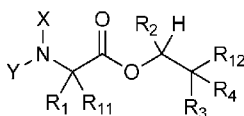




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- (71) **Applicant:** DOW AGROSCIENCES LLC [US/US];
9330 Zionsville Road, Indianapolis, Indiana 46268 (US).
- (72) **Inventors:** BRAVO-ALTAMIRANO, Karla; 9330
Zionsville Road, Indianapolis, Indiana 46268 (US). LU,
Yu; 9330 Zionsville Road, Indianapolis, Indiana 46268
(US). LOY, Brian; 9330 Zionsville Road, Indianapolis,
Indiana 46268 (US). BUCHAN, Zachary; 9330 Zionsville
Road, Indianapolis, Indiana 46268 (US). JONES, David;
9330 Zionsville Road, Indianapolis, Indiana 46268 (US).
WILMOT, Jeremy; 9330 Zionsville Road, Indianapolis,
Indiana 46268 (US). RIGOLI, Jared; 9330 Zionsville
Road, Indianapolis, Indiana 46268 (US). DEKORVER,
Kyle; 9330 Zionsville Road, Indianapolis, Indiana 46268
(US). DAEUBLE, John; 9330 Zionsville Road, Indiana-
polis, Indiana 46268 (US). HERRICK, Jessica; 9330
Zionsville Road, Indianapolis, Indiana 46268 (US).
WANG, Xuelin; 9330 Zionsville Road, Indianapolis, Indi-
ana 46268 (US). YAO, Chenglin; 9330 Zionsville Road,
Indianapolis, Indiana 46268 (US). MEYER, Kevin; 9330
Zionsville Road, Indianapolis, Indiana 46268 (US).
- (74) **Agent:** BICKLEY, Patrick M.; Faegre Baker Daniels
LLP, 300 North Meridian Street, Suite 2700, Indianapolis,
Indiana 46204 (US).
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(54) **Title:** PICOLINAMIDE COMPOUNDS WITH FUNGICIDAL ACTIVITY

(I)

(57) **Abstract:** This disclosure relates to picolinamides of Formula I and their use as fungicides. Fungicides are compounds, of natural or synthetic origin, which act to protect and/or cure plants against damage caused by agriculturally relevant fungi. Generally, no single fungicide is useful in all situations. Consequently, research is ongoing to produce fungicides that may have better performance, are easier to use, and cost less.

PICOLINAMIDE COMPOUNDS WITH FUNGICIDAL ACTIVITY

CROSS REFERENCE TO RELATED APPLICATIONS

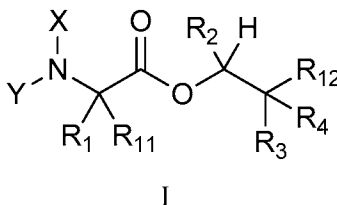
[0001] This application claims the benefit of U.S. Provisional Patent Application Serial Nos. 62/098120 filed December 30, 2014 and 62/098122 filed December 30, 2014, which are expressly incorporated by reference herein.

BACKGROUND & SUMMARY

[0002] Fungicides are compounds, of natural or synthetic origin, which act to protect and/or cure plants against damage caused by agriculturally relevant fungi. Generally, no single fungicide is useful in all situations. Consequently, research is ongoing to produce fungicides that may have better performance, are easier to use, and cost less.

[0003] The present disclosure relates to picolinamides and their use as fungicides. The compounds of the present disclosure may offer protection against ascomycetes, basidiomycetes, deuteromycetes and oomycetes.

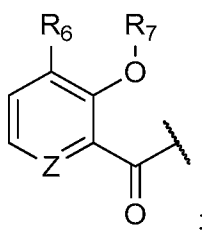
[0004] One embodiment of the present disclosure may include compounds of Formula I:



in which: X is hydrogen or C(O)R₅;

Y is hydrogen, C(O)R₅, or Q;

Q is



wherein: Z is N or CH;

R₁ is hydrogen or alkyl, each optionally substituted with 0, 1 or multiple R₈;

R₂ is methyl;

R₃ is chosen from aryl or heteroaryl, each optionally substituted with 0, 1 or multiple R₈;

R₄ is chosen from hydrogen, halo, hydroxyl, alkyl or alkoxy;

5 R₅ is chosen from alkoxy or benzyloxy, each optionally substituted with 0, 1, or multiple R₈;

R₆ is chosen from hydrogen, alkoxy, or halo, each optionally substituted with 0, 1, or multiple R₈;

R₇ is chosen from hydrogen, -C(O)R₉, or -CH₂OC(O)R₉;

10 R₈ is chosen from hydrogen, alkyl, aryl, acyl, halo, alkenyl, alkynyl, alkoxy, cyano or heterocyclyl, each optionally substituted with 0, 1, or multiple R₁₀;

R₉ is chosen from alkyl, alkoxy, or aryl, each optionally substituted with 0, 1, or multiple R₈;

R₁₀ is chosen from hydrogen, alkyl, aryl, acyl, halo, alkenyl, alkoxy, or heterocyclyl;

R₁₁ is chosen from hydrogen or alkyl, substituted with 0, 1, or multiple R₈;

15 R₁₂ is chosen from aryl or heteroaryl, each optionally substituted with 0, 1 or multiple R₈.

[0005] Another embodiment of the present disclosure may include a fungicidal composition for the control or prevention of fungal attack comprising the compounds described above and a phytologically acceptable carrier material.

20 **[0006]** Yet another embodiment of the present disclosure may include a method for the control or prevention of fungal attack on a plant, the method including the steps of applying a fungicidally effective amount of one or more of the compounds described above to at least one of the fungus, the plant, and an area adjacent to the plant.

25 **[0007]** It will be understood by those skilled in the art that the following terms may include generic "R"-groups within their definitions, e.g., "the term alkoxy refers to an -OR substituent". It is also understood that within the definitions for the following terms, these "R" groups are included for illustration purposes and should not be construed as limiting or being limited by substitutions about Formula I.

30 **[0008]** The term "alkyl" refers to a branched, unbranched, or saturated cyclic carbon chain, including, but not limited to, methyl, ethyl, propyl, butyl, isopropyl, isobutyl, tertiary butyl, pentyl, hexyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, and the like.

[0009] The term "alkenyl" refers to a branched, unbranched or cyclic carbon chain containing one or more double bonds including, but not limited to, ethenyl, propenyl, butenyl, isopropenyl, isobutenyl, cyclobutenyl, cyclopentenyl, cyclohexenyl, and the like.

5 [0010] The term "alkynyl" refers to a branched or unbranched carbon chain containing one or more triple bonds including, but not limited to, propynyl, butynyl, and the like.

[0011] The terms "aryl" and "Ar" refer to any aromatic ring, mono- or bi-cyclic, containing 0 heteroatoms.

[0012] The term "heterocyclyl" refers to any aromatic or non-aromatic ring, mono- or bi-cyclic, containing one or more heteroatoms.

10 [0013] The term "alkoxy" refers to an -OR substituent.

[0014] The term "acyloxy" refers to an -OC(O)R substituent.

[0015] The term "cyano" refers to a -C≡N substituent.

[0016] The term "hydroxyl" refers to an -OH substituent.

[0017] The term "amino" refers to a -N(R)₂ substituent.

15 [0018] The term "arylalkoxy" refers to -O(CH₂)_nAr where *n* is an integer selected from the list 1, 2, 3, 4, 5, or 6.

[0019] The term "haloalkoxy" refers to an -OR-X substituent, wherein X is Cl, F, Br, or I, or any combination thereof.

20 [0020] The term "haloalkyl" refers to an alkyl, which is substituted with Cl, F, I, or Br or any combination thereof.

[0021] The term "halogen" or "halo" refers to one or more halogen atoms, defined as F, Cl, Br, and I.

[0022] The term "nitro" refers to a -NO₂ substituent.

[0023] The term thioalkyl refers to an -SR substituent.

25 [0024] Throughout the disclosure, reference to the compounds of Formula I is read as also including all stereoisomers, for example diastereomers, enantiomers, and mixtures thereof. In another embodiment, Formula I is read as also including salts or hydrates thereof. Exemplary salts include, but are not limited to: hydrochloride, hydrobromide, hydroiodide, trifluoroacetate, and trifluoromethane sulfonate.

[0025] It is also understood by those skilled in the art that additional substitution is allowable, unless otherwise noted, as long as the rules of chemical bonding and strain energy are satisfied and the product still exhibits fungicidal activity.

[0026] Another embodiment of the present disclosure is a use of a compound of Formula I, for protection of a plant against attack by a phytopathogenic organism or the treatment of a plant infested by a phytopathogenic organism, comprising the application of a compound of Formula I, or a composition comprising the compound to soil, a plant, a part of a plant, foliage, and/or roots.

[0027] Additionally, another embodiment of the present disclosure is a composition useful for protecting a plant against attack by a phytopathogenic organism and/or treatment of a plant infested by a phytopathogenic organism comprising a compound of Formula I and a phytologically acceptable carrier material.

DETAILED DESCRIPTION

[0028] The compounds of the present disclosure may be applied by any of a variety of known techniques, either as the compounds or as formulations comprising the compounds. For example, the compounds may be applied to the roots or foliage of plants for the control of various fungi, without damaging the commercial value of the plants. The materials may be applied in the form of any of the generally used formulation types, for example, as solutions, dusts, wettable powders, flowable concentrate, or emulsifiable concentrates.

[0029] Preferably, the compounds of the present disclosure are applied in the form of a formulation, comprising one or more of the compounds of Formula I with a phytologically acceptable carrier. Concentrated formulations may be dispersed in water, or other liquids, for application, or formulations may be dust-like or granular, which may then be applied without further treatment. The formulations can be prepared according to procedures that are conventional in the agricultural chemical art.

[0030] The present disclosure contemplates all vehicles by which one or more of the compounds may be formulated for delivery and use as a fungicide. Typically, formulations are applied as aqueous suspensions or emulsions. Such suspensions or emulsions may be produced from water-soluble, water-suspendible, or emulsifiable formulations which are solids, usually known as wettable powders; or liquids, usually known as emulsifiable concentrates, aqueous suspensions, or suspension concentrates. As will be readily appreciated, any material to which these

compounds may be added may be used, provided it yields the desired utility without significant interference with the activity of these compounds as antifungal agents.

[0031] Wettable powders, which may be compacted to form water-dispersible granules, comprise an intimate mixture of one or more of the compounds of Formula I, an inert carrier and
5 surfactants. The concentration of the compound in the wettable powder may be from about 10 percent to about 90 percent by weight based on the total weight of the wettable powder, more preferably about 25 weight percent to about 75 weight percent. In the preparation of wettable powder formulations, the compounds may be compounded with any finely divided solid, such as prophyllite, talc, chalk, gypsum, Fuller's earth, bentonite, attapulgite, starch, casein, gluten,
10 montmorillonite clays, diatomaceous earths, purified silicates or the like. In such operations, the finely divided carrier and surfactants are typically blended with the compound(s) and milled.

[0032] Emulsifiable concentrates of the compounds of Formula I may comprise a convenient concentration, such as from about 1 weight percent to about 50 weight percent of the compound, in a suitable liquid, based on the total weight of the concentrate. The compounds may be dissolved in
15 an inert carrier, which is either a water-miscible solvent or a mixture of water-immiscible organic solvents, and emulsifiers. The concentrates may be diluted with water and oil to form spray mixtures in the form of oil-in-water emulsions. Useful organic solvents include aromatics, especially the high-boiling naphthalenic and olefinic portions of petroleum such as heavy aromatic naphtha. Other organic solvents may also be used, for example, terpenic solvents, including rosin
20 derivatives, aliphatic ketones, such as cyclohexanone, and complex alcohols, such as 2-ethoxyethanol.

[0033] Emulsifiers which may be advantageously employed herein may be readily determined by those skilled in the art and include various nonionic, anionic, cationic and amphoteric emulsifiers, or a blend of two or more emulsifiers. Examples of nonionic emulsifiers useful in
25 preparing the emulsifiable concentrates include the polyalkylene glycol ethers and condensation products of alkyl and aryl phenols, aliphatic alcohols, aliphatic amines or fatty acids with ethylene oxide, propylene oxides such as the ethoxylated alkyl phenols and carboxylic esters solubilized with the polyol or polyoxyalkylene. Cationic emulsifiers include quaternary ammonium compounds and fatty amine salts. Anionic emulsifiers include the oil-soluble salts (e.g., calcium) of alkylaryl
30 sulfonic acids, oil-soluble salts or sulfated polyglycol ethers and appropriate salts of phosphated polyglycol ether.

[0034] Representative organic liquids which may be employed in preparing the emulsifiable concentrates of the compounds of the present disclosure are the aromatic liquids such as xylene, propyl benzene fractions; or mixed naphthalene fractions, mineral oils, substituted aromatic organic liquids such as dioctyl phthalate; kerosene; dialkyl amides of various fatty acids, particularly the dimethyl amides of fatty glycols and glycol derivatives such as the *n*-butyl ether, ethyl ether or methyl ether of diethylene glycol, the methyl ether of triethylene glycol, petroleum fractions or hydrocarbons such as mineral oil, aromatic solvents, paraffinic oils, and the like; vegetable oils such as soybean oil, rapeseed oil, olive oil, castor oil, sunflower seed oil, coconut oil, corn oil, cottonseed oil, linseed oil, palm oil, peanut oil, safflower oil, sesame oil, tung oil and the like; esters of the above vegetable oils; and the like. Mixtures of two or more organic liquids may also be employed in the preparation of the emulsifiable concentrate. Organic liquids include xylene, and propyl benzene fractions, with xylene being most preferred in some cases. Surface-active dispersing agents are typically employed in liquid formulations and in an amount of from 0.1 to 20 percent by weight based on the combined weight of the dispersing agent with one or more of the compounds. The formulations can also contain other compatible additives, for example, plant growth regulators and other biologically active compounds used in agriculture.

[0035] Aqueous suspensions comprise suspensions of one or more water-insoluble compounds of Formula I, dispersed in an aqueous vehicle at a concentration in the range from about 1 to about 50 weight percent, based on the total weight of the aqueous suspension. Suspensions are prepared by finely grinding one or more of the compounds, and vigorously mixing the ground material into a vehicle comprised of water and surfactants chosen from the same types discussed above. Other components, such as inorganic salts and synthetic or natural gums, may also be added to increase the density and viscosity of the aqueous vehicle.

[0036] The compounds of Formula I can also be applied as granular formulations, which are particularly useful for applications to the soil. Granular formulations generally contain from about 0.5 to about 10 weight percent, based on the total weight of the granular formulation of the compound(s), dispersed in an inert carrier which consists entirely or in large part of coarsely divided inert material such as attapulgite, bentonite, diatomite, clay or a similar inexpensive substance. Such formulations are usually prepared by dissolving the compounds in a suitable solvent and applying it to a granular carrier which has been preformed to the appropriate particle size, in the range of from about 0.5 to about 3 mm. A suitable solvent is a solvent in which the compound is substantially or

completely soluble. Such formulations may also be prepared by making a dough or paste of the carrier and the compound and solvent, and crushing and drying to obtain the desired granular particle.

[0037] Dusts containing the compounds of Formula I may be prepared by intimately mixing one or more of the compounds in powdered form with a suitable dusty agricultural carrier, such as, for example, kaolin clay, ground volcanic rock, and the like. Dusts can suitably contain from about 1 to about 10 weight percent of the compounds, based on the total weight of the dust.

[0038] The formulations may additionally contain adjuvant surfactants to enhance deposition, wetting, and penetration of the compounds onto the target crop and organism. These adjuvant surfactants may optionally be employed as a component of the formulation or as a tank mix. The amount of adjuvant surfactant will typically vary from 0.01 to 1.0 percent by volume, based on a spray-volume of water, preferably 0.05 to 0.5 volume percent. Suitable adjuvant surfactants include, but are not limited to ethoxylated nonyl phenols, ethoxylated synthetic or natural alcohols, salts of the esters or sulfosuccinic acids, ethoxylated organosilicones, ethoxylated fatty amines, blends of surfactants with mineral or vegetable oils, crop oil concentrate (mineral oil (85%) + emulsifiers (15%)); nonylphenol ethoxylate; benzylcocoalkyldimethyl quaternary ammonium salt; blend of petroleum hydrocarbon, alkyl esters, organic acid, and anionic surfactant; C₉ – C₁₁ alkylpolyglycoside; phosphated alcohol ethoxylate; natural primary alcohol (C₁₂ – C₁₆) ethoxylate; di-*sec*-butylphenol EO-PO block copolymer; polysiloxane-methyl cap; nonylphenol ethoxylate + urea ammonium nitrate; emulsified methylated seed oil; tridecyl alcohol (synthetic) ethoxylate (8EO); tallow amine ethoxylate (15 EO); PEG(400) dioleate-99. The formulations may also include oil-in-water emulsions such as those disclosed in U.S. Patent Application Serial No. 11/495,228, the disclosure of which is expressly incorporated by reference herein.

[0039] The formulations may optionally include combinations that contain other pesticidal compounds. Such additional pesticidal compounds may be fungicides, insecticides, herbicides, nematocides, miticides, arthropodocides, bactericides or combinations thereof that are compatible with the compounds of the present disclosure in the medium selected for application, and not antagonistic to the activity of the present compounds. Accordingly, in such embodiments, the other pesticidal compound is employed as a supplemental toxicant for the same or for a different pesticidal use. The compounds of Formula I and the pesticidal compound in the combination can generally be present in a weight ratio of from 1:100 to 100:1.

[0040] The compounds of the present disclosure may also be combined with other fungicides to form fungicidal mixtures and synergistic mixtures thereof. The fungicidal compounds of the present disclosure are often applied in conjunction with one or more other fungicides to control a wider variety of undesirable diseases. When used in conjunction with other fungicide(s), the presently claimed compounds may be formulated with the other fungicide(s), tank-mixed with the other fungicide(s) or applied sequentially with the other fungicide(s). Such other fungicides may include 2-(thiocyanatomethylthio)-benzothiazole, 2-phenylphenol, 8-hydroxyquinoline sulfate, ametoctradin, amisulbrom, antimycin, *Ampelomyces quisqualis*, azaconazole, azoxystrobin, *Bacillus subtilis*, *Bacillus subtilis* strain QST713, benalaxyl, benomyl, benthiavalicarb-isopropyl, benzovindiflupyr, benzylaminobenzene-sulfonate (BABS) salt, bicarbonates, biphenyl, bismethiazol, bitertanol, bixafen, blastidicidin-S, borax, Bordeaux mixture, boscalid, bromuconazole, bupirimate, calcium polysulfide, captafol, captan, carbendazim, carboxin, carpropamid, carvone, chlazafenone, chloroneb, chlorothalonil, chlozolate, *Coniothyrium minitans*, copper hydroxide, copper octanoate, copper oxychloride, copper sulfate, copper sulfate (tribasic), coumoxystrobin, cuprous oxide, cyazofamid, cyflufenamid, cymoxanil, cyproconazole, cyprodinil, dazomet, debacarb, diammonium ethylenebis-(dithiocarbamate), dichlofluanid, dichlorophen, diclocymet, diclomezine, dichloran, diethofencarb, difenoconazole, difenzoquat ion, diflumetorim, dimethomorph, dimoxystrobin, diniconazole, diniconazole-M, dinobuton, dinocap, diphenylamine, dipymetitrone, dithianon, dodemorph, dodemorph acetate, dodine, dodine free base, edifenphos, enestrobin, enestroburin, enoxastrobin, epoxiconazole, ethaboxam, ethoxyquin, etridiazole, famoxadone, fenamidone, fenaminostrobin, fenarimol, fenbuconazole, fenfuram, fenhexamid, fenoxanil, fenpiclonil, fenpropidin, fenpropimorph, fenpyrazamine, fentin, fentin acetate, fentin hydroxide, ferbam, ferimzone, fluazinam, fludioxonil, flufenoxystrobin, flumorph, fluopicolide, fluopyram, fluoroimide, fluoxastrobin, fluquinconazole, flusilazole, flusulfamide, flutianil, flutolanil, flutriafol, fluxapyroxad, folpet, formaldehyde, fosetyl, fosetyl-aluminium, fuberidazole, furalaxyl, furametpyr, guazatine, guazatine acetates, GY-81, hexachlorobenzene, hexaconazole, hymexazol, imazalil, imazalil sulfate, imibenconazole, iminoctadine, iminoctadine triacetate, iminoctadine tris(albesilate), iodocarb, ipconazole, ipfenpyrazolone, iprobenfos, iprodione, iprovalicarb, isofetamid, isoprothiolane, isopyrazam, isotianil, kasugamycin, kasugamycin hydrochloride hydrate, kresoxim-methyl, laminarin, mancozeb, mancozeb, mandestrobin, mandipropamid, maneb, mfenoxam, mepanipyrim, mepronil, meptyl-dinocap, mercuric chloride,

mercuric oxide, mercurous chloride, metalaxyl, metalaxyl-M, metam, metam-ammonium, metam-
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 pyributicarb, pyrifenoxy, pyrimethanil, pyriofenone, pyrisoxazole, pyroquilon, quinoxamine,
 quinoxifen, quintozone, *Reynoutria sachalinensis* extract, sedaxane, silthiofam, simeconazole,
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 15 thifluzamide, thiophanate-methyl, thiram, tiadinil, tolclofos-methyl, tolprocarb, tolylfluanid,
 triadimefon, triadimenol, triazoxide, triclopyricarb, tricyclazole, tridemorph, trifloxystrobin,
 triflumizole, triforine, triticonazole, validamycin, valifenalate, valiphenal, vinclozolin, zineb, ziram,
 zoxamide, *Candida oleophila*, *Fusarium oxysporum*, *Gliocladium* spp., *Phlebiopsis gigantea*,
Streptomyces griseoviridis, *Trichoderma* spp., (RS)-N-(3,5-dichlorophenyl)-2-(methoxymethyl)-
 20 succinimide, 1,2-dichloropropane, 1,3-dichloro-1,1,3,3-tetrafluoroacetone hydrate, 1-chloro-2,4-
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 dihydro-5-phenyl-1,4-dithi-ine 1,1,4,4-tetraoxide, 2-methoxyethylmercury acetate, 2-
 methoxyethylmercury chloride, 2-methoxyethylmercury silicate, 3-(4-chlorophenyl)-5-
 methylrhodanine, 4-(2-nitroprop-1-enyl)phenyl thiocyanateme, ampropylfos, anilazine, azithiram,
 25 barium polysulfide, Bayer 32394, benodanil, benquinox, bentazone, benzamocil, benzamocil-
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 30 cyprofuram, decafentin, dichlone, dichlozoline, diclobutrazol, dimethirimol, dinocron, dinosulfon,
 dinoterbon, dipyrithione, ditalimfos, dodicin, drazoxolon, EBP, ESBP, etaconazole, etem, ethirim,

fenaminosulf, fenapanil, fenitropan, fluotrimazole, furcarbanil, furconazole, furconazole-cis, furmecyclox, furophanate, glyodine, griseofulvin, halacrinat, Hercules 3944, hexylthiofos, ICIA0858, isopamphos, isovalledione, mebenil, mecarbinzid, metazoxolon, methfuroxam, methylmercury dicyandiamide, metsulfovax, milneb, mucochloric anhydride, myclozolin, *N*-3,5-dichlorophenyl-succinimide, *N*-3-nitrophenylitaconimide, natamycin, *N*-ethylmercurio-4-toluenesulfonanilide, nickel bis(dimethyldithiocarbamate), OCH, phenylmercury dimethyldithiocarbamate, phenylmercury nitrate, phosdiphen, prothiocarb, prothiocarb hydrochloride, pyracarbolid, pyridinitril, pyroxychlor, pyroxyfur, quinacetol, quinacetol sulfate, quinazamid, quinconazole, rabenzazole, salicylanilide, SSF-109, sultropen, tecoram, thiadifluor, thicyofen, thiochlorfenphim, thiophanate, thioquinox, tioxyimid, triamiphos, triarimol, triazbutil, trichlamide, urbacid, zarilamid, and any combinations thereof.

[0041] Additionally, the compounds described herein may be combined with other pesticides, including insecticides, nematocides, miticides, arthropodicides, bactericides or combinations thereof that are compatible with the compounds of the present disclosure in the medium selected for application, and not antagonistic to the activity of the present compounds to form pesticidal mixtures and synergistic mixtures thereof. The fungicidal compounds of the present disclosure may be applied in conjunction with one or more other pesticides to control a wider variety of undesirable pests. When used in conjunction with other pesticides, the presently claimed compounds may be formulated with the other pesticide(s), tank-mixed with the other pesticide(s) or applied sequentially with the other pesticide(s). Typical insecticides include, but are not limited to: 1,2-dichloropropane, abamectin, acephate, acetamiprid, acethion, acetoprole, acrinathrin, acrylonitrile, afidopyropen, alanycarb, aldicarb, aldoxycarb, aldrin, allethrin, allosamidin, allyxycarb, alpha-cypermethrin, alpha-ecdysone, alpha-endosulfan, amidithion, aminocarb, amiton, amiton oxalate, amitraz, anabasine, athidathion, azadirachtin, azamethiphos, azinphos-ethyl, azinphos-methyl, azothoate, barium hexafluorosilicate, barthrin, bendiocarb, benfuracarb, bensultap, beta-cyfluthrin, beta-cypermethrin, bifenthrin, bioallethrin, bioethanomethrin, biopermethrin, bistrifluron, borax, boric acid, broflanilide, bromfenvinfos, bromocyclen, bromo-DDT, bromophos, bromophos-ethyl, bufencarb, buprofezin, butacarb, butathiofos, butocarboxim, butonate, butoxycarboxim, cadusafos, calcium arsenate, calcium polysulfide, camphechlor, carbanolate, carbaryl, carbofuran, carbon disulfide, carbon tetrachloride, carbophenothion, carbosulfan, cartap, cartap hydrochloride, chlorantranilprole, chlorbicyclen, chlordane, chlordecone, chlordimeform, chlordimeform

hydrochloride, chlorethoxyfos, chlorfenapyr, chlorfenvinphos, chlorfluazuron, chlormephos, chloroform, chloropicrin, chlorphoxim, chlorprazophos, chlorpyrifos, chlorpyrifos-methyl, chlorthiophos, chromafenozide, cinerin I, cinerin II, cinerins, cismethrin, clacyfos, cloethocarb, closantel, clothianidin, copper acetoarsenite, copper arsenate, copper naphthenate, copper oleate, coumaphos, coumithoate, crotamiton, crotoxyphos, crufomate, cryolite, cyanofenphos, cyanophos, 5 cyanthoate, cyantraniliprole, cyclaniliprole, cyclethrin, cycloprothrin, cyfluthrin, cyhalothrin, cypermethrin, cyphenothrin, cyromazine, cythioate, DDT, decarbofuran, deltamethrin, demephion, demephion-O, demephion-S, demeton, demeton-methyl, demeton-O, demeton-O-methyl, demeton-S, demeton-S-methyl, demeton-S-methylsulphon, diafenthiuron, dialifos, diatomaceous earth, diazinon, dicapthon, dichlofenthion, dichlorvos, dicloromezotiaz, dicresyl, dicrotophos, dicyclanil, 10 dieldrin, diflubenzuron, dilor, dimefluthrin, dimefox, dimetan, dimethoate, dimethrin, dimethylvinphos, dimetilan, dinex, dinex-diclexine, dinoprop, dinosam, dinotefuran, diofenolan, dioxabenzofos, dioxacarb, dioxathion, disulfoton, dithicrofos, d-limonene, DNOC, DNOC-ammonium, DNOC-potassium, DNOC-sodium, doramectin, ecdysterone, emamectin, emamectin benzoate, EMPC, empenethrin, endosulfan, endothion, endrin, EPN, epofenonane, eprinomectin, 15 esdepalléthrine, esfenvalerate, etaphos, ethiofencarb, ethion, ethiprole, ethoate-methyl, ethoprophos, ethyl formate, ethyl-DDD, ethylene dibromide, ethylene dichloride, ethylene oxide, etofenprox, etrimfos, EXD, famphur, fenamiphos, fenazaflor, fenchlorphos, fenethacarb, fenfluthrin, fenitrothion, fenobucarb, fenoxacrim, fenoxycarb, fenpirithrin, fenpropathrin, fensulfothion, fenthion, fenthion-ethyl, fenvalerate, fipronil, flometoquin, flonicamid, flubendiamide, flucofuron, 20 flucycloxuron, flucythrinate, flufenerim, flufenoxuron, flufenprox, flufiprole, fluhexafon, flupyradifurone, fluvalinate, fonofos, formetanate, formetanate hydrochloride, formothion, formparanate, formparanate hydrochloride, fosmethilan, fospirate, fosthietan, furathiocarb, furethrin, gamma-cyhalothrin, gamma-HCH, halfenprox, halofenozide, HCH, HEOD, heptachlor, heptafluthrin, heptenophos, heterophos, hexaflumuron, HHDN, hydramethylnon, hydrogen cyanide, 25 hydroprene, hyquincarb, imidacloprid, imiprothrin, indoxacarb, iodomethane, IPSP, isazofos, isobenzan, isocarbophos, isodrin, isofenphos, isofenphos-methyl, isoprocarb, isoprothiolane, isothioate, isoxathion, ivermectin, jasmolin I, jasmolin II, jodfenphos, juvenile hormone I, juvenile hormone II, juvenile hormone III, kappa-bifenthrin, kappa-tefluthrin, kelevan, kinoprene, lambda-cyhalothrin, lead arsenate, lepimectin, leptophos, lindane, lirimfos, lufenuron, lythidathion, 30 malathion, malonoben, mazidox, mecarbam, mecarphon, menazon, mephosfolan, mercurous

chloride, mesulfenfos, metaflumizone, methacrifos, methamidophos, methidathion, methiocarb, methocrotophos, methomyl, methoprene, methoxychlor, methoxyfenozide, methyl bromide, methyl isothiocyanate, methylchloroform, methylene chloride, metofluthrin, metolcarb, metoxadiazone, mevinphos, mexacarbate, milbemectin, milbemycin oxime, mipafox, mirex, molosultap, momfluorothrin, monocrotophos, monomehypo, monosultap, morphothion, moxidectin, naftalofos, naled, naphthalene, nicotine, nifluridide, nitenpyram, nithiazine, nitrilacarb, novaluron, noviflumuron, omethoate, oxamyl, oxydemeton-methyl, oxydeprofos, oxydisulfoton, para-dichlorobenzene, parathion, parathion-methyl, penfluron, pentachlorophenol, permethrin, phenkapton, phenothrin, phenthoate, phorate, phosalone, phosfolan, phosmet, phosnichlor, phosphamidon, phosphine, phoxim, phoxim-methyl, pirimetaphos, pirimicarb, pirimiphos-ethyl, pirimiphos-methyl, potassium arsenite, potassium thiocyanate, pp'-DDT, prallethrin, precocene I, precocene II, precocene III, primidophos, profenofos, profluralin, promacyl, promecarb, propaphos, propetamphos, propoxur, prothidathion, prothiofos, prothoate, protrifenbute, pyflubumide, pyraclofos, pyrafluprole, pyrazophos, pyresmethrin, pyrethrin I, pyrethrin II, pyrethrins, pyridaben, pyridalyl, pyridaphenthion, pyrifluquinazon, pyrimidifen, pyriminostrobin, pyrimitate, pyriprole, pyriproxyfen, quassia, quinalphos, quinalphos-methyl, quinothion, rafoxanide, resmethrin, rotenone, ryania, sabadilla, schradan, selamectin, silafluofen, silica gel, sodium arsenite, sodium fluoride, sodium hexafluorosilicate, sodium thiocyanate, sophamide, spinetoram, spinosad, spiromesifen, spirotetramat, sulcofuron, sulcofuron-sodium, sulfluramid, sulfotep, sulfoxafloor, sulfuryl fluoride, sulprofos, tau-fluvalinate, tazimcarb, TDE, tebufenozide, tebufenpyrad, tebupirimfos, teflubenzuron, tefluthrin, temephos, TEPP, terallethrin, terbufos, tetrachloroethane, tetrachlorvinphos, tetramethrin, tetramethylfluthrin, tetraniliprole, theta-cypermethrin, thiacloprid, thiamethoxam, thicofos, thiocarboxime, thiocyclam, thiocyclam oxalate, thiodicarb, thiofanox, thiometon, thiosultap, thiosultap-disodium, thiosultap-monosodium, thuringiensin, tioxazafen, tolfenpyrad, tralomethrin, transfluthrin, transpermethrin, triarathene, triazamate, triazophos, trichlorfon, trichlormetaphos-3, trichloronat, trifenofos, triflumezopyrim, triflumuron, trimethacarb, triprene, vamidothion, vaniliprole, XMC, xylylcarb, zeta-cypermethrin, zolaprofos, and any combinations thereof.

[0042] Additionally, the compounds described herein may be combined with herbicides that are compatible with the compounds of the present disclosure in the medium selected for application, and not antagonistic to the activity of the present compounds to form pesticidal mixtures and

synergistic mixtures thereof. The fungicidal compounds of the present disclosure may be applied in conjunction with one or more herbicides to control a wide variety of undesirable plants. When used in conjunction with herbicides, the presently claimed compounds may be formulated with the herbicide(s), tank-mixed with the herbicide(s) or applied sequentially with the herbicide(s). Typical

5 herbicides include, but are not limited to: 4-CPA; 4-CPB; 4-CPP; 2,4-D; 3,4-DA; 2,4-DB; 3,4-DB; 2,4-DEB; 2,4-DEP; 3,4-DP; 2,3,6-TBA; 2,4,5-T; 2,4,5-TB; acetochlor, acifluorfen, aclonifen, acrolein, alachlor, allidochlor, alloxydim, allyl alcohol, alorac, ametrudione, ametryn, amibuzin, amicarbazone, amidosulfuron, aminocyclopyrachlor, aminopyralid, amiprofos-methyl, amitrole, ammonium sulfamate, anilofos, anisuron, asulam, atraton, atrazine, azafenidin, azimsulfuron,

10 aziprotryne, barban, BCPC, beflubutamid, benazolin, bencarbazone, benfluralin, benfuresate, bensulfuron, bensulide, bentazone, benzadox, benzfendizone, benzipram, benzobicyclon, benzofenap, benzofluor, benzoylprop, benzthiazuron, bicyclopyrone, bifenox, bilanafos, bispyribac, borax, bromacil, bromobonil, bromobutide, bromofenoxim, bromoxynil, brompyrazon, butachlor, butafenacil, butamifos, butenachlor, buthidazole, buthiuron, butralin, butroxydim, buturon, butylate,

15 cacodylic acid, cafenstrole, calcium chlorate, calcium cyanamide, cambendichlor, carbasulam, carbetamide, carboxazole, chlorprocarb, carfentrazone, CDEA, CEPC, chlomethoxyfen, chloramben, chloranocryl, chlorazifop, chlorazine, chlorbromuron, chlorbufam, chloreturon, chlorfenac, chlorfenprop, chlorflurazole, chlorflurenol, chloridazon, chlorimuron, chlornitrofen, chloropon, chlorotoluron, chloroxuron, chloroxynil, chlorpropham, chlorsulfuron, chlorthal,

20 chlorthiamid, cinidon-ethyl, cinmethylin, cinosulfuron, cisanilide, clethodim, clidinate, clodinafop, clofop, clomazone, clomeprop, cloprop, cloproxydim, clopyralid, cloransulam, CMA, copper sulfate, CPMF, CPPC, credazine, cresol, cumyluron, cyanatryn, cyanazine, cycloate, cyclopyrimorate, cyclosulfamuron, cycloxydim, cycluron, cyhalofop, cyperquat, cyprazine, cyprazole, cypromid, daimuron, dalapon, dazomet, delachlor, desmedipham, desmetryn, di-allate,

25 dicamba, dichlobenil, dichloralurea, dichlormate, dichlorprop, dichlorprop-P, diclofop, diclosulam, diethamquat, diethatyl, difenopenten, difenoxuron, difenzoquat, diflufenican, diflufenzopyr, dimefuron, dimepiperate, dimethachlor, dimethametryn, dimethenamid, dimethenamid-P, dimexano, dimidazon, dinitramine, dinofenate, dinoprop, dinosam, dinoseb, dinoterb, diphenamid, dipropetryn, diquat, disul, dithiopyr, diuron, DMPA, DNOC, DSMA, EBEP, eglinazone, endotal,

30 epronaz, EPTC, erbon, esprocarb, ethalfluralin, ethametsulfuron, ethidimuron, ethiolate, ethofumesate, ethoxyfen, ethoxysulfuron, etinofen, etnipromid, etobenzanid, EXD, fenasulam,

fenoprop, fenoxaprop, fenoxaprop-P, fenoxasulfone, fenquinotrine, fenteracol, fenthiaaprop, fentrazamide, fenuron, ferrous sulfate, flamprop, flamprop-M, flazasulfuron, florasulam, fluazifop, fluazifop-P, fluazolate, flucarbazone, flucetosulfuron, fluchloralin, flufenacet, flufenican, flufenpyr, flumetsulam, flumezin, flumiclorac, flumioxazin, flumipropyn, fluometuron, fluorodifen, fluoroglycofen, fluoromidine, fluoronitrofen, fluothiuron, flupoxam, flupropacil, flupropanate, flupyrsulfuron, fluridone, flurochloridone, fluroxypyr, flurtamone, fluthiacet, fomesafen, foramsulfuron, fosamine, furyloxyfen, glufosinate, glufosinate-P, glyphosate, halauxifen, halosafen, halosulfuron, haloxydine, haloxyfop, haloxyfop-P, hexachloroacetone, hexaflurate, hexazinone, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, imazosulfuron, indanofan, indaziflam, iodobonil, iodomethane, iodosulfuron, iofensulfuron, ioxynil, ipazine, ipfencarbazone, iprymidam, isocarbamid, isocil, isomethiozin, isonoruron, isopolinate, isopropalin, isoproturon, isouron, isoxaben, isoxachlortole, isoxaflutole, isoxapyrifop, karbutilate, ketospiradox, lactofen, lenacil, linuron, MAA, MAMA, MCPA, MCPA-thioethyl, MCPB, mecoprop, mecoprop-P, medinoterb, mefenacet, mefluidide, mesoprazine, mesosulfuron, mesotrione, metam, metamifop, metamitron, metazachlor, metazosulfuron, metflurazon, methabenzthiazuron, methalpropalin, methazole, methiobencarb, methiozolin, methiuron, methometon, methoprotryne, methyl bromide, methyl isothiocyanate, methyldymron, metobenzuron, metobromuron, metolachlor, metosulam, metoxuron, metribuzin, metsulfuron, molinate, monalide, monisouron, monochloroacetic acid, monolinuron, monuron, morfamquat, MSMA, naproanilide, napropamide, napropamide-M, naptalam, neburon, nicosulfuron, nipyraclufen, nitralin, nitrofen, nitrofluorfen, norflurazon, noruron, OCH, orbencarb, *ortho*-dichlorobenzene, orthosulfamuron, oryzalin, oxadiargyl, oxadiazon, oxapyrazon, oxasulfuron, oxaziclomefone, oxyfluorfen, parafluron, paraquat, pebulate, pelargonic acid, pendimethalin, penoxsulam, pentachlorophenol, pentanochlor, pentoxazone, perfluidone, pethoxamid, phenisopham, phenmedipham, phenmedipham-ethyl, phenobenzuron, phenylmercury acetate, picloram, picolinafen, pinoxaden, piperophos, potassium arsenite, potassium azide, potassium cyanate, pretilachlor, primisulfuron, procyazine, prodiamine, profluzol, profluralin, profoxydim, proglinazine, prometon, prometryn, propachlor, propanil, propaquizafop, propazine, propham, propisochlor, propoxycarbazone, propyrisulfuron, propyzamide, prosulfalin, prosulfocarb, prosulfuron, proxan, prynachlor, pydanon, pyraclonil, pyraflufen, pyrasulfotole, pyrazolynate, pyrazosulfuron, pyrazoxyfen, pyribenzoxim, pyributicarb, pyriclor, pyridafol, pyridate, pyriftalid, pyriminobac, pyrimisulfan, pyriithiobac, pyroxasulfone, pyroxsulam, quinclorac,

quinmerac, quinclamine, quinonamid, quizalofop, quizalofop-P, rhodethanil, rimsulfuron, saflufenacil, S-metolachlor, sebuthylazine, secbumeton, sethoxydim, siduron, simazine, simeton, simetryn, SMA, sodium arsenite, sodium azide, sodium chlorate, sulcotrione, sulfallate, sulfentrazone, sulfometuron, sulfosulfuron, sulfuric acid, sulglycapin, swep, TCA, tebutam, 5 tebuthiuron, tefuryltrione, tembotrione, tepraloxydim, terbacil, terbucarb, terbuchlor, terbumeton, terbuthylazine, terbutryn, tetrafluron, thenylchlor, thiazafluron, thiazopyr, thidiazimin, thidiazuron, thiencarbazone-methyl, thifensulfuron, thiobencarb, tiafenacil, tiocarbazil, tioclorim, tolypyralate, topramezone, tralkoxydim, triafamone, tri-allate, triasulfuron, triaziflam, tribenuron, tricamba, triclopyr, tridiphane, trietazine, trifloxysulfuron, trifludimoxazin, trifluralin, triflusulfuron, trifop, 10 trifopsime, trihydroxytriazine, trimeturon, tripropindan, tritac, tritosulfuron, vernolate, and xylachlor.

[0043] Another embodiment of the present disclosure is a method for the control or prevention of fungal attack. This method comprises applying to the soil, plant, roots, foliage, or locus of the fungus, or to a locus in which the infestation is to be prevented (for example applying to 15 cereal or grape plants), a fungicidally effective amount of one or more of the compounds of Formula I. The compounds are suitable for treatment of various plants at fungicidal levels, while exhibiting low phytotoxicity. The compounds may be useful both in a protectant and/or an eradicant fashion.

[0044] The compounds have been found to have significant fungicidal effect particularly for agricultural use. Many of the compounds are particularly effective for use with agricultural crops 20 and horticultural plants.

[0045] It will be understood by those skilled in the art that the efficacy of the compound for the foregoing fungi establishes the general utility of the compounds as fungicides.

[0046] The compounds have broad ranges of activity against fungal pathogens. Exemplary pathogens may include, but are not limited to, causing agent of wheat leaf blotch (*Zymoseptoria tritici*), wheat brown rust (*Puccinia triticina*), wheat stripe rust (*Puccinia striiformis*), scab of apple (*Venturia inaequalis*), powdery mildew of grapevine (*Uncinula necator*), barley scald (*Rhynchosporium secalis*), blast of rice (*Pyricularia oryzae*), rust of soybean (*Phakopsora pachyrhizi*), glume blotch of wheat (*Leptosphaeria nodorum*), powdery mildew of wheat (*Blumeria graminis f. sp. tritici*), powdery mildew of barley (*Blumeria graminis f. sp. hordei*), powdery mildew 25 of cucurbits (*Erysiphe cichoracearum*), anthracnose of cucurbits (*Colletotrichum lagenarium*), leaf spot of beet (*Cercospora beticola*), early blight of tomato (*Alternaria solani*), and spot blotch of 30

barley (*Cochliobolus sativus*). The exact amount of the active material to be applied is dependent not only on the specific active material being applied, but also on the particular action desired, the fungal species to be controlled, and the stage of growth thereof, as well as the part of the plant or other product to be contacted with the compound. Thus, all the compounds, and formulations
5 containing the same, may not be equally effective at similar concentrations or against the same fungal species.

[0047] The compounds are effective in use with plants in a disease-inhibiting and phytologically acceptable amount. The term "disease-inhibiting and phytologically acceptable amount" refers to an amount of a compound that kills or inhibits the plant disease for which control
10 is desired, but is not significantly toxic to the plant. This amount will generally be from about 0.1 to about 1000 ppm (parts per million), with 1 to 500 ppm being preferred. The exact concentration of compound required varies with the fungal disease to be controlled, the type of formulation employed, the method of application, the particular plant species, climate conditions, and the like. A suitable application rate is typically in the range from about 0.10 to about 4 pounds/acre (about 0.01
15 to 0.45 grams per square meter, g/m²).

[0048] Any range or desired value given herein may be extended or altered without losing the effects sought, as is apparent to the skilled person for an understanding of the teachings herein.

[0049] The compounds of Formula I may be made using well-known chemical procedures. Intermediates not specifically mentioned in this disclosure are either commercially available, may
20 be made by routes disclosed in the chemical literature, or may be readily synthesized from commercial starting materials utilizing standard procedures.

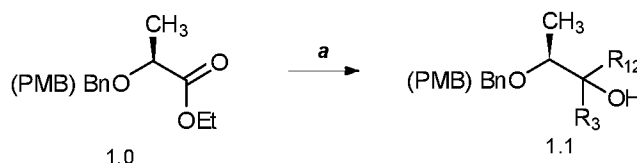
GENERAL SCHEMES

[0050] The following schemes illustrate approaches to generating picolinamide compounds
25 of Formula I. The following descriptions and examples are provided for illustrative purposes and should not be construed as limiting in terms of substituents or substitution patterns.

[0051] Compounds of Formula 1.1, wherein R₃ and R₁₂ are as originally defined and are equivalent, can be prepared by the methods shown in **Scheme 1, step a**. The compound of Formula 1.0 can be treated with an organometallic nucleophile such as phenylmagnesium
30 bromide (PhMgBr) in a polar aprotic solvent such as tetrahydrofuran (THF) at a temperature of

about 0 °C to 23 °C to afford compounds of Formula 1.1, wherein R₃ and R₁₂ are as previously defined, as shown in *a*.

Scheme 1



5

[0052] Compounds of Formula 2.2, wherein R₃ is as originally defined and may or may not be equal to R₁₂, can be prepared by the methods shown in **Scheme 2, steps a – c**. Compounds of Formula 2.2, wherein R₃ and R₁₂ are as previously defined but not an electron-deficient aryl or heteroaryl group and may or may not be equivalent, can be obtained by treating the compounds of Formula 2.0, wherein R₃ and R₁₂ are as previously defined but not an electron-deficient aryl or heteroaryl group and may or may not be equivalent, with a mixture of a hydride reagent, such as triethylsilane (Et₃SiH), and an acid, such as 2,2,2-trifluoroacetic acid (TFA) in a halogenated solvent such as dichloromethane (DCM) at a temperature of about 0 °C to 23 °C, as depicted in *a*. Alternatively, compounds of Formula 2.1, wherein R₃ and R₁₂ are an electron-deficient aryl or heteroaryl group and may or may not be equivalent, can be obtained by treating the compounds of Formula 2.0, wherein R₃ and R₁₂ are an electron-deficient aryl or heteroaryl group and may or may not be equivalent, with a base, such as sodium hydride (NaH), and a catalyst, such as imidazole, in a polar aprotic solvent such as THF at a temperature of about 23 °C, followed by sequential addition of carbon disulfide (CS₂) and an alkyl iodide, such as iodomethane (MeI), as depicted in *b*. Compounds of Formula 2.2, wherein R₃ and R₁₂ are an electron-deficient aryl or heteroaryl group and may or may not be equivalent, can be obtained by treating the compounds of Formula 2.1, wherein R₃ and R₁₂ are as previously defined and may or may not be equivalent, with a tin reagent, such as tributyltin hydride, and a radical initiator, such as azobisisobutyronitrile (AIBN), in a nonpolar solvent such as toluene at a temperature of about 115 °C, as depicted in *c*.

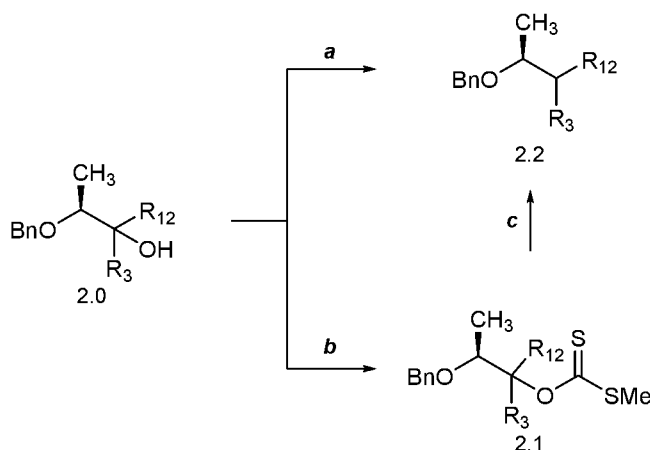
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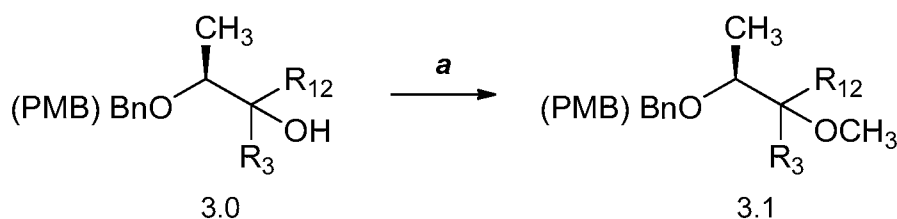
Scheme 2



[0053] Compounds of Formula 3.1, wherein R₃ and R₁₂ are as originally defined and may or may not be equivalent, can be prepared according to the method outlined in **Scheme 3, step a**.

5 Compounds of Formula 3.1, wherein R₃ and R₁₂ are as originally defined and may or may not be equivalent, can be prepared from compounds of Formula 3.0, wherein R₃ and R₁₂ are as previously defined and may or may not be equivalent, by treating with a base, such as NaH and an alkyl halide, such as MeI, in a polar aprotic solvent like *N,N*-dimethylformamide (DMF) at a temperature of about 0 °C to 23 °C, as depicted in **a**.

10

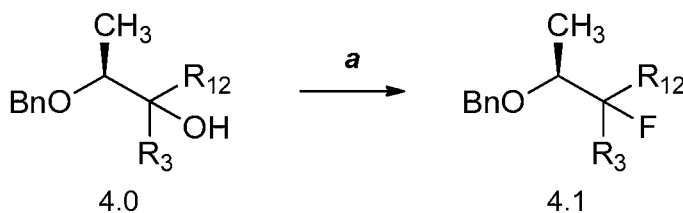
Scheme 3

[0054] Compounds of Formula 4.1, wherein R₃ and R₁₂ are as originally defined and may or may not be equivalent, can be prepared according to the method outlined in **Scheme 4, step a**.

15 Compounds of Formula 4.1, wherein R₃ and R₁₂ are as originally defined and may or may not be equivalent, can be prepared from compounds of Formula 4.0, wherein R₃ and R₁₂ are as previously defined and may or may not be equivalent, by treating with a fluorination reagent, such as (diethylamino)sulfur trifluoride (DAST), in a halogenated solvent such as DCM at a temperature of about 0 °C to 23 °C, as depicted in **a**.

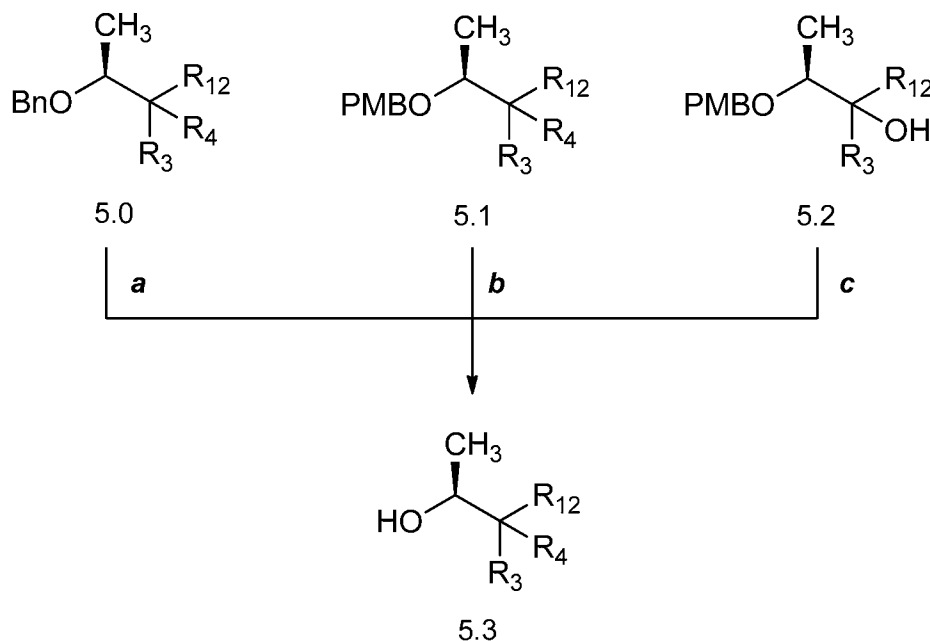
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Scheme 4

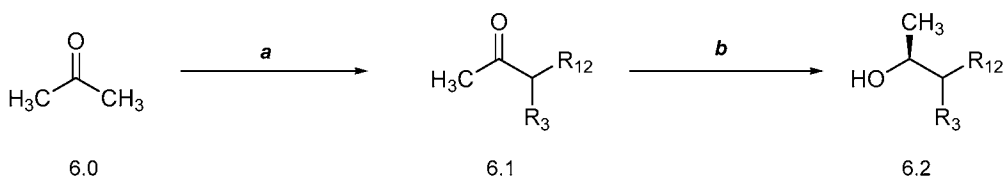


5 **[0055]** Compounds of Formula 5.3, wherein R_3 , R_4 , and R_{12} are as originally defined and R_3 may or may not be equivalent to R_{12} , can be prepared according to the methods outlined in **Scheme 5, steps a – c**. Compounds of Formula 5.3, wherein R_3 , R_4 , and R_{12} are as originally defined and R_3 may or may not be equivalent to R_{12} , can be prepared from compounds of Formula 5.0, wherein R_3 , R_4 , and R_{12} are as originally defined and R_3 may or may not be equivalent to R_{12} , by treating with a catalyst such as palladium on carbon (Pd/C) in a mixture of an unsaturated hydrocarbon solvent, such as cyclohexene, and a polar protic solvent, such as ethanol (EtOH), at an elevated temperature of about 65 °C, as shown in **a**. Alternatively, compounds of Formula 5.3, wherein R_3 and R_{12} are an electron-deficient aryl or heteroaryl group and may or may not be equivalent and R_4 is hydroxyl (OH) or alkoxy, can be obtained by treating compounds of Formula 5.1, wherein R_3 , R_4 , and R_{12} are as previously defined and R_3 may or may not be equivalent to R_{12} , with a mixture of a hydride reagent, such as Et_3SiH , and an acid, such as TFA in a halogenated solvent such as DCM at a temperature of about 0 °C to 23 °C, as indicated in **b**. Additionally, compounds of Formula 5.3, wherein R_3 and R_{12} are as originally defined but not an electron-deficient aryl or heteroaryl group and may or may not be equivalent, and R_4 is a proton (H), can be obtained by treating the compounds of Formula 5.2, wherein R_3 , R_4 , and R_{12} are as previously defined and R_3 may or may not be equivalent to R_{12} , with a mixture of a hydride reagent, such as Et_3SiH , and an acid, such as TFA in a halogenated solvent such as DCM at a temperature of about 0 °C to 23 °C, as depicted in **c**.

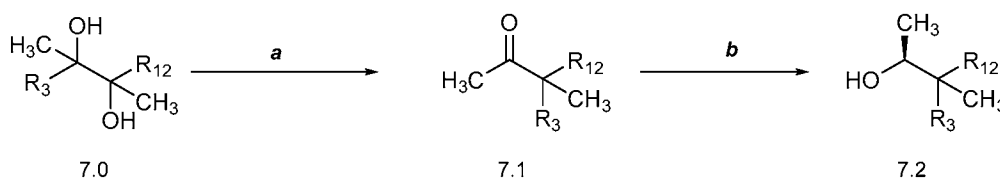
Scheme 5



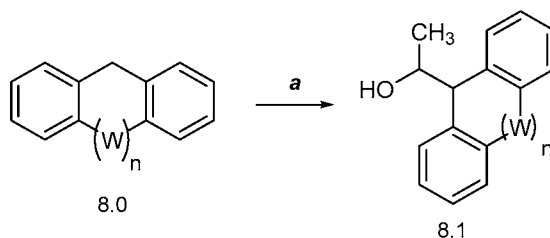
[0056] Compounds of Formula 6.2, wherein R_3 and R_{12} are an electron-deficient aryl or heteroaryl group and equivalent, can be prepared according to the methods outlined in **Scheme 6**, steps *a* – *b*. Compounds of Formula 6.1, wherein R_3 and R_{12} are as described previously, can be prepared from compound of Formula 6.0, by treating with an aryl bromide, such as 4-bromobenzonitrile, in the presence of a Pd catalyst, such as XPhos Pd G3 (CAS # [1445085-55-1](#), commercially available from Sigma-Aldrich), in a polar aprotic solvent such as THF at a temperature of about 55 °C, as indicated in *a*. Compounds of Formula 6.2, wherein R_3 and R_{12} are as described previously, can be prepared from compound of Formula 6.1, wherein R_3 and R_{12} are as described previously, by treating with a hydride reagent, such as borane dimethyl sulfide complex, in the presence of a catalyst, such as (*R*)-(+)-2-Methyl-CBS-oxazaborolidine, in a polar protic solvent, such as methanol (MeOH), at a temperature of about 0 °C, as indicated in *b*.

Scheme 6

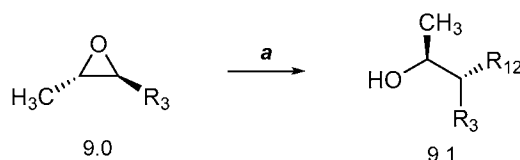
[0057] Compounds of Formula 7.2, wherein R_3 and R_{12} are as originally defined and equivalent, can be prepared according to the methods outlined in **Scheme 7, steps a – b**. Compounds of Formula 7.1, wherein R_3 and R_{12} are as described previously, can be prepared from compounds of Formula 7.0, by treating with a catalyst, such as $SbCl_5$, in a halogenated solvent such as DCM at a temperature of about 23 °C, as indicated in **a**. Compounds of Formula 7.2, wherein R_3 and R_{12} are as described previously, can be prepared from compound of Formula 7.1, wherein R_3 and R_{12} are as described previously, by treating with a hydride reagent, such as borane dimethyl sulfide complex, in the presence of a catalyst, such as (*R*)-(+)-2-Methyl-CBS-oxazaborolidine, in a polar protic solvent, such as methanol (MeOH), at a temperature of about 23 °C, as indicated in **b**.

Scheme 7

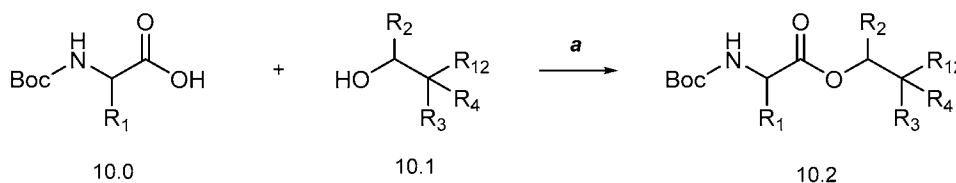
[0058] Compounds of Formula 8.1, wherein n is either 0 or 1, and W is either CH_2 or O , can be prepared according to the method outlined in **Scheme 8, step a**. Compounds of Formula 8.1, wherein n is either 0 or 1, and W is either CH_2 or O , can be prepared from compounds of Formula 8.0, wherein n is either 0 or 1, and W is either CH_2 or O , by treating with a base, such as *n*-butyllithium (*n*-BuLi), and an aldehyde, such as acetaldehyde, in a polar aprotic solvent such as THF at a temperature of about -78 °C to 23 °C, as indicated in **a**.

Scheme 8

[0059] Compounds of Formula 9.1, wherein R₃ and R₁₂ are as originally defined, can be prepared according to the method outlined in **Scheme 9, step a**. Compounds of Formula 9.1, wherein R₃ and R₁₂ are as originally defined, can be prepared from compounds of Formula 9.0, wherein R₃ is as originally defined (Formula 9.0 is either commercially available, or could be prepared from asymmetric Shi epoxidation of the corresponding *E*-olefin precursor, as reported in Wang, Z.-X.; Tu, Y.; Frohn, M.; Zhang, J.-R.; Shi, Y. *J. Am. Chem. Soc.* **1997**, *119*, 11224), by treating with a pre-mixed suspension of a copper(I) salt, such as copper iodide (CuI), and an organometallic nucleophile, such as 4-(trifluoromethyl)phenylmagnesium bromide in a polar aprotic solvent such as THF, at a temperature of about -78 °C to 23 °C, as shown in **a**.

Scheme 9

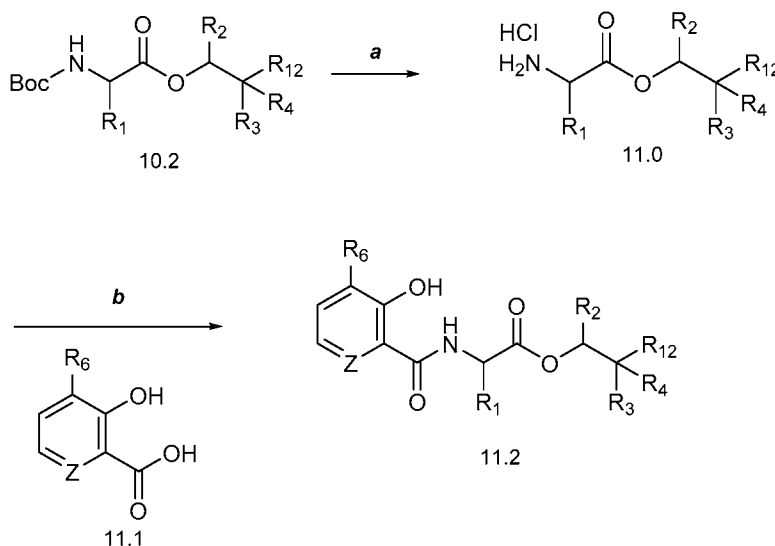
[0060] Compounds of Formula 10.2, wherein R₁, R₂, R₃, R₄ and R₁₂ are as originally defined, can be prepared according to the method outlined in **Scheme 10, step a**. Compounds of Formula 10.0, wherein R₁ is as originally defined, can be treated with alcohols of Formula 10.1, wherein R₂, R₃, R₄ and R₁₂ are as originally defined, and a coupling reagent such as 3-(ethyliminomethyleneamino)-*N,N*-dimethylpropan-1-amine hydrochloride (EDC), and a catalyst such as *N,N*-dimethylpyridin-4-amine (DMAP) in a halogenated solvent like DCM to afford compounds of Formula 10.2, wherein R₁, R₂, R₃, R₄ and R₁₂ are as previously defined, as shown in **a**.

Scheme 10

[0061] Compounds of Formula 11.2, wherein R_1 , R_2 , R_3 , R_4 , R_6 , R_{12} and Z are as originally defined, can be prepared according to the methods outlined in **Scheme 11, steps a – b**. As depicted in **a**, compounds of Formula 11.2, wherein R_1 , R_2 , R_3 , R_4 and R_{12} are as originally defined, can be subjected to an acid, such as a 4 normal (N) solution of hydrogen chloride (HCl) in dioxane, in a halogenated solvent such as DCM to afford compounds of Formula 9.0, wherein R_1 , R_2 , R_3 , R_4 and R_{12} are as originally defined, as shown in **a**.

[0062] Compounds of Formula 11.0, wherein R_1 , R_2 , R_3 , R_4 and R_{12} are as originally defined, can be treated with compounds of Formula 11.1, wherein R_6 and Z are as originally defined, in the presence of a base, such as diisopropylethylamine (DIPEA), and a peptide coupling reagent, such as benzotriazol-1-yl-oxytripyrrolidinophosphonium hexafluorophosphate (PyBOP), in an halogenated solvent like DCM, to afford compounds of Formula 11.2, wherein R_1 , R_2 , R_3 , R_4 , R_6 , R_{12} and Z are as originally defined, as shown in **b**.

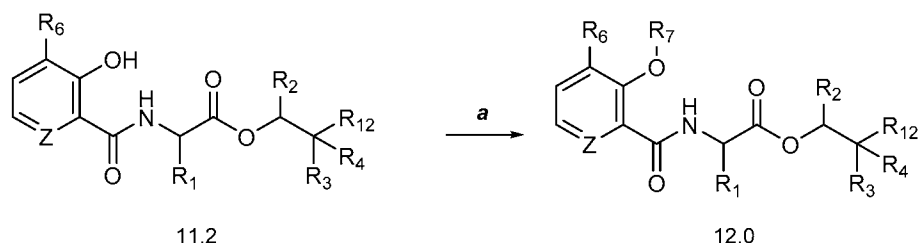
Scheme 11



[0063] Compounds of Formula 12.0, wherein R_1 , R_2 , R_3 , R_4 , R_6 , R_7 , R_{12} and Z are as originally defined, can be prepared according to the method outlined in **Scheme 12, step a**. As shown in **a**, compounds of Formula 11.2, wherein R_1 , R_2 , R_3 , R_4 , R_6 , R_{12} and Z are as originally defined, can be treated with an appropriate alkyl halide with or without a reagent such as sodium iodide (NaI) and an alkali carbonate base, such as sodium carbonate (Na_2CO_3) or potassium

carbonate (K_2CO_3), in a solvent like acetone at a temperature of about 55 °C, or by treatment with an acyl halide in the presence of an amine base, such as pyridine, triethylamine (Et_3N), DMAP, or mixtures thereof, in an aprotic solvent such as DCM, at a temperature of about 23 °C, to afford compounds of Formula 12.0 wherein R_1 , R_2 , R_3 , R_4 , R_6 , R_7 , R_{12} and Z are as originally defined.

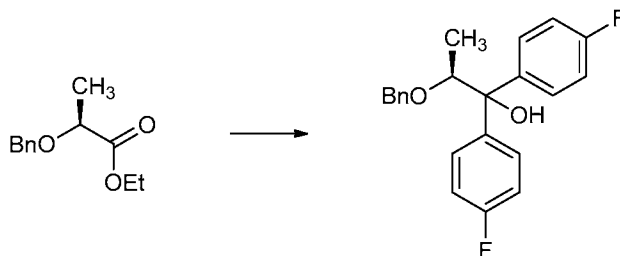
Scheme 12



EXAMPLES

[0050] The chemistry in the following examples may be conducted using either enantiomer of 2-((*tert*-butoxycarbonyl)amino)propanoic acid (Boc-Ala-OH) or either protected (PMB or Bn) or unprotected enantiomer of ethyl lactate.

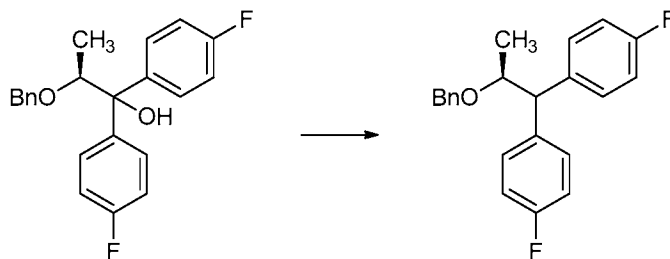
[0051] Example 1: Preparation of (*S*)-2-(benzyloxy)-1,1-bis(4-fluorophenyl)propan-1-ol.



[0052] To a solution of (*S*)-ethyl 2-(benzyloxy)propanoate (2.08 grams (g), 10.0 millimoles (mmol)) in tetrahydrofuran (THF; 20 milliliters (mL)) at 0 °C was slowly added (4-fluorophenyl)magnesium bromide (31.3 mL, 25.0 mmol, 0.8 molar (M) in THF) over a 10 minute (min) period. The reaction vessel was allowed to warm slowly to room temperature over 2 hours (h), and the reaction mixture was quenched by careful addition of saturated (sat.) aqueous (aq.) ammonium chloride (NH_4Cl ; 50 mL). The mixture was diluted with diethyl ether (Et_2O ; 50 mL), the

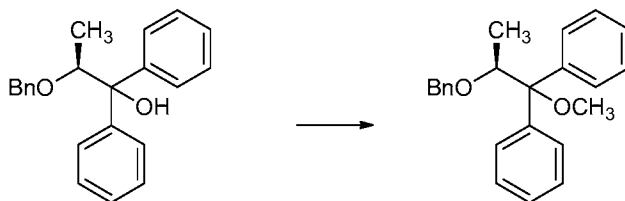
phases were separated, and the aq. phase was extracted with Et₂O (2 x 50 mL). The combined organic phases were washed with sat. aq. sodium chloride (NaCl, brine; 100 mL), dried over sodium sulfate (Na₂SO₄), filtered, and concentrated. The resulting oil was purified by flash column chromatography (silica gel (SiO₂), 0→5% acetone in hexanes) to afford the title compound (3.28 g, 93%) as a colorless oil: ¹H NMR (300 MHz, CDCl₃) δ 7.47 – 7.38 (m, 2H), 7.38 – 7.27 (m, 5H), 7.17 – 7.09 (m, 2H), 7.04 – 6.89 (m, 4H), 4.64 (dd, *J* = 11.4, 0.7 Hz, 1H), 4.51 – 4.38 (m, 2H), 3.12 (s, 1H), 1.11 (d, *J* = 6.1 Hz, 3H); ¹⁹F NMR (376 MHz, CDCl₃) δ -116.19, -116.41; ESIMS *m/z* 377 ([M+Na]⁺).

[0053] Example 2A: Preparation of (*S*)-4,4'-(2-(benzyloxy)propane-1,1-diyl)bis(fluorobenzene).



[0054] To a solution of (*S*)-2-(benzyloxy)-1,1-bis(4-fluorophenyl)propan-1-ol (709 milligrams (mg), 2.00 mmol) in dichloromethane (DCM; 20 mL) at 0 °C was added triethylsilane (Et₃SiH; 3.19 mL, 20.0 mmol) followed by 2,2,2-trifluoroacetic acid (TFA; 1.53 mL, 20.0 mmol). The mixture was stirred at 0 °C for 1 h. The resulting solution was quenched by careful addition of sat. aq. sodium bicarbonate (NaHCO₃; 20 mL). The phases were separated, and the aq. phase was extracted with DCM (2 x 30 mL). The combined organic phases were washed with brine (50 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→10% acetone in hexanes) to afford the title compound (627 mg, 92%) as a white solid: ¹H NMR (400 MHz, CDCl₃) δ 7.31 – 7.22 (m, 5H), 7.21 – 7.16 (m, 2H), 7.10 – 7.03 (m, 2H), 7.00 – 6.91 (m, 4H), 4.54 (dd, *J* = 11.5, 0.7 Hz, 1H), 4.31 (dd, *J* = 11.6, 0.8 Hz, 1H), 4.14 (dq, *J* = 8.1, 6.1 Hz, 1H), 3.93 (d, *J* = 8.1 Hz, 1H), 1.18 (d, *J* = 6.0 Hz, 3H); ¹⁹F NMR (376 MHz, CDCl₃) δ -116.60, -117.10; ESIMS (*m/z*) 361 ([M+Na]⁺).

[0055] Example 2B: Preparation of (*S*)-(2-(benzyloxy)-1-methoxypropane-1,1-diyl)dibenzene.



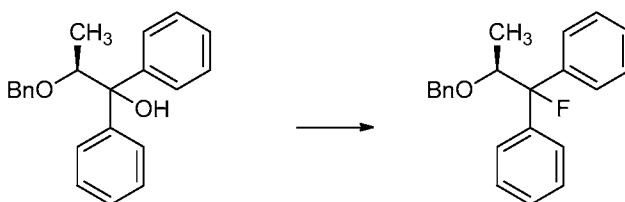
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[0056] To a suspension of sodium hydride (NaH; 52.0 mg, 1.30 mmol, 60% weight per weight (w/w) in mineral oil) in *N,N*-dimethylformamide (DMF; 3 mL) at 0 °C was added a solution of (*S*)-2-(benzyloxy)-1,1-diphenylpropan-1-ol (318 mg, 1 mmol) in DMF (1 mL). The reaction mixture was stirred at room temperature for 30 min and then cooled to 0 °C. Iodomethane (MeI; 93.0 microliters (μL), 1.50 mmol) was added, and the reaction mixture was stirred at room temperature for 1 h. The resulting solution was quenched by careful addition of sat. aq. NaHCO₃ (10 mL). The mixture was diluted with diethyl ether (Et₂O; 10 mL), the phases were separated, and the aq. phase was extracted with Et₂O (2 x 10 mL). The combined organic phases were washed with brine (20 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→5% acetone in hexanes) to afford the title compound (295 mg, 89%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.47 – 7.41 (m, 2H), 7.40 – 7.35 (m, 2H), 7.33 – 7.18 (m, 11H), 4.69 (d, *J* = 11.9 Hz, 1H), 4.54 (d, *J* = 12.3 Hz, 1H), 4.50 (q, *J* = 6.1 Hz, 1H), 3.13 (s, 3H), 1.10 (d, *J* = 6.1 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 142.96, 141.31, 138.79, 129.13, 128.54, 128.14, 127.61, 127.16, 127.08, 126.95, 126.69, 99.99, 85.35, 78.13, 70.80, 52.46, 13.65; ESIMS (*m/z*) 333 ([M+H]⁺).

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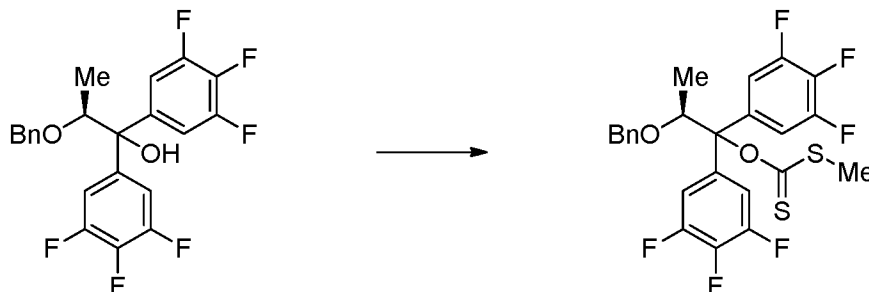
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[0057] Example 2C: Preparation of (*S*)-(2-(benzyloxy)-1-fluoropropane-1,1-diyl)dibenzene.



[0058] To a solution of (*S*)-2-(benzyloxy)-1,1-diphenylpropan-1-ol (300 mg, 0.942 mmol) in DCM (5 mL) at 0 °C was added (diethylamino)sulfur trifluoride (DAST; 1.88 mL, 1.88 mmol, 1 M in DCM). The reaction was slowly warmed to room temperature over 3 h. The resulting solution was quenched by careful addition of sat. aq. NaHCO₃ (5 mL). The phases were separated, and the aq. phase was extracted with DCM (2 x 10 mL). The combined organic phases were washed with brine (10 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→10% acetone in hexanes) to afford the title compound (300 mg, 98%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.58 – 7.49 (m, 2H), 7.43 – 7.37 (m, 2H), 7.36 – 7.20 (m, 9H), 7.09 – 6.99 (m, 2H), 4.47 (d, *J* = 11.7 Hz, 1H), 4.37 – 4.25 (m, 2H), 1.26 (dd, *J* = 6.3, 1.3 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 142.23 (d, *J* = 22.7 Hz), 141.00 (d, *J* = 23.5 Hz), 138.03, 128.21, 128.16, 127.90 (d, *J* = 1.5 Hz), 127.80, 127.72 (d, *J* = 1.7 Hz), 127.52, 127.42 (d, *J* = 1.3 Hz), 126.23 (d, *J* = 9.6 Hz), 125.93 (d, *J* = 8.7 Hz), 99.96 (d, *J* = 180.8 Hz), 78.91 (d, *J* = 26.9 Hz), 71.68, 14.47 (d, *J* = 3.6 Hz); ¹⁹F NMR (376 MHz, CDCl₃) δ -159.80.

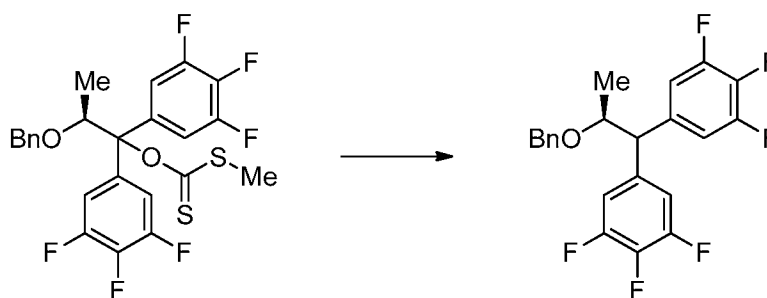
[0059] Example 2D, Step 1: Preparation of (*S*)-*O*-(2-(benzyloxy)-1,1-bis(3,4,5-trifluorophenyl)propyl) *S*-methyl carbonodithioate.



[0060] To a solution of (*S*)-2-(benzyloxy)-1,1-bis(3,4,5-trifluorophenyl)propan-1-ol (496 mg, 1.16 mmol) in anhydrous THF (5.8 mL) was added NaH (93.0 mg, 2.33 mmol), followed by imidazole (3.96 mg, 0.0580 mmol), and the reaction mixture was stirred at ambient temperature for 1 h. Carbon disulfide (562 μL, 9.30 mmol) was added via syringe in one portion, followed by MeI (579 μL, 9.30 mmol), and the reaction mixture was stirred at ambient temperature for 2 h. The reaction mixture was diluted with Et₂O (5 mL) and quenched with sat. aq. NH₄Cl (10 mL). The layers were separated, and the aq. layer was extracted with Et₂O (3 x 10 mL). The combined organic layers were dried over magnesium sulfate (MgSO₄), filtered and concentrated to afford an

orange/brown oil. The crude oil was purified by flash column chromatography (SiO₂, 0→50% ethyl acetate (EtOAc) in hexanes) to afford the title compound (627 mg, 94%) as a clear, bright yellow colored oil: ¹H NMR (400 MHz, CDCl₃) δ 7.40 – 7.27 (m, 3H), 7.24 – 7.16 (m, 2H), 7.02 (dd, *J* = 9.1, 6.6 Hz, 2H), 6.96 (dd, *J* = 8.8, 6.5 Hz, 2H), 5.44 (q, *J* = 6.1 Hz, 1H), 4.66 (d, *J* = 11.6 Hz, 1H), 4.51 (d, *J* = 11.6 Hz, 1H), 2.49 (s, 3H), 1.16 (d, *J* = 6.1 Hz, 3H); ¹⁹F NMR (376 MHz, CDCl₃) δ -133.89 (d, *J* = 20.7 Hz), -134.73 (d, *J* = 20.6 Hz), -159.83 (t, *J* = 20.6 Hz), -160.56 (t, *J* = 20.7 Hz); (Thin film) 2922, 1721, 1622, 1595, 1526, 1436, 1344, 1241, 1217, 1197, 1119, 1088, 1040, 965, 908, 861, 822, 730, 712, 697, 672 cm⁻¹.

10 **[0061] Example 2D, Step 2:** Preparation of (*S*)-5,5'-(2-(benzyloxy)propane-1,1-diyl)bis(1,2,3-trifluorobenzene).

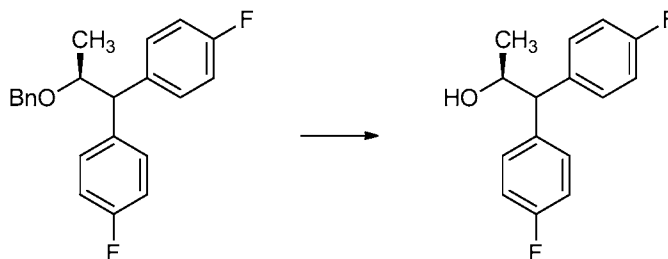


15 **[0062]** A solution of (*S*)-*O*-(2-(benzyloxy)-1,1-bis(3,4,5-trifluorophenyl)propyl) *S*-methyl carbonodithioate (598 mg, 1.16 mmol) in toluene (200 mL) was degassed by a freeze-pump-thaw procedure (3 cycles using liquid nitrogen (N₂)) under an atmosphere of N₂. Tributyltin hydride (3.12 mL, 11.6 mmol) was then added, the reaction flask was fitted with a reflux condenser, and the reaction mixture was heated to a light reflux (115 °C). A solution of azobisisobutyronitrile (AIBN; 0.200 g, 1.22 mmol) in degassed toluene (3 cycles via liquid N₂; 32 mL) was added via syringe
20 down the reflux condenser over 3 h. Once slow addition of the AIBN was complete, the reaction mixture was stirred at reflux overnight. The solvent was removed *in vacuo* to provide a pale yellow oil. The crude oil was purified by flash column chromatography (SiO₂, 0→30% EtOAc in hexanes) to afford the title compound (358 mg, 72%) as a clear, colorless oil: ¹H NMR (400 MHz, CDCl₃) δ
25 7.28 (d, *J* = 6.6 Hz, 3H), 7.17 – 7.06 (m, 2H), 6.92 (dd, *J* = 8.5, 6.5 Hz, 2H), 6.79 (dd, *J* = 8.3, 6.4

Hz, 2H), 4.59 (d, $J = 11.7$ Hz, 1H), 4.31 (d, $J = 11.7$ Hz, 1H), 4.02 (p, $J = 6.2$ Hz, 1H), 3.76 (d, $J = 6.8$ Hz, 1H), 1.19 (d, $J = 6.1$ Hz, 3H); ^{19}F NMR (376 MHz, CDCl_3) δ -133.80 (d, $J = 20.5$ Hz), -134.34 (d, $J = 20.5$ Hz), -162.54 (t, $J = 20.5$ Hz), -162.84 (t, $J = 20.5$ Hz); (Thin film) 2871, 1621, 1526, 1445, 1345, 1262, 1235, 1116, 1096, 1043, 859, 802, 728, 698, 679 cm^{-1} .

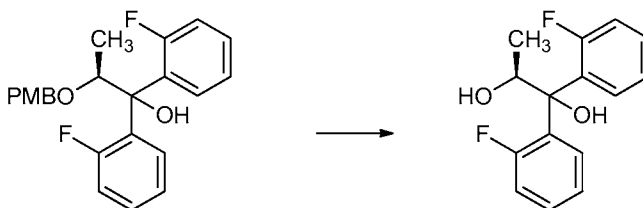
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[0063] Example 3A: Preparation of (*S*)-1,1-bis(4-fluorophenyl)propan-2-ol.



[0064] To a solution of (*S*)-4,4'-(2-(benzyloxy)propane-1,1-diyl)bis(fluorobenzene) (575 mg, 1.70 mmol) in ethanol (EtOH; 11 mL) and cyclohexene (5.5 mL) at room temperature was added palladium on carbon (Pd/C; 362 mg, 0.0850 mmol, 2.5% w/w of Pd). The reaction mixture was stirred at 65 °C for 2 h, cooled to room temperature, filtered through a plug of Celite[®], and concentrated to afford the title compound (415 mg, 98%) as a colorless oil: ^1H NMR (400 MHz, CDCl_3) δ 7.36 – 7.29 (m, 2H), 7.25 – 7.18 (m, 2H), 7.09 – 6.93 (m, 4H), 4.47 (dq, $J = 8.2, 6.1, 3.3$ Hz, 1H), 3.80 (d, $J = 8.3$ Hz, 1H), 1.55 (d, $J = 3.3$ Hz, 1H), 1.19 (d, $J = 6.1$ Hz, 3H); ^{13}C NMR (101 MHz, CDCl_3) δ 162.90 (d, $J = 23.3$ Hz), 160.46 (d, $J = 23.1$ Hz), 138.15 (d, $J = 3.1$ Hz), 136.94 (d, $J = 3.6$ Hz), 130.14 (d, $J = 7.8$ Hz), 129.55 (d, $J = 7.8$ Hz), 115.70 (d, $J = 18.8$ Hz), 115.49 (d, $J = 18.8$ Hz), 70.07, 58.61, 21.63; ^{19}F NMR (376 MHz, CDCl_3) δ -115.84, -116.19.

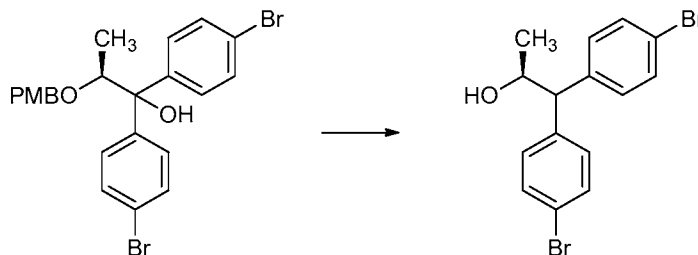
[0065] Example 3B: Preparation of (*S*)-1,1-bis(2-fluorophenyl)propane-1,2-diol.



[0066] To a solution of (*S*)-1,1-bis(2-fluorophenyl)-2-((4-methoxybenzyl)oxy)propan-1-ol (790 mg, 2.06 mmol) in DCM (20 mL) at 0 °C was added Et_3SiH (3.28 mL, 20.6 mmol) followed

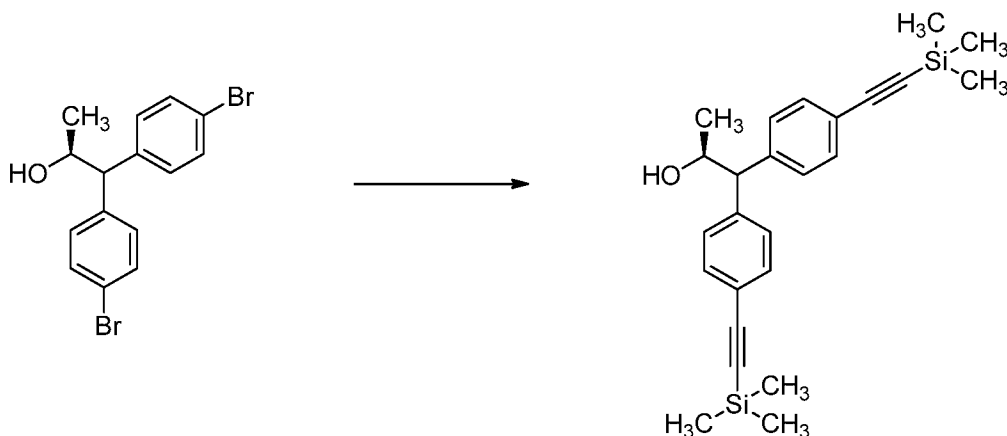
by TFA (1.57 mL, 20.6 mmol). The mixture was stirred at 0 °C for 1 h. The resulting solution was quenched by careful addition of sat. aq. NaHCO₃ (20 mL). The phases were separated, and the aq. phase was extracted with DCM (2 x 30 mL). The combined organic phases were washed with brine (50 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→10% acetone in hexanes) to afford the title compound (388 mg, 71%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.90 – 7.77 (m, 1H), 7.70 (tt, *J* = 8.2, 1.5 Hz, 1H), 7.31 – 7.10 (m, 4H), 6.97 (ddd, *J* = 12.7, 8.1, 1.3 Hz, 1H), 6.88 (ddd, *J* = 11.8, 8.0, 1.4 Hz, 1H), 5.11 (qd, *J* = 6.3, 2.3 Hz, 1H), 3.49 (s, 1H), 2.27 (s, 1H), 1.09 (d, *J* = 6.3 Hz, 3H); ¹⁹F NMR (376 MHz, CDCl₃) δ -112.90 (d, *J* = 8.3 Hz), -113.92 (d, *J* = 8.4 Hz); ESIMS (*m/z*) 551 ([2M+Na]⁺).

[0067] Example 3C: Preparation of (*S*)-1,1-bis(4-bromophenyl)propan-2-ol.



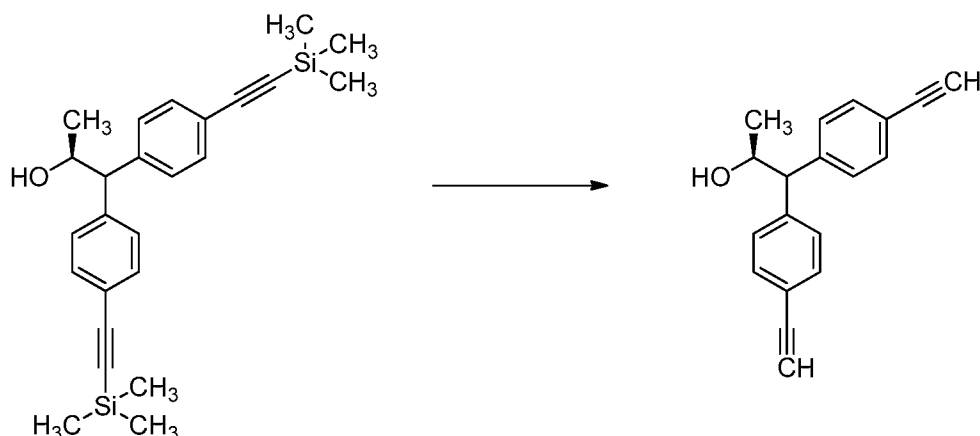
[0068] To a solution of (*S*)-1,1-bis(4-bromophenyl)-2-((4-methoxybenzyl)oxy)propan-1-ol (1.80 g, 3.56 mmol) in DCM (18 mL) at 0 °C was added Et₃SiH (5.68 mL, 35.6 mmol) followed by TFA (2.72 mL, 35.6 mmol). The mixture was warmed slowly to room temperature over 3 h. The resulting solution was quenched by careful addition of sat. aq. NaHCO₃ (20 mL). The phases were separated, and the aq. phase was extracted with DCM (2 x 30 mL). The combined organic phases were washed with brine (50 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→10% acetone in hexanes) to afford the title compound (742 mg, 56%) as a colorless oil: ¹H NMR (300 MHz, CDCl₃) δ 7.51 – 7.36 (m, 4H), 7.25 – 7.17 (m, 2H), 7.18 – 7.06 (m, 2H), 4.48 (dq, *J* = 8.2, 6.1 Hz, 1H), 3.76 (d, *J* = 8.2 Hz, 1H), 2.80 (s, 1H), 1.19 (d, *J* = 6.2 Hz, 3H); ¹³C NMR (75 MHz, CDCl₃) δ 140.94, 139.85, 131.98, 131.85, 130.39, 129.84, 121.06, 120.72, 69.82, 58.91, 21.65; (Thin film) 3390, 3024, 2969, 2900, 1486, 1072 cm⁻¹.

[0069] Example 3D, Step 1: Preparation of (*S*)-1,1-bis(4-((trimethylsilyl)ethynyl)phenyl)propan-2-ol.



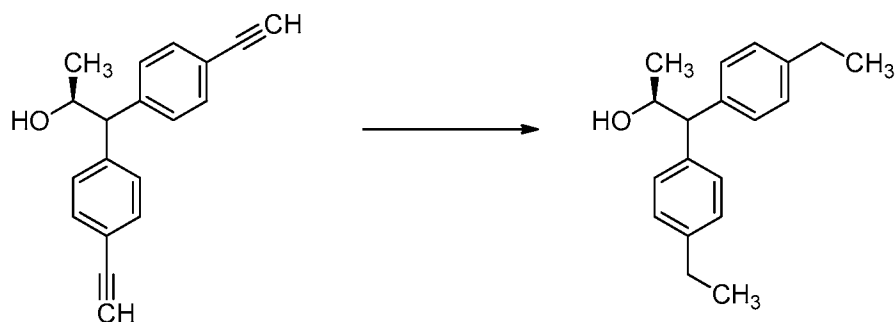
[0070] To a solution of (*S*)-1,1-bis(4-bromophenyl)propan-2-ol (1.01 g, 2.72 mmol) in THF (9 mL) was added bis(triphenylphosphine)palladium dichloride (0.095 g, 0.136 mmol) and copper(I) iodide (CuI; 0.026 g, 0.136 mmol). The mixture was sparged with N₂ for 20 min, and triethylamine (Et₃N; 4.53 mL) was added dropwise. To the resulting mixture was added ethynyltrimethylsilane (1.15 mL, 8.15 mmol) dropwise, and the mixture was heated to reflux and stirred overnight. The mixture was cooled to room temperature, and the reaction was quenched with sat. aq. NaHCO₃. The products were extracted with EtOAc (2x), and the combined organic layers were washed with brine, dried over Na₂SO₄, filtered and concentrated. The crude residue was then purified by flash column chromatography (SiO₂, 0→20% acetone in hexanes) to provide the title compound (495 mg, 45%) as a brown foam: ¹H NMR (400 MHz, CDCl₃) δ 7.48 – 7.42 (m, 2H), 7.42 – 7.37 (m, 2H), 7.33 – 7.27 (m, 2H), 7.24 – 7.17 (m, 2H), 4.51 (dq, *J* = 12.2, 6.1, 3.5 Hz, 1H), 3.81 (d, *J* = 8.3 Hz, 1H), 1.60 (d, *J* = 3.8 Hz, 1H), 1.18 (d, *J* = 6.1 Hz, 3H), 0.26 (s, 9H), 0.26 (s, 9H); ¹³C NMR (101 MHz, CDCl₃) δ 142.55, 141.48, 132.42, 132.29, 128.69, 128.15, 121.90, 121.57, 104.76, 104.71, 94.49, 94.33, 69.76, 59.96, 21.55, 0.00; (Thin film) 3397, 2960, 2156, 1501, 1248, 861, 840 cm⁻¹; HRMS-ESI (*m/z*) [*M*+H]⁺ calcd for C₂₅H₃₃OSi₂, 405.2064; found, 405.2070.

[0071] Example 3D, Step 2: Preparation of (*S*)-1,1-bis(4-ethynylphenyl)propan-2-ol.



[0072] To a solution of (*S*)-1,1-bis(4-((trimethylsilyl)ethynyl)phenyl)propan-2-ol (0.470 g, 1.16 mmol) in methanol (MeOH; 5.8 mL) was added potassium carbonate (K_2CO_3 ; 0.482 g, 3.48 mmol). The mixture was stirred for 1 h at room temperature and then filtered through Celite[®]. The filter cake was washed with MeOH, and the filtrate was concentrated. The crude material was purified by flash column chromatography (SiO_2 , 0→20% acetone in hexanes) to provide the title compound (288 mg, 95%) as a yellow oil: 1H NMR (300 MHz, $CDCl_3$) δ 7.48 – 7.43 (m, 2H), 7.43 – 7.39 (m, 2H), 7.35 – 7.29 (m, 2H), 7.24 – 7.19 (m, 2H), 4.51 (dq, J = 8.3, 6.1, 3.7 Hz, 1H), 3.82 (d, J = 8.3 Hz, 1H), 3.05 (s, 1H), 3.04 (s, 1H), 1.63 – 1.55 (m, 1H), 1.18 (d, J = 6.1 Hz, 3H); ^{13}C NMR (101 MHz, $CDCl_3$) δ 142.84, 141.82, 132.60, 132.48, 128.74, 128.22, 120.87, 120.57, 83.31, 83.29, 77.39, 77.29, 69.73, 59.96, 21.66; (Thin film) 3436, 3280, 2968, 2106, 1499, 1075, 825 cm^{-1} ; HRMS-ESI (m/z) $[M+H]^+$ calcd for $C_{19}H_{17}O$, 261.1274; found, 261.1272.

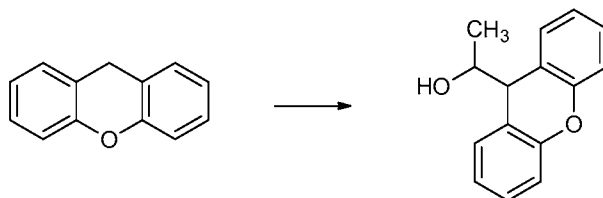
[0073] Example 3D, Step 3: Preparation of (*S*)-1,1-bis(4-ethylphenyl)propan-2-ol.



[0074] To a solution of (*S*)-1,1-bis(4-ethynylphenyl)propan-2-ol (0.144 g, 0.553 mmol) in EtOAc (2.8 mL) was added palladium (5% weight (wt) on carbon, dry basis; 0.235 g, 0.055 mmol).

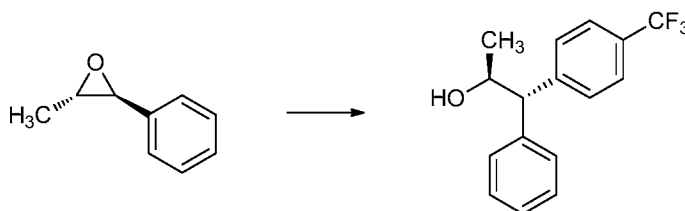
The mixture was stirred under a balloon of hydrogen overnight. The mixture was filtered through Celite[®], and the filter cake was washed with EtOAc. The combined filtrate was then concentrated, and the crude residue was purified by flash column chromatography (SiO₂, 0→25% acetone in hexanes) to provide the title compound (97.0 mg, 65%) as a clear oil: ¹H NMR (400 MHz, CDCl₃) δ 7.33 – 7.25 (m, 2H), 7.22 – 7.15 (m, 2H), 7.18 – 7.11 (m, 2H), 7.10 (d, *J* = 8.1 Hz, 2H), 4.51 (dq, *J* = 8.7, 6.1, 2.5 Hz, 1H), 3.74 (d, *J* = 8.9 Hz, 1H), 2.65 – 2.53 (m, 4H), 1.68 (d, *J* = 2.8 Hz, 1H), 1.23 – 1.14 (m, 9H); ¹³C NMR (101 MHz, CDCl₃) δ 142.74, 142.33, 139.94, 138.91, 128.48, 128.40, 128.07, 128.02, 70.19, 60.02, 28.41, 28.39, 21.37, 15.47, 15.46; (Thin film) 3421, 2963, 1510, 1110, 821 cm⁻¹; HRMS-ESI (*m/z*) ([M+Na]⁺) calcd for C₁₉H₂₄NaO, 291.1719; found, 291.1725.

[0075] Example 3E: Preparation of 1-(9*H*-xanthen-9-yl)ethanol.



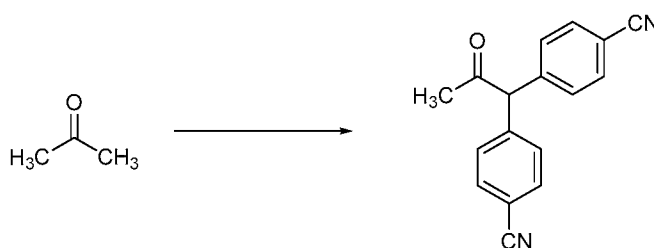
[0076] To a solution of 9*H*-xanthene (364 mg, 2.00 mmol) in THF (10 mL) at -78 °C was added *n*-butyllithium (2.5 M in hexanes; 0.880 mL, 2.20 mmol). The mixture was stirred at -78 °C for 30 min. Acetaldehyde (0.226 mL, 4.00 mmol) was added, and the reaction mixture was warmed slowly to room temperature overnight. The resulting solution was quenched by careful addition of sat. aq. NH₄Cl (10 mL). The phases were separated, and the aq. phase was extracted with Et₂O (2 x 15 mL). The combined organic phases were washed with brine (20 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→10% acetone in hexanes) to afford the title compound (216 mg, 48%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.33 – 7.22 (m, 4H), 7.17 – 7.04 (m, 4H), 3.99 (d, *J* = 5.1 Hz, 1H), 3.96 – 3.82 (m, 1H), 1.54 (d, *J* = 6.0 Hz, 1H), 1.00 (d, *J* = 6.3 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 152.94, 152.65, 129.54, 129.30, 128.19, 128.17, 123.18, 123.14, 122.48, 121.73, 116.59, 116.41, 73.07, 47.06, 18.81; ESIMS (*m/z*) 475 ([2M+Na]⁺).

[0077] Example 3F: Preparation of (1*S*,2*S*)-1-phenyl-1-(4-(trifluoromethyl)phenyl)propan-2-ol.



[0078] To a mixture of magnesium turnings (102 mg, 4.20 mmol) in Et₂O (4 mL) was added 1-bromo-4-(trifluoromethyl)benzene (0.588 mL, 4.20 mmol) at room temperature, followed by MeI (5 μ L). Upon warming to a gentle boil using a heat gun, the mixture turned a yellow/brown color. The reaction was then stirred in a water bath at room temperature for 30 min until almost all the magnesium was consumed. This was added to a suspension of copper(I) iodide (CuI; 400 mg, 2.10 mmol) in Et₂O (4 mL) at -78 °C. The reaction was stirred at -20 °C for 30 min, then cooled to -78 °C, and (2*S*,3*S*)-2-methyl-3-phenyloxirane (0.201 mL, 1.50 mmol) was added. The resulting mixture was warmed slowly to room temperature overnight. The resulting solution was quenched by careful addition of sat. aq. NH₄Cl (10 mL). The phases were separated, and the aq. phase was extracted with Et₂O (2 x 15 mL). The combined organic phases were washed with brine (20 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0 $\rightarrow$ 10% acetone in hexanes) to afford the title compound (390 mg, 94%) as a light yellow oil: ¹H NMR (400 MHz, CDCl₃) δ 7.60 – 7.50 (m, 2H), 7.48 – 7.38 (m, 2H), 7.38 – 7.33 (m, 4H), 7.30 – 7.23 (m, 1H), 4.58 (dq, *J* = 8.4, 6.1, 3.5 Hz, 1H), 3.88 (d, *J* = 8.5 Hz, 1H), 1.65 (d, *J* = 3.6 Hz, 1H), 1.20 (d, *J* = 6.1 Hz, 3H); ¹⁹F NMR (376 MHz, CDCl₃) δ -62.49; ESIMS (*m/z*) 263 ([M-OH]⁺).

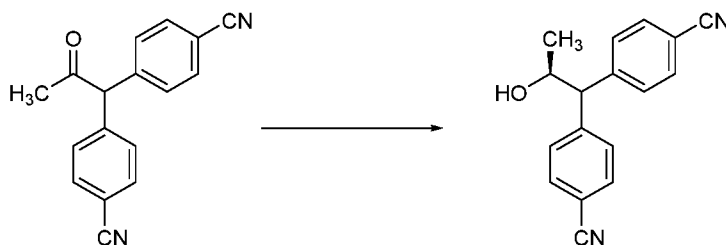
[0079] Example 3G, Step 1: Preparation of 4,4'-(2-oxopropane-1,1-diyl)dibenzonitrile.



[0080] To a suspension of 4-bromobenzonitrile (546 mg, 3.00 mmol) and cesium carbonate (977 mg, 3.00 mmol) in THF (10 mL) under an N₂ atmosphere was added acetone (1.10 mL, 15.00 mmol), followed by X-Phos Pd G3 (50.8 mg, 0.060 mmol). Then, the vial was sealed and heated to

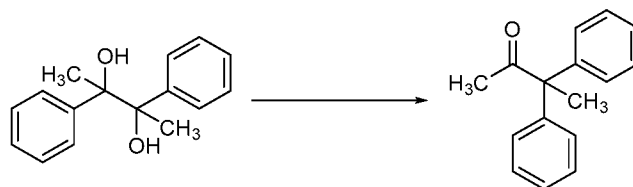
55 °C for 4 days. The reaction was diluted with EtOAc (30 mL) and washed with sat. NH₄Cl (3 x 10 mL), water (15 mL), and brine (15 mL). Then the organic phase was dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→40% EtOAc in hexanes) to afford the title compound (174 mg, 22%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.66 (d, *J* = 8.4 Hz, 4H), 7.34 (d, *J* = 8.3 Hz, 4H), 5.21 (s, 1H), 2.29 (s, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 203.68, 142.15, 132.75, 129.64, 118.21, 112.00, 64.25, 30.43; ESIMS *m/z* 261 ([M+H]⁺).

[0081] Example 3G, Step 2: Preparation of (*S*)-4,4'-(2-hydroxypropane-1,1-diyl)dibenzonitrile.



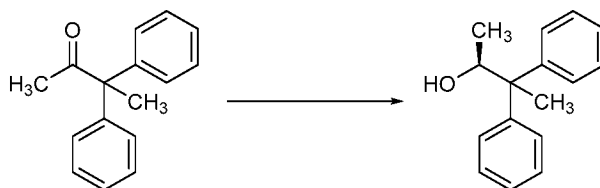
[0082] To a solution of 4,4'-(2-oxopropane-1,1-diyl)dibenzonitrile (174 mg, 0.668 mmol) in toluene (4.5 mL) was added (*R*)-1-methyl-3,3-diphenylhexahydropyrrolo[1,2-c][1,3,2]oxazaborole (1 M solution in toluene, 66.8 μL, 0.067 mmol). Then, the reaction was cooled to 0 °C and a solution of BH₃-DMS (69.8 μL, 0.735 mmol) in 0.5 mL toluene was added over 2 min. The flask was left to stir at 0 °C. After 2 h, the reaction was quenched with methanol (0.5 mL), diluted with EtOAc and added water. Phases were separated and the aqueous phase was extracted with EtOAc x 2. The combined organic phases were washed with brine (20 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→50% EtOAc in hexanes) to afford the title compound (99.7 mg, 57%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ d 7.60 (dd, *J* = 8.4, 6.8 Hz, 4H), 7.51 – 7.46 (m, 2H), 7.43 – 7.37 (m, 2H), 4.63 – 4.47 (m, 1H), 3.97 (d, *J* = 7.5 Hz, 1H), 1.97 (d, *J* = 3.8 Hz, 1H), 1.21 (d, *J* = 6.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) δ 146.91, 145.86, 132.60, 132.45, 129.90, 129.19, 118.58, 118.51, 110.96, 110.92, 69.19, 59.56, 22.27; ESIMS *m/z* 263 ([M+H]⁺).

[0083] Example 3H, Step 1: Preparation of 3,3-diphenylbutan-2-one.



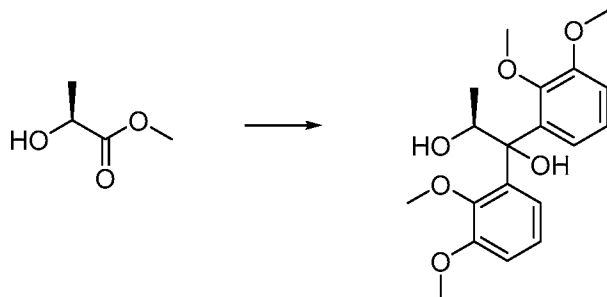
[0084] To a magnetically stirred mixture of 2,3-diphenylbutane-2,3-diol (500 mg, 2.06 mmol) in DCM (10 mL) was added antimony pentachloride (26.5 μ L, 0.206 mmol) under air atmosphere. The reaction mixture was stirred at 25 °C for 1 h and then was quenched by slow addition of sat. aq. NaHCO₃. The resulting mixture was diluted with water and additional DCM, and the organic layer was separated by passing through a phase separator. The resulting oil was purified by flash column chromatography (SiO₂, 0→5% acetone in hexanes) to afford the title compound (330 mg, 71%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.36 – 7.31 (m, 4H), 7.30 – 7.25 (m, 2H), 7.23 – 7.15 (m, 4H), 2.11 (s, 3H), 1.87 (s, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 209.16, 143.59, 128.36, 126.91, 62.32, 27.62, 26.42; ESIMS m/z 225 ([M+H]⁺).

[0085] Example 3H, Step 2: Preparation of (*S*)-3,3-diphenylbutan-2-ol.



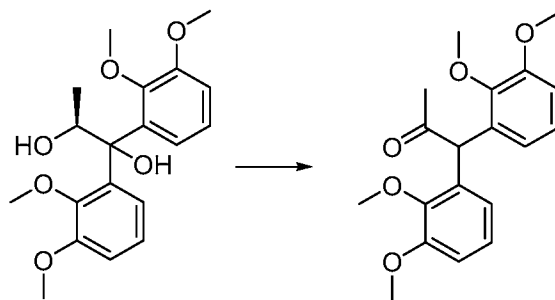
[0086] To a solution of 3,3-diphenylbutan-2-one (150 mg, 0.669 mmol) in toluene (4.5 mL) was added (*R*)-1-methyl-3,3-diphenylhexahydropyrrolo[1,2-c][1,3,2]oxazaborole (1 M solution in toluene, 134 μ L, 0.134 mmol). Then, a solution of BH₃-DMS (70.2 μ L, 0.702 mmol) in 0.5 mL of toluene was added to the reaction mixture over 2 min. The flask was left to stir at room temperature. After 1 h, the reaction was quenched with methanol (0.5 mL). DCM and water were added, and the phases were separated. The aqueous phase was extracted with DCM (2x). The combined organic phases were washed with brine (20 mL), dried over Na₂SO₄, filtered, and concentrated. The resulting oil was purified by flash column chromatography (SiO₂, 0→20% acetone in hexanes) to afford the title compound (150 mg, 99%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.39 - 7.17 (m, 10H), 4.70 – 4.61 (m, 1H), 1.67 (s, 3H), 1.51 (d, J = 4.9 Hz, 1H), 1.11 (d, J = 6.3 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 147.30, 145.86, 128.40, 128.15, 128.05, 127.79, 126.20, 126.01, 72.28, 51.77, 23.26, 18.39; ESIMS m/z 227 ([M+H]⁺).

[0087] Example 3I, Step 1: Preparation of (*S*)-1,1-bis(2,3-dimethoxyphenyl)propane-1,2-diol.



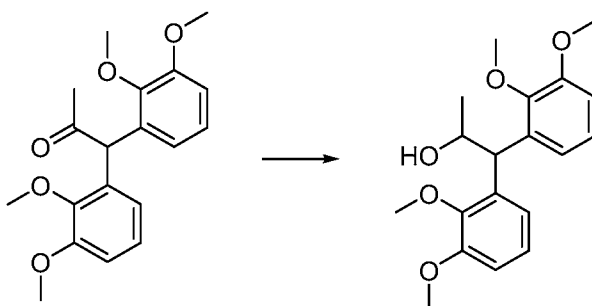
[0088] To a solution of isopropylmagnesium lithium chloride (1.3 M in THF, 6.1 mL, 8.00 mmol) was added THF (2 mL) and 1-bromo-2,3-dimethoxybenzene (1.74 g, 8.00 mmol). The resulting brown solution was heated to a gentle reflux (75 °C external temp) for 2.5 h, then cooled to 0 °C in an ice water bath. (*S*)-methyl 2-hydroxypropanoate (0.191 mL, 2 mmol) was then added dropwise via syringe. The reaction was stirred at 0 °C for 1 h, then removed from the cold bath and stirred overnight at rt. The reaction was cooled to 0 °C in an ice water bath, diluted with water (20 mL), brine (20 mL), and Et₂O (40 mL), and was quenched with 1 N HCl (8 mL). The phases were separated, and the aqueous phase was extracted with Et₂O (20 mL). The organic phases were combined, dried over MgSO₄, filtered, and concentrated to provide an oil. Purification by automated silica gel column chromatography (5-50% EtOAc in hexanes) provided the title compound (568 mg, 82%) as a yellow, crystalline solid: ¹H NMR (300 MHz, CDCl₃) δ 7.43 (td, *J* = 8.0, 1.5 Hz, 2H), 7.11 (td, *J* = 8.1, 4.9 Hz, 2H), 6.83 (dd, *J* = 8.1, 1.4 Hz, 2H), 5.06 – 4.82 (m, 1H), 4.74 (d, *J* = 1.2 Hz, 1H), 3.81 (s, 3H), 3.80 (s, 3H), 3.20 (s, 3H), 3.04 (s, 3H), 2.86 (d, *J* = 9.5 Hz, 1H), 0.97 (d, *J* = 6.4 Hz, 3H); ¹³C NMR (126 MHz, CDCl₃) δ 152.89, 152.82, 146.94, 145.53, 139.56, 138.92, 123.32, 123.26, 122.01, 119.01, 111.30, 79.20, 77.22, 60.07, 59.26, 55.77, 55.64, 18.34; HRMS-ESI (*m/z*) ([*M*+Na]⁺) calcd for C₁₉H₂₄O₆Na, 371.1465; found, 371.1456.

[0089] Example 3I, Step 2: Preparation of 1,1-bis(2,3-dimethoxyphenyl)propan-2-one.



[0090] To a solution of (*S*)-1,1-bis(2,3-dimethoxyphenyl)propane-1,2-diol (560 mg, 1.61 mmol) in anhydrous CH₂Cl₂ (8 mL) at 0 °C was added triethylsilane (770 µl, 4.82 mmol) and trifluoroacetic acid (TFA, 124 µL, 1.61 mmol). The resulting solution was stirred at 0 °C for 2 h, then removed from the cold bath and stirred for 2 h. TFA (248 µL, 3.2 mmol) was added, and the reaction was then stirred overnight at rt. The reaction was diluted with water (25 mL) and extracted with CH₂Cl₂ (3x 25 mL). The organic extracts were dried over Na₂SO₄, filtered, and concentrated to provide an oil. Purification by automated silica gel column chromatography (5-25% acetone in hexanes) provided the title compound (396 mg, 75%) as a white solid: ¹H NMR (300 MHz, CDCl₃) δ 6.99 (t, *J* = 8.0 Hz, 2H), 6.87 (dd, *J* = 8.2, 1.5 Hz, 2H), 6.67 – 6.54 (m, 2H), 5.86 (s, 1H), 3.87 (s, 6H), 3.75 (s, 6H), 2.25 (s, 3H); ¹³C NMR (126 MHz, CDCl₃) δ 207.18, 152.69, 147.02, 132.23, 123.74, 121.61, 111.64, 60.36, 55.74, 51.96, 29.80; HRMS-ESI (*m/z*) ([*M*+Na]⁺) calcd for C₁₉H₂₂O₅Na, 353.1359; found, 353.1353.

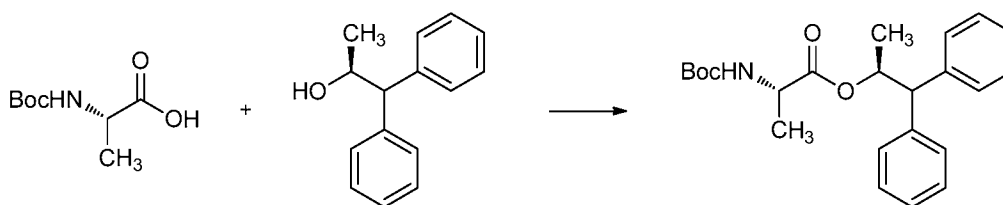
[0091] Example 3I, Step 3: Preparation of 1,1-bis(2,3-dimethoxyphenyl)propan-2-ol.



[0092] To a solution of 1,1-bis(2,3-dimethoxyphenyl)propan-2-one (356 mg, 1.08 mmol) in methanol (3.5 mL) was added sodium borohydride (61 mg, 1.6 mmol). The resulting solution was stirred at rt for 20 h, then was quenched with sat'd NH₄Cl (1 mL), diluted with water (20 mL) and extracted with CH₂Cl₂ (3x 20 mL). The organic extracts were combined, dried over Na₂SO₄, filtered, and concentrated to provide the title compound (360 mg, 100%) as an oil: ¹H NMR (300

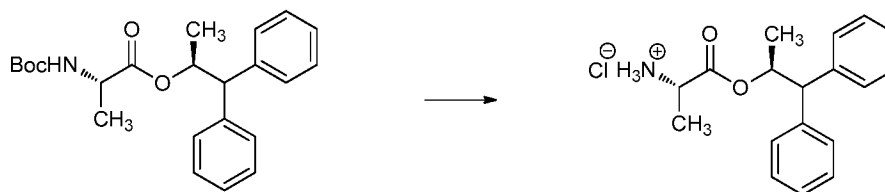
MHz, CDCl₃) δ 7.16 – 6.88 (m, 4H), 6.79 (ddd, J = 9.6, 7.8, 1.9 Hz, 2H), 4.81 (d, J = 8.3 Hz, 1H), 4.53 – 4.32 (m, 1H), 3.84 (s, 3H), 3.84 (s, 3H), 3.77 (s, 3H), 3.76 (s, 3H), 2.04 (d, J = 4.2 Hz, 1H), 1.22 (d, J = 6.2 Hz, 3H); ¹³C NMR (126 MHz, CDCl₃) δ 152.98, 152.83, 147.71, 147.04, 136.17, 135.33, 123.94, 123.62, 120.96, 120.84, 110.76, 110.48, 70.32, 60.26, 60.20, 55.66, 55.63, 45.11, 21.80; IR (neat film) 3451, 2935, 2833, 1582, 1473, 1428, 1266, 1215, 1167, 1125, 1088, 1068, 1004, 964, 908, 835, 809, 787, 748, 728.

[0093] Example 4A: Preparation of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-((*tert*-butoxycarbonyl)amino)-propanoate.



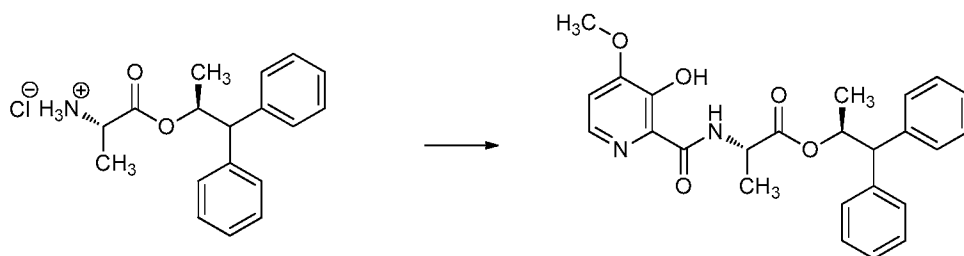
[0094] To a solution of (*S*)-1,1-diphenylpropan-2-ol (317 mg, 1.493 mmol) in DCM (15 mL) at 0 °C were added (*S*)-2-((*tert*-butoxycarbonyl)amino)propanoic acid (Boc-Ala-OH; 311 mg, 1.64 mmol) and *N,N*-dimethylpyridin-4-amine (DMAP; 18.2 mg, 0.149 mmol) followed by *N*¹-((ethylimino)methylene)-*N*³,*N*³-dimethylpropane-1,3-diamine hydrochloride (EDC; 573 mg, 2.99 mmol), and the reaction mixture was stirred at room temperature overnight and concentrated to give a yellow oil. The crude material was purified by flash column chromatography (SiO₂, 1 → 10% acetone in hexanes) to afford the title compound (433 mg, 75%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 7.42 – 7.07 (m, 10H), 5.80 (dq, J = 10.1, 6.1 Hz, 1H), 4.97 (d, J = 8.0 Hz, 1H), 4.19 – 4.06 (m, 1H), 4.03 (d, J = 10.1 Hz, 1H), 1.41 (s, 9H), 1.23 (d, J = 6.1 Hz, 3H), 0.76 (d, J = 7.2 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 172.83, 154.96, 141.52, 141.26, 128.79, 128.50, 128.10, 128.08, 126.91, 126.67, 79.62, 73.10, 57.98, 49.21, 28.33, 19.31, 17.98; ESIMS m/z 384 ([M+H]⁺).

[0095] Example 5, Step 1: Preparation of (*S*)-1-(((*S*)-1,1-diphenylpropan-2-yl)oxy)-1-oxopropan-2-aminium chloride.



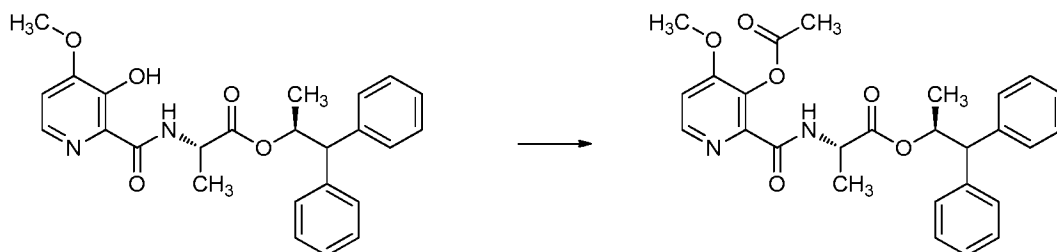
[0096] To a solution of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-((*tert*-butoxycarbonyl)amino)propanoate (Cmpd **2**; 433 mg, 1.13 mmol) in DCM (6 mL) was added a 4 N solution of HCl in dioxane (2.8 mL, 11.3 mmol), and the mixture was stirred for 3 h at room temperature. The solvent was evaporated under a stream of N₂ to provide the title compound (360 mg, 100%) as a white solid: ESIMS (*m/z*) 284 ([M+H]⁺).

[0097] Example 5, Step 2: Preparation of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-hydroxy-4-methoxypicolinamido)propanoate.



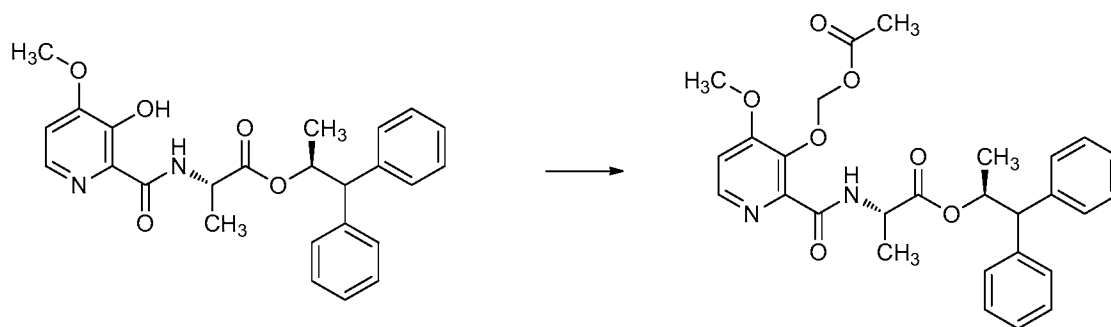
[0098] To a solution of (*S*)-1-(((*S*)-1,1-diphenylpropan-2-yl)oxy)-1-oxopropan-2-aminium chloride (Cmpd **46**; 361 mg, 1.13 mmol) and 3-hydroxy-4-methoxypicolinic acid (210 mg, 1.24 mmol) in DCM (11 mL) were added benzotriazol-1-yl-oxytripyrrolidinophosphonium hexafluorophosphate (PyBOP; 646 mg, 1.24 mmol) and *N*-ethyl-*N*-isopropylpropan-2-amine (DIPEA; 0.651 mL, 3.72 mmol), and the reaction mixture was stirred for 2 h at room temperature. The solvent was evaporated and the crude oil was purified by flash column chromatography (SiO₂, 1→50% acetone in hexanes) to afford the title compound (340 mg, 70%) as a white foam: ¹H NMR (400 MHz, CDCl₃) δ 12.10 (s, 1H), 8.34 (d, *J* = 8.0 Hz, 1H), 7.98 (d, *J* = 5.2 Hz, 1H), 7.38 – 7.06 (m, 10H), 6.86 (d, *J* = 5.3, 1H), 5.83 (dq, *J* = 10.1, 6.1 Hz, 1H), 4.52 (dq, *J* = 8.1, 7.2 Hz, 1H), 4.06 (d, *J* = 10.2 Hz, 1H), 3.93 (s, 3H), 1.26 (d, *J* = 6.1 Hz, 3H), 0.97 (d, *J* = 7.2 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 171.67, 168.53, 155.34, 148.72, 141.38, 141.13, 140.40, 130.48, 128.80, 128.50, 128.10, 128.03, 126.95, 126.70, 109.39, 73.57, 57.93, 56.07, 47.85, 19.24, 17.61; HRMS–ESI (*m/z*) ([M+H]⁺) calcd for C₂₅H₂₇N₂O₅, 435.1920; found, 435.1925.

[0099] Example 6A: Preparation of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-acetoxy-4-methoxypicolinamido)propanoate.



[00100] To a solution of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-hydroxy-4-methoxypicolinamido)-propanoate (Cmpd **90**; 70.0 mg, 0.161 mmol), Et₃N (44.9 μ L, 0.332 mmol), and DMAP (3.94 mg, 0.032 mmol) in DCM (3.2 mL) was added acetyl chloride (17.2 μ L, 0.242 mmol) at room temperature, and the reaction mixture was stirred for 2 h. The solvent was evaporated, and the resulting crude oil was purified by flash column chromatography (SiO₂, 1 $\rightarrow$ 40% acetone in hexanes) to afford the title compound (75.0 mg, 97%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 8.41 (d, *J* = 7.8 Hz, 1H), 8.30 (d, *J* = 5.4 Hz, 1H), 7.38 – 7.10 (m, 10H), 6.97 (d, *J* = 5.4 Hz, 1H), 5.82 (dq, *J* = 10.0, 6.2 Hz, 1H), 4.52 (dt, *J* = 8.2, 7.1 Hz, 1H), 4.05 (d, *J* = 10.1 Hz, 1H), 3.87 (s, 3H), 2.37 (s, 3H), 1.24 (d, *J* = 6.1 Hz, 3H), 0.89 (d, *J* = 7.1 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 172.23, 168.89, 162.28, 159.42, 146.66, 141.55, 141.44, 141.25, 137.45, 128.77, 128.50, 128.13, 128.11, 126.89, 126.67, 109.73, 73.32, 57.90, 56.27, 47.85, 20.75, 19.25, 17.92; HRMS–ESI (*m/z*) ([*M*+H]⁺) calcd for C₂₇H₂₉N₂O₆, 477.2025; found, 477.2019.

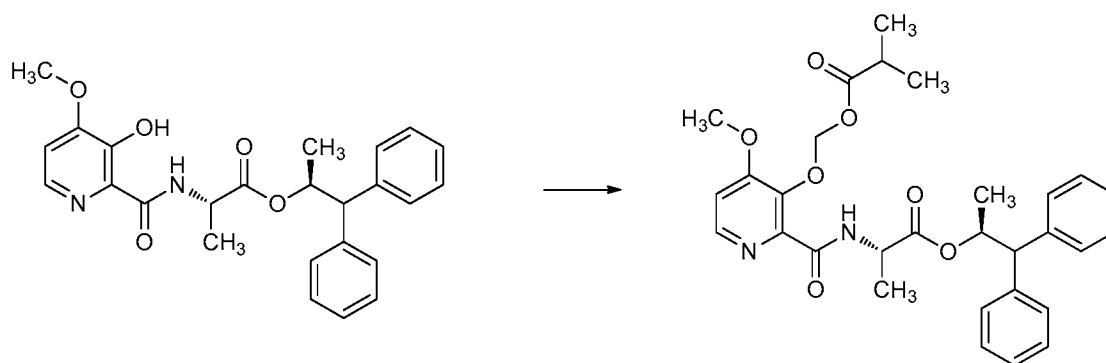
[00101] Example 6B: Preparation of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-(acetoxymethoxy)-4-methoxypicolinamido)propanoate.



[00102] To a suspension of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-hydroxy-4-methoxypicolinamido)-propanoate (Cmpd **90**; 100 mg, 0.230 mmol) and K₂CO₃ (63.6 mg, 0.460 mmol) in acetone (4.6 mL) was added bromomethyl acetate (33.9 μ L, 0.345 mmol) at room

temperature, and the mixture was heated to 55 °C for 3 h and then cooled to room temperature. The solvent was evaporated and the resulting crude material was purified by flash column chromatography (SiO₂, 1→40% acetone in hexanes) to afford the title compound (94.0 mg, 80% yield) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 8.25 (d, *J* = 5.4 Hz, 1H), 8.22 (d, *J* = 7.9 Hz, 1H), 7.34 – 7.09 (m, 10H), 6.92 (d, *J* = 5.4 Hz, 1H), 5.83 (dq, *J* = 10.1, 6.2 Hz, 1H), 5.72 (d, *J* = 0.7 Hz, 2H), 4.60 – 4.49 (m, 1H), 4.06 (d, *J* = 10.1 Hz, 1H), 3.88 (s, 3H), 2.05 (s, 3H), 1.25 (d, *J* = 6.1 Hz, 3H), 0.91 (d, *J* = 7.2 Hz, 3H); ¹³C NMR (101 MHz, CDCl₃) δ 172.33, 170.25, 162.88, 160.24, 145.70, 143.91, 142.54, 141.48, 141.25, 128.76, 128.49, 128.12, 128.09, 126.89, 126.65, 109.56, 89.50, 73.27, 57.92, 56.17, 48.07, 20.86, 19.25, 17.73; HRMS–ESI (*m/z*) [*M*+H]⁺ calcd for C₂₈H₃₁N₂O₇, 507.2131; found, 507.2125.

[00103] Example 6C: Preparation of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-((isobutyryloxy)methoxy)-4-methoxypicolinamido)propanoate.



[00104] To a solution of (*S*)-(*S*)-1,1-diphenylpropan-2-yl 2-(3-hydroxy-4-methoxypicolinamido)-propanoate (Cmpd **90**; 100 mg, 0.230 mmol) in acetone (4.6 mL) were added sodium carbonate (Na₂CO₃; 73.2 mg, 0.690 mmol), sodium iodide (NaI; 6.90 mg, 0.046 mmol) and chloromethyl 2-ethoxyacetate (62.9 mg, 0.460 mmol). The mixture was heated to 55 °C overnight and then cooled to room temperature, and the solvent was evaporated. The resulting residue was purified by flash column chromatography (SiO₂, 2→30% acetone in hexanes) to afford the title compound (79.0 mg, 64%) as a colorless oil: ¹H NMR (400 MHz, CDCl₃) δ 8.28 (d, *J* = 7.9 Hz, 1H), 8.25 (d, *J* = 5.3 Hz, 1H), 7.36 – 7.08 (m, 10H), 6.92 (d, *J* = 5.4 Hz, 1H), 5.83 (dq, *J* = 10.1, 6.2 Hz, 1H), 5.79 – 5.69 (m, 2H), 4.62 – 4.44 (m, 1H), 4.06 (d, *J* = 10.1 Hz, 1H), 3.86 (s, 3H), 2.53 (hept, *J* = 7.0 Hz, 1H), 1.25 (d, *J* = 6.2 Hz, 3H), 1.13 (d, *J* = 7.0 Hz, 6H), 0.91 (d, *J* = 7.2 Hz, 3H);

¹³C NMR (101 MHz, CDCl₃) δ 176.22, 172.34, 162.85, 160.23, 145.55, 144.16, 142.18, 141.48, 141.26, 128.76, 128.49, 128.12, 128.09, 126.89, 126.65, 109.48, 89.90, 73.26, 57.93, 56.12, 48.07, 33.85, 19.26, 18.68, 17.74; HRMS–ESI (*m/z*) ([M+H]⁺) calcd for C₃₀H₃₅N₂O₇, 535.2444; found, 535.2431.

5

[00105] Example A: Evaluation of Fungicidal Activity: Leaf Blotch of Wheat (*Zymoseptoria tritici*; Bayer code SEPTTR):

[00106] Technical grades of materials were dissolved in acetone, which were then mixed with nine volumes of water (H₂O) containing 110 ppm Triton X-100. The fungicide solutions were applied onto wheat seedlings using an automated booth sprayer to run-off. All sprayed plants were allowed to air dry prior to further handling. All fungicides were evaluated using the aforementioned method for their activity vs. all target diseases, unless stated otherwise. Wheat leaf blotch and brown rust activity were also evaluated using track spray applications, in which case the fungicides were formulated as EC formulations, containing 0.1% Trycol 5941 in the spray solutions.

[00107] Wheat plants (variety Yuma) were grown from seed in a greenhouse in 50% mineral soil/50% soil-less Metro mix until the first leaf was fully emerged, with 7-10 seedlings per pot. These plants were inoculated with an aqueous spore suspension of *Zymoseptoria tritici* either prior to or after fungicide treatments. After inoculation the plants were kept in 100% relative humidity (one day in a dark dew chamber followed by two to three days in a lighted dew chamber at 20 °C) to permit spores to germinate and infect the leaf. The plants were then transferred to a greenhouse set at 20 °C for disease to develop. When disease symptoms were fully expressed on the 1st leaves of untreated plants, infection levels were assessed on a scale of 0 to 100 percent disease severity. Percent disease control was calculated using the ratio of disease severity on treated plants relative to untreated plants.

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[00108] Example B: Evaluation of Fungicidal Activity: Wheat Brown Rust (*Puccinia triticina*; Synonym: *Puccinia recondita* f. sp. *tritici*; Bayer code PUCCRT):

[00109] Wheat plants (variety Yuma) were grown from seed in a greenhouse in 50% mineral soil/50% soil-less Metro mix until the first leaf was fully emerged, with 7-10 seedlings per pot. These plants were inoculated with an aqueous spore suspension of *Puccinia triticina* either prior to or after fungicide treatments. After inoculation the plants were kept in a dark dew room at 22 °C

30

with 100% relative humidity overnight to permit spores to germinate and infect the leaf. The plants were then transferred to a greenhouse set at 24 °C for disease to develop. Fungicide formulation, application and disease assessment followed the procedures as described in the Example A.

5 **[00110]** Example C: Evaluation of Fungicidal Activity: Wheat Glume Blotch (*Leptosphaeria nodorum*; Bayer code LEPTNO):

10 **[00111]** Wheat plants (variety Yuma) were grown from seed in a greenhouse in 50% mineral soil/50% soil-less Metro mix until the first leaf was fully emerged, with 7-10 seedlings per pot. These plants were inoculated with an aqueous spore suspension of *Leptosphaeria nodorum* 24 h after fungicide treatments. After inoculation the plants were kept in 100% relative humidity (one day in a dark dew chamber followed by two days in a lighted dew chamber at 20 °C) to permit spores to germinate and infect the leaf. The plants were then transferred to a greenhouse set at 20 °C for disease to develop. Fungicide formulation, application and disease assessment followed the procedures as described in the Example A.

15 **[00112]** Example D: Evaluation of Fungicidal Activity: Apple Scab (*Venturia inaequalis*; Bayer code VENTIN):

20 **[00113]** Apple seedlings (variety McIntosh) were grown in soil-less Metro mix, with one plant per pot. Seedlings with two expanding young leaves at the top (older leaves at bottom of the plants were trimmed) were used in the test. Plants were inoculated with a spore suspension of *Venturia inaequalis* 24 h after fungicide treatment and kept in a 22 °C dew chamber with 100% relative humidity for 48 h, and then moved to a greenhouse set at 20 °C for disease to develop. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

25 **[00114]** Example E: Evaluation of Fungicidal Activity: Leaf Spot of Sugar Beets (*Cercospora beticola*; Bayer code CERCBE):

30 **[00115]** Sugar beet plants (variety HH88) were grown in soil-less Metro mix and trimmed regularly to maintain a uniform plant size prior to test. Plants were inoculated with a spore suspension 24 h after fungicide treatments. Inoculated plants were kept in a dew chamber at 22 °C

for 48 h then incubated in a greenhouse set at 24 °C under a clear plastic hood with bottom ventilation until disease symptoms were fully expressed. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

5 **[00116]** Example F: Evaluation of Fungicidal Activity: Asian Soybean Rust (*Phakopsora pachyrhizi*; Bayer code PHAKPA):

10 **[00117]** Technical grades of materials were dissolved in acetone, which were then mixed with nine volumes of H₂O containing 0.011% Tween 20. The fungicide solutions were applied onto soybean seedlings using an automated booth sprayer to run-off. All sprayed plants were allowed to air dry prior to further handling.

15 **[00118]** Soybean plants (variety Williams 82) were grown in soil-less Metro mix, with one plant per pot. Two weeks old seedlings were used for testing. Plants were inoculated either 3 days prior to or 1 day after fungicide treatments. Plants were incubated for 24 h in a dark dew room at 22 °C and 100% relative humidity then transferred to a growth room at 23 °C for disease to develop. Disease severity was assessed on the sprayed leaves.

[00119] Example G: Evaluation of Fungicidal Activity: Barley Scald (*Rhynchosporium secalis*; Bayer code RHYNSE):

20 **[00120]** Barley seedlings (variety Harrington) were propagated in soil-less Metro mix, with each pot having 8 to 12 plants, and used in the test when the first leaf was fully emerged. Test plants were inoculated by an aqueous spore suspension of *Rhynchosporium secalis* 24 h after fungicide treatments. After inoculation the plants were kept in a dew room at 22°C with 100% relative humidity for 48 h. The plants were then transferred to a greenhouse set at 20 °C for disease to develop. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

[00121] Example H: Evaluation of Fungicidal Activity: Rice Blast (*Pyricularia oryzae*; Bayer code PYRIOR):

30 **[00122]** Rice seedlings (variety Japonica) were propagated in soil-less Metro mix, with each pot having 8 to 14 plants, and used in the test when 12 to 14 days old. Test plants were inoculated with an aqueous spore suspension of *Pyricularia oryzae* 24 h after fungicide treatments. After

inoculation the plants were kept in a dew room at 22 °C with 100% relative humidity for 48 h to permit spores to germinate and infect the leaf. The plants were then transferred to a greenhouse set at 24 °C for disease to develop. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

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[00123] Example I: Evaluation of Fungicidal Activity: Tomato Early Blight (*Alternaria solani*; Bayer code ALTESO):

[00124] Tomato plants (variety Outdoor Girl) were propagated in soil-less Metro mix, with each pot having one plant, and used when 12 to 14 days old. Test plants were inoculated with an aqueous spore suspension of *Alternaria solani* 24 h after fungicide treatments. After inoculation the plants were kept in a dew room at 22 °C with 100% relative humidity for 48 h to permit spores to germinate and infect the leaf. The plants were then transferred to a growth room at 22 °C for disease to develop. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

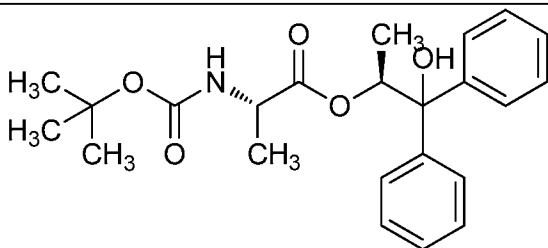
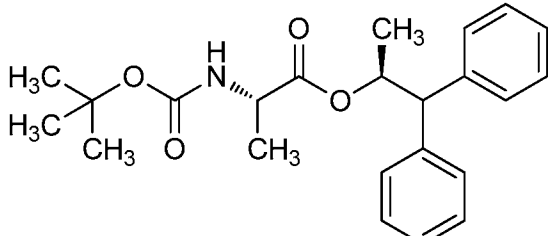
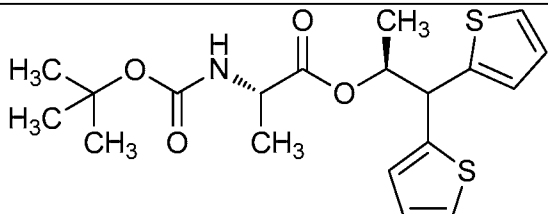
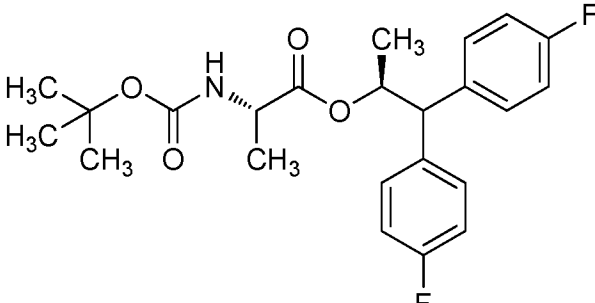
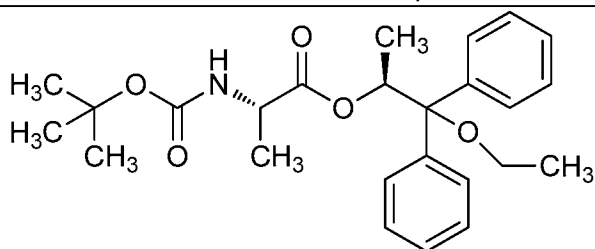
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[00125] Example J: Evaluation of Fungicidal Activity: Cucumber Anthracnose (*Colletotrichum lagenarium*; Bayer code COLLLA):

[00126] Cucumber seedlings (variety Bush Pickle) were propagated in soil-less Metro mix, with each pot having one plant, and used in the test when 12 to 14 days old. Test plants were inoculated with an aqueous spore suspension of *Colletotrichum lagenarium* 24 hr after fungicide treatments. After inoculation the plants were kept in a dew room at 22 °C with 100% relative humidity for 48 hr to permit spores to germinate and infect the leaf. The plants were then transferred to a growth room set at 22 °C for disease to develop. Fungicide formulation, application and disease assessment on the sprayed leaves followed the procedures as described in the Example A.

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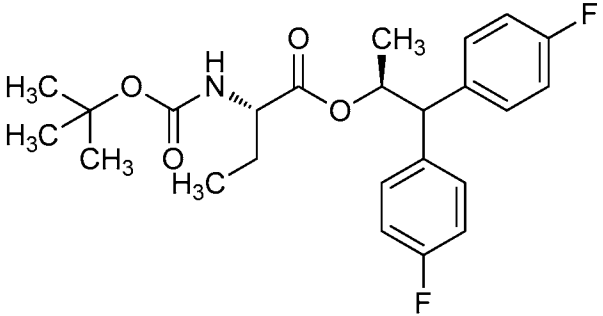
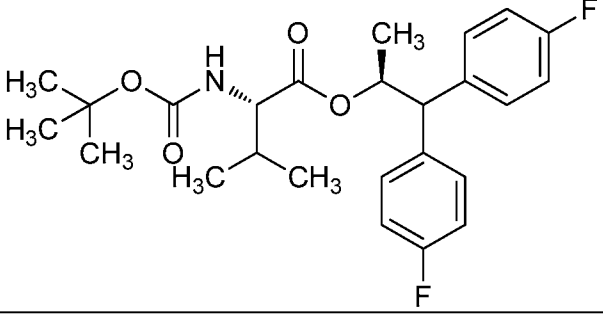
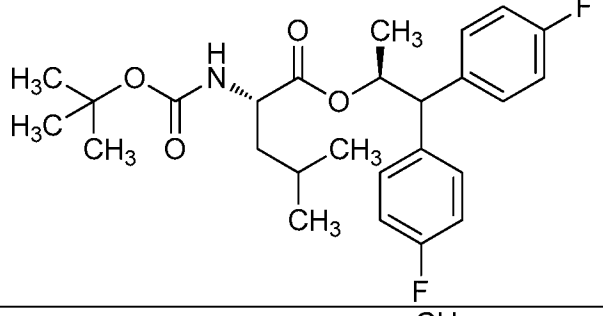
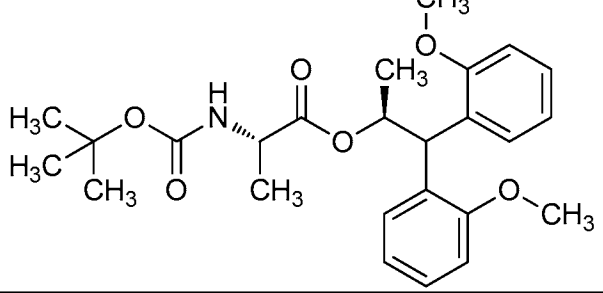
Table 1. Compound Structure, Preparation Method, and Appearance

*Cmpd. No.	Structure	Prepared According To Example	Appearance
1		Example 1; Example 3A; Example 4A	White Solid
2		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
3		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
4		Example 1; Example 2A; Example 3A; Example 4A	Clear, Colorless Oil
5		Example 1; Example 2B; Example 3A; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
6		Example 1; Example 2B; Example 3A; Example 4A	Colorless Oil
7		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
8		Example 1; Example 2C; Example 3A; Example 4A	Colorless Oil
9		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
10		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
11		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
12		Example 3E; Example 4A	Colorless Oil
13		Example 3E; Example 4A	Colorless Oil
14		Example 1; Example 3C; Example 4A	Colorless Oil
15		Example 1; Example 3C; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
16		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
18		Example 3F; Example 4A	Colorless Oil
19		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
20		Example 1; Example 2A; Example 3A; Example 4A	Clear Oil

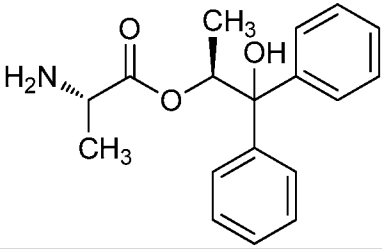
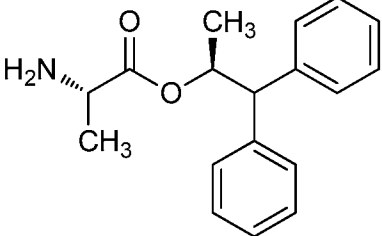
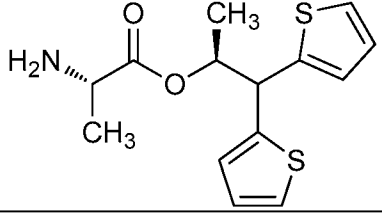
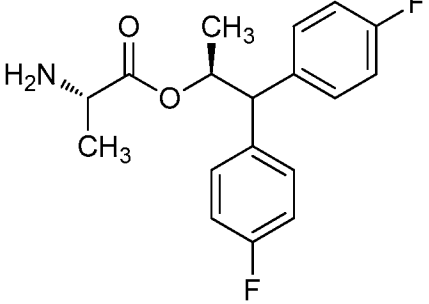
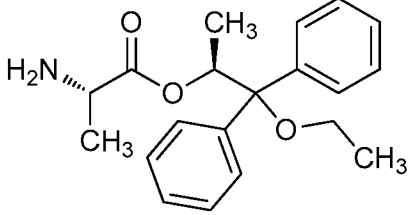
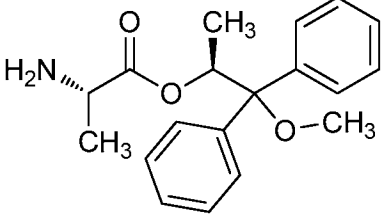
*Cmpd. No.	Structure	Prepared According To Example	Appearance
21		Example 1; Example 2A; Example 3A; Example 4A	Clear Oil
22		Example 1; Example 2A; Example 3A; Example 4A	Clear Oil
23		Example 1; Example 2A; Example 3A; Example 4A	Clear Oil
24		Example 1; Example 3C; Example 4A	Sticky Wax

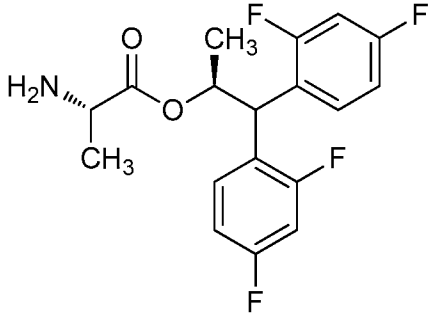
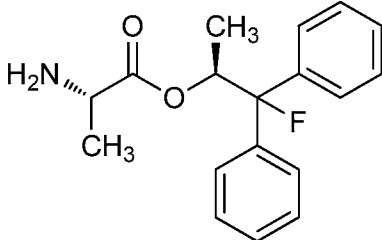
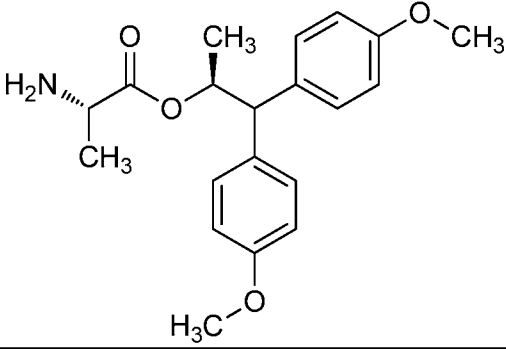
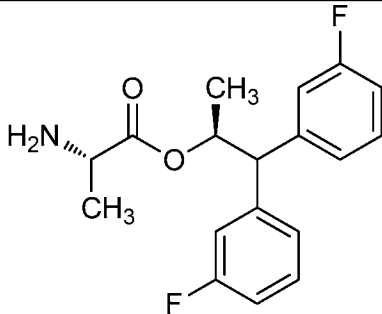
*Cmpd. No.	Structure	Prepared According To Example	Appearance
25		Example 1; Example 3C; Example 4A	Sticky Wax
26		Example 1; Example 3C; Example 4A	Sticky Wax
27		Example 1; Example 3C; Example 4A	Sticky Wax
28		Example 1; Example 3C; Example 3D, Steps 1-2; Example 4A	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
29		Example 1; Example 3C; Example 3D, Steps 1-3; Example 4A	Sticky Wax
31		Example 3F; Example 4A	Clear Oil
33		Example 1; Example 3B; Example 4A	White Solid
34		Example 1; Example 3B; Example 4A	White Solid

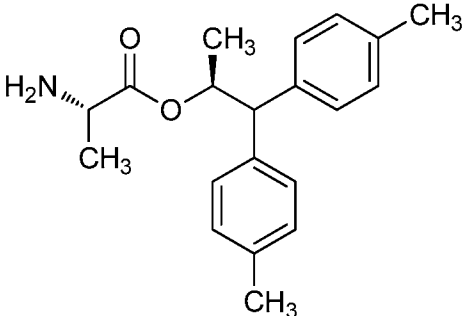
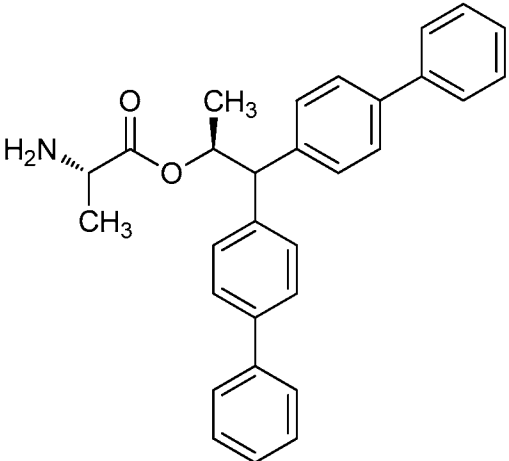
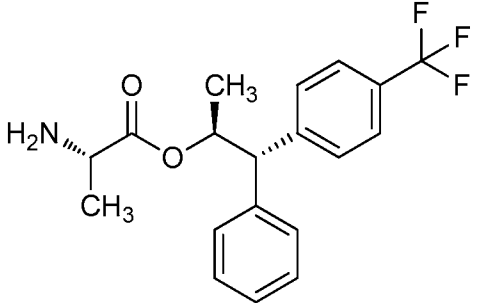
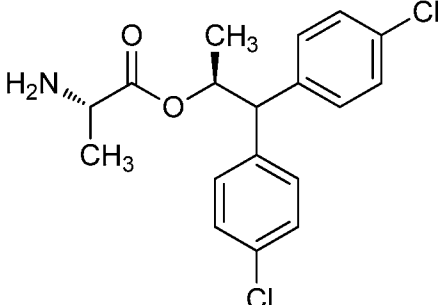
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35		Example 1; Example 2A; Example 3A; Example 4A	White Solid
36		Example 1; Example 3B; Example 4A	White Foam
37		Example 1; Example 2A; Example 3A; Example 4A	Clear, Colorless Oil
38		Example 1; Example 2A; Example 3A; Example 4A	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
39		Example 1; Example 2A; Example 3A; Example 4A	Clear, Colorless Oil
40		Example 1; Example 2A; Example 3A; Example 4A	White Foam
43		Example 1; Example 2A; Example 3A; Example 4A	White Solid
44		Example 1; Example 2A; Example 3A; Example 4A	White Solid

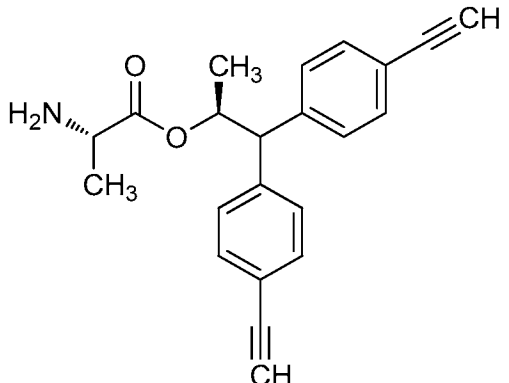
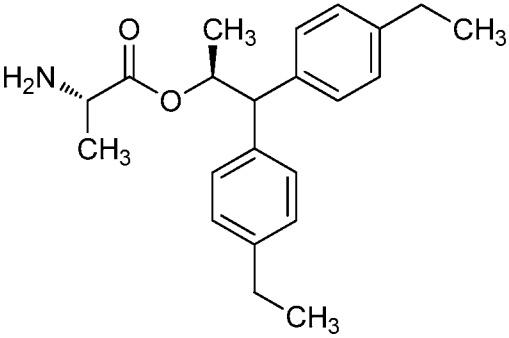
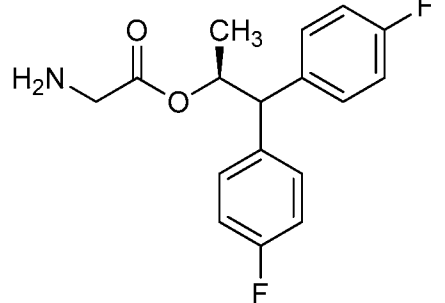
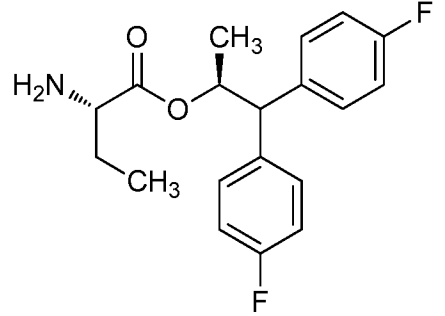
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45		Example 5, Step 1	White Solid
46		Example 5, Step 1	Colorless Oil
47		Example 5, Step 1	Colorless Oil
48		Example 5, Step 1	Pale Yellow Oil
49		Example 5, Step 1	Colorless Oil
50		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
51		Example 5, Step 1	Colorless Oil
52		Example 5, Step 1	Colorless Oil
53		Example 5, Step 1	Colorless Oil
54		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
55		Example 5, Step 1	Colorless Oil
56		Example 5, Step 1	Colorless Oil
57		Example 5, Step 1	Colorless Oil
58		Example 5, Step 1	Colorless Oil
59		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
60		Example 5, Step 1	Colorless Oil
61		Example 5, Step 1	White Solid
63		Example 5, Step 1	Colorless Oil
64		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
65		Example 5, Step 1	Sticky Oil
66		Example 5, Step 1	Sticky Oil
67		Example 5, Step 1	Sticky Oil
68		Example 5, Step 1	Sticky Wax

*Cmpd. No.	Structure	Prepared According To Example	Appearance
69		Example 5, Step 1	Sticky Wax
70		Example 5, Step 1	Sticky Wax
71		Example 5, Step 1	White Solid
72		Example 5, Step 1	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
73		Example 5, Step 1	White Solid
74		Example 5, Step 1	White Solid
75		Example 5, Step 1	White Solid
77		Example 5, Step 1	White Solid
78		Example 5, Step 1	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
79		Example 5, Step 1	White Solid
80		Example 1; Example 3B; Example 4A; Example 5, Step 1	Sticky Oil
81		Example 5, Step 1	Sticky Oil
83		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
84		Example 5, Step 1	Clear, Colorless Oil
85		Example 5, Step 1	Clear, Colorless Oil
86		Example 5, Step 1	White Solid
87		Example 5, Step 1	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
88		Example 5, Step 1	White Solid
89		Example 5, Step 2	White Solid
90		Example 5, Step 2	White Foam
91		Example 5, Step 2	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
92		Example 5, Step 2	White Foam
93		Example 5, Step 2	White Foam
95		Example 5, Step 2	Colorless Oil
96		Example 5, Step 2	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
97		Example 5, Step 2	Colorless Oil
98		Example 5, Step 2	Colorless Oil
99		Example 5, Step 2	Colorless Oil
100		Example 5, Step 2	Colorless Oil

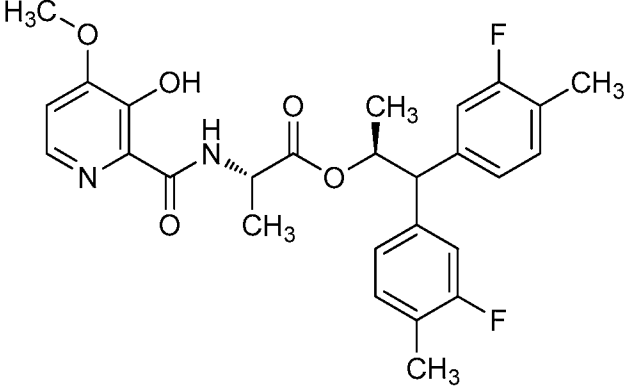
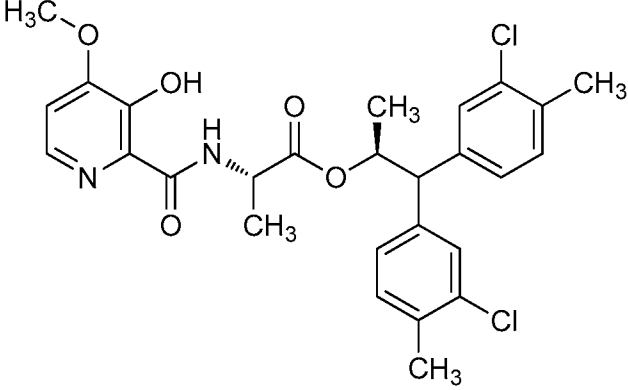
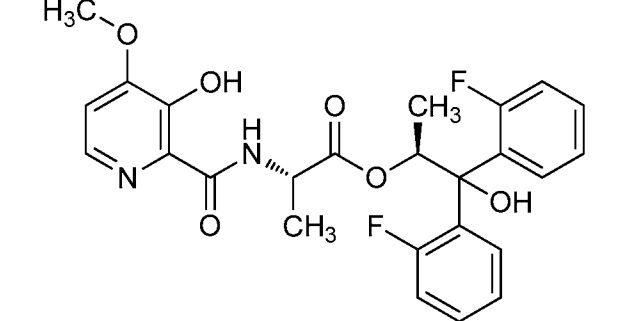
*Cmpd. No.	Structure	Prepared According To Example	Appearance
101		Example 5, Step 2	Colorless Oil
102		Example 5, Step 2	Colorless Oil
103		Example 5, Step 2	Colorless Oil
104		Example 5, Step 2	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
105		Example 5, Step 2	Colorless Oil
106		Example 5, Step 2	Colorless Gel
107		Example 5, Step 2	Colorless Gel

*Cmpd. No.	Structure	Prepared According To Example	Appearance
109		Example 5, Step 2	Colorless Oil
110		Example 5, Step 2	Clear, Colorless Oil
111		Example 5, Step 2	Clear, Colorless Oil
112		Example 5, Step 2	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
113		Example 5, Step 2	White Solid
114		Example 5, Step 2	White Solid
115		Example 5, Step 2	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
116		Example 5, Step 2	White Solid
117		Example 5, Step 2	White Foam
118		Example 5, Step 2	White Foam
119		Example 5, Step 2	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
120		Example 5, Step 2	White Foam
121		Example 5, Step 2	White Foam
122		Example 5, Step 2	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
123	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=C(C#C)C=C2)C(=O)C1=CN=C</chem>	Example 5, Step 2	White Foam
124	 <chem>CCOC1=CC=C(C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=C(CC)C=C2)C(=O)C1=CC=C</chem>	Example 5, Step 2	White Foam
125	 <chem>COc1cc(C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=CC=C2)c(O)c3ccncc13F</chem>	Example 5, Step 2	White Solid

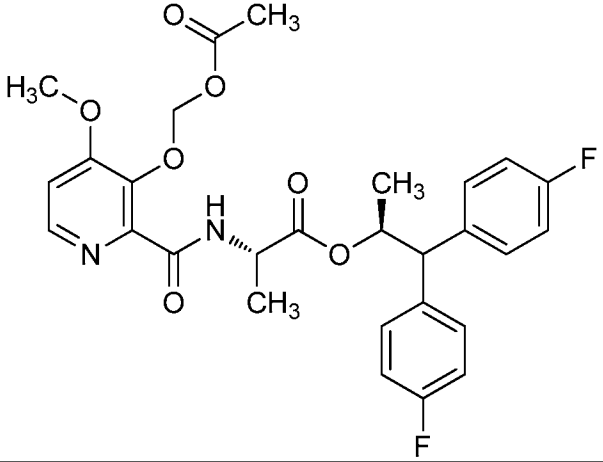
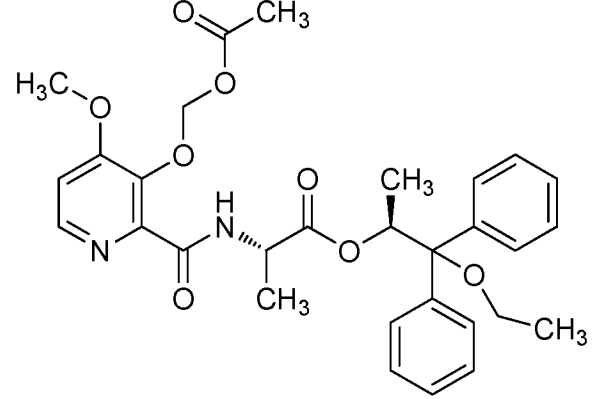
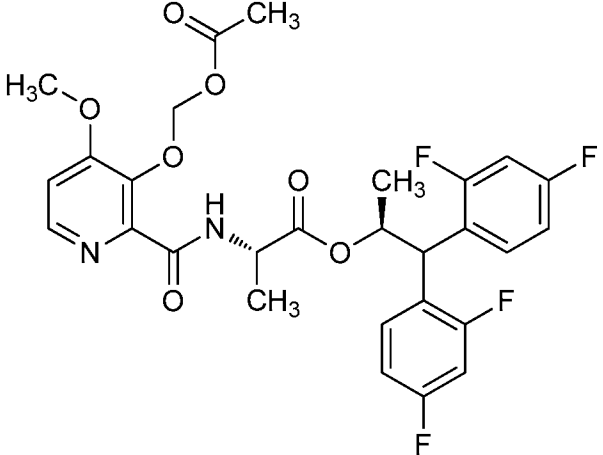
*Cmpd. No.	Structure	Prepared According To Example	Appearance
127		Example 5, Step 2	White Solid
128		Example 5, Step 2	White Solid
129		Example 5, Step 2	White Solid
130		Example 5, Step 2	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
131	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(C2=CC=C(C=C2)F)C3=CC=C(C=C3)F)C1=O</chem>	Example 5, Step 2	Clear, Colorless Oil
132	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(C2=CC=C(C=C2)Cl)C3=CC=C(C=C3)F)C1=O</chem>	Example 5, Step 2	Colorless Foam
133	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(C2=CC=C(C=C2)C)C3=CC=C(C=C3)F)C1=O</chem>	Example 5, Step 2	Colorless Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
135		Example 5, Step 2	Colorless Tacky Semi-Solid
136		Example 5, Step 2	White Foam
137		Example 5, Step 2	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
138		Example 6B	Colorless Semi-Solid
139		Example 6A	Colorless Oil
140		Example 6A	White Foam
141		Example 6B	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
142		Example 6C	White Foam
143		Example 6A	Colorless Oil
144		Example 6B	Colorless Oil
145		Example 6A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
146		Example 6B	Colorless Oil
147		Example 6B	Colorless Oil
148		Example 6B	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
149		Example 6B	Colorless Oil
150		Example 6A	Colorless Oil
152		Example 6A	Colorless Oil
153		Example 6B	Colorless Oil

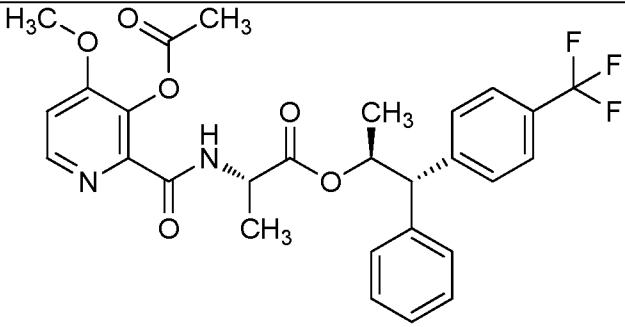
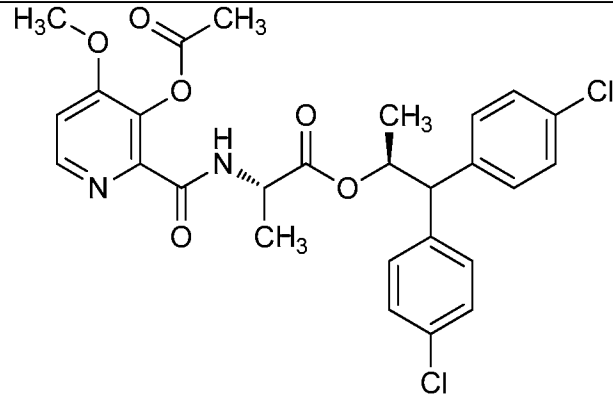
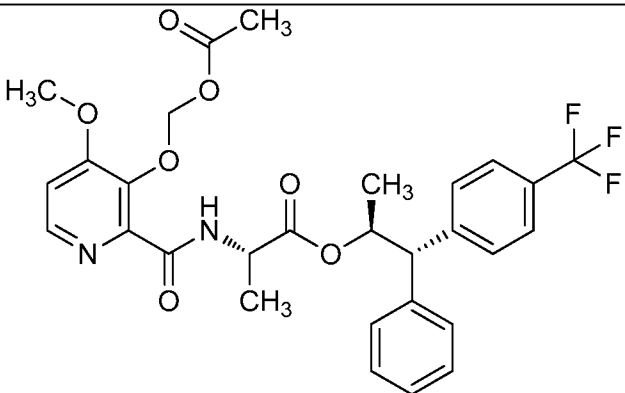
*Cmpd. No.	Structure	Prepared According To Example	Appearance
155		Example 6A	Colorless Oil
156		Example 6A	Colorless Oil
157		Example 6A	Colorless Oil
158		Example 6B	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
159		Example 6B	Colorless Oil
160		Example 6B	Colorless Oil
161		Example 6A	Colorless Oil
162		Example 6A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
163		Example 6B	Colorless Oil
164		Example 6B	Colorless Oil
165		Example 6A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
166	 <chem>CC(=O)OC[C@H](C)[C@@H](C1=CC=C(C=C1)S)C2=CC=C(C=C2)S</chem>	Example 6A	Colorless Oil
167	 <chem>CC(=O)OC[C@H](C)[C@@H](C1=CC=C(C=C1)C)C2=CC=C(C=C2)C</chem>	Example 6A	Colorless Oil
168	 <chem>CC(C)C(=O)OC[C@H](C)[C@@H](C1=CC=C(C=C1)C)C2=CC=C(C=C2)C</chem>	Example 6A	Colorless Oil

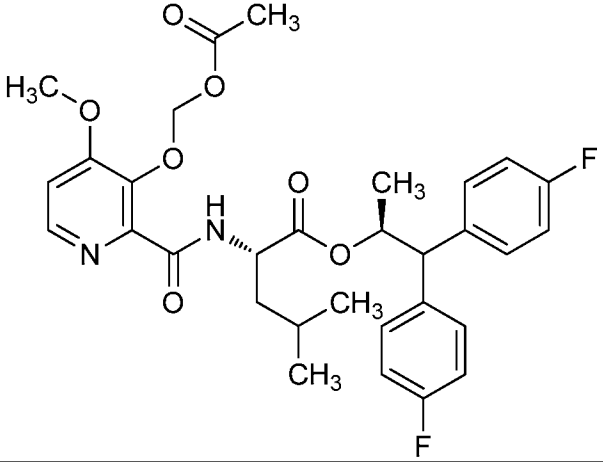
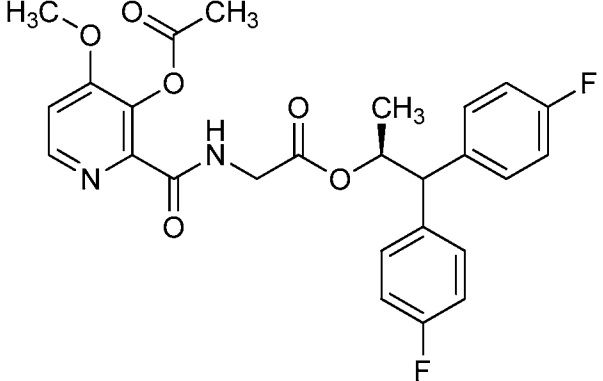
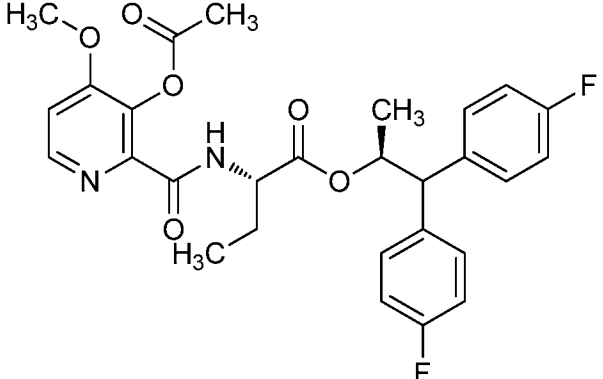
*Cmpd. No.	Structure	Prepared According To Example	Appearance
169		Example 6B	Colorless Oil
170		Example 6B	Colorless Oil
171		Example 6B	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
173		Example 6A	Colorless Oil
174		Example 6A	Colorless Oil
175		Example 6B	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
176	 <chem>CCOC(=O)C1=CC=C(C=C1C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=C(C=C2)C3=CC=C(C=C3)Cl)C=C1C</chem>	Example 6B	Colorless Oil
178	 <chem>CCOC(=O)C1=CC=C(C=C1C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=C(C=C2)C3=CC=C(C=C3)F)C=C1C</chem>	Example 6B	Clear, Colorless Oil
179	 <chem>CCOC(=O)C1=CC=C(C=C1C(=O)N[C@@H](C)C(=O)OC[C@H](C)C2=CC=C(C=C2)C3=CC=C(C=C3)F)C=C1C</chem>	Example 6B	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
180		Example 6B	Clear, Colorless Oil
181		Example 6B	White Foam
182		Example 6A	Colorless Oil

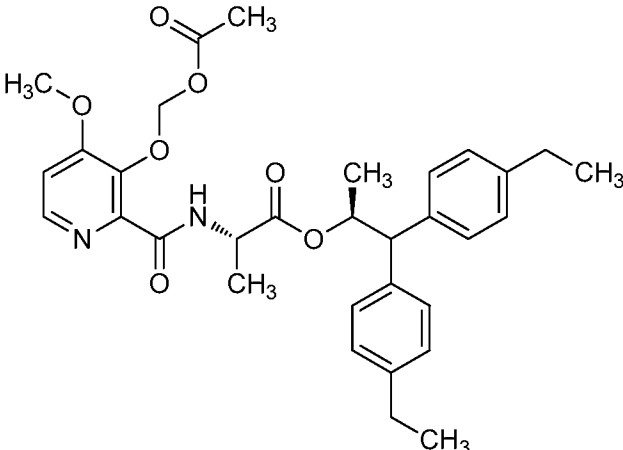
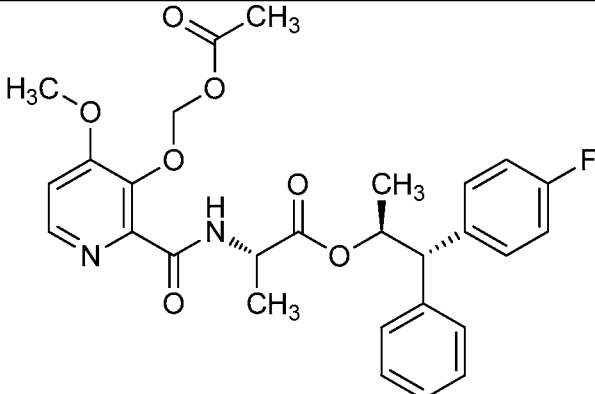
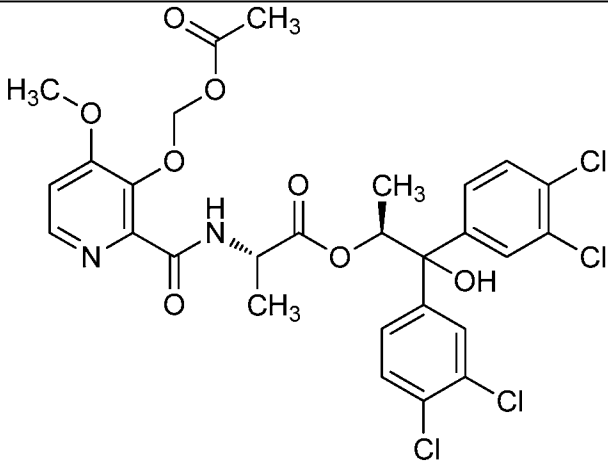
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183		Example 6B	White Solid
184		Example 6B	White Solid
185		Example 6B	White Solid

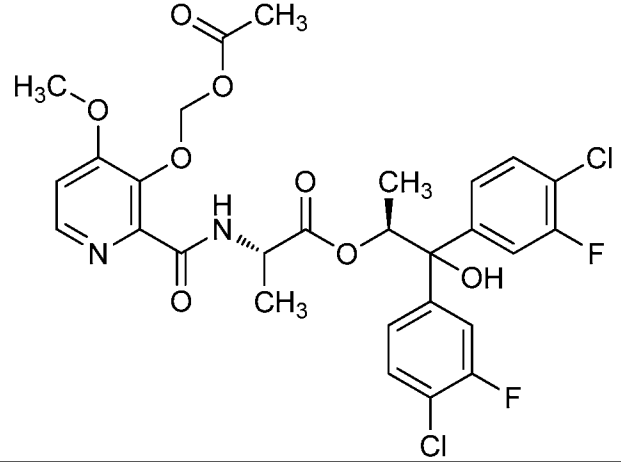
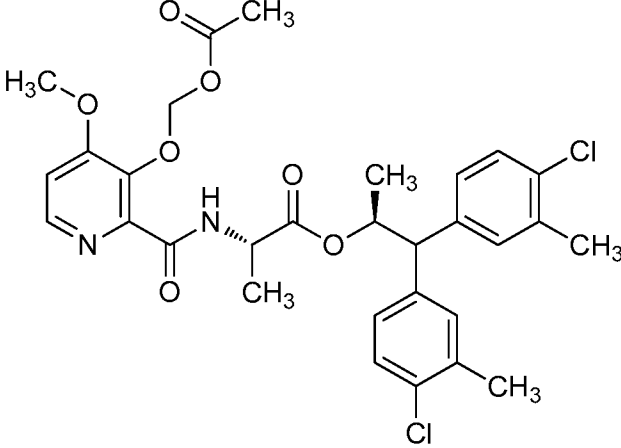
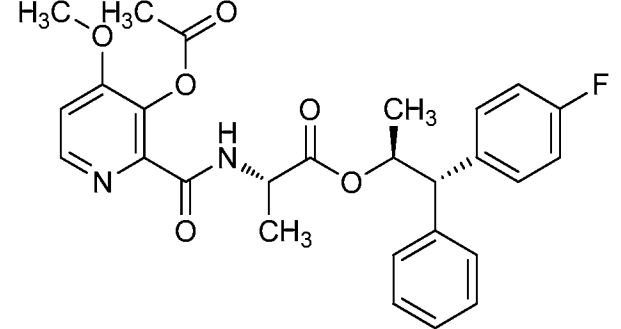
*Cmpd. No.	Structure	Prepared According To Example	Appearance
186		Example 6B	White Solid
187		Example 6A	White Solid
188		Example 6A	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
189		Example 6A	White Solid
190		Example 6A	White Solid
191		Example 6B	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
192		Example 6B	White Foam
193		Example 6B	Sticky Wax
194		Example 6B	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
195		Example 6B	White Foam
196		Example 6B	White Foam
197		Example 6B	White Foam

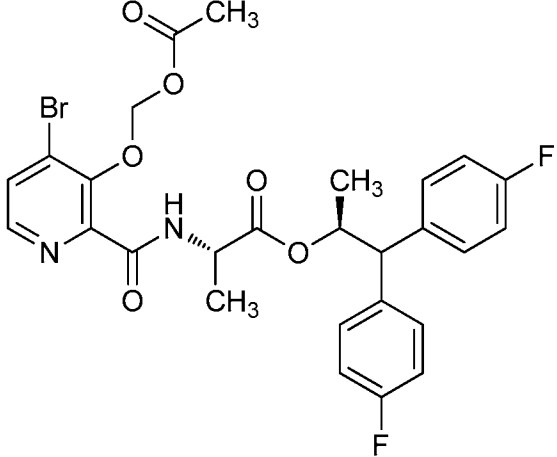
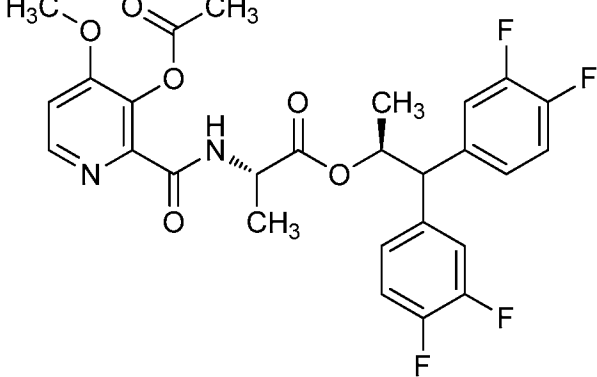
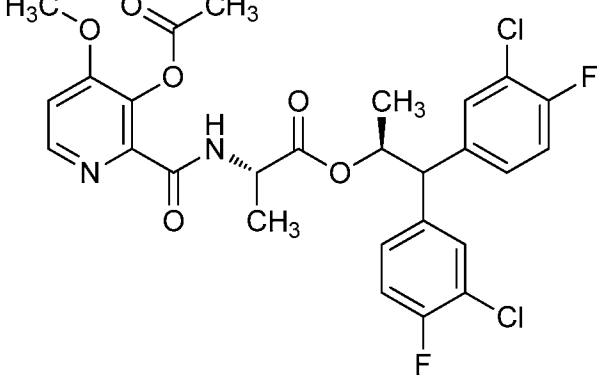
*Cmpd. No.	Structure	Prepared According To Example	Appearance
198		Example 6B	Sticky Wax
199		Example 6B	White Solid
201		Example 6B	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
202		Example 6B	White Solid
203		Example 6B	White Solid
204		Example 6A	White Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
206	 <chem>CCOC(=O)c1ccncc1C(=O)N[C@H](C)C(=O)O[C@H](C)C(c1ccc(Cl)c(C)c1)c2ccc(Cl)c(C)c2</chem>	Example 6A	White Solid
207	 <chem>CC(C)(C)C(=O)OC1=CC=C(C=C1)C(=O)N[C@H](C)C(=O)O[C@H](C)C(c1ccc(F)cc1)c2ccc(F)cc2</chem>	Example 6A	White Solid
208	 <chem>CC(C)C(=O)OC1=CC=C(C=C1)C(=O)N[C@H](C)C(=O)O[C@H](C)C(c1ccc(F)cc1)c2ccc(F)cc2</chem>	Example 6A	Clear Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
209	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(c2ccc(F)cc2)C(=O)OC3=CC=C(F)=CC3)C=C1</chem>	Example 6A	Slightly Cloudy Colorless Oil
210	 <chem>COC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(c2ccc(F)cc2)C(=O)OC3=CC=C(F)=CC3)C=C1</chem>	Example 6A	Slightly Cloudy Colorless Oil
211	 <chem>CC(C)C(=O)OCCOC1=CC=C(C(=O)N[C@@H](C)C(=O)O[C@H](C)C(c2ccc(F)cc2)C(=O)OC3=CC=C(F)=CC3)C=C1</chem>	Example 6C	Clear Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
212	 <chem>COc1cc(C(=O)N[C@H](C)C(=O)O[C@H](C)C(c2cc(F)cc(C(=O)O[C@H](C)COC(=O)CO)c3cc(F)cc3)cc2)cc1</chem>	Example 6C	Colorless Clear Film And Opaque Oil
213	 <chem>COc1cc(C(=O)N[C@H](C)C(=O)O[C@H](C)C(c2cc(F)cc(C(=O)O[C@H](C)CCCC)cc2)cc1</chem>	Example 6A	Clear Colorless Viscous Oil And Semi-Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
214		Example 6B	Clear, Colorless Oil
215		Example 6A	Pale Yellow Oil
216		Example 6A	Pale Yellow Oil

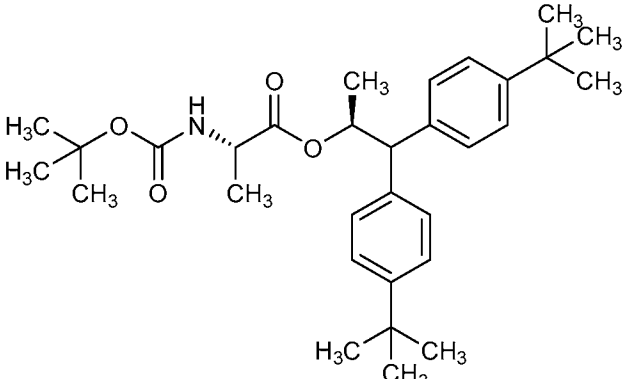
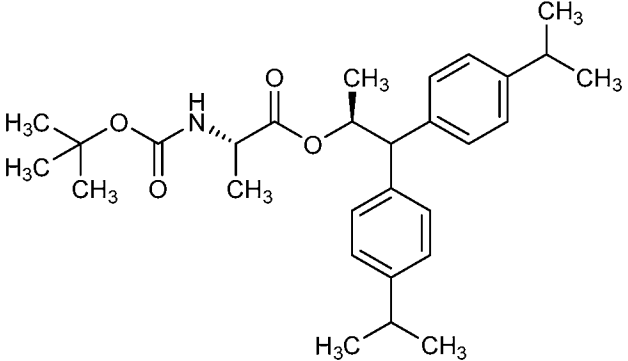
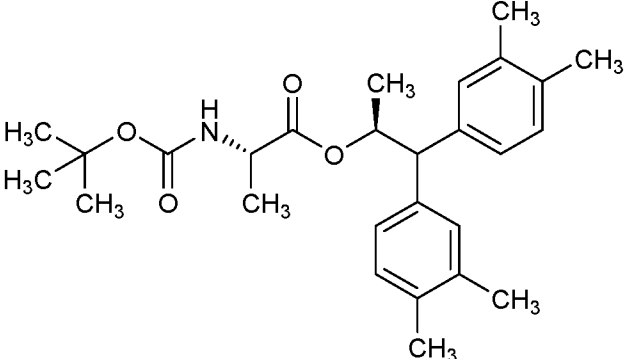
*Cmpd. No.	Structure	Prepared According To Example	Appearance
217		Example 6A	Pale Yellow Oil
218		Example 6B	Pale Yellow Oil
219		Example 6B	Pale Yellow Oil

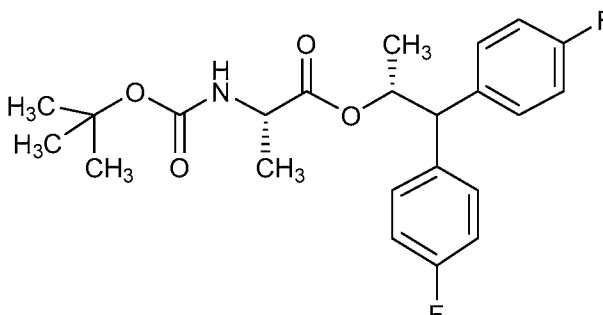
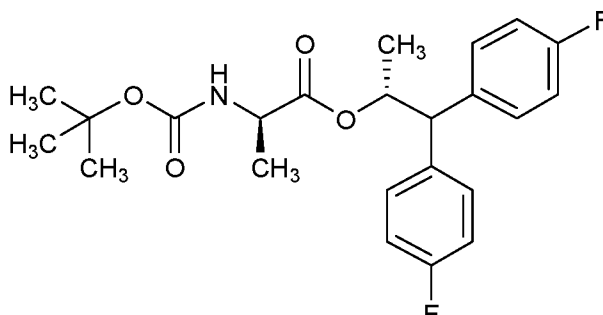
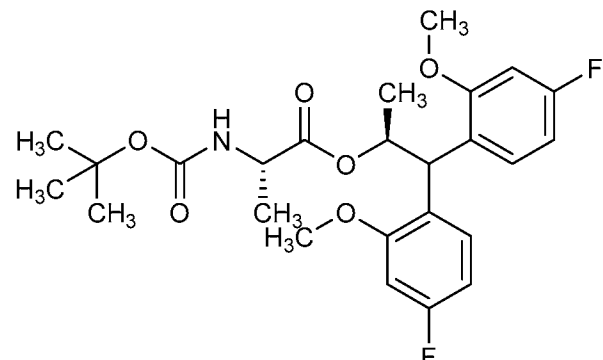
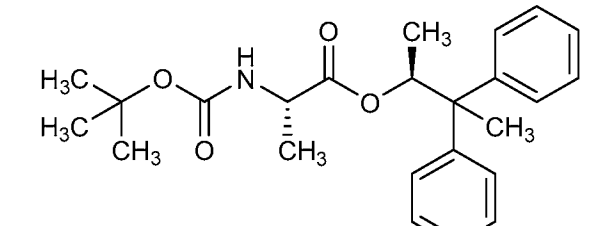
*Cmpd. No.	Structure	Prepared According To Example	Appearance
220		Example 6B	Pale Yellow Oil
221		Example 6B	White Foam
222		Example 6B	White Foam

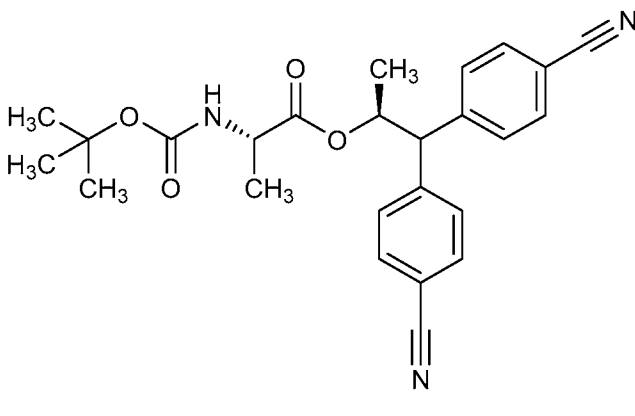
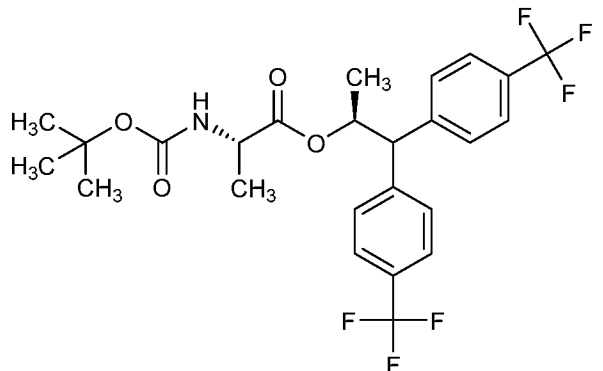
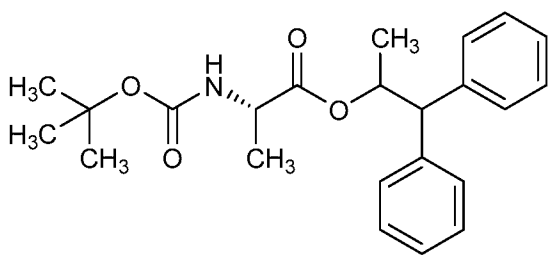
*Cmpd. No.	Structure	Prepared According To Example	Appearance
223		Example 6A	White Foam
224		Example 6A	White Foam
225		Example 6B	Slightly Opaque Colorless Oil

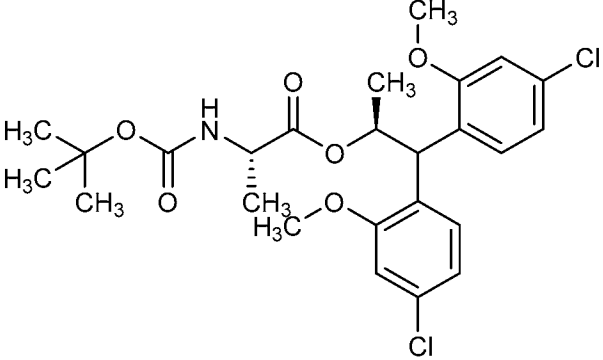
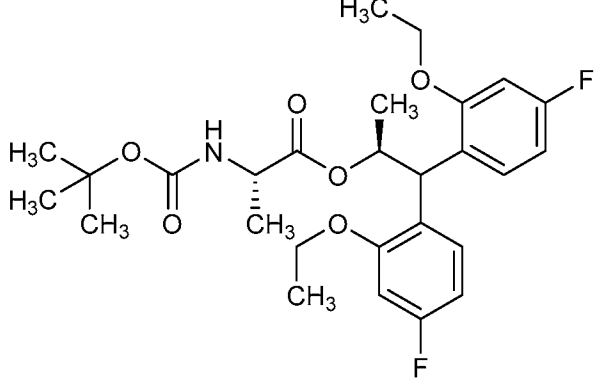
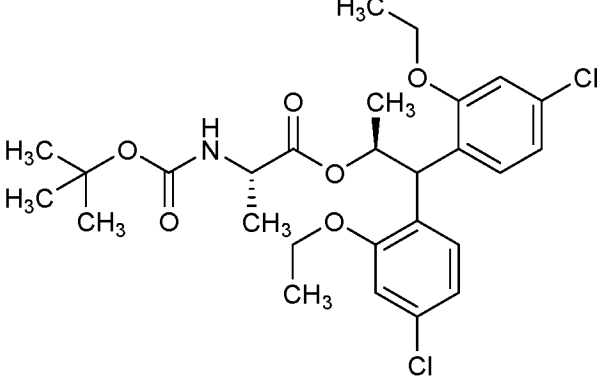
*Cmpd. No.	Structure	Prepared According To Example	Appearance
226		Example 1; Example 2D, Steps 1-2; Example 3A; Example 4A	White Semi-Solid
227		Example 5, Step 1	White Glass
228		Example 5, Step 2	Colorless Foam
229		Example 6A	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
230		Example 6B	Clear, Colorless Oil
232		Example 5, Step 1	White Semi-Solid
233		Example 1; Example 2A; Example 3A; Example 4A	Clear, Colorless Viscous Oil
234		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
235		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
236		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
237		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
238		Example 1; Example 2A; Example 3A; Example 4A.	Slightly Cloudy Colorless Viscous Oil
239		Example 1; Example 2A; Example 3A; Example 4A.	Slightly Cloudy Colorless Viscous Oil
240		Example 1; Example 2A; Example 3A; Example 4A.	White Foam
241		Example 3H Steps 1-2; Example 4A.	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
242		Example 3G, Steps 1 and 2; Example 4A	Colorless Oil
243		Example 3G, Steps 1 and 2; Example 4A	Colorless Oil
244		Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
245		Example 1; Example 3C; Example 4A.	White Foam
246		Example 1; Example 2A; Example 3A; Example 4A.	White Foam
247		Example 1; Example 3C; Example 4A.	White Foam

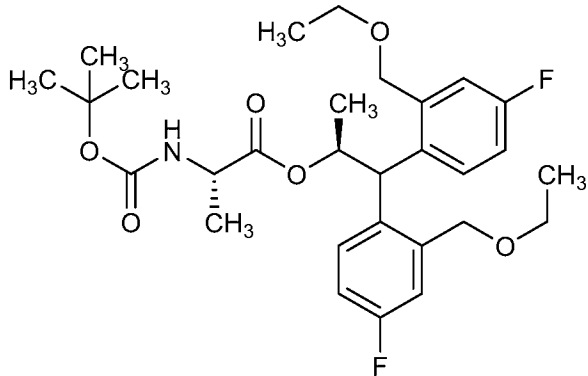
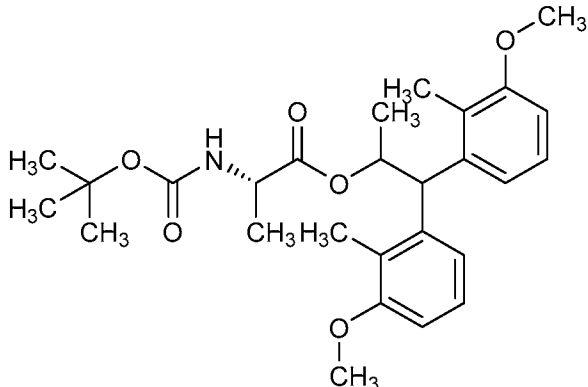
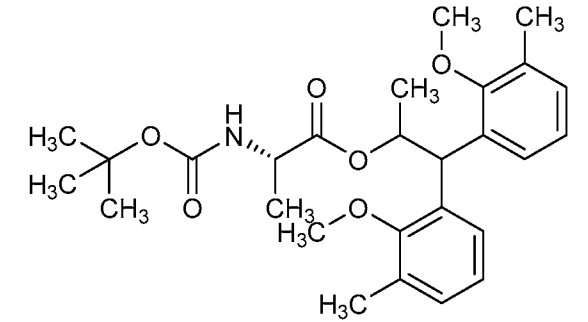
*Cmpd. No.	Structure	Prepared According To Example	Appearance
248		Example 1; Example 2A; Example 3A; Example 4A.	White Foam
249		Example 3G, Steps 1 and 2; Example 4A	White Foam
250		Example 1; Example 2A; Example 3A; Example 4A.	White Semisolid
251		Example 1; Example 2A; Example 3A; Example 4A.	White Semisolid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
252		Example 1; Example 2A; Example 3A; Example 4A.	White Semisolid
253		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
254		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
255		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
256		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
257		Example 1; Example 2A; Example 3A; Example 4A.	Clear, Colorless Oil
258		Example 3I, Example 4A	White Foam
259		Example 1; Example 2A; Example 3A; Example 4A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
260		Example 1; Example 2A; Example 3A; Example 4A.	Colorless Oil
261		Example 1; Example 2A; Example 3A; Example 4A.	Colorless Oil
262		Example 1; Example 2A; Example 3A; Example 4A.	Colorless Oil
263		Example 1; Example 2A; Example 3A; Example 4A.	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
264		Example 1; Example 2A; Example 3A; Example 4A.	White Foam
265		Example 1; Example 2A; Example 3A; Example 4A.	Colorless Oil
266		Example 1; Example 2A; Example 3A; Example 4A.	Sticky Wax

*Cmpd. No.	Structure	Prepared According To Example	Appearance
267		Example 1; Example 2A; Example 3A; Example 4A.	Sticky Wax.
268		Example 3I, Example 4A	Oil
269		Example 3I, Example 4A	Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
270		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
271		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
272		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
273		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
274		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
275		Example 3F; Example 4A	Colorless Oil
276		Example 3F; Example 4A	Colorless Oil
277		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
278		Example 3F; Example 4A	Colorless Oil
279		Example 3F; Example 4A	Colorless Oil
280		Example 3F; Example 4A	Colorless Oil
281		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
282		Example 3F; Example 4A	Colorless Oil
283		Example 3F; Example 4A	Colorless Oil
284		Example 3F; Example 4A	Colorless Oil
285		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
286		Example 3F; Example 4A	Colorless Oil
287		Example 3F; Example 4A	Colorless Oil
288		Example 3F; Example 4A	White Foam
289		Example 3F; Example 4A	Yellow Sticky Wax

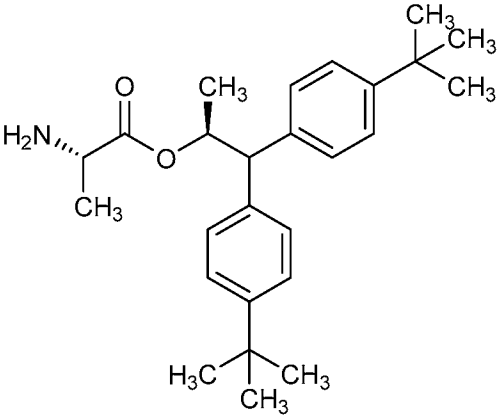
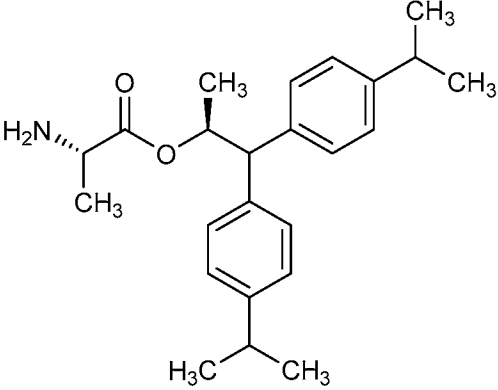
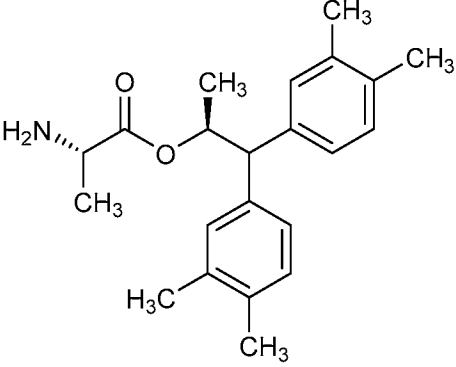
*Cmpd. No.	Structure	Prepared According To Example	Appearance
290		Example 3F; Example 4A	White Foam
291		Example 3F; Example 4A	Yellow Sticky Wax
292		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
293		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil

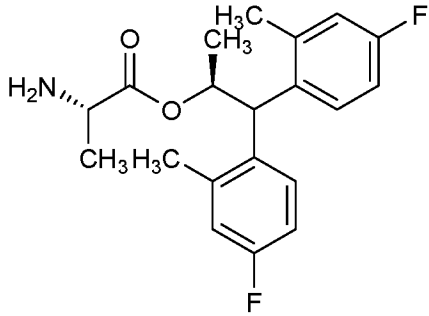
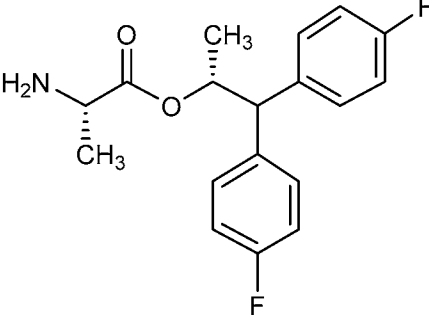
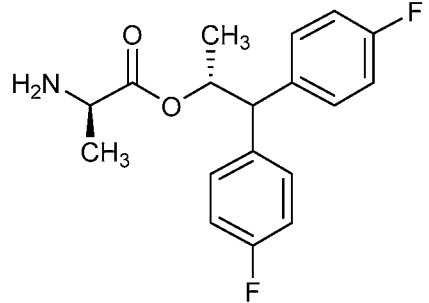
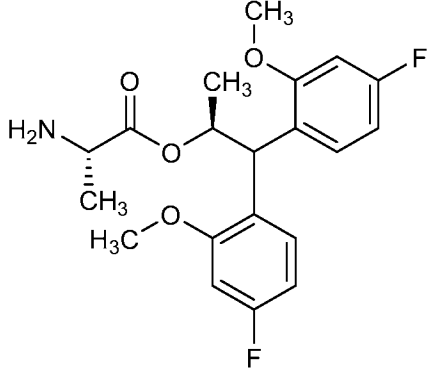
*Cmpd. No.	Structure	Prepared According To Example	Appearance
294		Example 1; Example 2A; Example 3A; Example 4A	Colorless Oil
295		Example 3F; Example 4A	Colorless Oil
296		Example 3F; Example 4A	Colorless Oil
297		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
298		Example 3F; Example 4A	Colorless Oil
299		Example 3F; Example 4A	Colorless Oil
300		Example 3F; Example 4A	Colorless Oil
301		Example 3F; Example 4A	Colorless Oil

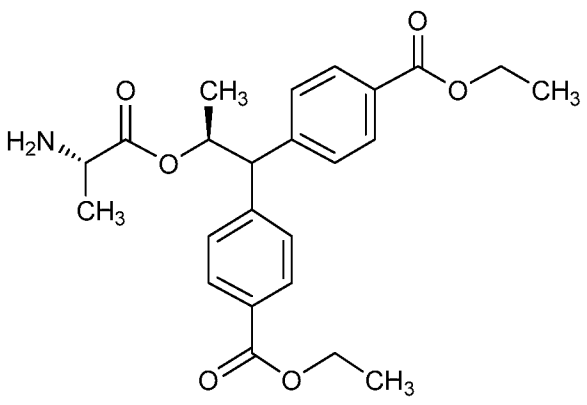
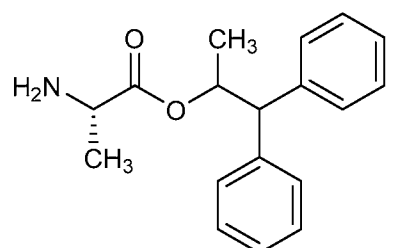
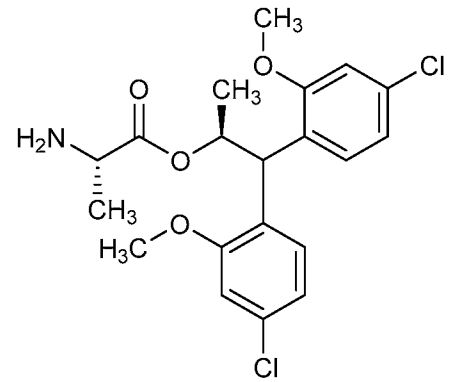
*Cmpd. No.	Structure	Prepared According To Example	Appearance
302		Example 3F; Example 4A	Colorless Oil
303		Example 3F; Example 4A	Colorless Oil
304		Example 3F; Example 4A	Colorless Oil
305		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
306		Example 3F; Example 4A	Colorless Oil
307		Example 3F; Example 4A	Colorless Oil
308		Example 3F; Example 4A	Thick Oil
309		Example 3F; Example 4A	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
310		Example 5, Step 1.	White Powder
311		Example 5, Step 1.	White Powder
312		Example 5, Step 1.	Clear, Colorless Thick Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
313		Example 5, Step 1.	White Powder
314		Example 5 Step 1.	White Semi-Solid
315		Example 5 Step 1.	White Semi-Solid
316		Example 5, Step 1.	Clear Glass

*Cmpd. No.	Structure	Prepared According To Example	Appearance
317		Example 1; Example 2A; Example 3A; Example 4A, Example 5, step 1.	Pale Purple Sticky Wax
318		Example 5 Step 1.	Colorless Oil
319		Example 5, Step 1	White Foam
320		Example 5, Step 1	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
321		Example 5, Step 1	White Solid
322		Example 5, Step 1.	Colorless Oil
323		Example 5, Step 1.	Yellow Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
324	 <chem>CCOC(=O)[C@H](c1ccc(F)cc1)[C@@H](c2ccc(F)cc2)[C@@H](c3ccc(OC)cc3)C[C@H](N)C</chem>	Example 5, Step 1.	Yellow Oil
325	 <chem>CCOC(=O)[C@H](c1ccc(Cl)cc1)[C@@H](c2ccc(Cl)cc2)[C@@H](c3ccc(OC)cc3)C[C@H](N)C</chem>	Example 5, Step 1.	Yellow Oil
326	 <chem>CCOC(=O)[C@H](c1ccc(C)cc1)[C@@H](c2ccc(C)cc2)[C@@H](c3ccc(OC)cc3)C[C@H](N)C</chem>	Example 5, Step 1.	Yellow Oil

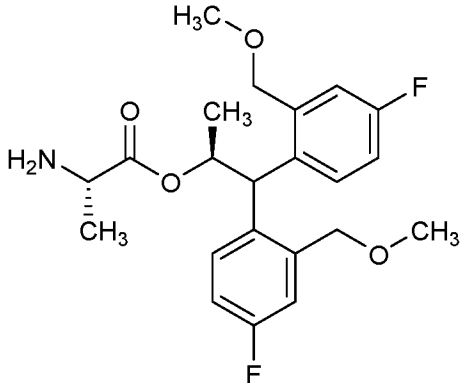
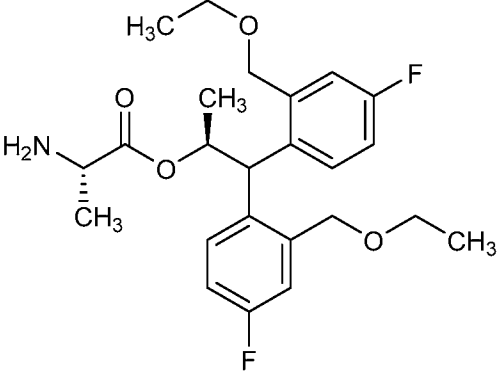
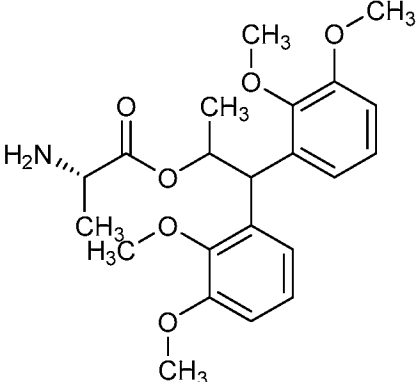
*Cmpd. No.	Structure	Prepared According To Example	Appearance
327		Example 5, Step 1	White Foam
328		Example 5, Step 1	White Foam
329		Example 5, Step 1	White Foam
330		Example 5, Step 1	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
331		Example 5, Step 1	White Foam
332		Example 5, Step 1.	Clear, Colorless Oil
333		Example 5, Step 1.	Light Brown Oil
334		Example 5, Step 1.	Pale Yellow Oil

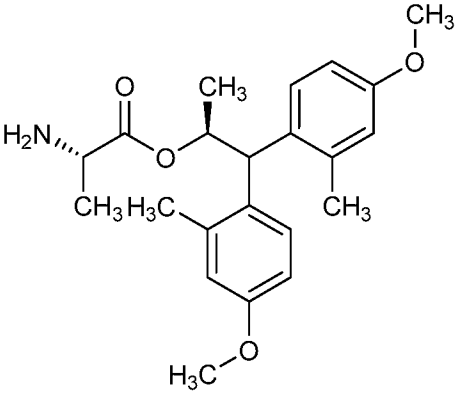
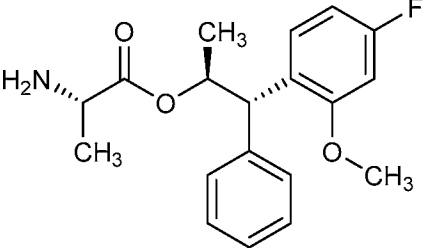
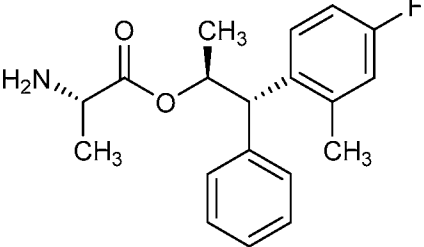
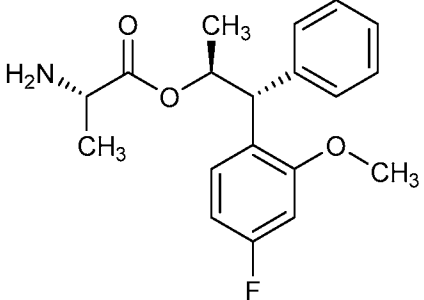
*Cmpd. No.	Structure	Prepared According To Example	Appearance
335		Example 5, Step 1.	Pale Yellow Oil
336		Example 5, Step 1.	White Powdery Solid
337		Example 5, Step 1.	Clear, Colorless Oil
338		Example 5, Step 1.	White Powdery Solid

*Cmpd. No.	Structure	Prepared According To Example	Appearance
339		Example 5, Step 1.	Clear, Colorless Oil
340		Example 5, Step 1.	White Solid
341		Example 5, Step 1.	Thick Oil
342		Example 5, Step 1.	White Solid

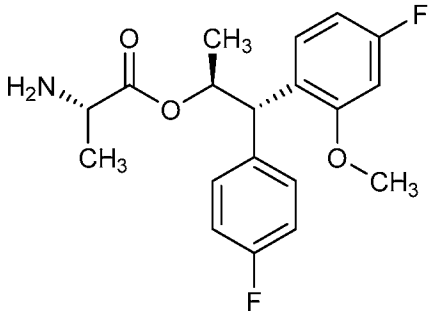
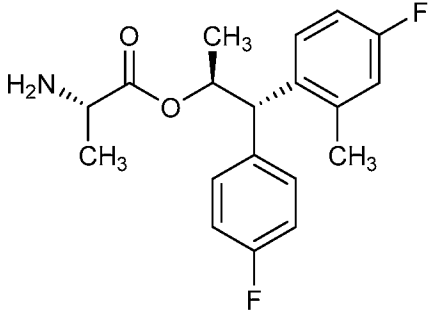
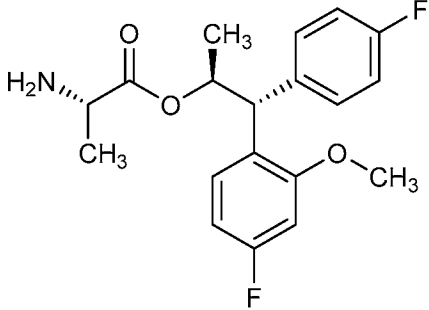
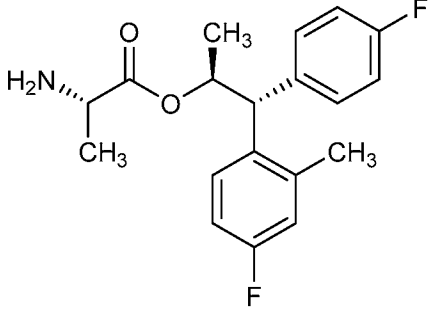
*Cmpd. No.	Structure	Prepared According To Example	Appearance
343		Example 5, Step 1.	White Solid
344		Example 5, Step 1.	White Solid
345		Example 5, Step 1.	White Solid
346		Example 5, Step 1.	Thick Oil

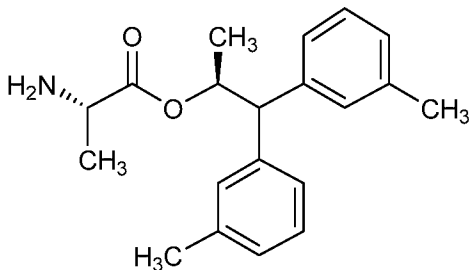
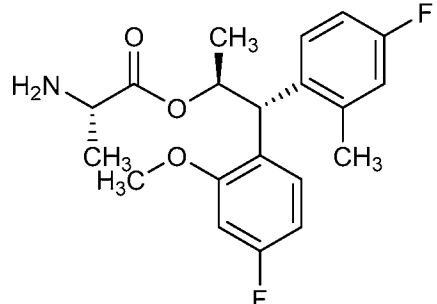
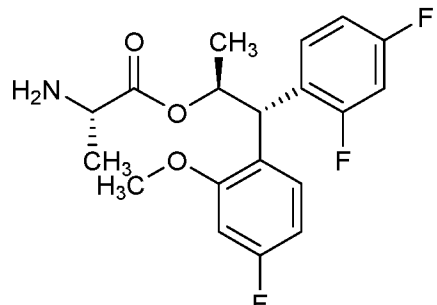
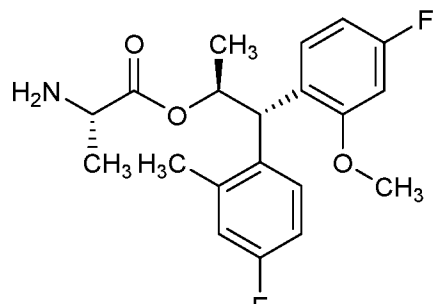
*Cmpd. No.	Structure	Prepared According To Example	Appearance
347		Example 5, Step 1.	White Solid
348		Example 5, Step 1.	White Solid
349		Example 5, Step 1	Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
350		Example 5, Step 1	Oil
351		Example 5, Step 1	Oil
352		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
353		Example 5, Step 1	Colorless Oil
354		Example 5, Step 1	Colorless Oil
355		Example 5, Step 1	Colorless Oil
356		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
357		Example 5, Step 1	Colorless Oil
358		Example 5, Step 1	Colorless Oil
359		Example 5, Step 1	Colorless Oil
360		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
361		Example 5, Step 1	Colorless Foam
362		Example 5, Step 1	Colorless Foam
363		Example 5, Step 1	Colorless Oil
364		Example 5, Step 1	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
365		Example 5, Step 1	White Foam
366		Example 5, Step 1.	Sticky Wax
367		Example 5, Step 1.	Sticky Wax
368		Example 5, Step 1.	Sticky Wax

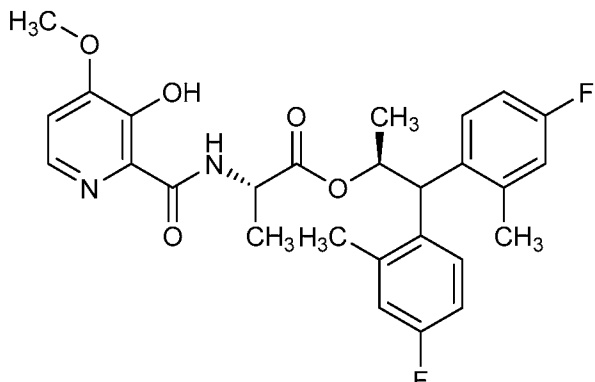
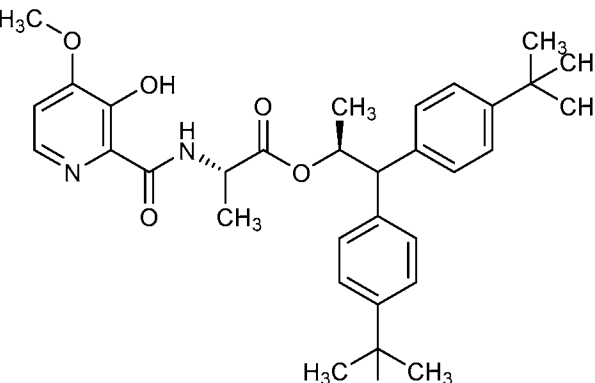
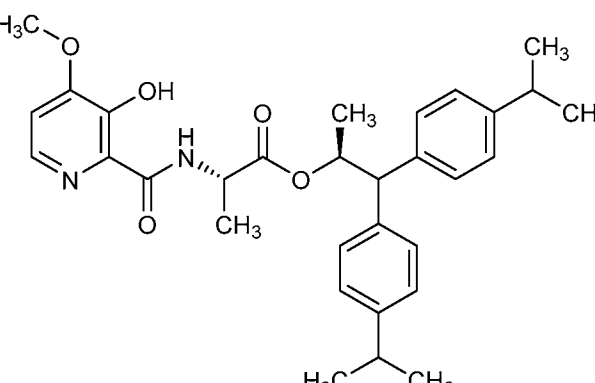
*Cmpd. No.	Structure	Prepared According To Example	Appearance
369		Example 5, Step 1.	Sticky Wax
370		Example 5, Step 1	White Foam
371		Example 5, Step 1	White Foam
372		Example 5, Step 1	White Foam

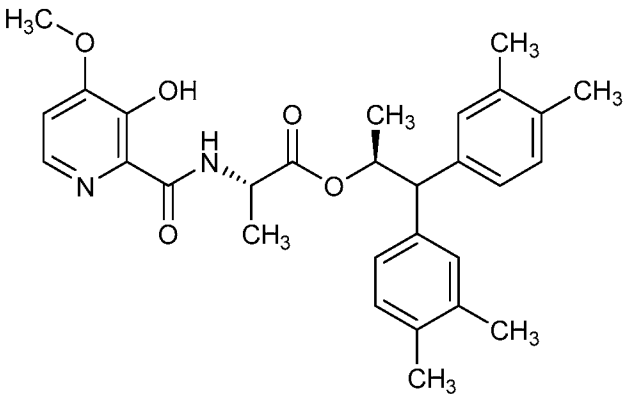
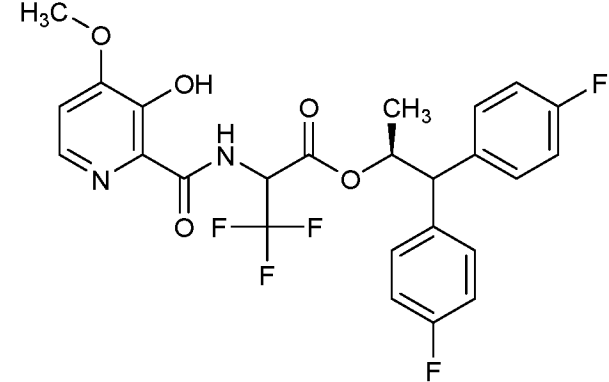
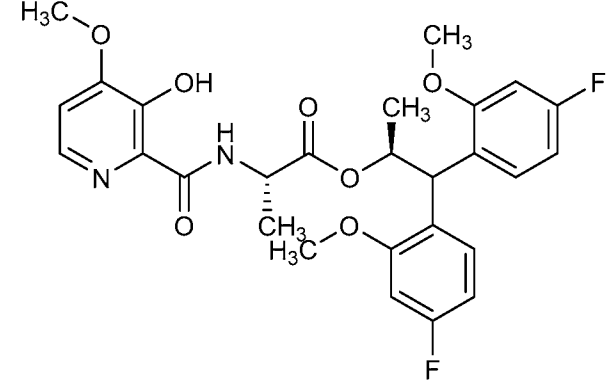
*Cmpd. No.	Structure	Prepared According To Example	Appearance
373		Example 5, Step 1	White Foam
374		Example 5, Step 1	White Foam
375		Example 5, Step 1	Colorless Oil
376		Example 5, Step 1	Colorless Oil

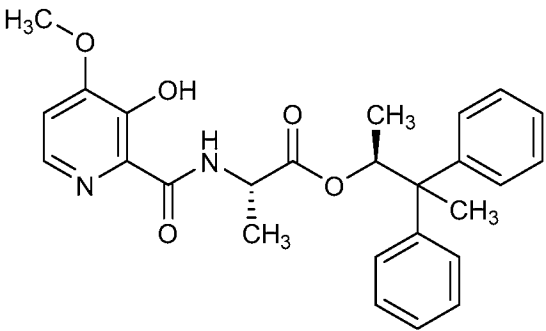
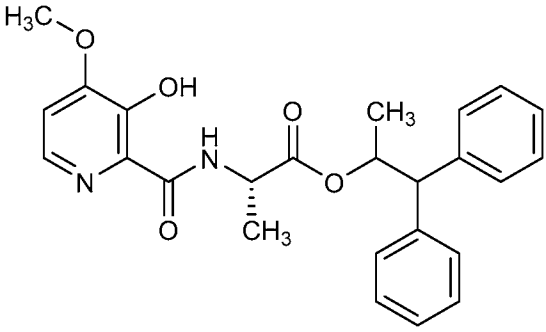
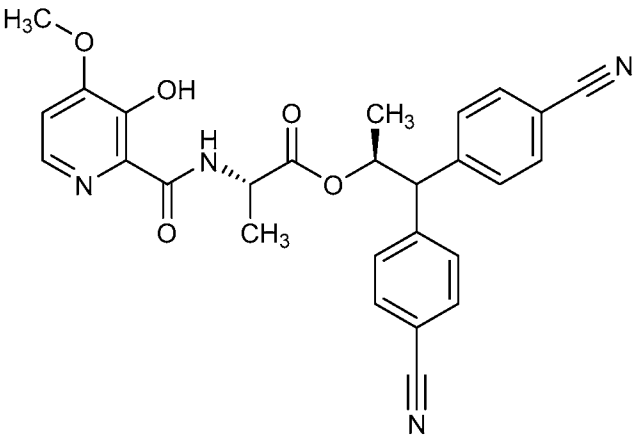
*Cmpd. No.	Structure	Prepared According To Example	Appearance
377		Example 5, Step 1.	Thick Oil
378		Example 5, Step 1.	Thick Oil
379		Example 5, Step 1.	White Solid
380		Example 5, Step 1.	Thick Oil

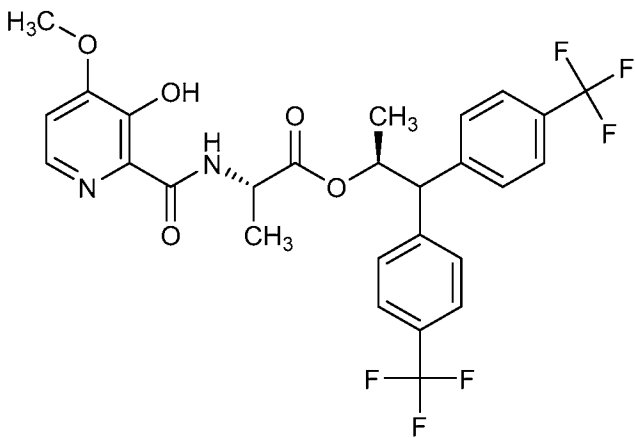
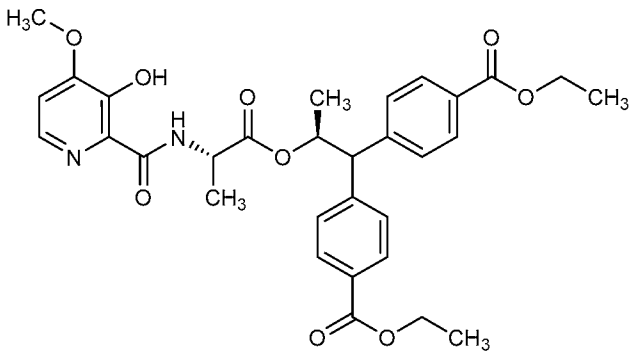
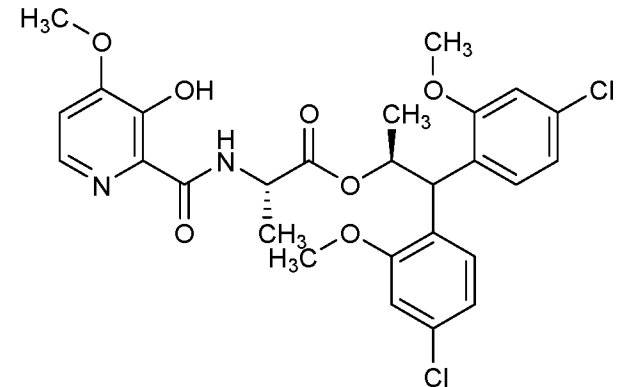
*Cmpd. No.	Structure	Prepared According To Example	Appearance
381		Example 5, Step 1.	Thick Oil
382		Example 5, Step 1.	White Foam
383		Example 5, Step 1.	White Solid
384		Example 5, Step 1.	White Foam

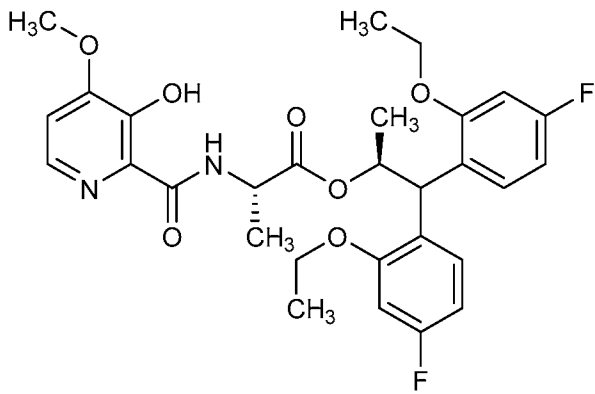
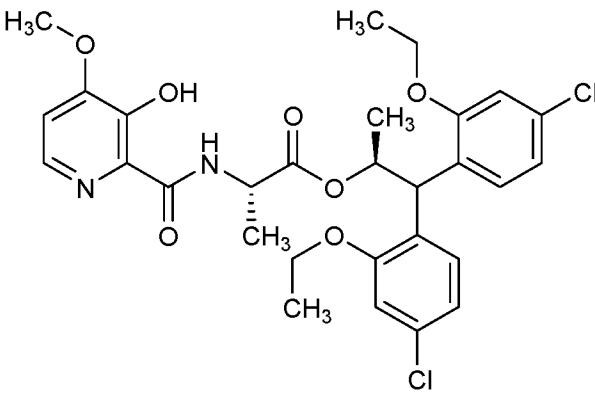
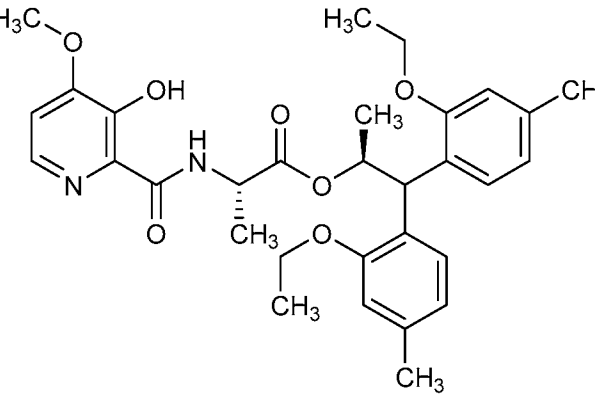
*Cmpd. No.	Structure	Prepared According To Example	Appearance
385		Example 5, Step 1.	White Foam
386		Example 5 Step 2.	Matte White Solid And Clear Oil
387		Example 5 Step 2.	Matte White Solid And Clear Oil

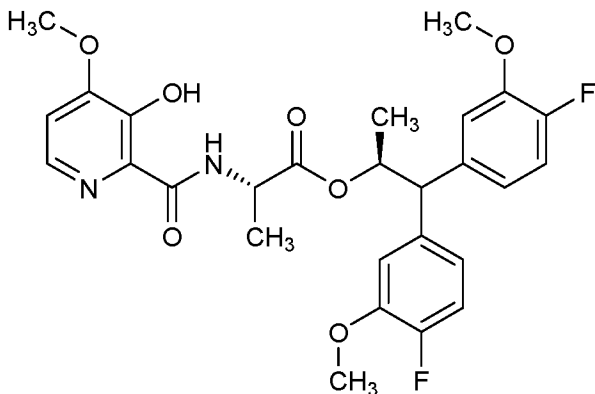
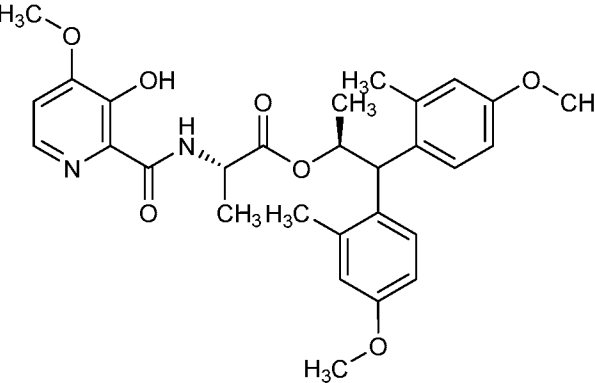
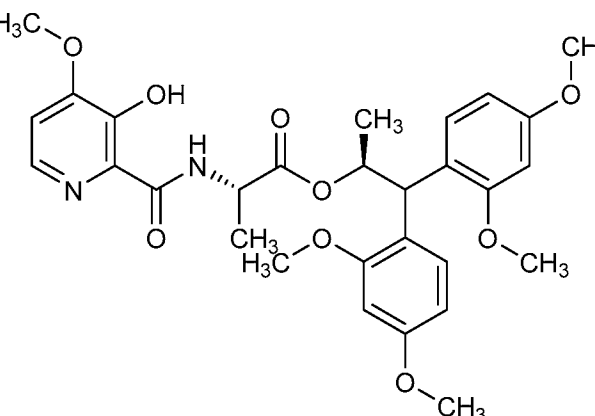
*Cmpd. No.	Structure	Prepared According To Example	Appearance
388		Example 5, Step 2.	Clear, Colorless Oil
389		Example 5, Step 2.	Colorless Foam
390		Example 5, Step 2.	Colorless Foam

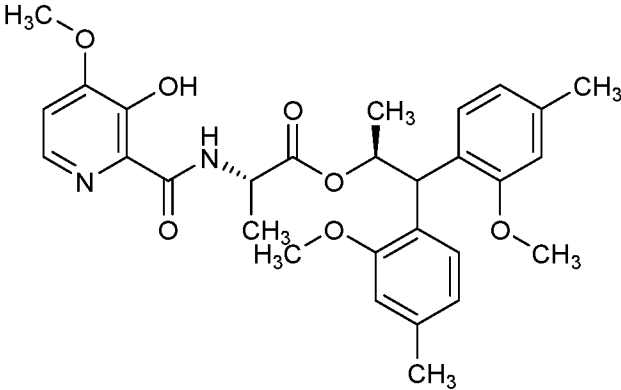
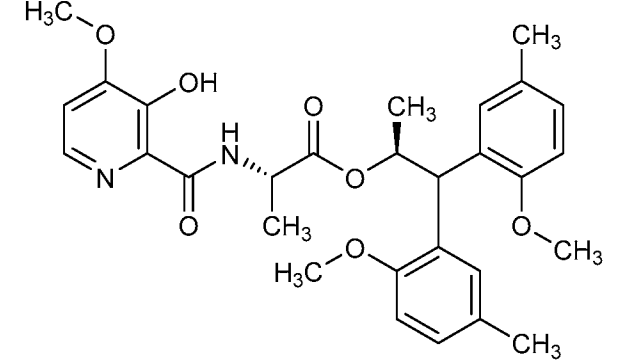
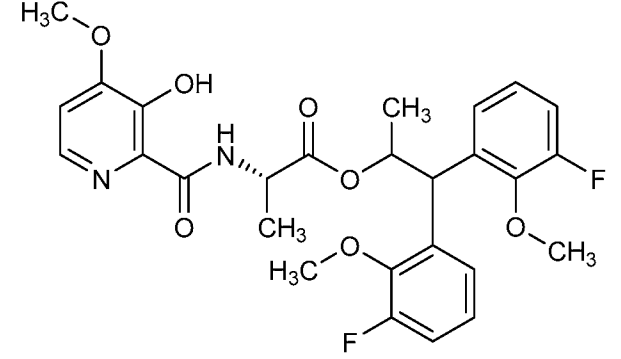
*Cmpd. No.	Structure	Prepared According To Example	Appearance
391		Example 5, Step 2.	Clear, Colorless Oil
392		Example 5, Step 2.	Semi Solid
393		Example 5, Step 2.	White Foam

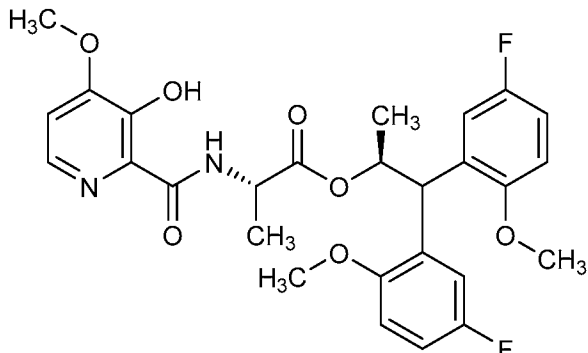
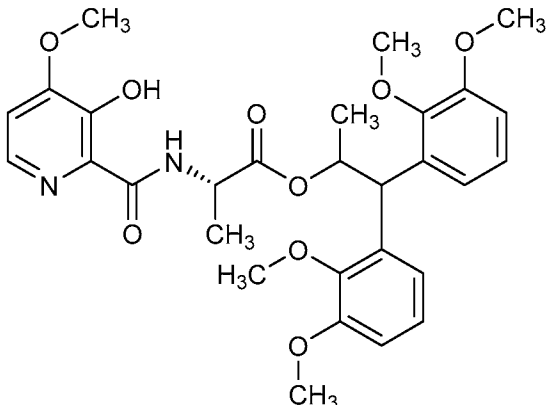
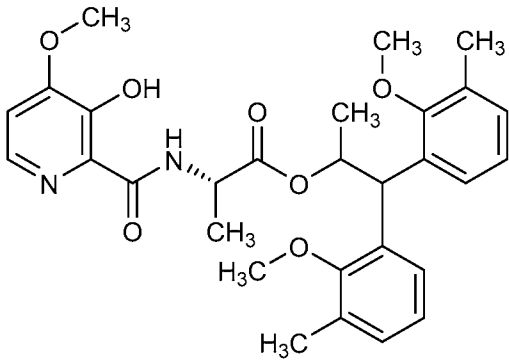
*Cmpd. No.	Structure	Prepared According To Example	Appearance
394		Example 5 Step 2.	Colorless Foamy Oil
395		Example 5, Step 2.	White Foam
396		Example 5, Step 2	White Foam

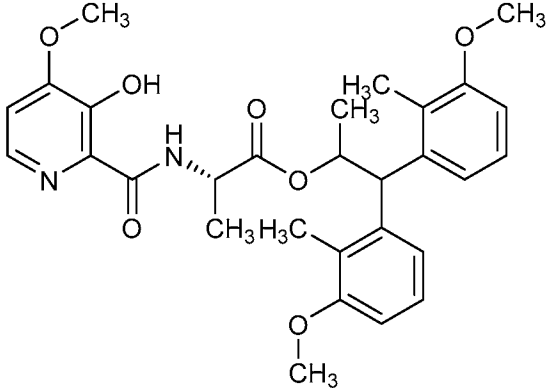
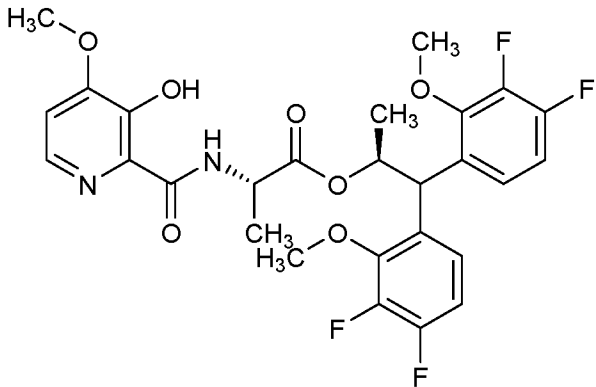
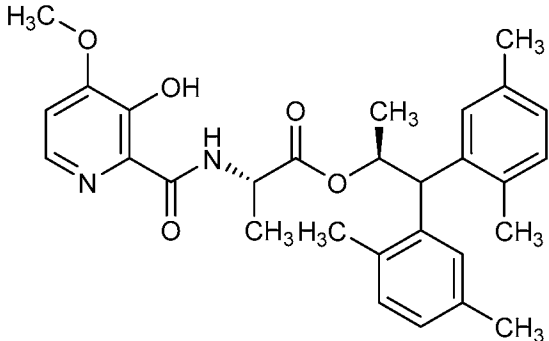
*Cmpd. No.	Structure	Prepared According To Example	Appearance
397		Example 5, Step 2	White Foam
398		Example 5, Step 2	White Foam
399		Example 5, Step 2.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
400		Example 5, Step 2.	White Foam
401		Example 5, Step 2.	White Foam
402		Example 5, Step 2.	White Foam

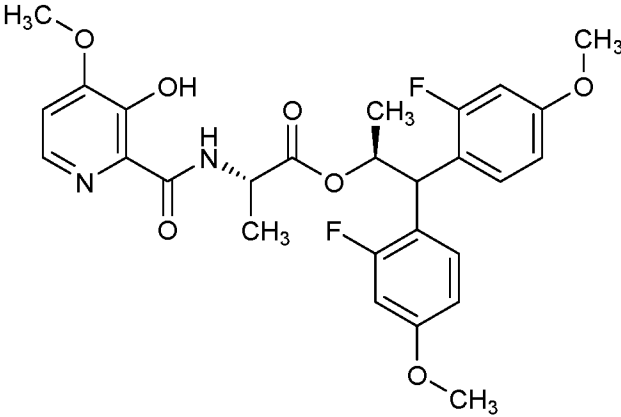
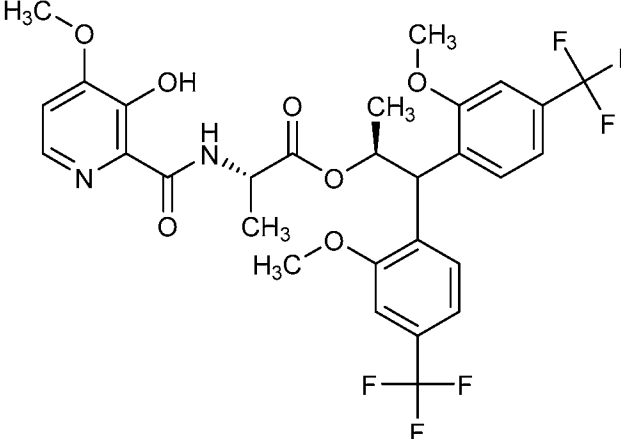
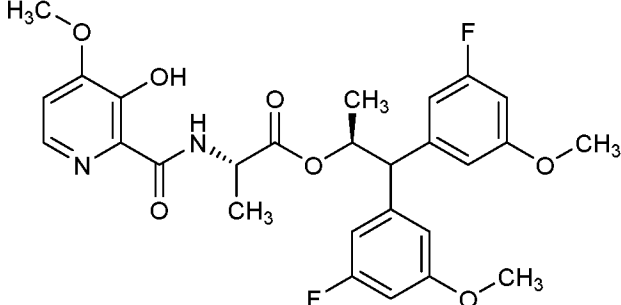
*Cmpd. No.	Structure	Prepared According To Example	Appearance
403		Example 5, Step 2	Colorless Oil
404		Example 5, Step 2	Colorless Oil
405		Example 5, Step 2	White Foam

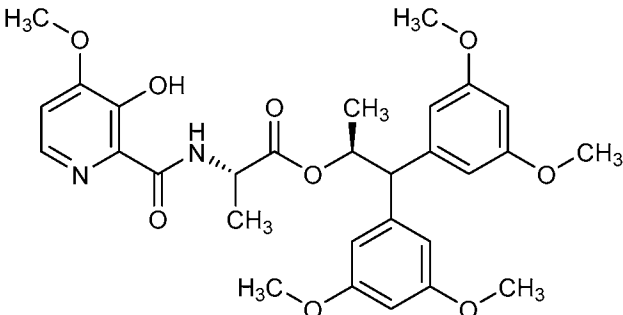
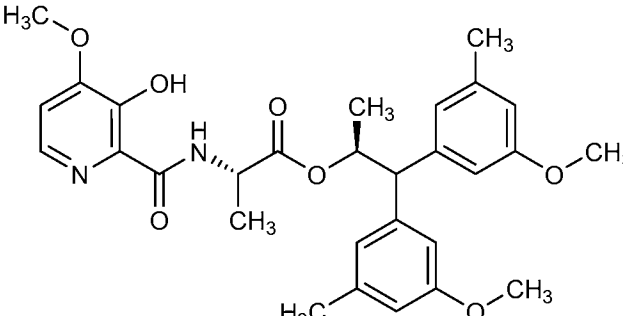
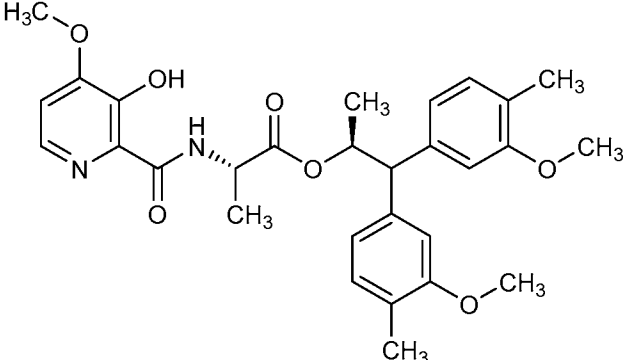
*Cmpd. No.	Structure	Prepared According To Example	Appearance
406		Example 5, Step 2	White Foam
407		Example 5, Step 2	White Foam
408		Example 5, Step 2	White Foam

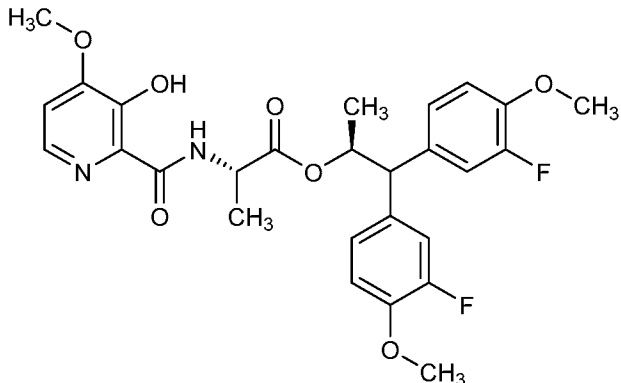
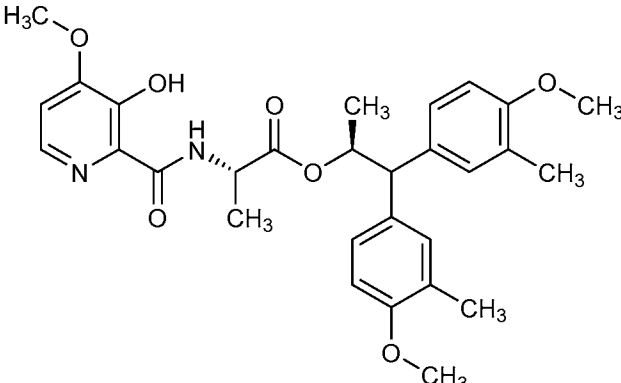
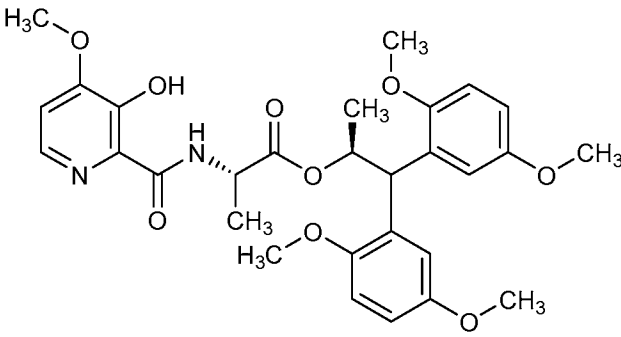
*Cmpd. No.	Structure	Prepared According To Example	Appearance
409		Example 5, Step 2	White Foam
410		Example 5, Step 2	White Foam
411		Example 5, Step 2	White Foam

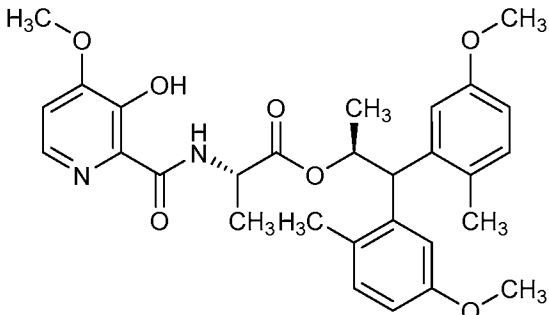
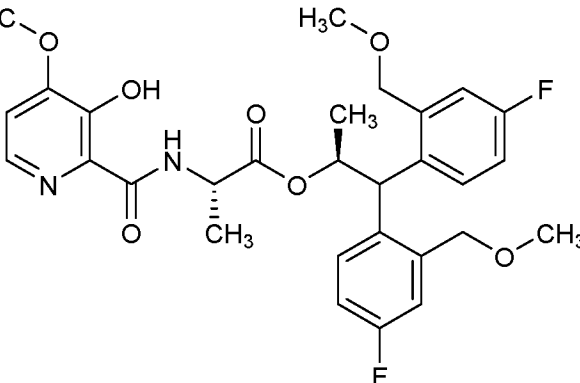
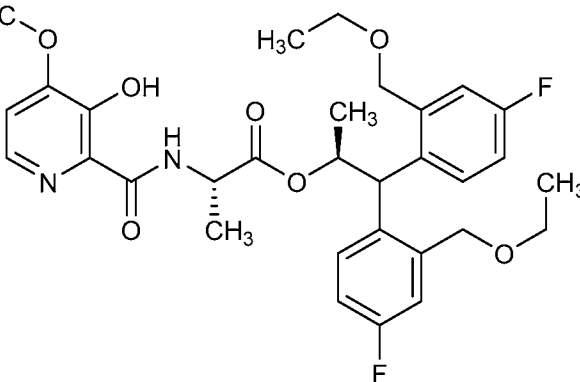
*Cmpd. No.	Structure	Prepared According To Example	Appearance
412		Example 5, Step 2	Oil
413		Example 5, Step 2.	White Foam
414		Example 5, Step 2.	Thick Oil

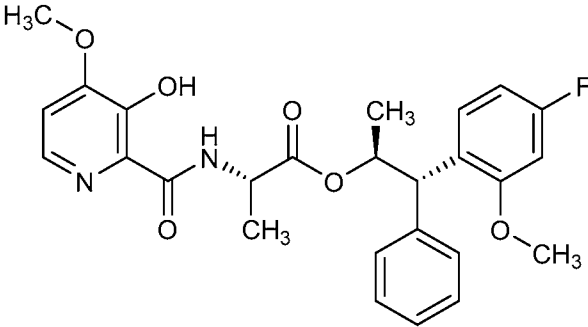
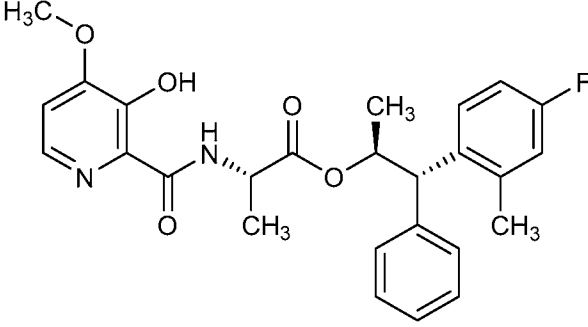
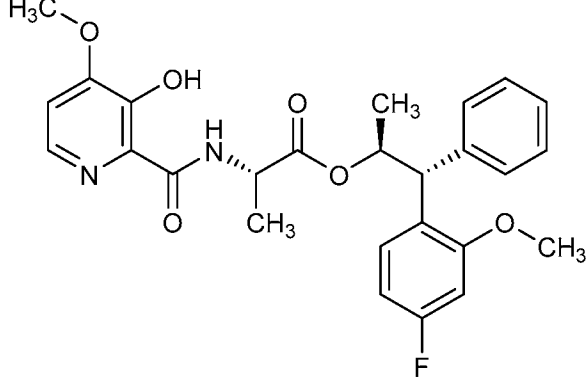
*Cmpd. No.	Structure	Prepared According To Example	Appearance
415		Example 5, Step 2.	White Foam
416		Example 5, Step 2.	White Foam
417		Example 5, Step 2.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
418		Example 5, Step 2.	White Foam
419		Example 5, Step 2.	White Foam
420		Example 5, Step 2.	Colorless Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
421		Example 5, Step 2.	Clear, Colorless Oil
422		Example 5, Step 2.	Clear, Colorless Oil
423		Example 5, Step 2.	Colorless Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
424		Example 5, Step 2.	Colorless Foam
425		Example 5, Step 2.	Clear, Colorless Oil
426		Example 5, Step 2.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
427		Example 5, Step 2.	Clear, Colorless Oil
428		Example 5, Step 2.	White Foam
429		Example 5, Step 2.	Sticky Wax

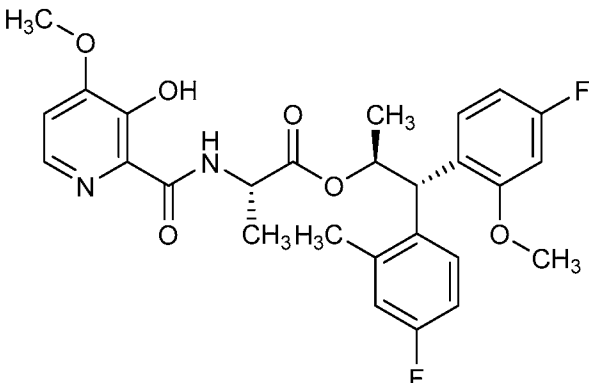
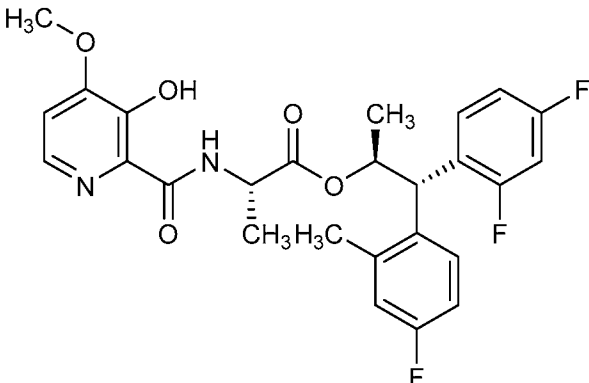
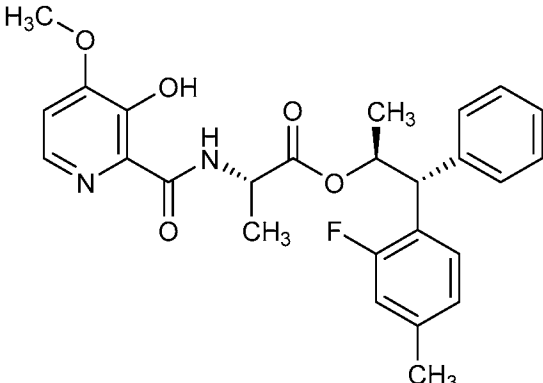
*Cmpd. No.	Structure	Prepared According To Example	Appearance
430		Example 5, Step 2	Colorless Gel
431		Example 5, Step 2	Colorless Gel
432		Example 5, Step 2	Colorless Gel

*Cmpd. No.	Structure	Prepared According To Example	Appearance
433	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccccc2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	Colorless Gel
434	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(OC)cc2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	Colorless Oil
435	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(C)cc2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	Colorless Oil

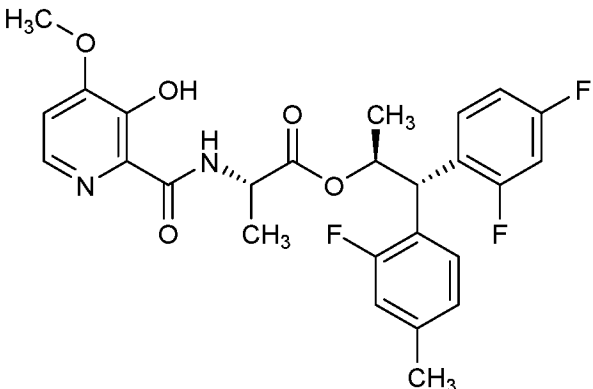
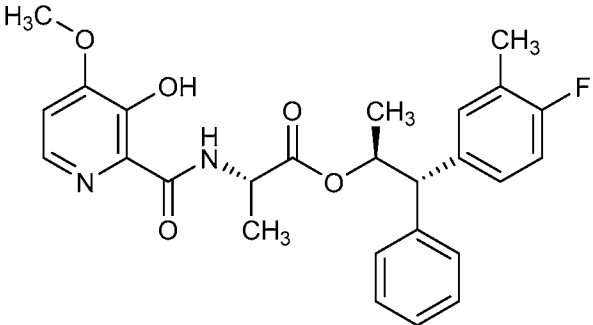
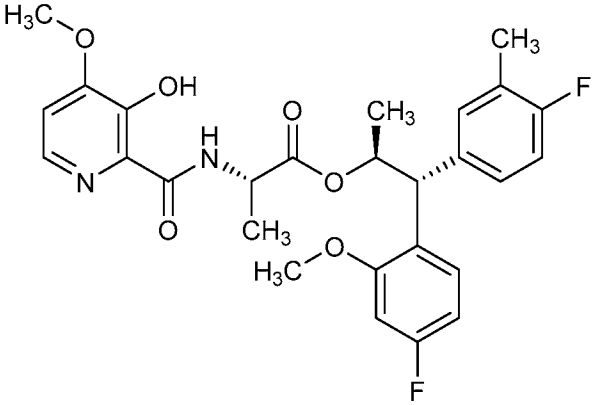
*Cmpd. No.	Structure	Prepared According To Example	Appearance
436	 <chem>COc1cc(O)c(C(=O)N[C@@H](C)C(=O)O[C@H](C)[C@H](c2ccc(OC)cc2)c3ccc(C)cc3)c[nH]1</chem>	Example 5, Step 2	Colorless Oil
437	 <chem>COc1cc(O)c(C(=O)N[C@@H](C)C(=O)O[C@H](C)[C@H](c2ccc(C)cc2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	Colorless Oil
438	 <chem>COc1cc(O)c(C(=O)N[C@@H](C)C(=O)O[C@H](C)[C@H](c2ccc(F)cc2)c3cc(F)ccc3)c[nH]1</chem>	Example 5, Step 2	Colorless Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
439	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(F)cc2)c3cc(F)cc3)c1</chem>	Example 5, Step 2	Colorless Foam
440	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(F)cc2)c3cc(F)cc3OC)c1</chem>	Example 5, Step 2	Colorless Oil
441	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(F)cc2)c3cc(F)cc3C)c1</chem>	Example 5, Step 2	Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
442		Example 5, Step 2	White Foam
443		Example 5, Step 2.	White Foam
444		Example 5, Step 2.	White Foam

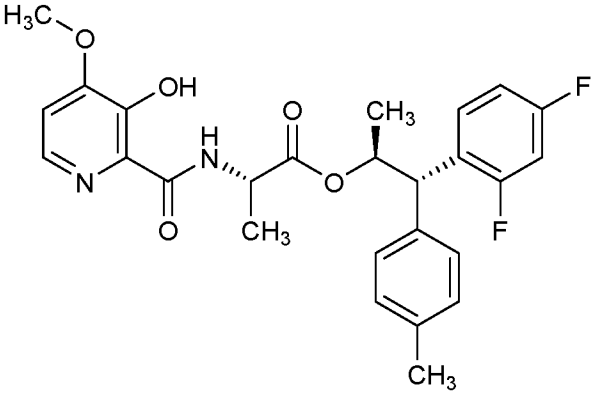
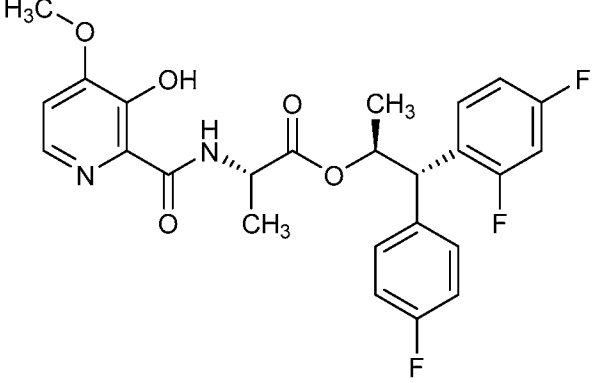
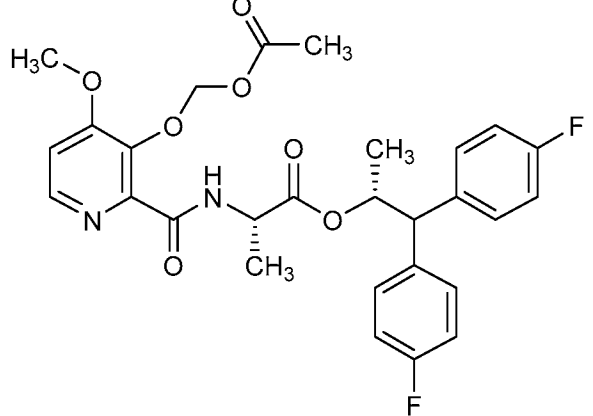
*Cmpd. No.	Structure	Prepared According To Example	Appearance
445		Example 5, Step 2.	White Foam
446		Example 5, Step 2.	White Foam
447		Example 5, Step 2	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
448	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2cc(F)cc(C)c2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	White Foam
449	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2cc(F)cc(C)c2)c3ccc(C)cc3)c[nH]1</chem>	Example 5, Step 2	White Foam
450	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2cc(F)cc(C)c2)c3ccc(F)cc3)c[nH]1</chem>	Example 5, Step 2	White Foam

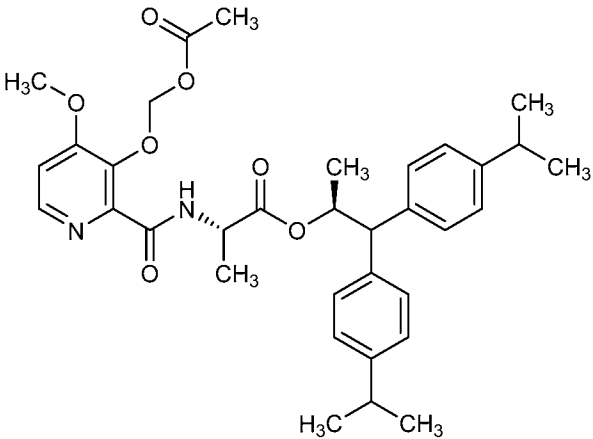
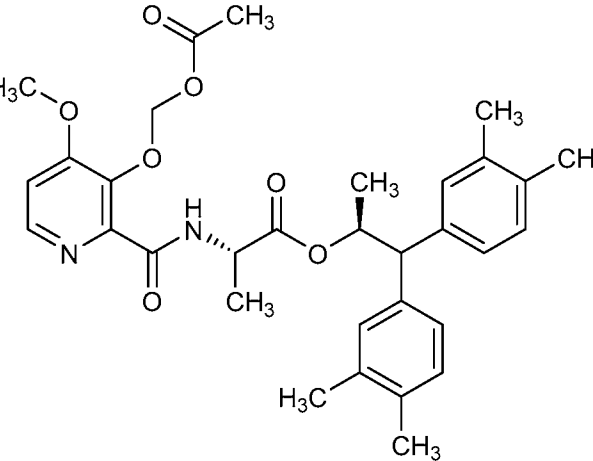
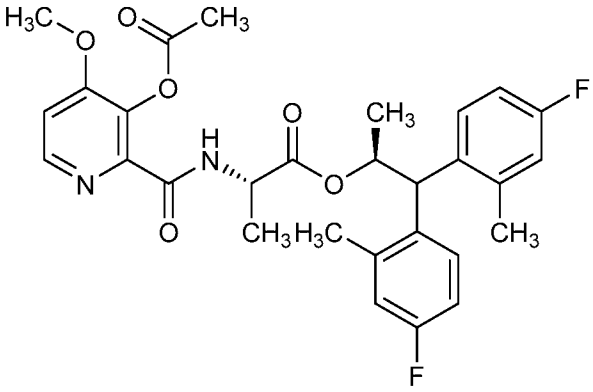
*Cmpd. No.	Structure	Prepared According To Example	Appearance
451		Example 5, Step 2	White Foam
452		Example 5, Step 2	Colorless Oil
453		Example 5, Step 2	Colorless Oil

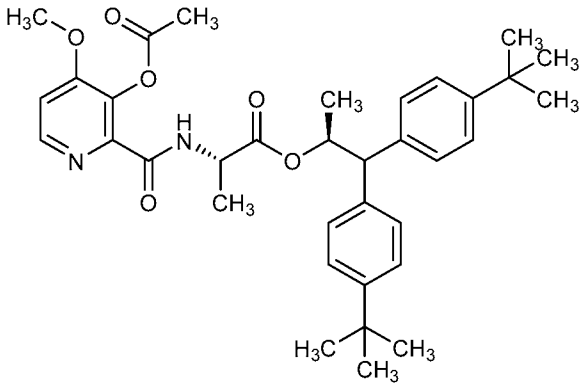
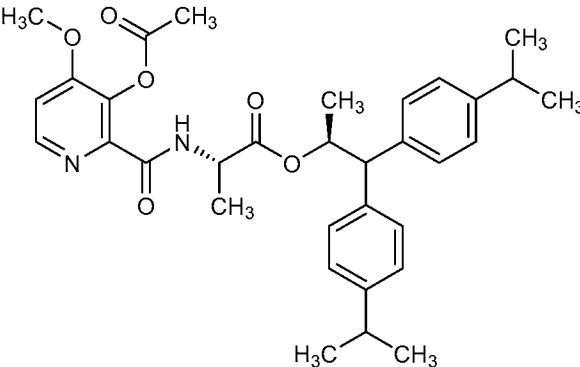
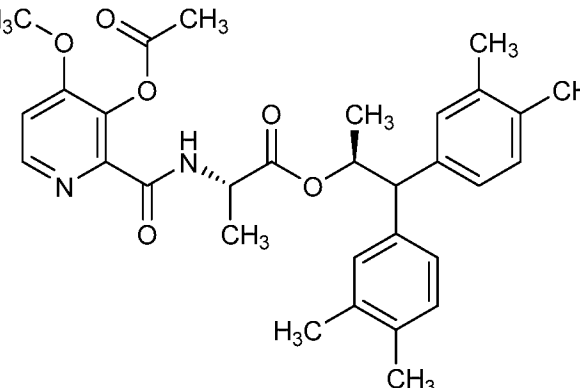
*Cmpd. No.	Structure	Prepared According To Example	Appearance
454	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccccc2)c3ccc(C)cc3)c[nH]1</chem>	Example 5, Step 2.	White Foam
455	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccccc2)c3ccc(C)cc3)c[nH]1</chem>	Example 5, Step 2.	White Foam
456	 <chem>COc1cc(O)c(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(F)cc2)c3ccc(C)cc3)c[nH]1</chem>	Example 5, Step 2.	White Foam

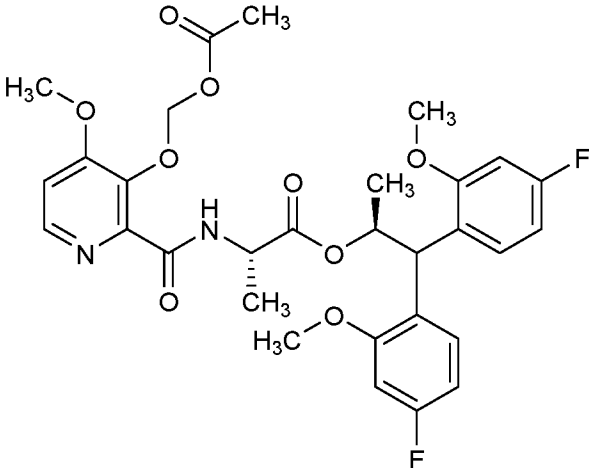
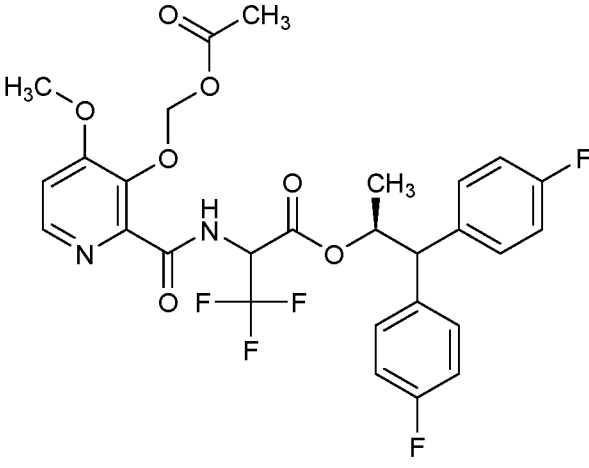
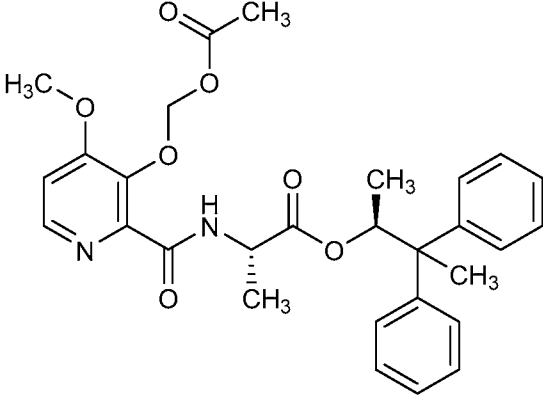
*Cmpd. No.	Structure	Prepared According To Example	Appearance
457	 <chem>COc1cc(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(F)cc2)c3ccccc3)c(O)c1</chem>	Example 5, Step 2.	White Foam
458	 <chem>COc1cc(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2ccc(C)cc2)c3ccccc3)c(O)c1</chem>	Example 5, Step 2.	White Foam
459	 <chem>COc1cc(C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c2cc(F)c(Cc3ccccc3)c(F)c2)c4ccccc4)c(O)c1</chem>	Example 5, Step 2.	White Foam

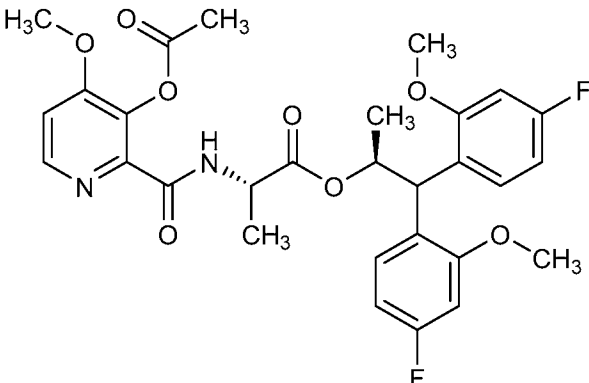
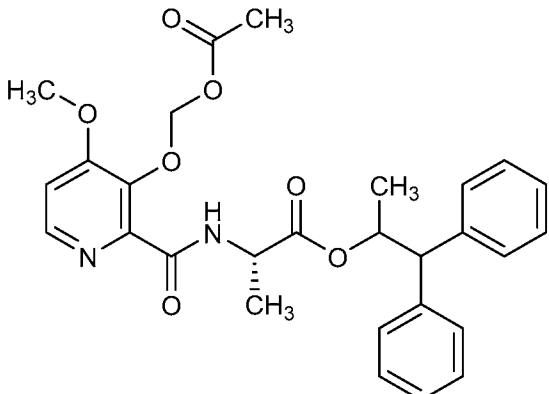
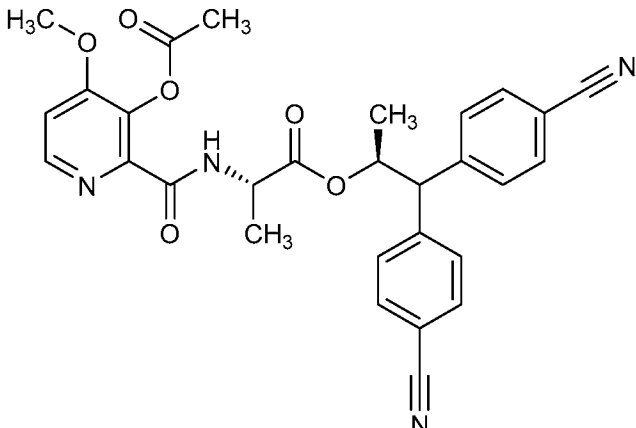
*Cmpd. No.	Structure	Prepared According To Example	Appearance
460		Example 5, Step 2.	White Foam
461		Example 5, Step 2.	White Foam
462		Example 6B.	Slightly Opaque Colorless Viscous Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
463		Example 6B.	Slightly Opaque Colorless Viscous Oil
464		Example 6B.	Yellow Oil
465		Example 6B.	Clear, Colorless Oil

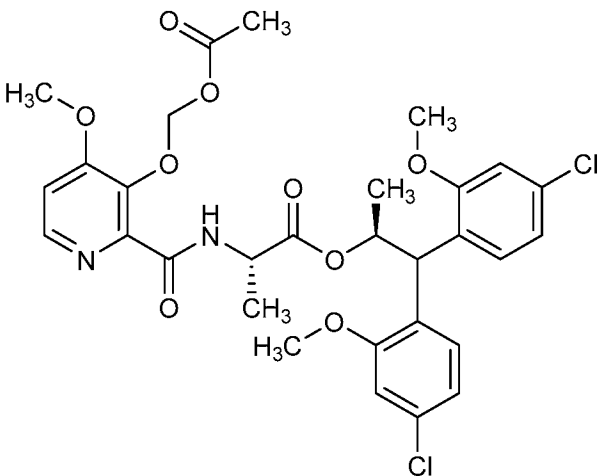
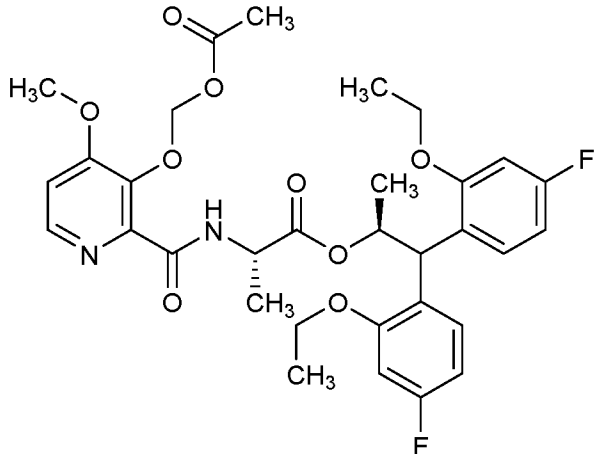
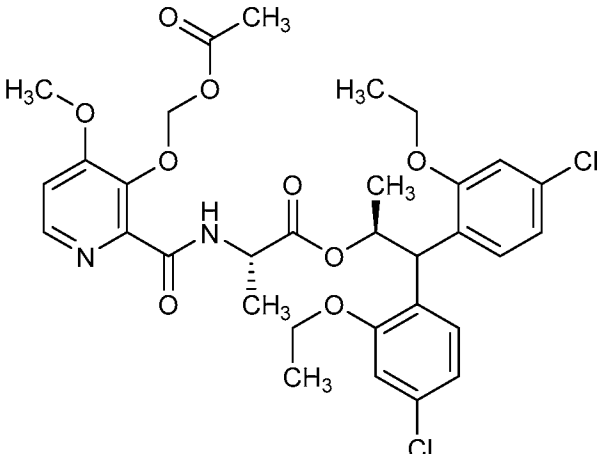
*Cmpd. No.	Structure	Prepared According To Example	Appearance
466		Example 6B.	Pale Yellow Oil
467		Example 6B.	Pale Yellow Oil
468		Example 6A.	Fluffy White Powder

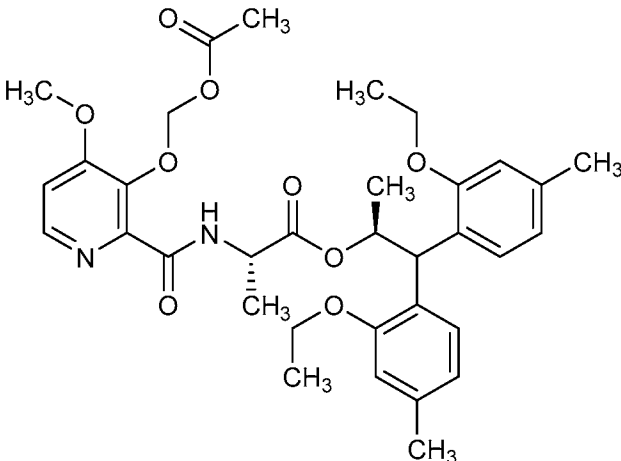
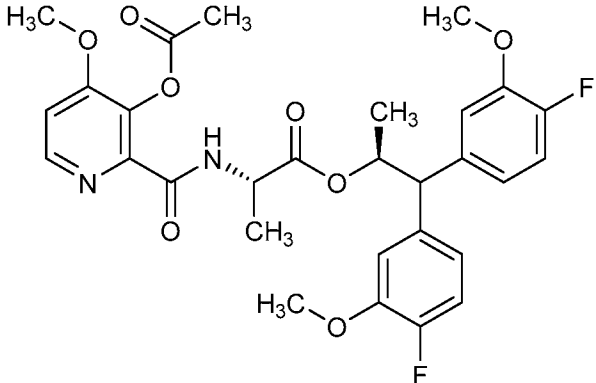
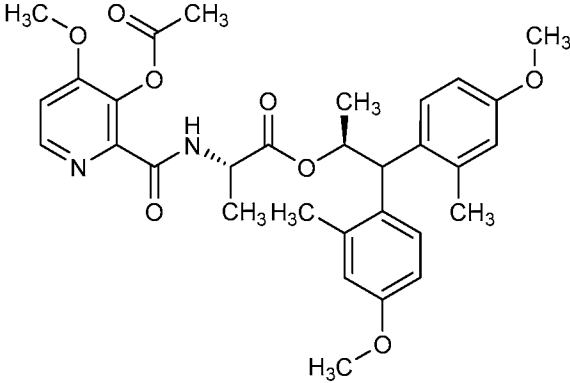
*Cmpd. No.	Structure	Prepared According To Example	Appearance
469		Example 6A.	Clear, Colorless Oil
470		Example 6A.	Clear, Colorless Oil
471		Example 6A.	Clear, Colorless Oil

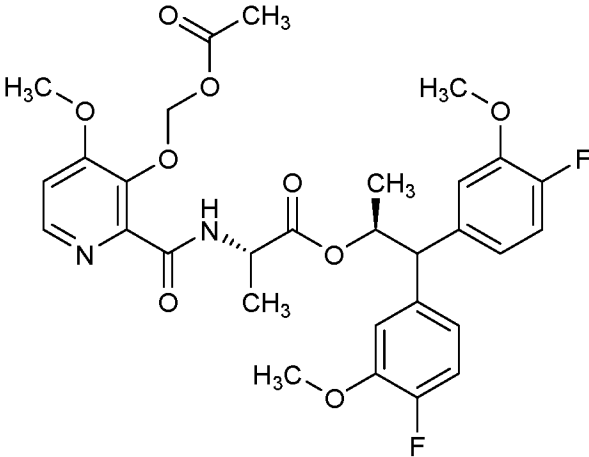
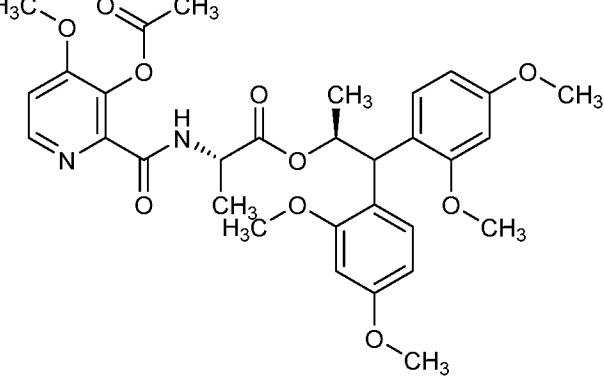
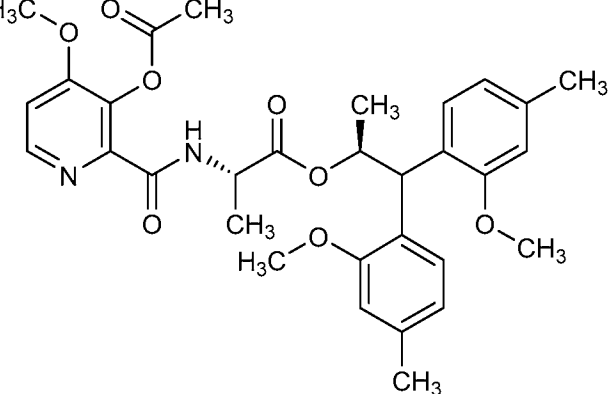
*Cmpd. No.	Structure	Prepared According To Example	Appearance
472		Example 6B.	White Foam
473		Example 6B.	Sticky Wax
474		Example 6B.	Colorless Oil

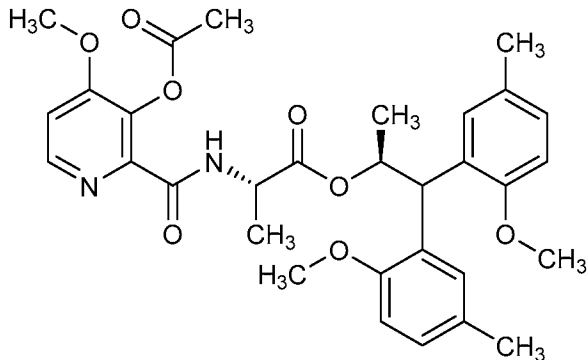
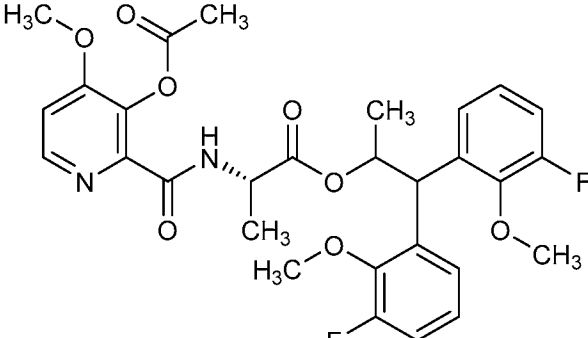
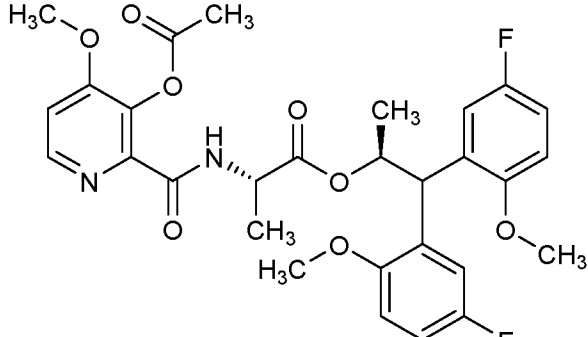
*Cmpd. No.	Structure	Prepared According To Example	Appearance
475		Example 6A.	White Foam
476		Example 6B.	White Foam
477		Example 6A.	White Foam

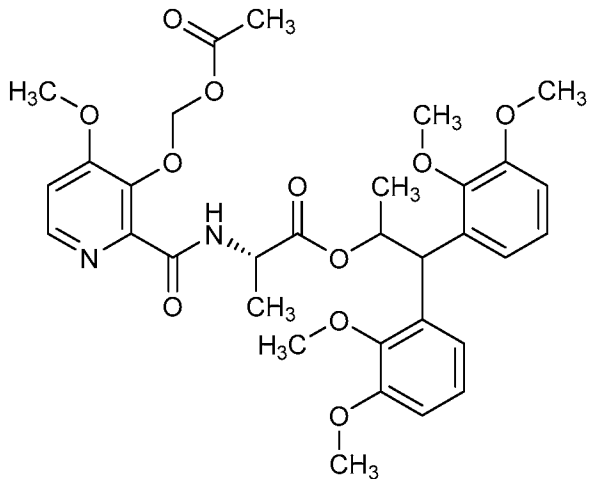
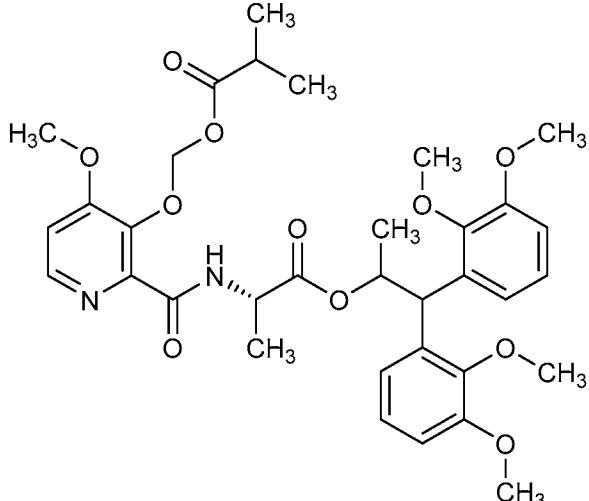
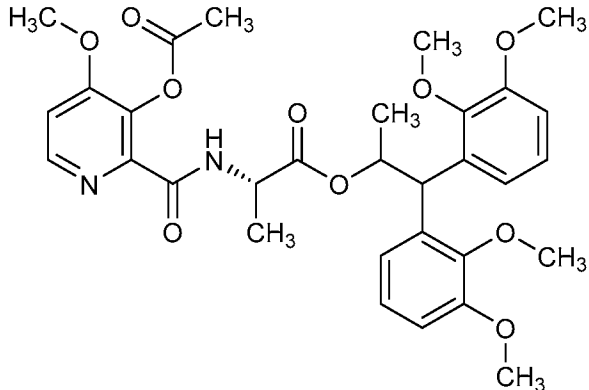
*Cmpd. No.	Structure	Prepared According To Example	Appearance
478		Example 6A.	White Foam
479		Example 6A.	White Foam
480		Example 6B.	White Foam

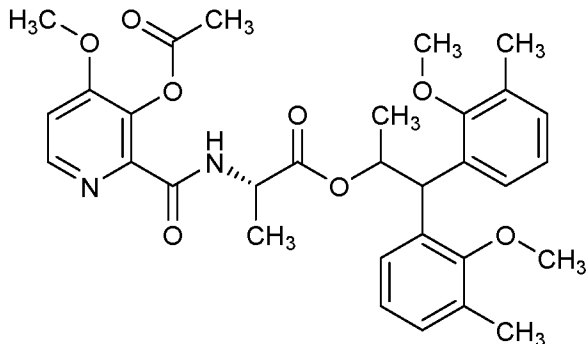
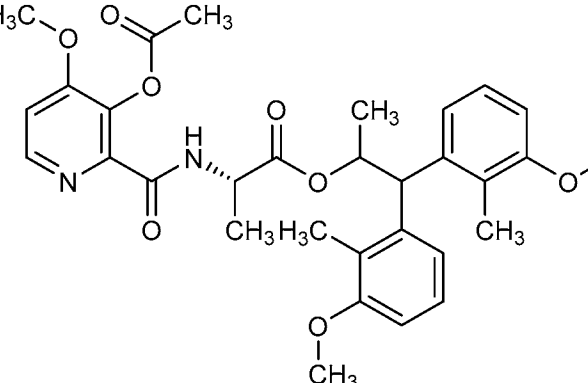
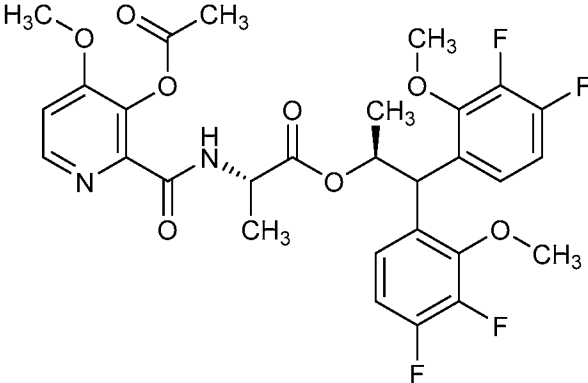
*Cmpd. No.	Structure	Prepared According To Example	Appearance
481		Example 6B.	White Foam
482		Example 6B.	White Foam
483		Example 6B.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
484		Example 6B.	White Foam
485		Example 6A	Colorless Oil
486		Example 6A	Colorless Oil

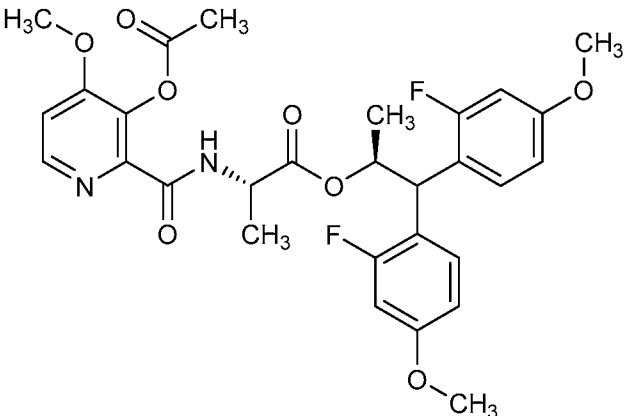
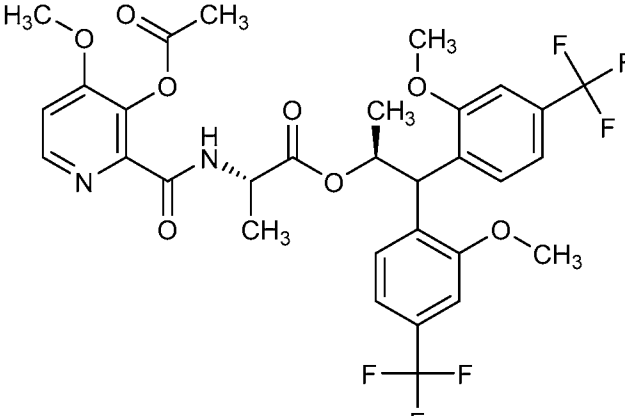
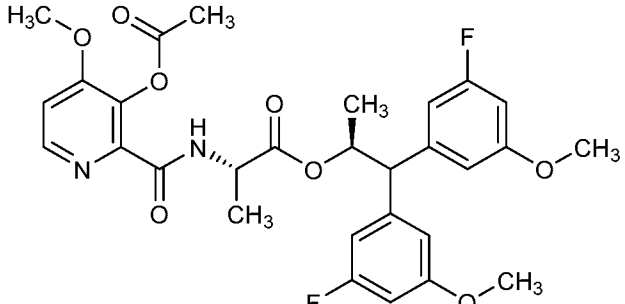
*Cmpd. No.	Structure	Prepared According To Example	Appearance
487		Example 6B	Colorless Oil
488		Example 6A.	White Foam
489		Example 6A.	White Foam

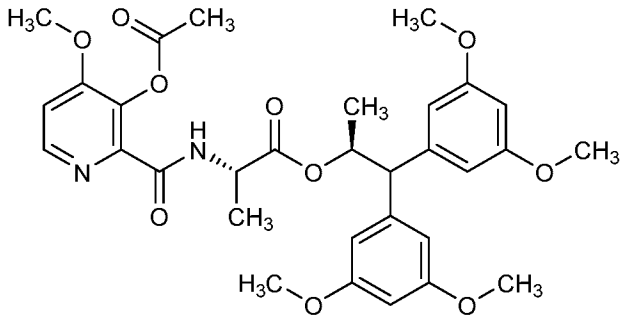
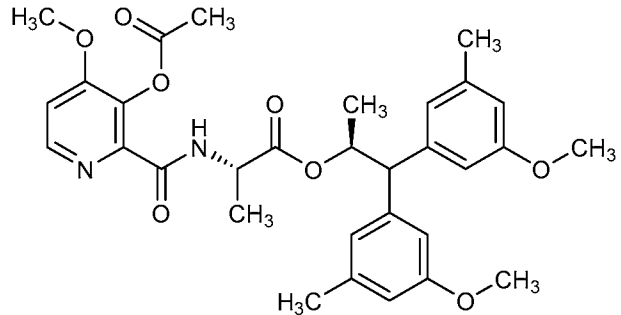
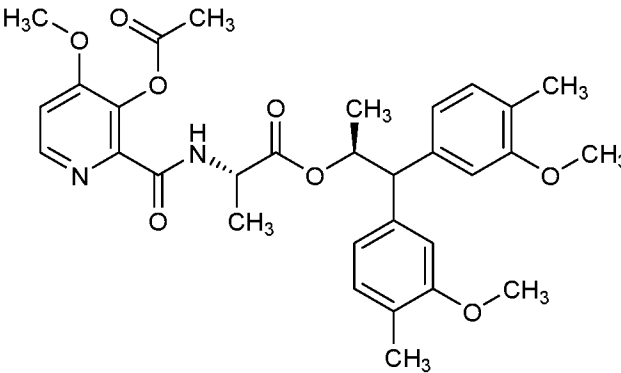
*Cmpd. No.	Structure	Prepared According To Example	Appearance
490		Example 6A.	White Wax
491		Example 6A.	White Foam
492		Example 6A.	White Foam

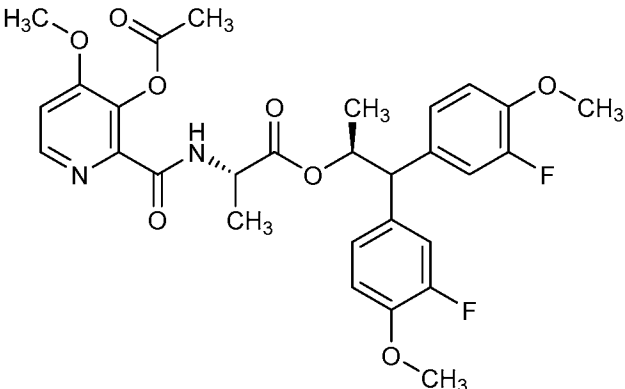
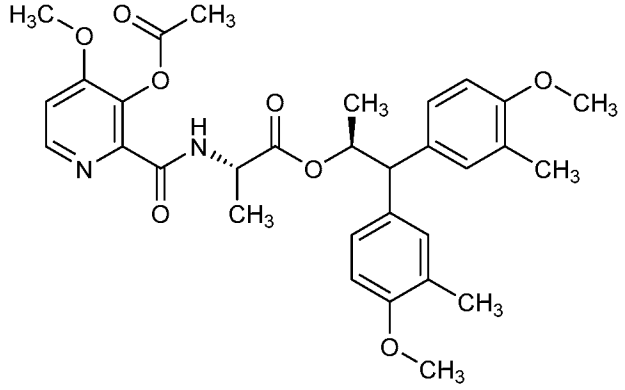
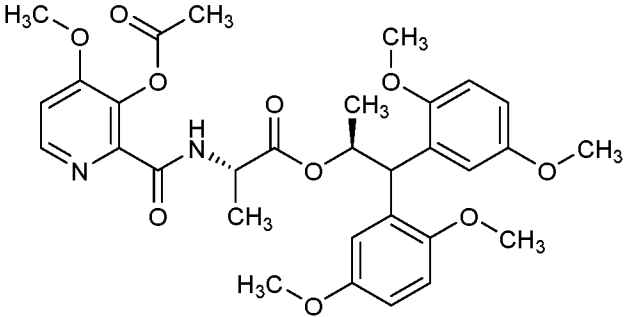
*Cmpd. No.	Structure	Prepared According To Example	Appearance
493		Example 6B	White Foam
494		Example 6C	White Foam
495		Example 6A	White Foam

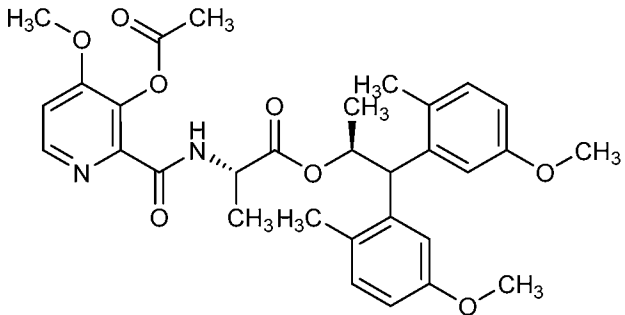
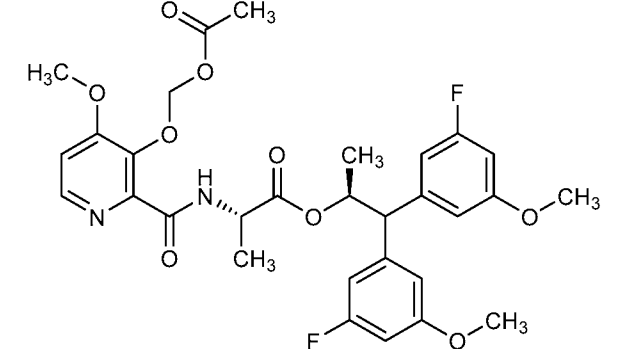
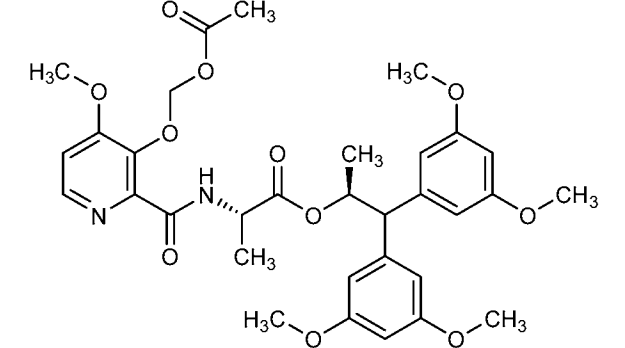
*Cmpd. No.	Structure	Prepared According To Example	Appearance
496		Example 6A	White Foam
497		Example 6A	Colorless Film
498		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
499		Example 6A.	White Foam
500		Example 6A.	White Foam
501		Example 6A.	White Foam
502		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
503		Example 6A.	White Foam
504		Example 6A.	White Foam
505		Example 6A.	Clear, Colorless Oil

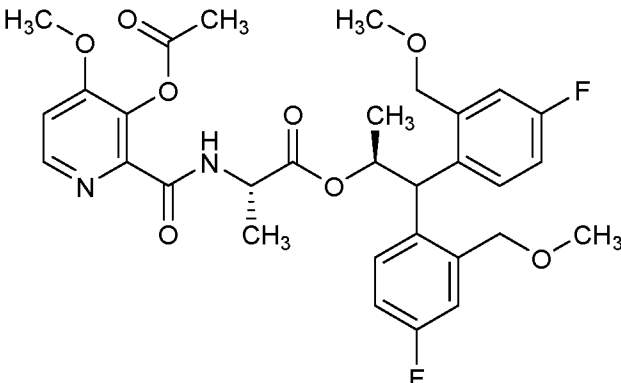
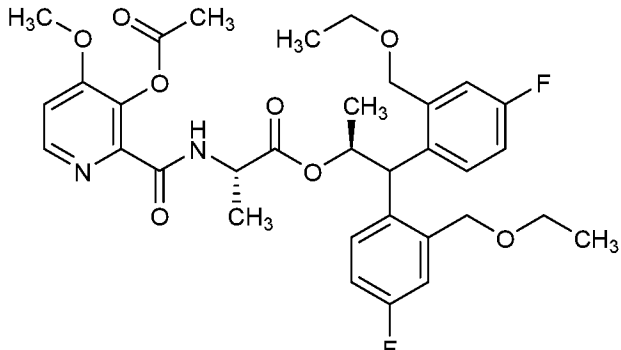
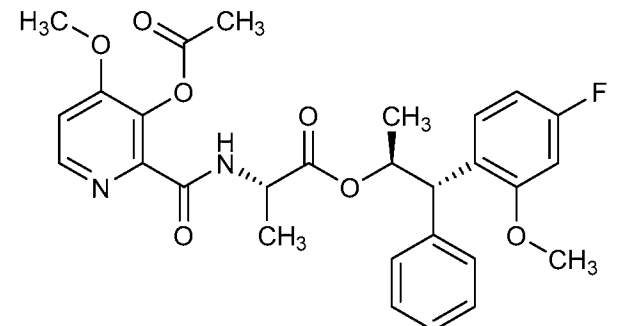
*Cmpd. No.	Structure	Prepared According To Example	Appearance
506		Example 6A.	Clear, Colorless Oil
507		Example 6A.	Clear, Colorless Oil
508		Example 6A.	Clear, Colorless Oil

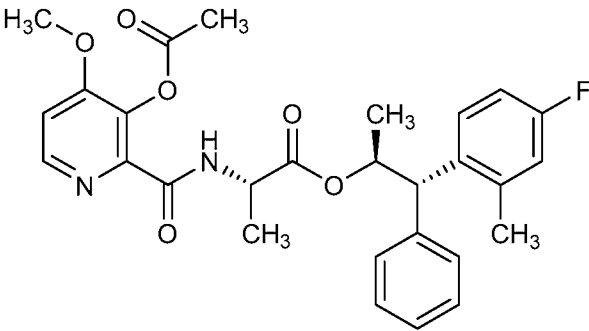
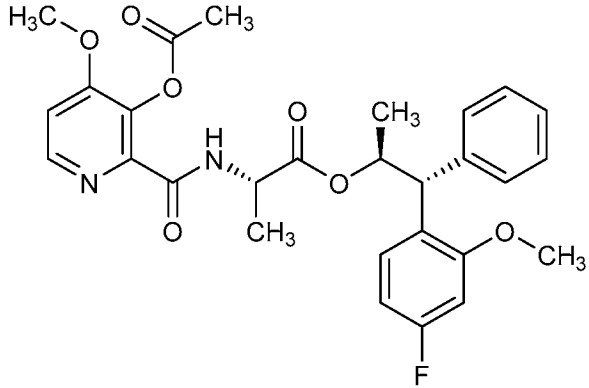
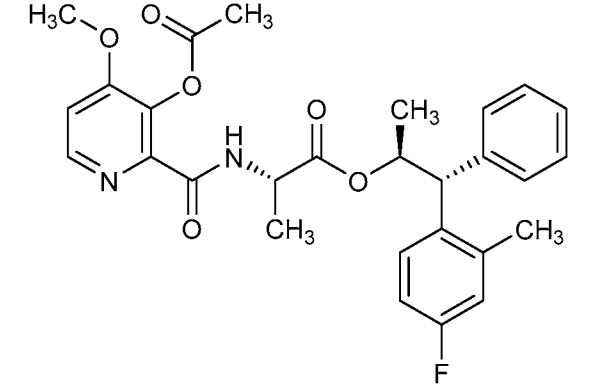
*Cmpd. No.	Structure	Prepared According To Example	Appearance
509		Example 6A.	Clear, Colorless Oil
510		Example 6A.	Clear, Colorless Oil
511		Example 6A.	Clear, Colorless Oil

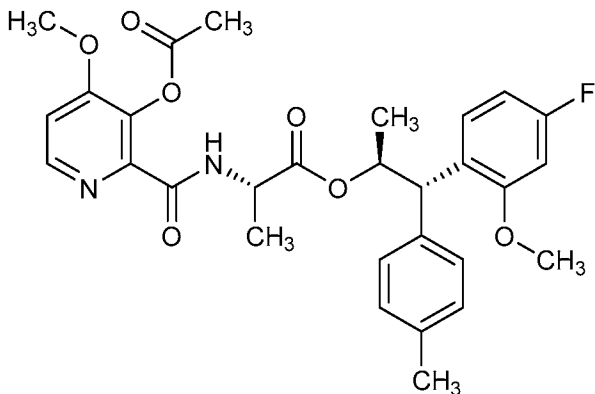
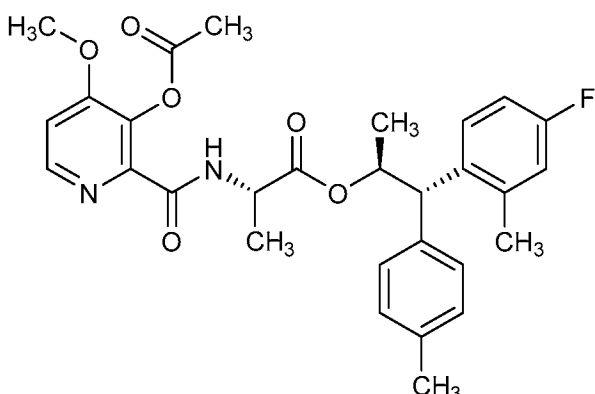
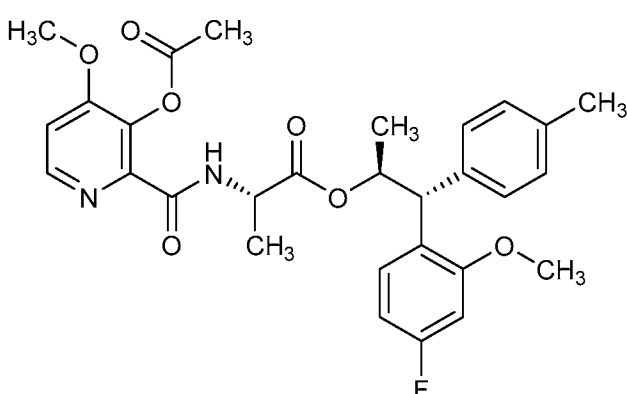
*Cmpd. No.	Structure	Prepared According To Example	Appearance
512		Example 6A.	Clear, Colorless Oil
513		Example 6B.	Clear, Colorless Oil
514		Example 6B.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
515		Example 6B.	Clear, Colorless Oil
516		Example 6B.	Clear, Colorless Oil
517		Example 6B.	Clear, Colorless Oil

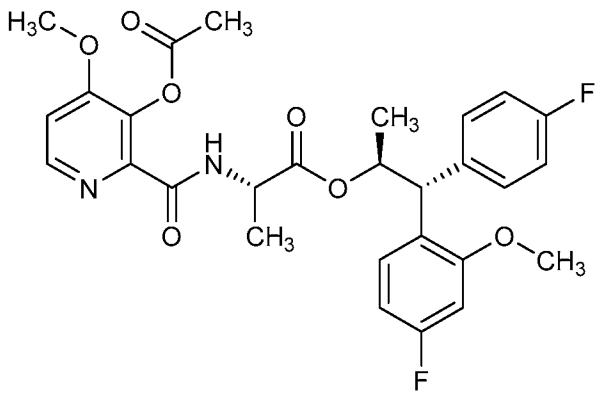
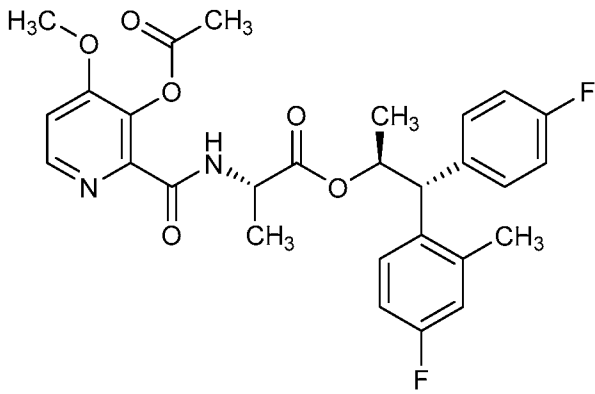
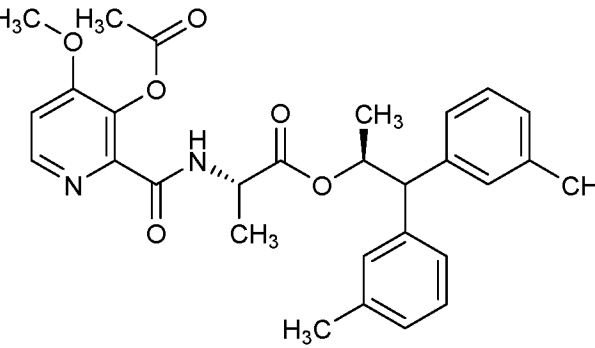
*Cmpd. No.	Structure	Prepared According To Example	Appearance
518		Example 6B.	Clear, Colorless Oil
519		Example 6B.	Clear, Colorless Oil
520		Example 6B.	Clear, Colorless Oil

*Cmpd. No.	Structure	Prepared According To Example	Appearance
521		Example 6A.	White Foam.
522		Example 6A.	Sticky White Foam
523		Example 6A	Colorless Oil

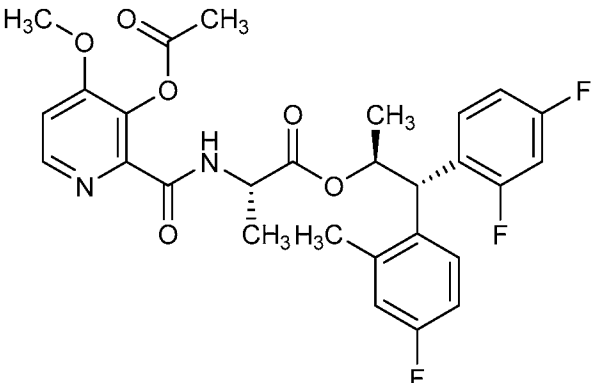
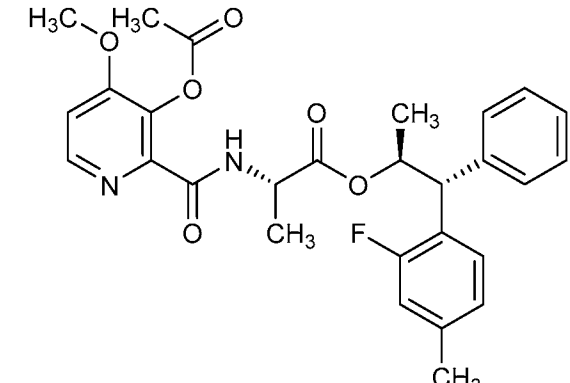
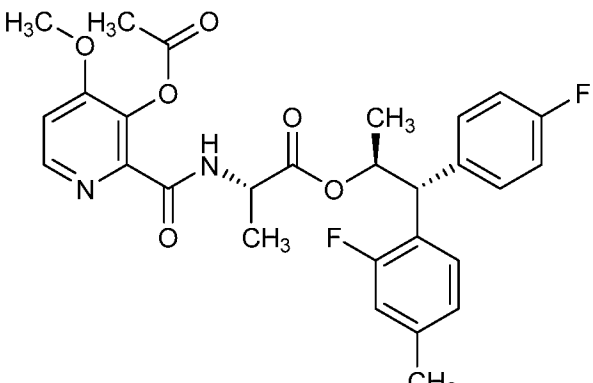
*Cmpd. No.	Structure	Prepared According To Example	Appearance
524		Example 6A	Colorless Oil
525		Example 6A	Colorless Oil
526		Example 6A	Colorless Oil

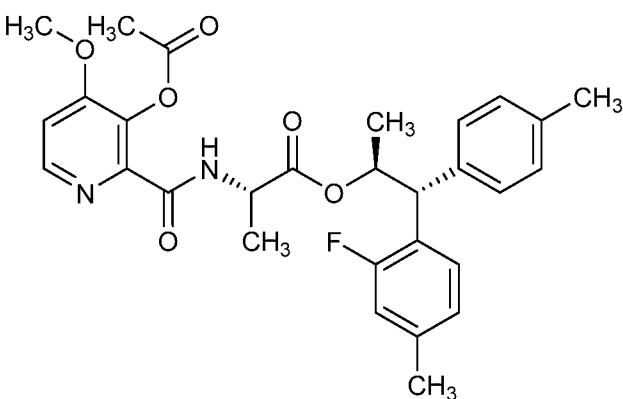
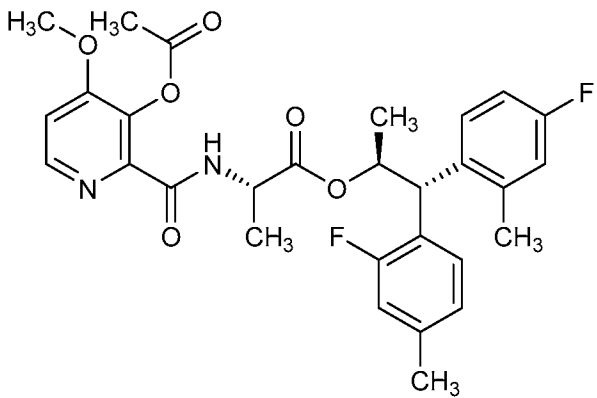
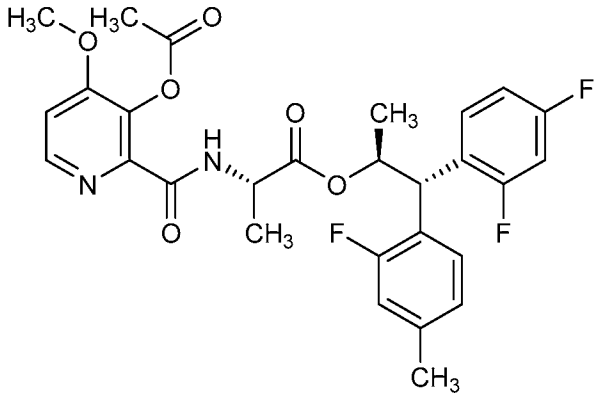
*Cmpd. No.	Structure	Prepared According To Example	Appearance
527		Example 6A	Colorless Foam
528		Example 6A	Colorless Foam
529		Example 6A	Colorless Foam

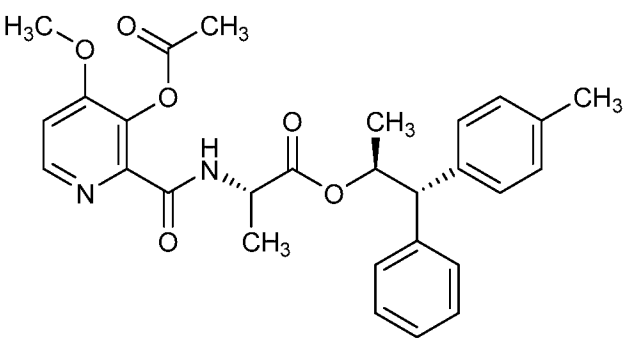
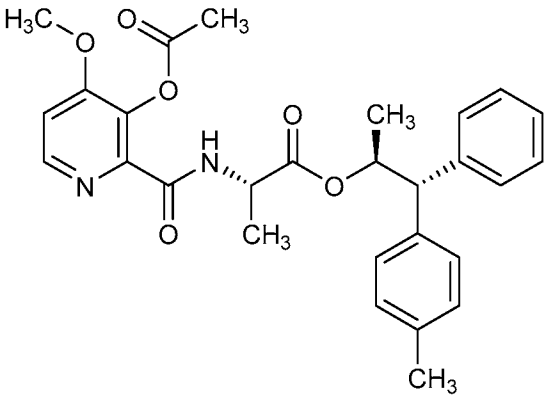
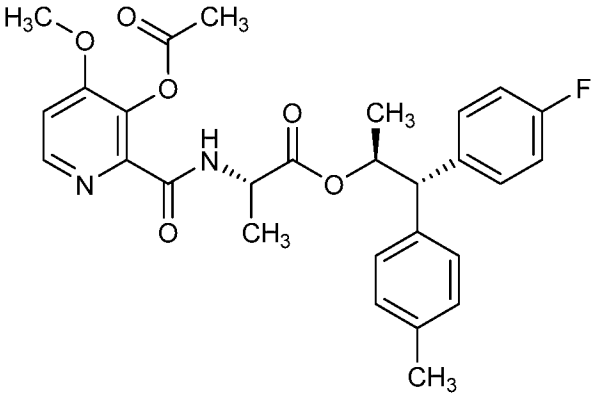
*Cmpd. No.	Structure	Prepared According To Example	Appearance
530	 <chem>CCOC(=O)c1ccncc1C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c1ccc(C)c(C)c1)c2ccccc2F</chem>	Example 6A	Colorless Foam
531	 <chem>CCOC(=O)c1ccncc1C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c1ccc(OC)c(F)c1)c2ccccc2F</chem>	Example 6A	Colorless Oil
532	 <chem>CCOC(=O)c1ccncc1C(=O)N[C@H](C)C(=O)O[C@H](C)[C@@H](c1ccccc1F)c2ccccc2F</chem>	Example 6A	Colorless Oil

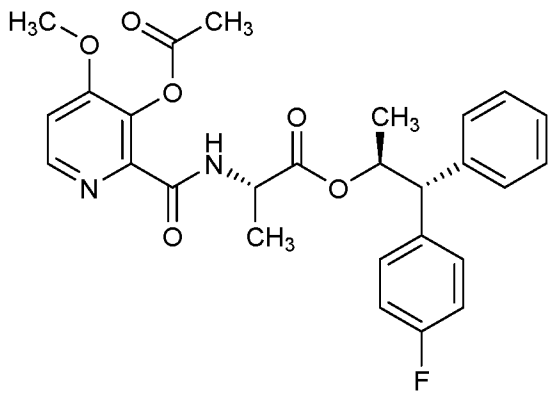
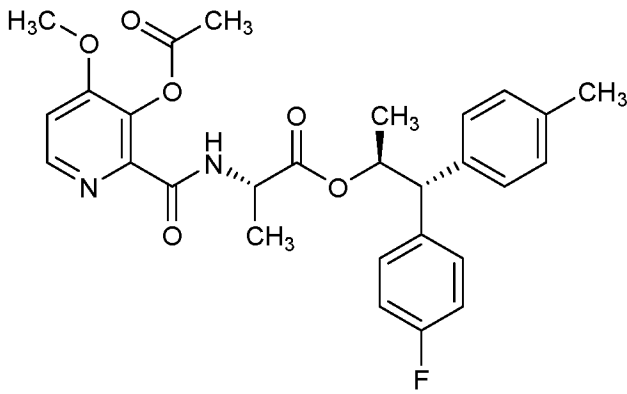
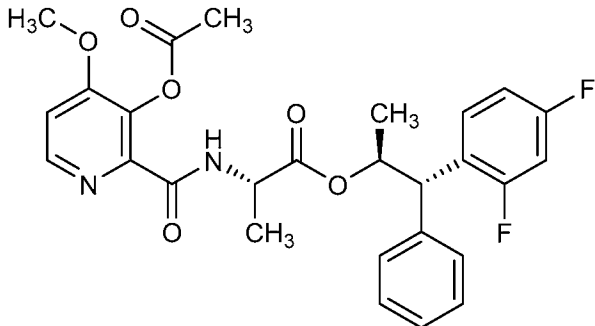
*Cmpd. No.	Structure	Prepared According To Example	Appearance
533		Example 6A	Colorless Oil
534		Example 6A	Colorless Oil
535		Example 6A.	White Foam

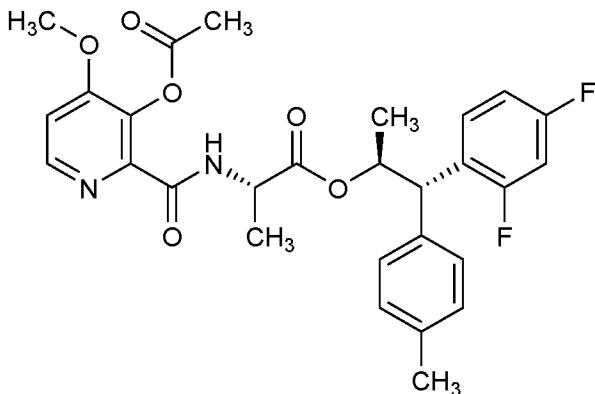
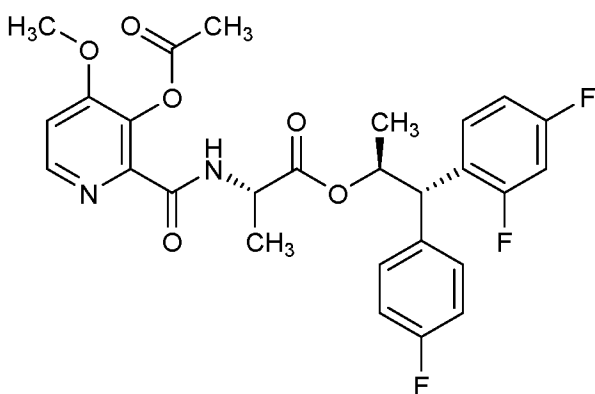
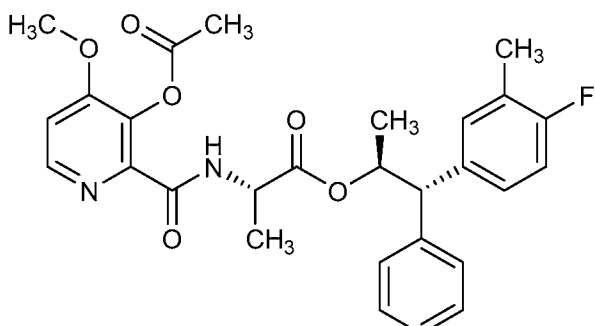
*Cmpd. No.	Structure	Prepared According To Example	Appearance
536		Example 6A.	White Foam
537		Example 6A.	White Foam
538		Example 6A.	White Foam

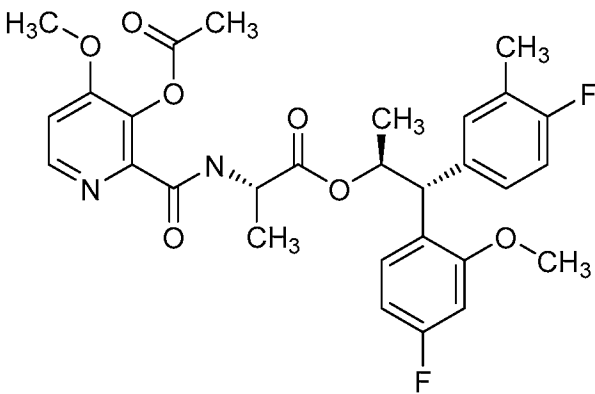
*Cmpd. No.	Structure	Prepared According To Example	Appearance
539		Example 6A.	White Foam
540		Example 6A.	White Foam
541		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
542		Example 6A.	White Foam
543		Example 6A.	White Foam
544		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
545		Example 6A.	White Foam
546		Example 6A.	White Foam
547		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
548		Example 6A.	White Foam
549		Example 6A.	White Foam
550		Example 6A.	White Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
551		Example 6A.	White Foam
552		Example 6A.	White Foam
553		Example 6A	Colorless Foam

*Cmpd. No.	Structure	Prepared According To Example	Appearance
554		Example 6A	Colorless Foam

*Cmpd. No. – Compound Number

Table 2. Analytical Data

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
1	---	---	HRMS-ESI (<i>m/z</i>) [M] ⁺ calcd for C ₂₃ H ₂₉ NO ₅ , 399.2046; found, 399.2048	¹ H NMR (500 MHz, CDCl ₃) δ 7.53 – 7.41 (m, 4H), 7.32 – 7.23 (m, 4H), 7.23 – 7.13 (m, 2H), 6.01 (q, <i>J</i> = 6.3 Hz, 1H), 4.98 (d, <i>J</i> = 8.0 Hz, 1H), 4.13 (p, <i>J</i> = 7.1 Hz, 1H), 2.78 (s, 1H), 1.41 (s, 9H), 1.21 (d, <i>J</i> = 6.3 Hz, 3H), 0.83 (d, <i>J</i> = 7.3 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.55, 154.95, 145.04, 142.86, 128.32, 128.30, 127.17, 127.11, 125.59, 125.52, 79.83, 79.54, 75.16, 49.13, 28.29, 17.95, 14.38
2	---	---	ESIMS <i>m/z</i> 384.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.42 – 7.07 (m, 10H), 5.80 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.97 (d, <i>J</i> = 8.0 Hz, 1H), 4.19 – 4.06 (m, 1H), 4.03 (d, <i>J</i> = 10.1 Hz, 1H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.76 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.83, 154.96, 141.52, 141.26, 128.79, 128.50, 128.10, 128.08, 126.91, 126.67, 73.10, 57.98, 28.33, 19.31, 17.98
3	---	--	ESIMS <i>m/z</i> 396.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.22 – 7.15 (m, 2H), 7.00 (ddd, <i>J</i> = 3.5, 1.2, 0.6 Hz, 1H), 6.97 – 6.89 (m, 3H), 5.52 (dq, <i>J</i> = 7.3, 6.2 Hz, 1H), 4.99 (d, <i>J</i> = 5.1 Hz, 1H), 4.63 (d, <i>J</i> = 7.3 Hz, 1H), 4.29 – 4.18 (m, 1H), 1.43 (s, 9H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.64, 143.87, 142.87, 126.75, 126.55, 125.98, 125.39, 124.58, 124.56, 79.69, 74.40, 49.31, 47.46, 28.32, 18.74, 18.22

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
4	---	---	ESIMS <i>m/z</i> 420.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 – 7.16 (m, 4H), 6.97 (td, <i>J</i> = 8.7, 7.0 Hz, 4H), 5.71 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.95 (d, <i>J</i> = 8.0 Hz, 1H), 4.22 – 4.07 (m, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.53, -115.94
5	---	---	ESIMS <i>m/z</i> 450.6 ([M+Na] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.37 – 7.19 (m, 10H), 6.01 – 5.89 (m, 1H), 5.02 (d, <i>J</i> = 7.9 Hz, 1H), 4.27 – 4.10 (m, 1H), 3.38 (dq, <i>J</i> = 8.9, 6.9 Hz, 1H), 3.25 – 3.13 (m, 1H), 1.40 (d, <i>J</i> = 2.1 Hz, 9H), 1.18 (t, <i>J</i> = 7.0 Hz, 3H), 1.15 – 1.06 (m, 6H)
6	---	---	ESIMS <i>m/z</i> 436.6 ([M+Na] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.38 – 7.21 (m, 10H), 6.01 – 5.82 (m, 1H), 5.01 (d, <i>J</i> = 8.0 Hz, 1H), 4.27 – 4.12 (m, 1H), 3.15 (s, 3H), 1.40 (s, 9H), 1.15 – 1.07 (m, 6H)
7	---	---	ESIMS <i>m/z</i> 456.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.36 (td, <i>J</i> = 8.5, 6.1 Hz, 1H), 7.26 – 7.15 (m, 1H), 6.91 – 6.68 (m, 4H), 5.86 – 5.73 (m, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.66 (d, <i>J</i> = 10.1 Hz, 1H), 4.23 – 4.09 (m, 1H), 1.42 (s, 9H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.06 (d, <i>J</i> = 7.6 Hz), -111.55 (d, <i>J</i> = 7.5 Hz), -111.91 (dd, <i>J</i> = 7.9, 2.7 Hz), -112.72 (d, <i>J</i> = 5.9 Hz)
8	---	---	ESIMS <i>m/z</i> 424.5 ([M+Na] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.48 – 7.41 (m, 4H), 7.38 – 7.19 (m, 6H), 5.97 (dq, <i>J</i> = 25.6, 6.5 Hz, 1H), 4.90 (d, <i>J</i> = 7.8 Hz, 1H), 4.23 – 4.05 (m, 1H), 1.41 (s, 9H), 1.29 (dd, <i>J</i> = 6.5, 1.0 Hz, 3H), 0.75 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -169.03

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
9	---	---	ESIMS <i>m/z</i> 444.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.22 – 7.09 (m, 4H), 6.91 – 6.65 (m, 4H), 5.70 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 8.0 Hz, 1H), 4.19 – 4.05 (m, 1H), 3.93 (d, <i>J</i> = 9.8 Hz, 1H), 3.76 (s, 3H), 3.74 (s, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.84, 158.34, 158.22, 133.99, 133.81, 128.96, 114.10, 113.84, 79.64, 73.33, 56.17, 55.22, 49.22, 28.31, 19.28, 18.19
10	---	---	ESIMS <i>m/z</i> 420.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 – 7.21 (m, 2H), 7.14 – 7.02 (m, 2H), 7.03 – 6.84 (m, 4H), 5.72 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 8.0 Hz, 1H), 4.22 – 4.07 (m, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.84 (d, <i>J</i> = 7.1 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.14, -112.59
11	---	---	ESIMS <i>m/z</i> 452.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 – 7.11 (m, 8H), 5.71 (dq, <i>J</i> = 10.0, 5.9 Hz, 1H), 4.94 (d, <i>J</i> = 8.0 Hz, 1H), 4.18 – 4.07 (m, 1H), 3.99 (d, <i>J</i> = 9.9 Hz, 1H), 1.42 (d, <i>J</i> = 1.7 Hz, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.87 – 0.81 (m, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.79, 154.94, 142.68, 142.43, 134.73, 134.43, 130.21, 129.93, 128.39, 128.32, 127.49, 127.18, 126.28, 126.20, 79.79, 72.40, 57.09, 49.15, 28.30, 19.21, 18.04
12	---	---	ESIMS <i>m/z</i> 382.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.79 – 7.72 (m, 2H), 7.72 – 7.62 (m, 1H), 7.59 – 7.48 (m, 1H), 7.46 – 7.36 (m, 2H), 7.36 – 7.25 (m, 2H), 5.81 – 5.64 (m, 1H), 5.09 (s, 1H), 4.55 – 4.34 (m, 1H), 4.33 – 4.18 (m, 1H), 1.46 (s, 9H), 1.45 (d, <i>J</i> = 3.5 Hz, 3H), 0.70 (d, <i>J</i> = 6.3 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
13	---	---	ESIMS <i>m/z</i> 398.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 – 7.21 (m, 4H), 7.15 – 7.04 (m, 4H), 5.15 – 5.03 (m, 1H), 5.01 (d, <i>J</i> = 8.0 Hz, 1H), 4.35 – 4.24 (m, 1H), 4.27 – 4.15 (m, 1H), 1.44 (s, 9H), 1.29 (d, <i>J</i> = 7.2 Hz, 3H), 1.03 (d, <i>J</i> = 6.4 Hz, 3H)
14	---	---	ESIMS <i>m/z</i> 542.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.46 – 7.36 (m, 4H), 7.17 – 7.07 (m, 4H), 5.71 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 7.9 Hz, 1H), 4.13 (p, <i>J</i> = 7.2 Hz, 1H), 3.97 (d, <i>J</i> = 9.8 Hz, 1H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H)
15	---	---	ESIMS <i>m/z</i> 424.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 6.73 (d, <i>J</i> = 3.4 Hz, 1H), 6.67 (d, <i>J</i> = 3.4 Hz, 1H), 6.59 – 6.46 (m, 2H), 5.43 (dq, <i>J</i> = 7.4, 6.2 Hz, 1H), 5.03 (d, <i>J</i> = 8.1 Hz, 1H), 4.42 (d, <i>J</i> = 7.3 Hz, 1H), 4.24 (p, <i>J</i> = 7.1, 6.7 Hz, 1H), 2.41 (d, <i>J</i> = 1.1 Hz, 3H), 2.40 (d, <i>J</i> = 1.1 Hz, 3H), 1.43 (s, 9H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.1 Hz, 3H)
16	---	---	ESIMS <i>m/z</i> 412.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.18 – 7.11 (m, 4H), 7.11 – 7.02 (m, 4H), 5.75 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 8.0 Hz, 1H), 4.11 (p, <i>J</i> = 7.4, 6.5 Hz, 1H), 3.95 (d, <i>J</i> = 10.0 Hz, 1H), 2.27 (s, 3H), 2.25 (s, 3H), 1.41 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.80 (d, <i>J</i> = 7.2 Hz, 3H)
18	---	---	ESIMS <i>m/z</i> 452.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.55 (d, <i>J</i> = 8.1 Hz, 2H), 7.41 (d, <i>J</i> = 8.0 Hz, 2H), 7.31 – 7.16 (m, 5H), 5.82 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 7.9 Hz, 1H), 4.15 – 4.06 (m, 2H), 1.41 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.77 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -62.58

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
19	---	---	ESIMS <i>m/z</i> 452.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 – 7.22 (m, 4H), 7.22 – 7.15 (m, 4H), 5.71 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 8.0 Hz, 1H), 4.21 – 4.06 (m, 1H), 4.00 (d, <i>J</i> = 9.8 Hz, 1H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.85 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.75, 154.96, 139.41, 139.25, 133.03, 132.77, 129.43, 129.35, 129.05, 128.74, 79.81, 72.51, 56.45, 49.17, 28.30, 19.18, 18.09
20	---	---	ESIMS <i>m/z</i> 406.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 – 7.14 (m, 4H), 7.06 – 6.87 (m, 4H), 5.68 (dq, <i>J</i> = 9.3, 6.2 Hz, 1H), 4.83 (s, 1H), 4.02 (d, <i>J</i> = 9.3 Hz, 1H), 3.82 (dd, <i>J</i> = 18.2, 5.9 Hz, 1H), 3.56 (dd, <i>J</i> = 18.2, 5.2 Hz, 1H), 1.43 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 169.66, 161.74 (d, <i>J</i> = 245.9 Hz), 161.63 (d, <i>J</i> = 245.7 Hz), 155.45, 136.74, 129.65 (d, <i>J</i> = 7.9 Hz), 115.70 (d, <i>J</i> = 21.3 Hz), 115.41 (d, <i>J</i> = 21.2 Hz), 79.97, 77.21, 73.15, 55.84, 42.44, 28.29, 19.17
21	---	---	ESIMS <i>m/z</i> 434.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 – 7.15 (m, 4H), 7.06 – 6.89 (m, 4H), 5.75 – 5.62 (m, 1H), 4.90 (d, <i>J</i> = 8.4 Hz, 1H), 4.11 (q, <i>J</i> = 6.7 Hz, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 1.49 – 1.33 (m, 10H), 1.30 – 1.08 (m, 4H), 0.54 (t, <i>J</i> = 7.4 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.10, 161.70 (d, <i>J</i> = 245.6 Hz), 155.20, 136.97, 129.52, 115.71 (d, <i>J</i> = 21.3 Hz), 115.44 (d, <i>J</i> = 21.2 Hz), 79.73, 73.12, 56.08, 54.46, 28.30, 25.40, 19.26, 8.95

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
22	---	---	ESIMS <i>m/z</i> 448.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 – 7.15 (m, 4H), 7.04 – 6.91 (m, 4H), 5.69 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.86 (d, <i>J</i> = 9.3 Hz, 1H), 4.09 (dd, <i>J</i> = 9.3, 4.2 Hz, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 1.69 – 1.57 (m, 1H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.73 (d, <i>J</i> = 6.9 Hz, 3H), 0.43 (d, <i>J</i> = 6.8 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.77, 161.73 (d, <i>J</i> = 246.0 Hz), 155.60, 137.05, 129.61, 129.52, 129.44, 115.71 (d, <i>J</i> = 21.6 Hz), 115.49 (d, <i>J</i> = 21.4 Hz), 79.69, 73.23, 58.49, 56.03, 30.92, 28.28, 19.31, 18.96, 16.54
23	---	---	ESIMS <i>m/z</i> 462.7 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 – 7.20 (m, 4H), 7.04 – 6.92 (m, 4H), 5.68 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.72 (d, <i>J</i> = 8.9 Hz, 1H), 4.10 (td, <i>J</i> = 9.2, 5.1 Hz, 1H), 4.02 (d, <i>J</i> = 10.0 Hz, 1H), 1.41 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.96 (ddd, <i>J</i> = 13.7, 9.6, 5.5 Hz, 1H), 0.84 (m, 1H), 0.75 (d, <i>J</i> = 6.5 Hz, 3H), 0.70 (d, <i>J</i> = 6.6 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 173.06, 161.72 (d, <i>J</i> = 245.8 Hz), 155.29, 137.17, 136.83, 129.49, 115.73 (d, <i>J</i> = 21.4 Hz), 115.46 (d, <i>J</i> = 21.3 Hz), 79.74, 73.02, 56.27, 52.04, 41.48, 28.28, 24.41, 22.76, 21.53, 19.23
24	---	(Thin film) 3358, 2977, 1708, 1491, 1243, 1162, 1051, 1027	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₅ H ₃₃ NNaO ₆ , 466.22; found, 466.2191	¹ H NMR (300 MHz, CDCl ₃) δ 7.50 – 7.37 (m, 1H), 7.29 – 7.19 (m, 1H), 7.20 – 7.06 (m, 2H), 6.92 – 6.75 (m, 4H), 5.91 (dq, <i>J</i> = 10.1, 6.4 Hz, 1H), 5.03 – 4.97 (m, 1H), 4.98 (d, <i>J</i> = 9.9 Hz, 1H), 4.22 – 4.04 (m, 1H), 3.84 (s, 3H), 3.76 (s, 3H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
25	---	(Thin film) 3368, 2978, 1707, 1597, 1488, 1156, 1043	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₅ H ₃₃ NNaO ₆ , 466.22; found, 466.2193	¹ H NMR (300 MHz, CDCl ₃) δ 7.18 (dt, <i>J</i> = 11.8, 7.9 Hz, 2H), 6.89 (dq, <i>J</i> = 7.6, 1.5 Hz, 2H), 6.83 (dt, <i>J</i> = 4.0, 2.1 Hz, 2H), 6.71 (dddd, <i>J</i> = 10.7, 8.2, 2.6, 0.9 Hz, 2H), 5.77 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.96 (d, <i>J</i> = 8.0 Hz, 1H), 4.20 – 4.01 (m, 1H), 3.96 (d, <i>J</i> = 10.3 Hz, 1H), 3.77 (s, 3H), 3.75 (s, 3H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.79 (d, <i>J</i> = 7.2 Hz, 3H)
26	---	(Thin film) 3368 2979, 1706, 1504, 1162, 1052	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₃₁ F ₂ NNaO ₄ , 470.2113; found, 470.2122	¹ H NMR (300 MHz, CDCl ₃) δ 7.14 – 7.02 (m, 2H), 6.99 – 6.84 (m, 4H), 5.67 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 7.9 Hz, 1H), 4.22 – 4.05 (m, 1H), 3.94 (d, <i>J</i> = 9.8 Hz, 1H), 2.20 (d, <i>J</i> = 2.1 Hz, 3H), 2.19 (d, <i>J</i> = 2.2 Hz, 3H), 1.42 (s, 9H), 1.28 – 1.17 (m, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H)
27	---	(Thin film) 3366, 2978, 1706, 1162, 1051	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₃₁ Cl ₂ NNaO ₄ , 502.1522; found, 502.1533	¹ H NMR (300 MHz, CDCl ₃) δ 7.22 (dd, <i>J</i> = 4.6, 1.9 Hz, 2H), 7.13 (t, <i>J</i> = 7.9 Hz, 2H), 7.04 (ddd, <i>J</i> = 7.6, 5.1, 1.9 Hz, 2H), 5.67 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.96 (d, <i>J</i> = 7.9 Hz, 1H), 4.22 – 4.05 (m, 1H), 3.91 (d, <i>J</i> = 9.9 Hz, 1H), 2.31 (s, 3H), 2.29 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.0 Hz, 3H), 0.87 (d, <i>J</i> = 7.2 Hz, 3H)
28	---	(Thin film) 3285, 2979, 2107, 1702, 1501, 1160	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₇ H ₂₉ NNaO ₄ , 454.1989; found, 454.1993	¹ H NMR (300 MHz, CDCl ₃) δ 7.45 – 7.37 (m, 4H), 7.26 – 7.18 (m, 4H), 5.75 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.91 (d, <i>J</i> = 7.9 Hz, 1H), 4.20 – 4.06 (m, 1H), 4.04 (d, <i>J</i> = 9.9 Hz, 1H), 3.05 (s, 1H), 3.04 (s, 1H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H)
29	---	(Thin film) 3362, 2964, 1712, 1510, 1163, 1053	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₇ H ₃₇ NNaO ₄ , 462.2615; found, 462.2622	¹ H NMR (300 MHz, CDCl ₃) δ 7.22 – 7.16 (m, 4H), 7.13 – 7.03 (m, 4H), 5.76 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.95 (d, <i>J</i> = 7.8 Hz, 1H), 4.17 – 4.02 (m, 1H), 3.96 (d, <i>J</i> = 10.2 Hz, 1H), 2.67 – 2.45 (m, 4H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.21 – 1.10 (m, 6H), 0.73 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
31	---	---	ESIMS <i>m/z</i> 402.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.32 – 7.20 (m, 6H), 7.20 – 7.14 (m, 1H), 6.97 (t, <i>J</i> = 8.7 Hz, 2H), 5.75 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.11 (t, <i>J</i> = 7.4 Hz, 1H), 4.02 (d, <i>J</i> = 10.0 Hz, 1H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.77 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.81, 161.71 (d, <i>J</i> = 245.7 Hz), 154.94, 141.23, 137.03 (d, <i>J</i> = 3.5 Hz), 129.56 (d, <i>J</i> = 7.9 Hz), 128.59, 127.99, 126.82, 115.62 (d, <i>J</i> = 21.3 Hz), 79.70, 72.94, 57.09, 49.16, 28.31, 14.13
33	---	---	ESIMS <i>m/z</i> 519.6 ([M-H ₂ O] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.58 (t, <i>J</i> = 2.1 Hz, 2H), 7.38 (dd, <i>J</i> = 8.4, 3.9 Hz, 2H), 7.29 – 7.25 (m, 1H), 7.20 (dd, <i>J</i> = 8.5, 2.2 Hz, 1H), 5.84 (q, <i>J</i> = 6.2 Hz, 1H), 4.94 (d, <i>J</i> = 7.8 Hz, 1H), 4.14 (t, <i>J</i> = 7.4 Hz, 1H), 3.05 (s, 1H), 1.41 (s, 9H), 1.18 (d, <i>J</i> = 6.3 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.37, 155.04, 144.43, 142.16, 132.90 (d, <i>J</i> = 2.7 Hz), 131.93, 131.87, 130.51, 130.46, 128.13, 127.70, 125.08, 124.99, 80.20, 78.55, 74.10, 49.16, 34.67, 28.25, 14.28
34	---	---	ESIMS <i>m/z</i> 486.5 ([M-H ₂ O] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.37 – 7.28 (m, 4H), 7.18 (ddd, <i>J</i> = 8.4, 2.2, 0.8 Hz, 1H), 7.09 (ddd, <i>J</i> = 8.4, 2.2, 0.9 Hz, 1H), 5.86 (q, <i>J</i> = 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 7.8 Hz, 1H), 4.14 (t, <i>J</i> = 7.4 Hz, 1H), 3.06 (s, 1H), 1.41 (s, 9H), 1.18 (d, <i>J</i> = 6.3 Hz, 3H), 0.98 (d, <i>J</i> = 6.8 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.28, 158.09 (d, <i>J</i> = 249.9 Hz), 158.06 (d, <i>J</i> = 249.5 Hz), 155.05, 145.31 (d, <i>J</i> = 5.7 Hz), 142.98, 130.64 (d, <i>J</i> = 10.0 Hz), 121.90 (d, <i>J</i> = 8.8 Hz), 120.38 (d, <i>J</i> = 12.3 Hz), 120.24 (d, <i>J</i> = 12.3 Hz), 114.59 (d, <i>J</i> = 22.6 Hz), 114.20 (d, <i>J</i> = 22.9 Hz), 80.19, 78.60, 74.13, 49.13, 34.67, 28.25, 14.30

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
35	---	---	ESIMS <i>m/z</i> 480.6 ([M] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.24 (dd, <i>J</i> = 10.4, 8.1 Hz, 2H), 7.09 (dd, <i>J</i> = 5.5, 2.2 Hz, 2H), 7.02 (td, <i>J</i> = 8.6, 2.3 Hz, 2H), 5.69 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.9 Hz, 1H), 4.13 (t, <i>J</i> = 7.5 Hz, 1H), 3.92 (d, <i>J</i> = 10.0 Hz, 1H), 2.33 (s, 3H), 2.31 (s, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.81, 154.92, 139.66, 139.44, 136.53, 136.10, 133.08, 132.72, 130.69, 130.57, 129.43, 129.12, 126.59, 126.46, 79.77, 72.61, 56.49, 49.17, 28.29, 20.16, 20.09, 19.23, 18.09
36	---	(Thin film) 3385, 2980, 1669, 1486, 1452, 1160, 757	---	¹ H NMR (300 MHz, CDCl ₃) δ 7.82 (ddd, <i>J</i> = 8.6, 7.3, 1.8 Hz, 1H), 7.51 (tt, <i>J</i> = 7.9, 1.5 Hz, 1H), 7.33 – 7.12 (m, 3H), 7.09 (td, <i>J</i> = 7.6, 1.4 Hz, 1H), 6.94 (dd, <i>J</i> = 8.1, 1.4 Hz, 1H), 6.90 (dd, <i>J</i> = 8.1, 1.4 Hz, 1H), 6.23 (qd, <i>J</i> = 6.3, 1.6 Hz, 1H), 5.02 (d, <i>J</i> = 7.9 Hz, 1H), 4.30 – 4.13 (m, 1H), 3.21 (s, 1H), 1.42 (s, 9H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H)
37	---	(Thin film) 3375, 2981, 1703, 1609, 1515, 1453, 1433, 1380, 1367, 1284, 1250, 1208, 1162, 1113, 1053, 1023, 967, 909, 873, 821, 754, 731	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₃ H ₂₅ F ₄ NNaO ₄ , 478.1612; found, 478.1624	¹ H NMR (300 MHz, CDCl ₃) δ 7.18 – 6.91 (m, 6H), 5.63 (dq, <i>J</i> = 9.4, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.24 – 4.06 (m, 1H), 3.98 (d, <i>J</i> = 9.5 Hz, 1H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -136.25 (dt, <i>J</i> = 20.6, 9.7 Hz), -136.69 (dt, <i>J</i> = 20.4, 9.9 Hz), -139.30 (dd, <i>J</i> = 21.3, 10.5 Hz), -139.70 (dd, <i>J</i> = 21.1, 10.1 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
38	---	(Thin film) 3440, 2981, 1704, 1600, 1497, 1452, 1379, 1367, 1306, 1250, 1210, 1162, 1095, 1054, 1023, 907, 867, 822, 799, 780, 731, 719, 689	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₃ H ₂₅ Cl ₂ F ₂ NNaO ₄ , 510.1021; found, 510.1033	¹ H NMR (300 MHz, CDCl ₃) δ 7.32 – 7.22 (m, 2H), 7.18 – 7.02 (m, 4H), 5.64 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 8.0 Hz, 1H), 4.25 – 4.03 (m, 1H), 3.98 (d, <i>J</i> = 9.6 Hz, 1H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.98 (q, <i>J</i> = 6.9 Hz), -117.44 (q, <i>J</i> = 6.8 Hz)
39	---	(Thin film) 3364, 2980, 2931, 1707, 1597, 1501, 1451, 1379, 1366, 1307, 1248, 1207, 1163, 1118, 1052, 1023, 959, 908, 881, 821, 781, 731	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₅ H ₃₁ F ₂ NNaO ₄ , 470.2113; found, 470.2120	¹ H NMR (300 MHz, CDCl ₃) δ 7.13 – 6.98 (m, 4H), 6.90 (td, <i>J</i> = 9.1, 7.4 Hz, 2H), 5.67 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.93 (d, <i>J</i> = 8.0 Hz, 1H), 4.22 – 4.02 (m, 1H), 3.91 (d, <i>J</i> = 10.1 Hz, 1H), 2.23 (d, <i>J</i> = 2.0 Hz, 3H), 2.21 (d, <i>J</i> = 2.0 Hz, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -119.99 (q, <i>J</i> = 6.8 Hz), -120.57 (q, <i>J</i> = 7.0 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
40	---	---	ESIMS <i>m/z</i> 536 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.53 (ddd, <i>J</i> = 13.6, 6.7, 4.2 Hz, 8H), 7.45 – 7.37 (m, 8H), 7.35 – 7.29 (m, 2H), 5.87 (dq, <i>J</i> = 12.3, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.1 Hz, 1H), 4.18 – 4.09 (m, 2H), 1.41 (s, 9H), 1.31 (d, <i>J</i> = 6.2 Hz, 3H), 0.80 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.93, 154.96, 140.72, 140.60, 140.56, 140.21, 139.92, 139.68, 128.76, 128.75, 128.51, 127.58, 127.30, 127.27, 127.23, 127.00, 126.96, 79.70, 73.12, 57.33, 49.22, 28.31, 19.39, 18.04
43	---	---	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₃ H ₂₅ Cl ₄ NNaO ₄ , 542.0430; found, 542.0442	¹ H NMR (400 MHz, CDCl ₃) δ 7.38 (t, <i>J</i> = 8.1 Hz, 2H), 7.32 (dd, <i>J</i> = 13.6, 2.1 Hz, 2H), 7.10 (dd, <i>J</i> = 8.4, 2.1 Hz, 1H), 7.07 (dd, <i>J</i> = 8.4, 2.1 Hz, 1H), 5.65 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 7.9 Hz, 1H), 4.22 – 4.09 (m, 1H), 3.97 (d, <i>J</i> = 9.5 Hz, 1H), 1.42 (d, <i>J</i> = 0.9 Hz, 9H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.73, 154.93, 140.37, 140.26, 133.10, 132.76, 131.66, 131.34, 130.97, 130.67, 130.23, 130.06, 127.34, 127.27, 79.92, 71.96, 55.79, 49.16, 28.29, 19.14, 18.11

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
44	---	---	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₃ H ₂₅ Cl ₂ F ₂ NNaO ₄ , 510.1021; found, 510.1030	¹ H NMR (400 MHz, CDCl ₃) δ 7.38 – 7.28 (m, 2H), 7.06 (dd, <i>J</i> = 10.0, 1.8 Hz, 1H), 7.04 – 6.94 (m, 3H), 5.66 (ddt, <i>J</i> = 9.1, 6.9, 5.5 Hz, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.22 – 4.08 (m, 1H), 4.01 (d, <i>J</i> = 9.4 Hz, 1H), 1.42 (d, <i>J</i> = 1.3 Hz, 9H), 1.24 (dd, <i>J</i> = 6.2, 1.3 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.68, 158.17 (d, <i>J</i> = 250.1 Hz), 158.03 (d, <i>J</i> = 250.1 Hz), 154.93, 141.08 (d, <i>J</i> = 6.1 Hz), 140.95 (d, <i>J</i> = 6.1 Hz), 131.11, 130.80, 124.51 (d, <i>J</i> = 3.3 Hz), 124.36 (d, <i>J</i> = 3.6 Hz), 120.08 (d, <i>J</i> = 17.6 Hz), 119.78 (d, <i>J</i> = 17.6 Hz), 116.48 (d, <i>J</i> = 16.8 Hz), 116.24, 79.92, 72.02, 56.07, 49.15, 28.28, 19.10, 18.10
45	---	---	ESIMS <i>m/z</i> 300 ([M+H] ⁺)	---
46	---	---	ESIMS <i>m/z</i> 284.3 ([M+H] ⁺)	---
47	---	---	ESIMS <i>m/z</i> 296.3 ([M+H] ⁺)	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
48	---	(Thin film) 3395, 2885, 1741, 1603, 1508, 1459, 1381, 1324, 1224, 1159, 1137, 1118, 1049, 1015, 955, 881, 826, 793, 779, 755, 746, 721, 693, 666	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₂₀ F ₂ NO ₂ , 320.1457; found, 320.1457	¹ H NMR (400 MHz, CDCl ₃) δ 8.55 (s, 3H), 7.22 (dt, <i>J</i> = 9.0, 4.8 Hz, 4H), 6.98 (q, <i>J</i> = 8.2 Hz, 4H), 5.71 (dq, <i>J</i> = 11.8, 6.1 Hz, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 2H), 1.23 (d, <i>J</i> = 5.9 Hz, 3H), 1.13 (d, <i>J</i> = 6.7 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.32, -115.70
49	---	---	ESIMS <i>m/z</i> 341.5 ([M+Na] ⁺)	---
50	---	---	ESIMS <i>m/z</i> 314.6 ([M+H] ⁺)	---
51	---	---	ESIMS <i>m/z</i> 356.4 ([M+H] ⁺)	---
52	---	---	ESIMS <i>m/z</i> 302.4 ([M+H] ⁺)	¹⁹ F NMR (376 MHz, CDCl ₃) δ -169.31
53	---	---	ESIMS <i>m/z</i> 344.5 ([M+H] ⁺)	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
54	---	---	ESIMS <i>m/z</i> 320.4 ([M+H] ⁺)	---
55	---	---	ESIMS <i>m/z</i> 352.4 ([M+H] ⁺)	---
56	---	---	ESIMS <i>m/z</i> 282.4 ([M+H] ⁺)	---
57	---	---	ESIMS <i>m/z</i> 298.4 ([M+H] ⁺)	---
58	---	---	ESIMS <i>m/z</i> 442.4 ([M+H] ⁺)	---
59	---	---	ESIMS <i>m/z</i> 324.4 ([M+H] ⁺)	---
60	---	---	ESIMS <i>m/z</i> 312.3 ([M+H] ⁺)	---
61	---	---	ESIMS <i>m/z</i> 436 ([M+H] ⁺)	---
63	---	---	ESIMS <i>m/z</i> 375.5 ([M+Na] ⁺)	---
64	---	---	ESIMS <i>m/z</i> 375.5 ([M+Na] ⁺)	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
65	---	---	ESIMS <i>m/z</i> 344.5 ([M+H] ⁺)	---
66	---	---	ESIMS <i>m/z</i> 344.5 ([M+H] ⁺)	---
67	---	---	ESIMS <i>m/z</i> 348.5 ([M+H] ⁺)	---
68	---	---	ESIMS <i>m/z</i> 380.5 ([M+H] ⁺)	---
69	---	---	ESIMS <i>m/z</i> 332.5 ([M+H] ⁺)	---
70	---	---	ESIMS <i>m/z</i> 340.5 ([M+H] ⁺)	---
71	---	(Thin film) 2959, 1749, 1508, 1401, 1229, 1159, 1055, 830	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₇ H ₁₇ F ₂ NO ₂ , 306.1300; found, 306.1298	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
72	---	(Thin film) 3452, 2855, 1742, 1601, 1506, 1454, 1220, 1159, 1136, 1046, 824	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₉ H ₂₂ F ₂ NO ₂ , 335.1646; found, 335.1646	---
73	---	(Thin film) 2966, 1736, 1602, 1507, 1221, 1158, 1120, 1046, 825	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₀ H ₂₄ F ₂ NO ₂ , 349.1803; found, 349.1804	---
74	---	(Thin film) 2959, 1739, 1603, 1507, 1219, 1158, 1132, 1046, 825	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₁ H ₂₆ F ₂ NO ₂ , 363.1959; found, 363.1959	---
75	---	(Thin film) 3411, 2986, 1740, 1605, 1509, 1453, 1223, 1137, 1116, 1049, 700	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₂₁ FNO ₂ , 302.1551; found, 302.1551	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
77	---	(Thin film) 3363, 2941, 1743, 1467, 1385, 1236, 1201, 1173, 1136, 1117, 1061, 1029, 992, 824, 755, 723, 675	ESIMS <i>m/z</i> 438.0 ([M+H] ⁺)	---
78	---	(Thin film) 3361, 2942, 1742, 1582, 1486, 1419, 1240, 1207, 1141, 1116, 1057, 800	ESIMS <i>m/z</i> 404.0 ([M] ⁺)	---
79	---	(Thin film) 3218, 2980, 2945, 1742, 1522, 1481, 1245, 1216, 1136, 1118, 1048, 758	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₀ H ₂₄ Cl ₂ NO ₂ , 380.1179; found, 380.1181	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
80	---	---	ESIMS <i>m/z</i> 404.4 ([M+H] ⁺)	---
81	---	---	ESIMS <i>m/z</i> 336.5 ([M+H] ⁺)	---
83	---	---	ESIMS <i>m/z</i> 408.5 ([M+H] ⁺)	---
84	---	(Thin film) 2881, 2193, 2130, 1742, 1609, 1516, 1457, 1434, 1383, 1325, 1285, 1208, 1118, 1049, 966, 906, 875, 821, 754, 710, 692, 681, 656	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₁₈ F ₄ NO ₂ , 356.1268; found, 356.1273	¹ H NMR (300 MHz, methanol- <i>d</i> ₄) δ 7.46 – 7.30 (m, 2H), 7.28 – 7.14 (m, 4H), 5.84 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.24 (d, <i>J</i> = 10.1 Hz, 1H), 3.96 (q, <i>J</i> = 7.3 Hz, 1H), 3.31 (pd, <i>J</i> = 1.6, 0.5 Hz, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, methanol- <i>d</i> ₄) δ -139.39 (ddd, <i>J</i> = 19.8, 11.5, 7.5 Hz), -139.57 – -139.84 (m), -142.33 – -142.56 (m), -142.66 – -142.93 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
85	---	(Thin film) 3409, 2928, 2026, 1957, 1743, 1597, 1499, 1458, 1408, 1323, 1249, 1208, 1118, 1061, 917, 866, 822, 798, 780, 753, 718, 690, 663	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₁₈ Cl ₂ F ₂ NO ₂ , 388.0677; found, 388.0677	¹ H NMR (300 MHz, methanol- <i>d</i> ₄) δ 7.54 (dt, <i>J</i> = 7.0, 2.7 Hz, 2H), 7.37 (ddt, <i>J</i> = 8.6, 4.3, 2.1 Hz, 2H), 7.21 (td, <i>J</i> = 8.8, 4.7 Hz, 2H), 5.93 – 5.75 (m, 1H), 4.24 (d, <i>J</i> = 10.1 Hz, 1H), 3.96 (q, <i>J</i> = 7.3 Hz, 1H), 3.31 (t, <i>J</i> = 1.7 Hz, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.03 (d, <i>J</i> = 7.3 Hz, 3H) ¹⁹ F NMR (471 MHz, methanol- <i>d</i> ₄) δ -119.62 – -119.72 (m), -119.99 – -120.08 (m)
86	---	(Thin film) 3374, 2928, 1742, 1596, 1501, 1457, 1379, 1323, 1233, 1206, 1118, 1052, 1003, 956, 933, 886, 824, 780, 752, 721, 711, 690, 681, 671, 664, 655	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₀ H ₂₄ F ₂ NO ₂ , 348.1770; found, 348.1771	¹ H NMR (300 MHz, methanol- <i>d</i> ₄) δ 7.30 – 7.12 (m, 4H), 6.95 (td, <i>J</i> = 8.9, 6.6 Hz, 2H), 5.91 – 5.74 (m, 1H), 4.07 (d, <i>J</i> = 10.4 Hz, 1H), 3.99 – 3.83 (m, 1H), 3.30 (dtd, <i>J</i> = 3.3, 1.6, 0.6 Hz, 3H), 2.23 (t, <i>J</i> = 2.6 Hz, 6H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.94 (dd, <i>J</i> = 7.3, 0.7 Hz, 3H) ¹⁹ F NMR (471 MHz, methanol- <i>d</i> ₄) δ -122.00 – -122.37 (m), -122.69 (tt, <i>J</i> = 6.1, 2.9 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
87	---	(Thin film) 2879, 1746, 1587, 1561, 1517, 1468, 1395, 1227, 1194, 1116, 1053, 1029, 871, 822, 747, 727, 669	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₁₈ Cl ₄ NO ₂ , 420.0086; found, 420.0090	---
88	---	(Thin film) 2858, 1747, 1580, 1486, 1458, 1383, 1368, 1278, 1236, 1206, 1119, 1048, 970, 871, 824, 779, 761, 682	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₁₈ H ₁₈ Cl ₂ F ₂ NO ₂ , 388.0677; found, 388.0688	---

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
89	---	---	HRMS-ESI (<i>m/z</i>) [M] ⁺ calcd for C ₂₅ H ₂₆ N ₂ O ₆ , 450.1791; found, 450.1794	¹ H NMR (500 MHz, CDCl ₃) δ 11.97 (d, <i>J</i> = 0.5 Hz, 1H), 8.33 (d, <i>J</i> = 8.1 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.47 (ddt, <i>J</i> = 8.5, 6.4, 1.3 Hz, 4H), 7.33 – 7.13 (m, 5H), 6.89 – 6.81 (m, 1H), 6.03 (q, <i>J</i> = 6.3 Hz, 1H), 4.62 – 4.49 (m, 1H), 3.93 (s, 3H), 2.74 (s, 1H), 1.23 (d, <i>J</i> = 6.3 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.30, 168.61, 155.37, 148.71, 144.85, 142.71, 140.44, 130.29, 128.33, 128.32, 127.22, 127.16, 125.51, 125.45, 109.44, 79.57, 75.54, 56.08, 47.85, 17.62, 14.32
90	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₇ N ₂ O ₅ , 435.1920; found, 435.1925	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.38 – 7.06 (m, 10H), 6.86 (dd, <i>J</i> = 5.3, 0.7 Hz, 1H), 5.83 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.52 (dq, <i>J</i> = 8.1, 7.2 Hz, 1H), 4.06 (d, <i>J</i> = 10.2 Hz, 1H), 3.93 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.67, 168.53, 155.34, 148.72, 141.38, 141.13, 140.40, 130.48, 128.80, 128.50, 128.10, 128.03, 126.95, 126.70, 109.39, 73.57, 57.93, 56.07, 47.85, 19.24, 17.61
91	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₁ H ₂₃ N ₂ O ₅ S ₂ , 447.1048; found, 447.1047	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (d, <i>J</i> = 0.6 Hz, 1H), 8.41 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.18 – 7.16 (m, 2H), 7.01 (ddd, <i>J</i> = 3.6, 1.3, 0.6 Hz, 1H), 6.94 – 6.88 (m, 3H), 6.86 (dd, <i>J</i> = 5.3, 0.7 Hz, 1H), 5.56 (dq, <i>J</i> = 7.4, 6.2 Hz, 1H), 4.70 – 4.58 (m, 2H), 3.94 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.24 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.48, 168.62, 155.35, 148.74, 143.75, 142.69, 140.43, 130.48, 126.77, 126.57, 126.05, 125.43, 124.61, 124.58, 109.44, 74.83, 56.08, 47.98, 47.42, 18.69, 17.80

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
92	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₅ , 471.1731; found, 471.1735	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (d, <i>J</i> = 0.7 Hz, 1H), 8.32 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.3 Hz, 1H), 7.26 – 7.18 (m, 4H), 7.01 – 6.89 (m, 4H), 6.87 (d, <i>J</i> = 5.3 Hz, 1H), 5.73 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.59 – 4.49 (m, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 1H), 3.94 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.46, -115.80
93	---	---	HRMS-ESI (<i>m/z</i>) [2M+Na] ⁺ calcd for C ₅₄ H ₆₀ N ₄ NaO ₁₂ , 979.4106; found, 979.4119	¹ H NMR (400 MHz, CDCl ₃) δ 12.03 (d, <i>J</i> = 0.7 Hz, 1H), 8.40 (d, <i>J</i> = 8.1 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.41 – 7.09 (m, 10H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 5.97 (q, <i>J</i> = 6.3 Hz, 1H), 4.61 (dq, <i>J</i> = 8.2, 7.2 Hz, 1H), 3.94 (s, 3H), 3.39 (dq, <i>J</i> = 9.1, 6.9 Hz, 1H), 3.18 (dq, <i>J</i> = 9.2, 6.9 Hz, 1H), 1.30 (d, <i>J</i> = 7.2 Hz, 3H), 1.17 (t, <i>J</i> = 6.9 Hz, 3H), 1.13 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.45, 168.56, 155.34, 148.71, 141.84, 140.56, 140.38, 130.37, 128.25, 127.87, 127.81, 127.69, 127.33, 127.21, 109.41, 84.05, 74.30, 59.93, 56.08, 48.05, 18.02, 15.67, 14.95
95	---	---	HRMS-ESI (<i>m/z</i>) [M-OCH ₃] ⁺ calcd for C ₂₅ H ₂₅ N ₂ O ₅ , 433.1764; found, 433.1763	¹ H NMR (300 MHz, CDCl ₃) δ 12.04 (d, <i>J</i> = 0.6 Hz, 1H), 8.41 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.41 – 7.18 (m, 10H), 6.85 (d, <i>J</i> = 5.4 Hz, 1H), 5.97 (q, <i>J</i> = 6.3 Hz, 1H), 4.75 – 4.49 (m, 1H), 3.94 (s, 3H), 3.15 (s, 3H), 1.29 (d, <i>J</i> = 7.2 Hz, 3H), 1.13 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.42, 168.58, 155.35, 148.72, 141.11, 140.39, 139.89, 130.37, 128.51, 128.11, 127.86, 127.69, 127.52, 127.31, 109.42, 84.47, 74.02, 56.08, 52.55, 48.05, 17.97, 14.97

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
96	---	---	---	¹ H NMR (400 MHz, CDCl ₃) δ 12.03 (d, <i>J</i> = 0.6 Hz, 1H), 8.31 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.35 (td, <i>J</i> = 8.5, 6.2 Hz, 1H), 7.23 (td, <i>J</i> = 8.4, 6.2 Hz, 1H), 6.91 – 6.74 (m, 4H), 6.69 (ddd, <i>J</i> = 10.4, 8.8, 2.6 Hz, 1H), 5.88 – 5.74 (m, 1H), 4.69 (d, <i>J</i> = 9.9 Hz, 1H), 4.64 – 4.48 (m, 1H), 3.95 (s, 3H), 1.30 (d, <i>J</i> = 6.1 Hz, 3H), 1.17 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -110.97 (d, <i>J</i> = 7.7 Hz), -111.39 (d, <i>J</i> = 7.6 Hz), -111.98 (dd, <i>J</i> = 7.7, 2.6 Hz), -112.83 (dd, <i>J</i> = 7.6, 2.6 Hz)
97	---	---	---	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.31 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.49 – 7.40 (m, 4H), 7.37 – 7.24 (m, 5H), 7.23 – 7.18 (m, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.00 (dq, <i>J</i> = 25.4, 6.4 Hz, 1H), 4.63 – 4.51 (m, 1H), 3.94 (s, 3H), 1.32 (dd, <i>J</i> = 6.5, 1.0 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -169.17
98	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₁ N ₂ O ₇ , 495.2131; found, 495.2124	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.22 – 7.12 (m, 4H), 6.90 – 6.73 (m, 5H), 5.73 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.64 – 4.44 (m, 1H), 3.96 (d, <i>J</i> = 9.9 Hz, 1H), 3.93 (s, 3H), 3.75 (s, 3H), 3.73 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.65, 168.54, 158.36, 158.20, 155.34, 148.70, 140.40, 133.83, 133.69, 130.45, 128.97, 128.92, 114.11, 113.81, 109.39, 73.77, 56.11, 56.04, 55.20, 55.19, 47.90, 19.20, 17.75

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
99	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₅ , 471.1731; found, 471.1724	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.3 Hz, 1H), 7.32 – 7.19 (m, 2H), 7.11 – 7.03 (m, 2H), 7.02 – 6.83 (m, 5H), 5.75 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.65 – 4.46 (m, 1H), 4.06 (d, <i>J</i> = 9.9 Hz, 1H), 3.94 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.07, -112.48
100	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ Cl ₂ N ₂ O ₅ , 503.1140; found, 503.1137	¹ H NMR (400 MHz, CDCl ₃) δ 12.04 (s, 1H), 8.32 (d, <i>J</i> = 7.7 Hz, 1H), 7.98 (d, <i>J</i> = 5.3 Hz, 1H), 7.31 – 7.10 (m, 8H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.73 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.60 – 4.48 (m, 1H), 4.01 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.08 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.55, 168.60, 155.36, 148.72, 142.54, 142.33, 140.47, 134.73, 134.42, 130.33, 130.23, 129.94, 128.42, 128.33, 127.52, 127.21, 126.18, 125.98, 109.47, 72.83, 57.03, 56.08, 47.85, 19.11, 17.66
101	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ N ₂ O ₅ , 433.1763; found, 433.1749	¹ H NMR (400 MHz, CDCl ₃) δ 12.23 – 11.94 (m, 1H), 8.64 – 8.39 (m, 1H), 8.11 – 7.92 (m, 1H), 7.78 – 7.60 (m, 3H), 7.59 – 7.48 (m, 1H), 7.46 – 7.35 (m, 2H), 7.36 – 7.26 (m, 1H), 7.27 – 7.20 (m, 1H), 6.91 – 6.84 (m, 1H), 5.87 – 5.69 (m, 1H), 4.94 – 4.76 (m, 1H), 4.35 – 4.22 (m, 1H), 4.00 – 3.93 (m, 3H), 1.69 – 1.51 (m, 3H), 0.95 – 0.59 (m, 3H)
102	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ N ₂ O ₆ , 449.1712; found, 449.1707	¹ H NMR (400 MHz, CDCl ₃) δ 12.16 (s, 1H), 8.51 – 8.38 (m, 1H), 8.11 – 7.82 (m, 1H), 7.34 – 7.15 (m, 4H), 7.15 – 6.94 (m, 4H), 6.91 – 6.77 (m, 1H), 5.20 – 5.09 (m, 1H), 4.78 – 4.64 (m, 1H), 4.33 – 4.17 (m, 1H), 3.96 – 3.92 (m, 3H), 1.55 – 1.42 (m, 3H), 1.10 – 0.91 (m, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
103	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ Br ₂ N ₂ O ₅ , 591.0130; found, 591.0125	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.50 – 7.31 (m, 4H), 7.24 – 7.01 (m, 4H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 5.73 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 4.01 (d, <i>J</i> = 9.7 Hz, 1H), 3.93 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.50, 168.61, 155.39, 148.74, 140.47, 139.69, 139.59, 132.00, 131.69, 130.31, 129.80, 129.73, 121.12, 120.84, 109.52, 72.81, 56.45, 56.08, 47.86, 19.09, 17.67
104	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₃ H ₂₇ N ₂ O ₅ S ₂ , 475.1361; found, 475.1368	¹ H NMR (400 MHz, CDCl ₃) δ 12.13 (s, 1H), 8.44 (d, <i>J</i> = 8.0 Hz, 1H), 7.99 (d, <i>J</i> = 5.2 Hz, 1H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 6.73 (d, <i>J</i> = 3.4 Hz, 1H), 6.67 (d, <i>J</i> = 3.4 Hz, 1H), 6.54 – 6.35 (m, 2H), 5.54 – 5.40 (m, 1H), 4.78 – 4.59 (m, 1H), 4.45 (d, <i>J</i> = 7.1 Hz, 1H), 3.94 (s, 3H), 2.39 (s, 6H), 1.30 (d, <i>J</i> = 2.8 Hz, 3H), 1.28 (d, <i>J</i> = 3.7 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.50, 168.60, 155.35, 148.74, 141.52, 140.47, 140.41, 139.03, 139.00, 130.53, 125.76, 125.08, 124.67, 124.42, 109.41, 74.68, 56.07, 48.00, 47.84, 18.65, 17.88, 15.25
105	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₇ H ₃₁ N ₂ O ₅ , 463.2233; found, 463.2242	¹ H NMR (400 MHz, CDCl ₃) δ 12.14 (s, 1H), 8.38 (d, <i>J</i> = 8.0 Hz, 1H), 7.94 (d, <i>J</i> = 5.2 Hz, 1H), 7.21 – 7.10 (m, 4H), 7.09 – 6.97 (m, 4H), 6.82 (d, <i>J</i> = 5.2 Hz, 1H), 5.79 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 3.98 (d, <i>J</i> = 10.0 Hz, 1H), 3.88 (s, 3H), 2.25 (s, 3H), 2.23 (s, 3H), 1.25 (d, <i>J</i> = 6.3 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.66, 168.57, 155.32, 148.71, 140.43, 138.63, 138.47, 136.37, 136.05, 130.45, 129.44, 129.11, 127.91, 127.85, 109.45, 73.66, 57.08, 56.02, 47.92, 20.97, 20.93, 19.24, 17.64

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
106	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₆ H ₂₆ F ₃ N ₂ O ₅ , 503.1794; found, 503.1794	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.54 (d, <i>J</i> = 8.1 Hz, 2H), 7.42 (d, <i>J</i> = 8.1 Hz, 2H), 7.34 – 7.21 (m, 4H), 7.21 – 7.13 (m, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.85 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.61 – 4.46 (m, 1H), 4.15 (d, <i>J</i> = 9.9 Hz, 1H), 3.93 (s, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -62.53
107	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₅ Cl ₂ N ₂ O ₅ , 503.1140; found, 503.1139	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.32 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.38 – 7.10 (m, 8H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 5.73 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.62 – 4.45 (m, 1H), 4.03 (d, <i>J</i> = 9.6 Hz, 1H), 3.94 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.52, 168.61, 155.41, 148.74, 140.45, 139.26, 139.15, 133.04, 132.77, 130.32, 129.41, 129.36, 129.05, 128.73, 109.49, 72.95, 56.35, 56.08, 47.86, 19.08, 17.67
109	---	---	ESIMS <i>m/z</i> 587 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.36 (d, <i>J</i> = 7.9 Hz, 1H), 7.95 (d, <i>J</i> = 5.2 Hz, 1H), 7.57 – 7.46 (m, 8H), 7.43 – 7.38 (m, 7H), 7.34 – 7.29 (m, 2H), 6.81 (d, <i>J</i> = 5.2 Hz, 1H), 5.90 (dq, <i>J</i> = 12.2, 6.1 Hz, 1H), 4.56 (p, <i>J</i> = 7.2 Hz, 1H), 4.16 (d, <i>J</i> = 10.0 Hz, 1H), 3.89 (d, <i>J</i> = 1.9 Hz, 3H), 1.34 (d, <i>J</i> = 6.1 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.71, 168.59, 155.33, 148.72, 140.65, 140.58, 140.43, 140.11, 139.94, 139.66, 130.44, 128.77, 128.73, 128.67, 128.53, 127.58, 127.30, 127.26, 127.21, 127.00, 126.94, 109.40, 73.58, 57.25, 56.04, 47.91, 19.33, 17.66

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
110	---	(Thin film) 3374, 2984, 1735, 1649, 1602, 1577, 1530, 1507, 1449, 1380, 1329, 1296, 1222, 1188, 1159, 1130, 1105, 1049, 1015, 906, 826, 809, 792, 778, 731, 704, 666	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₄ H ₂₃ F ₂ N ₂ O ₄ , 441.1620; found, 441.1620	¹ H NMR (400 MHz, CDCl ₃) δ 11.80 (s, 1H), 8.30 (d, <i>J</i> = 8.0 Hz, 1H), 8.07 (dd, <i>J</i> = 4.3, 1.5 Hz, 1H), 7.40 – 7.15 (m, 6H), 7.05 – 6.85 (m, 4H), 5.73 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.65 – 4.45 (m, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 1H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.60, 168.26, 161.76 (d, <i>J</i> = 246.1 Hz), 161.64 (d, <i>J</i> = 245.7 Hz), 157.79, 139.65, 136.82 (d, <i>J</i> = 3.3 Hz), 136.71 (d, <i>J</i> = 3.5 Hz), 131.04, 129.50 (d, <i>J</i> = 7.9 Hz), 128.80, 126.08, 115.74 (d, <i>J</i> = 21.3 Hz), 115.41 (d, <i>J</i> = 21.3 Hz), 73.34, 56.14, 47.84, 19.12, 17.69 ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.44, -115.76

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
111	---	(Thin film) 3370, 2984, 2936, 2256, 1735, 1647, 1604, 1574, 1529, 1507, 1483, 1469, 1452, 1381, 1323, 1281, 1262, 1222, 1158, 1109, 1048, 1015, 990, 904, 824, 800, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₅ , 485.1883; found, 485.1880	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.95 (d, <i>J</i> = 5.2 Hz, 1H), 7.35 – 7.14 (m, 4H), 7.04 – 6.87 (m, 4H), 6.84 (d, <i>J</i> = 5.2 Hz, 1H), 5.73 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.60 – 4.48 (m, 1H), 4.16 (q, <i>J</i> = 7.0 Hz, 2H), 4.05 (d, <i>J</i> = 9.7 Hz, 1H), 1.51 (t, <i>J</i> = 7.0 Hz, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.58, 168.66, 161.75 (d, <i>J</i> = 246.1 Hz), 161.64 (d, <i>J</i> = 245.7 Hz), 154.75, 148.82, 140.38, 136.82 (d, <i>J</i> = 3.3 Hz), 136.73 (d, <i>J</i> = 3.3 Hz), 130.41, 129.51 (d, <i>J</i> = 7.6 Hz), 115.72 (d, <i>J</i> = 21.4 Hz), 115.39 (d, <i>J</i> = 21.2 Hz), 110.13, 73.32, 64.67, 56.12, 47.84, 19.11, 17.69, 14.37 ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.47, -115.80

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
112	---	(Thin film) 3370, 2984, 1729, 1641, 1601, 1531, 1507, 1491, 1450, 1361, 1305, 1281, 1254, 1222, 1177, 1158, 1135, 1087, 1048, 1015, 908, 824, 778, 752, 731, 666	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd calcd for C ₂₅ H ₂₄ F ₂ NO ₄ , 440.1668; found, 440.1676	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (s, 1H), 7.43 – 7.33 (m, 2H), 7.30 – 7.17 (m, 4H), 7.05 – 6.90 (m, 5H), 6.88 – 6.77 (m, 2H), 5.75 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.57 (p, <i>J</i> = 7.1 Hz, 1H), 4.06 (d, <i>J</i> = 9.9 Hz, 1H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.22, 169.33, 161.79 (d, <i>J</i> = 246.2 Hz), 161.70 (d, <i>J</i> = 245.9 Hz), 161.59, 136.83 (d, <i>J</i> = 3.4 Hz), 136.61 (d, <i>J</i> = 3.4 Hz), 134.49, 129.49 (d, <i>J</i> = 8.1 Hz), 129.46 (d, <i>J</i> = 7.9 Hz), 125.62, 118.70, 118.58, 115.79 (d, <i>J</i> = 21.4 Hz), 115.50 (d, <i>J</i> = 21.3 Hz), 113.72, 73.62, 56.17, 48.29, 19.15, 17.79 ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.30, -115.60
113	---	---	ESIMS <i>m/z</i> 457.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 11.98 (d, <i>J</i> = 0.6 Hz, 1H), 8.30 (t, <i>J</i> = 5.7 Hz, 1H), 7.99 (d, <i>J</i> = 5.2 Hz, 1H), 7.24 – 7.15 (m, 4H), 7.03 – 6.85 (m, 5H), 5.71 (dq, <i>J</i> = 9.2, 6.2 Hz, 1H), 4.11 (dd, <i>J</i> = 18.1, 6.0 Hz, 1H), 4.04 (d, <i>J</i> = 9.2 Hz, 1H), 3.95 (s, 3H), 3.90 (dd, <i>J</i> = 18.1, 5.6 Hz, 1H), 1.25 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 169.18, 168.43, 161.74 (d, <i>J</i> = 246.1 Hz), 161.63 (d, <i>J</i> = 245.5 Hz), 155.42, 148.71, 140.55, 136.68, 130.30, 129.68, 129.60, 115.67 (d, <i>J</i> = 29.2 Hz), 115.46 (d, <i>J</i> = 29.1 Hz), 109.55, 73.65, 56.11, 55.77, 40.91, 19.12

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
114	---	---	ESIMS <i>m/z</i> 485.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (s, 1H), 8.32 (d, <i>J</i> = 8.5 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.46 – 7.04 (m, 4H), 7.11 – 6.65 (m, 5H), 5.71 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.51 (ddd, <i>J</i> = 8.5, 7.0, 5.4 Hz, 1H), 4.05 (d, <i>J</i> = 9.6 Hz, 1H), 3.95 (s, 3H), 1.70 – 1.57 (m, 1H), 1.49 – 1.36 (m, 1H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.67 (t, <i>J</i> = 7.5 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 170.87, 168.79, 161.74 (d, <i>J</i> = 245.9 Hz), 161.66 (d, <i>J</i> = 245.8 Hz), 155.43, 148.73, 140.42, 136.80, 130.36, 129.55 (d, <i>J</i> = 2.7 Hz), 129.47 (d, <i>J</i> = 2.7 Hz), 115.67 (d, <i>J</i> = 32.4 Hz), 115.45 (d, <i>J</i> = 32.4 Hz), 109.44, 73.48, 56.09, 56.03, 53.16, 25.16, 19.18, 9.27
115	---	---	ESIMS <i>m/z</i> 499.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.32 (d, <i>J</i> = 9.4 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 – 7.07 (m, 4H), 6.97 (t, <i>J</i> = 8.6 Hz, 2H), 6.93 – 6.86 (m, 3H), 5.72 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.48 (dd, <i>J</i> = 9.4, 4.7 Hz, 1H), 4.05 (d, <i>J</i> = 9.7 Hz, 1H), 3.95 (s, 3H), 1.93 – 1.82 (m, 1H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.82 (d, <i>J</i> = 6.9 Hz, 3H), 0.65 (d, <i>J</i> = 6.8 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 170.46, 168.95, 161.73 (d, <i>J</i> = 246.4 Hz), 161.65 (d, <i>J</i> = 245.6 Hz), 155.43, 148.71, 140.42, 136.85, 130.40, 129.54 (d, <i>J</i> = 4.7 Hz), 129.47 (d, <i>J</i> = 4.7 Hz), 115.71 (d, <i>J</i> = 21.3 Hz), 115.40 (d, <i>J</i> = 21.3 Hz), 109.43, 73.51, 57.09, 56.09, 55.98, 30.96, 19.22, 19.10, 17.10

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
116	---	---	ESIMS <i>m/z</i> 513.7 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (d, <i>J</i> = 0.6 Hz, 1H), 8.15 (d, <i>J</i> = 8.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 – 7.04 (m, 4H), 7.08 – 6.74 (m, 6H), 5.70 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.54 (ddd, <i>J</i> = 9.7, 8.8, 5.0 Hz, 1H), 4.04 (d, <i>J</i> = 9.8 Hz, 1H), 3.94 (s, 3H), 1.46 – 1.36 (m, 1H), 1.33 – 1.18 (m, 4H), 1.08 (ddd, <i>J</i> = 13.9, 9.0, 5.0 Hz, 1H), 0.82 (d, <i>J</i> = 6.5 Hz, 3H), 0.77 (d, <i>J</i> = 6.6 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.62, 168.81, 161.75 (d, <i>J</i> = 246.2 Hz), 161.66 (d, <i>J</i> = 245.6 Hz), 155.43, 148.74, 140.39, 137.02, 136.76, 130.34, 129.51 (d, <i>J</i> = 3.4 Hz), 129.44 (d, <i>J</i> = 3.5 Hz), 115.73 (d, <i>J</i> = 21.4 Hz), 115.41 (d, <i>J</i> = 21.3 Hz), 109.44, 73.37, 56.21, 56.09, 50.52, 41.00, 24.57, 22.76, 21.49, 19.14
117	---	(Thin film) 3368, 2937, 1732, 1648, 1527, 1241, 1144	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₁ N ₂ O ₇ , 495.2126; found, 495.2104	¹ H NMR (300 MHz, CDCl ₃) δ 12.15 (d, <i>J</i> = 0.6 Hz, 1H), 8.38 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.45 (dd, <i>J</i> = 7.6, 1.7 Hz, 1H), 7.30 – 7.20 (m, 1H), 7.12 (dddd, <i>J</i> = 13.5, 8.1, 7.5, 1.7 Hz, 2H), 6.92 – 6.80 (m, 4H), 6.76 (dd, <i>J</i> = 8.2, 1.1 Hz, 1H), 5.97 (dq, <i>J</i> = 9.0, 5.7, 5.2 Hz, 1H), 5.01 (d, <i>J</i> = 10.1 Hz, 1H), 4.70 – 4.39 (m, 1H), 3.93 (s, 3H), 3.85 (s, 3H), 3.75 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H)
118	---	(Thin film) 3368, 2937, 1734, 1648, 1527, 1261, 1148, 1041	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd C ₂₇ H ₃₁ N ₂ O ₇ , 495.2126; found, 495.2106	¹ H NMR (300 MHz, CDCl ₃) δ 12.10 (d, <i>J</i> = 0.6 Hz, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.21 (t, <i>J</i> = 8.0 Hz, 1H), 7.15 (t, <i>J</i> = 7.9 Hz, 1H), 6.93 – 6.81 (m, 5H), 6.74 (ddd, <i>J</i> = 8.2, 2.6, 0.9 Hz, 1H), 6.68 (ddd, <i>J</i> = 8.2, 2.6, 0.9 Hz, 1H), 5.80 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.60 – 4.43 (m, 1H), 3.99 (d, <i>J</i> = 10.3 Hz, 1H), 3.94 (s, 3H), 3.77 (s, 3H), 3.75 (s, 3H), 1.26 (d, <i>J</i> = 6.0 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
119	---	(Thin film) 3367, 2985, 1738, 1647, 1575, 1481, 1263, 1153, 1058, 914	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₃ Cl ₂ F ₂ N ₂ O ₆ , 555.0896; found, 555.0909	¹ H NMR (300 MHz, CDCl ₃) δ 11.92 (s, 1H), 8.36 (d, <i>J</i> = 8.1 Hz, 1H), 7.95 (d, <i>J</i> = 5.2 Hz, 1H), 7.77 (t, <i>J</i> = 8.5 Hz, 1H), 7.37 (t, <i>J</i> = 8.5 Hz, 1H), 7.15 (ddd, <i>J</i> = 8.5, 2.1, 0.7 Hz, 1H), 7.08 – 6.89 (m, 3H), 6.86 (d, <i>J</i> = 5.3 Hz, 1H), 6.10 (q, <i>J</i> = 6.2 Hz, 1H), 4.66 (p, <i>J</i> = 7.3 Hz, 1H), 3.95 (s, 3H), 3.22 (s, 1H), 1.36 (d, <i>J</i> = 7.2 Hz, 3H), 1.24 (d, <i>J</i> = 6.3 Hz, 3H)
120	---	(Thin film) 3369, 2934, 1735, 1648, 1576, 1527, 1451, 1261	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₅ , 499.2039; found, 499.2050	¹ H NMR (300 MHz, CDCl ₃) δ 12.06 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.16 – 7.01 (m, 2H), 7.01 – 6.79 (m, 5H), 5.70 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.70 – 4.43 (m, 1H), 3.97 (d, <i>J</i> = 9.3 Hz, 1H), 3.94 (s, 3H), 2.20 (d, <i>J</i> = 1.9 Hz, 3H), 2.17 (d, <i>J</i> = 1.9 Hz, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H)
121	---	(Thin film) 3367, 2980, 1735, 1648, 1527, 1450, 1262, 1050	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ Cl ₂ N ₂ O ₅ , 531.1448; found, 531.1458	¹ H NMR (300 MHz, CDCl ₃) δ 12.14 – 11.95 (m, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.21 (d, <i>J</i> = 1.5 Hz, 2H), 7.19 – 6.99 (m, 4H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.69 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 3.94 (d, <i>J</i> = 9.9 Hz, 1H), 3.94 (s, 3H), 2.31 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.0 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H)
122	---	(Thin film) 3367, 2986, 1737, 1647, 1611, 1482, 1452, 1215, 1148, 1057	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₆ , 487.1675; found, 487.1686	¹ H NMR (300 MHz, CDCl ₃) δ 12.00 (d, <i>J</i> = 0.6 Hz, 1H), 8.41 (d, <i>J</i> = 8.1 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.87 – 7.75 (m, 1H), 7.48 (tt, <i>J</i> = 8.0, 1.5 Hz, 1H), 7.28 – 7.12 (m, 3H), 7.10 – 6.98 (m, 1H), 6.99 – 6.86 (m, 2H), 6.90 – 6.82 (m, 1H), 6.26 (qd, <i>J</i> = 6.3, 1.5 Hz, 1H), 4.73 – 4.57 (m, 1H), 3.94 (s, 3H), 3.19 (dd, <i>J</i> = 2.8, 1.9 Hz, 1H), 1.28 (d, <i>J</i> = 6.3 Hz, 3H), 1.27 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -111.85 – -112.11 (m), -112.15 – -112.47 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
123	---	(Thin film) 3285, 2981, 2107, 1736, 1648, 1528, 1263, 1050	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₇ N ₂ O ₅ , 483.1914; found, 483.1919	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.45 – 7.40 (m, 2H), 7.40 – 7.35 (m, 2H), 7.28 – 7.18 (m, 4H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.78 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.61 – 4.45 (m, 1H), 4.07 (d, <i>J</i> = 9.8 Hz, 1H), 3.94 (s, 3H), 3.05 (s, 1H), 3.03 (s, 1H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H)
124	---	(Thin film) 3368, 2963, 1735, 1648, 1527, 1480, 1450, 1280, 1263, 1142, 1053	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₅ , 491.2540; found, 491.2551	¹ H NMR (400 MHz, CDCl ₃) δ 12.12 (s, 1H), 8.37 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.24 – 7.18 (m, 4H), 7.14 – 7.08 (m, 2H), 7.08 – 7.02 (m, 2H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 5.80 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.63 – 4.40 (m, 1H), 3.99 (d, <i>J</i> = 10.2 Hz, 1H), 3.93 (s, 3H), 2.65 – 2.50 (m, 4H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.18 (t, <i>J</i> = 7.6 Hz, 3H), 1.14 (t, <i>J</i> = 7.6 Hz, 3H), 0.94 (d, <i>J</i> = 7.2 Hz, 3H)
125	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₆ FN ₂ O ₅ , 453.1820; found, 453.1831	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 – 7.20 (m, 5H), 7.19 – 7.10 (m, 1H), 6.97 (t, <i>J</i> = 8.7 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.78 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.58 – 4.45 (m, 1H), 4.05 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.63, 168.54, 161.72 (d, <i>J</i> = 245.7 Hz), 155.35, 148.71, 141.10, 140.41, 136.91 (d, <i>J</i> = 3.5 Hz), 130.42, 129.58 (d, <i>J</i> = 7.8 Hz), 128.59, 127.95, 126.84, 115.64 (d, <i>J</i> = 21.3 Hz), 109.40, 73.39, 57.04, 56.07, 47.83, 19.15, 17.59

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
127	---	---	ESIMS <i>m/z</i> 589.5 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 11.77 (d, <i>J</i> = 0.6 Hz, 1H), 8.25 (d, <i>J</i> = 8.0 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.53 (dd, <i>J</i> = 20.0, 2.2 Hz, 2H), 7.35 (dd, <i>J</i> = 8.5, 1.8 Hz, 2H), 7.18 (ddd, <i>J</i> = 10.9, 8.5, 2.3 Hz, 2H), 6.88 (d, <i>J</i> = 5.2 Hz, 1H), 5.80 (q, <i>J</i> = 6.3 Hz, 1H), 4.68 – 4.47 (m, 1H), 3.95 (s, 3H), 1.27 (d, <i>J</i> = 7.3 Hz, 3H), 1.20 (d, <i>J</i> = 6.4 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 170.98, 168.86, 155.52, 148.74, 144.18, 141.99, 140.57, 132.92, 132.87, 132.02, 131.86, 130.48, 130.37, 129.91, 128.15, 127.74, 125.09, 124.82, 109.64, 78.58, 74.60, 56.11, 48.05, 17.56, 14.13
128	---	---	ESIMS <i>m/z</i> 555.6 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 11.78 (d, <i>J</i> = 0.6 Hz, 1H), 8.25 (d, <i>J</i> = 8.0 Hz, 1H), 7.96 (d, <i>J</i> = 5.3 Hz, 1H), 7.33 – 7.27 (m, 2H), 7.22 (dd, <i>J</i> = 10.4, 2.2 Hz, 1H), 7.08 (dddd, <i>J</i> = 19.0, 8.5, 2.1, 0.8 Hz, 2H), 6.88 (d, <i>J</i> = 5.2 Hz, 1H), 5.82 (q, <i>J</i> = 6.3 Hz, 1H), 4.65 – 4.51 (m, 1H), 3.95 (s, 3H), 3.00 (s, 1H), 1.26 (d, <i>J</i> = 7.2 Hz, 3H), 1.20 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 170.92, 168.87, 158.04 (d, <i>J</i> = 249.8 Hz), 157.99 (d, <i>J</i> = 249.5 Hz), 155.54, 148.76, 145.02 (d, <i>J</i> = 5.5 Hz), 142.77 (d, <i>J</i> = 6.0 Hz), 140.55, 130.65, 130.55, 129.94, 122.05 (d, <i>J</i> = 3.7 Hz), 121.65 (d, <i>J</i> = 3.6 Hz), 120.45 (d, <i>J</i> = 17.8 Hz), 120.25 (d, <i>J</i> = 17.7 Hz), 114.56 (d, <i>J</i> = 22.7 Hz), 114.26 (d, <i>J</i> = 23.0 Hz), 109.62, 78.63, 74.64, 56.12, 48.02, 17.52, 14.30

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
129	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ Cl ₂ N ₂ O ₅ , 531.1448; found, 531.1454	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.32 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.25 (d, <i>J</i> = 9.7 Hz, 1H), 7.19 (d, <i>J</i> = 8.2 Hz, 1H), 7.09 (dd, <i>J</i> = 4.0, 2.3 Hz, 2H), 7.02 (td, <i>J</i> = 8.5, 2.3 Hz, 2H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 5.71 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.54 (p, <i>J</i> = 7.3 Hz, 1H), 3.99 – 3.92 (m, 4H), 2.33 (s, 3H), 2.29 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.61, 168.57, 155.39, 148.74, 140.44, 139.53, 139.35, 136.56, 136.15, 133.12, 132.77, 130.63, 130.59, 130.34, 129.45, 129.12, 126.59, 126.41, 109.44, 73.05, 56.45, 56.08, 47.85, 20.17, 20.08, 19.15, 17.69

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
130	---	(Thin film) 3376, 2986, 2360, 2107, 1736, 1652, 1604, 1558, 1530, 1508, 1452, 1427, 1381, 1329, 1287, 1262, 1247, 1223, 1187, 1159, 1137, 1116, 1049, 1015, 911, 826, 792, 779, 729, 680, 668	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₄ H ₂₂ BrF ₂ N ₂ O ₄ , 521.0709; found, 521.0713	¹ H NMR (400 MHz, CDCl ₃) δ 12.63 (s, 1H), 8.32 (d, <i>J</i> = 7.9 Hz, 1H), 7.88 (d, <i>J</i> = 4.9 Hz, 1H), 7.62 (d, <i>J</i> = 4.9 Hz, 1H), 7.29 – 7.15 (m, 4H), 7.05 – 6.85 (m, 4H), 5.74 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.61 – 4.48 (m, 1H), 4.05 (d, <i>J</i> = 9.9 Hz, 1H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 171.39, 167.69, 161.76 (d, <i>J</i> = 246.1 Hz), 161.65 (d, <i>J</i> = 246.0 Hz), 155.39, 139.43, 136.82 (d, <i>J</i> = 3.4 Hz), 136.63 (d, <i>J</i> = 3.1 Hz), 132.21, 131.44, 129.47 (d, <i>J</i> = 8.0 Hz), 129.44 (d, <i>J</i> = 7.9 Hz), 122.15, 115.76 (d, <i>J</i> = 21.3 Hz), 115.42 (d, <i>J</i> = 21.3 Hz), 73.47, 56.15, 48.05, 19.11, 17.61 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.26 – -115.47 (m), -115.64 (ddd, <i>J</i> = 13.7, 8.9, 5.2 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
131	---	(Thin film) 3373, 2940, 1739, 1651, 1609, 1577, 1518, 1481, 1454, 1436, 1382, 1324, 1283, 1243, 1210, 1149, 1120, 1054, 954, 924, 872, 850, 824, 801, 754, 733	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₃ F ₄ N ₂ O ₅ , 507.1538; found, 507.1543	¹ H NMR (300 MHz, CDCl ₃) δ 12.01 (d, <i>J</i> = 0.6 Hz, 1H), 8.31 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.18 – 6.91 (m, 5H), 6.88 (d, <i>J</i> = 5.2 Hz, 1H), 5.66 (dq, <i>J</i> = 9.4, 6.2 Hz, 1H), 4.64 – 4.49 (m, 1H), 4.01 (d, <i>J</i> = 9.4 Hz, 1H), 3.95 (s, 3H), 1.32 – 1.21 (m, 4H), 1.16 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -136.05 – -136.27 (m), -136.61 (ddd, <i>J</i> = 20.1, 11.4, 8.1 Hz), -139.14 – -139.32 (m), -139.45 – -139.68 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
132	---	(Thin film) 3372, 2983, 1737, 1649, 1601, 1576, 1529, 1498, 1481, 1453, 1439, 1381, 1323, 1245, 1184, 1145, 1096, 1060, 953, 909, 864, 849, 824, 800, 730, 689	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₃ Cl ₂ F ₂ N ₂ O ₅ , 539.0947; found, 539.0954	¹ H NMR (300 MHz, CDCl ₃) δ 12.02 (d, <i>J</i> = 0.6 Hz, 1H), 8.31 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.27 (td, <i>J</i> = 7.3, 2.1 Hz, 2H), 7.19 – 6.98 (m, 4H), 6.88 (d, <i>J</i> = 5.2 Hz, 1H), 5.66 (dq, <i>J</i> = 9.5, 6.1 Hz, 1H), 4.66 – 4.48 (m, 1H), 4.01 (d, <i>J</i> = 9.6 Hz, 1H), 3.95 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.17 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.83 – -116.94 (m), -117.22 – -117.34 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
133	---	(Thin film) 3372, 2935, 2257, 1735, 1649, 1576, 1528, 1501, 1481, 1452, 1439, 1380, 1324, 1281, 1262, 1241, 1206, 1149, 1118, 1051, 952, 908, 849, 821, 800, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₅ , 499.2039; found, 499.2046	¹ H NMR (300 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.5 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.12 – 6.98 (m, 5H), 6.97 – 6.79 (m, 3H), 5.70 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.65 – 4.46 (m, 1H), 3.94 (s, 3H), 2.21 (dd, <i>J</i> = 9.8, 1.9 Hz, 6H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -119.78 – -120.04 (m), -120.30 – -120.53 (m)
135	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₅ , 471.1726; found, 471.1742	¹ H NMR (300 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.20 (d, <i>J</i> = 8.0 Hz, 1H), 8.00 (d, <i>J</i> = 5.2 Hz, 1H), 7.26 – 7.13 (m, 4H), 7.02 – 6.83 (m, 5H), 5.69 (dq, <i>J</i> = 9.0, 6.2 Hz, 1H), 4.53 (dq, <i>J</i> = 8.0, 7.2 Hz, 1H), 4.05 (d, <i>J</i> = 9.1 Hz, 1H), 3.96 (s, 3H), 1.34 (d, <i>J</i> = 7.2 Hz, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.27, 168.54, 162.68, 162.58, 160.73, 160.63, 155.43, 148.77, 140.44, 136.81, 136.78, 136.46, 136.43, 130.33, 129.72, 129.66, 129.63, 129.57, 115.74, 115.57, 115.43, 115.26, 109.49, 73.33, 56.11, 55.65, 47.80, 18.95, 17.74

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
136	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₃ Cl ₄ N ₂ O ₅ , 571.0356; found, 571.0367	¹ H NMR (300 MHz, CDCl ₃) δ 12.00 (s, 1H), 8.30 (d, <i>J</i> = 7.8 Hz, 1H), 7.98 (d, <i>J</i> = 5.1 Hz, 1H), 7.42 – 7.28 (m, 4H), 7.09 (ddd, <i>J</i> = 10.1, 8.3, 2.2 Hz, 2H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 5.65 (dt, <i>J</i> = 12.2, 6.1 Hz, 1H), 4.57 (p, <i>J</i> = 7.3 Hz, 1H), 4.00 (d, <i>J</i> = 9.6 Hz, 1H), 3.95 (s, 3H), 1.27 (d, <i>J</i> = 5.9 Hz, 3H), 1.17 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.45, 168.64, 155.42, 148.74, 140.51, 140.21, 140.16, 133.11, 132.76, 131.70, 131.38, 130.97, 130.67, 130.27, 130.20, 130.08, 127.25, 127.17, 109.53, 72.38, 56.09, 55.71, 47.87, 19.03, 17.71
137	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₃ Cl ₂ F ₂ N ₂ O ₅ , 539.0947; found, 539.0953	¹ H NMR (300 MHz, CDCl ₃) δ 11.99 (s, 1H), 8.30 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.42 – 7.19 (m, 2H), 7.08 – 6.94 (m, 4H), 6.90 – 6.84 (m, 1H), 5.67 (dq, <i>J</i> = 9.4, 6.2 Hz, 1H), 4.65 – 4.48 (m, 1H), 4.03 (d, <i>J</i> = 9.4 Hz, 1H), 3.95 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.16 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.41, 168.64, 158.16 (d, <i>J</i> = 250.2 Hz), 158.01 (d, <i>J</i> = 250.1 Hz), 155.42, 148.75, 140.91 (d, <i>J</i> = 6.1 Hz), 140.83 (d, <i>J</i> = 6.3 Hz), 140.51, 131.12, 130.81, 130.20, 124.67 – 123.96 (m), 120.11 (d, <i>J</i> = 17.5 Hz), 119.82 (d, <i>J</i> = 17.7 Hz), 116.78 – 116.06 (m), 109.52, 72.44, 56.09, 47.85, 18.99, 17.71

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
138	---	---	HRMS-ESI (<i>m/z</i>) [M] ⁺ calcd for C ₂₈ H ₃₀ N ₂ O ₈ , 522.2002; found, 522.2006	¹ H NMR (500 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.13 (d, <i>J</i> = 8.0 Hz, 1H), 7.50 – 7.44 (m, 4H), 7.27 (ddd, <i>J</i> = 11.5, 8.5, 7.0 Hz, 4H), 7.20 – 7.14 (m, 2H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.01 (q, <i>J</i> = 6.3 Hz, 1H), 5.75 – 5.62 (m, 2H), 4.63 – 4.52 (m, 1H), 3.90 (s, 3H), 2.94 (s, 1H), 2.06 (s, 3H), 1.22 (d, <i>J</i> = 6.3 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.88, 170.27, 163.03, 160.26, 145.73, 144.99, 143.90, 142.88, 142.57, 128.31, 128.28, 127.14, 127.07, 125.56, 125.54, 109.58, 89.49, 79.55, 75.21, 56.19, 48.10, 30.93, 20.87, 17.75, 14.36
139	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ N ₂ O ₆ , 477.2025; found, 477.2019	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.8 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.38 – 7.10 (m, 10H), 6.97 (d, <i>J</i> = 5.4 Hz, 1H), 5.82 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.52 (dt, <i>J</i> = 8.2, 7.1 Hz, 1H), 4.05 (d, <i>J</i> = 10.1 Hz, 1H), 3.87 (s, 3H), 2.37 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.89 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.23, 168.89, 162.28, 159.42, 146.66, 141.55, 141.44, 141.25, 137.45, 128.77, 128.50, 128.13, 128.11, 126.89, 126.67, 109.73, 73.32, 57.90, 56.27, 47.85, 20.75, 19.25, 17.92

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
140	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ N ₂ O ₆ , 505.2338; found, 505.2324	¹ H NMR (400 MHz, CDCl ₃) δ 8.35 (d, <i>J</i> = 7.7 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.34 – 7.09 (m, 10H), 6.95 (d, <i>J</i> = 5.5 Hz, 1H), 5.81 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.62 – 4.44 (m, 1H), 4.05 (d, <i>J</i> = 10.0 Hz, 1H), 3.85 (s, 3H), 2.93 (hept, <i>J</i> = 7.0 Hz, 1H), 1.34 (d, <i>J</i> = 7.0 Hz, 6H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 174.69, 172.33, 162.28, 159.39, 146.56, 141.95, 141.45, 141.27, 137.61, 128.76, 128.50, 128.14, 128.12, 126.89, 126.67, 109.58, 73.28, 57.90, 56.27, 47.83, 33.94, 19.24, 18.82, 17.96
141	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₁ N ₂ O ₇ , 507.2131; found, 507.2125	¹ H NMR (400 MHz, CDCl ₃) δ 8.25 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.9 Hz, 1H), 7.34 – 7.09 (m, 10H), 6.92 (d, <i>J</i> = 5.4 Hz, 1H), 5.83 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 5.72 (d, <i>J</i> = 0.7 Hz, 2H), 4.60 – 4.49 (m, 1H), 4.06 (d, <i>J</i> = 10.1 Hz, 1H), 3.88 (s, 3H), 2.05 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.33, 170.25, 162.88, 160.24, 145.70, 143.91, 142.54, 141.48, 141.25, 128.76, 128.49, 128.12, 128.09, 126.89, 126.65, 109.56, 89.50, 73.27, 57.92, 56.17, 48.07, 20.86, 19.25, 17.73

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
142	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₇ , 535.2444; found, 535.2431	¹ H NMR (400 MHz, CDCl ₃) δ 8.28 (d, <i>J</i> = 7.9 Hz, 1H), 8.25 (d, <i>J</i> = 5.3 Hz, 1H), 7.36 – 7.08 (m, 10H), 6.92 (d, <i>J</i> = 5.4 Hz, 1H), 5.83 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 5.79 – 5.69 (m, 2H), 4.62 – 4.44 (m, 1H), 4.06 (d, <i>J</i> = 10.1 Hz, 1H), 3.86 (s, 3H), 2.53 (hept, <i>J</i> = 7.0 Hz, 1H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.13 (d, <i>J</i> = 7.0 Hz, 6H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 176.22, 172.34, 162.85, 160.23, 145.55, 144.16, 142.18, 141.48, 141.26, 128.76, 128.49, 128.12, 128.09, 126.89, 126.65, 109.48, 89.90, 73.26, 57.93, 56.12, 48.07, 33.85, 19.26, 18.68, 17.74
143	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₃ H ₂₅ N ₂ O ₆ S ₂ , 489.1154; found, 489.1154	¹ H NMR (400 MHz, CDCl ₃) δ 8.49 (d, <i>J</i> = 8.1 Hz, 1H), 8.31 (d, <i>J</i> = 5.5 Hz, 1H), 7.21 – 7.13 (m, 2H), 7.03 – 6.97 (m, 2H), 6.95 – 6.86 (m, 3H), 5.54 (dq, <i>J</i> = 7.3, 6.2 Hz, 1H), 4.70 – 4.61 (m, 2H), 3.88 (s, 3H), 2.39 (s, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.17 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.03, 168.89, 162.33, 159.44, 146.66, 143.85, 142.75, 141.50, 137.48, 126.75, 126.56, 126.06, 125.43, 124.60, 124.55, 109.78, 74.58, 56.28, 47.96, 47.41, 20.76, 18.68, 18.14
144	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₄ H ₂₇ N ₂ O ₇ S ₂ , 519.1259; found, 519.1258	¹ H NMR (400 MHz, CDCl ₃) δ 8.30 (d, <i>J</i> = 7.9 Hz, 1H), 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 7.21 – 7.13 (m, 2H), 7.02 (ddd, <i>J</i> = 3.5, 1.2, 0.6 Hz, 1H), 6.96 – 6.88 (m, 4H), 5.73 (d, <i>J</i> = 0.7 Hz, 2H), 5.55 (dq, <i>J</i> = 7.4, 6.2 Hz, 1H), 4.75 – 4.60 (m, 2H), 3.89 (s, 3H), 2.06 (s, 3H), 1.29 (d, <i>J</i> = 6.3 Hz, 3H), 1.19 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.13, 170.25, 162.91, 160.26, 145.69, 143.96, 143.86, 142.81, 142.46, 126.74, 126.55, 126.03, 125.42, 124.58, 124.54, 109.59, 89.52, 74.55, 56.19, 48.18, 47.42, 20.87, 18.70, 17.95

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
145	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ F ₂ N ₂ O ₆ , 513.1837; found, 513.1835	¹ H NMR (400 MHz, CDCl ₃) δ 8.48 – 8.37 (m, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.29 – 7.18 (m, 4H), 7.05 – 6.90 (m, 5H), 5.72 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.55 (dq, <i>J</i> = 8.3, 7.2 Hz, 1H), 4.05 (d, <i>J</i> = 9.6 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.58, -115.93
146	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₇ , 543.1943; found, 543.1938	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.8 Hz, 1H), 7.32 – 7.16 (m, 4H), 7.05 – 6.89 (m, 5H), 5.78 – 5.68 (m, 1H), 5.72 (s, 2H), 4.64 – 4.50 (m, 1H), 4.06 (d, <i>J</i> = 9.7 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.59, -115.97
147	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₈ , 551.2393; found, 551.2396	¹ H NMR (400 MHz, CDCl ₃) δ 8.34 (d, <i>J</i> = 7.9 Hz, 1H), 8.25 (d, <i>J</i> = 5.4 Hz, 1H), 7.39 – 7.16 (m, 10H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.97 (q, <i>J</i> = 6.2 Hz, 1H), 5.78 – 5.61 (m, 2H), 4.74 – 4.56 (m, 1H), 3.90 (s, 3H), 3.42 (dq, <i>J</i> = 9.2, 7.0 Hz, 1H), 3.21 (dq, <i>J</i> = 9.2, 7.0 Hz, 1H), 2.05 (s, 3H), 1.25 (d, <i>J</i> = 7.2 Hz, 3H), 1.19 (t, <i>J</i> = 6.9 Hz, 3H), 1.12 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.13, 170.23, 162.87, 160.27, 145.64, 144.02, 142.35, 142.09, 140.72, 128.24, 127.84, 127.81, 127.70, 127.27, 127.18, 109.57, 89.52, 84.04, 74.08, 59.96, 56.18, 48.26, 20.86, 18.23, 15.70, 14.95

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
148	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ F ₄ N ₂ O ₇ , 579.1754; found, 579.1756	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.3 Hz, 1H), 8.22 (d, <i>J</i> = 7.8 Hz, 1H), 7.38 (td, <i>J</i> = 8.6, 6.2 Hz, 1H), 7.24 (td, <i>J</i> = 8.4, 6.3 Hz, 1H), 6.96 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 – 6.69 (m, 4H), 5.88 – 5.75 (m, 1H), 5.73 (s, 2H), 4.69 (d, <i>J</i> = 9.8 Hz, 1H), 4.65 – 4.55 (m, 1H), 3.91 (s, 3H), 2.07 (s, 3H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.11 (d, <i>J</i> = 7.6 Hz), -111.57 (d, <i>J</i> = 7.5 Hz), -111.99 (dd, <i>J</i> = 7.7, 2.6 Hz), -112.76 (dd, <i>J</i> = 7.6, 2.5 Hz)
149	---	---	HRMS-ESI (<i>m/z</i>) [M-OCH ₃] ⁺ calcd for C ₂₈ H ₂₉ N ₂ O ₇ , 505.1975; found, 505.1975	¹ H NMR (400 MHz, CDCl ₃) δ 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 8.25 (d, <i>J</i> = 5.4 Hz, 1H), 7.40 – 7.18 (m, 10H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.97 (q, <i>J</i> = 6.2 Hz, 1H), 5.81 – 5.63 (m, 2H), 4.72 – 4.52 (m, 1H), 3.90 (s, 3H), 3.17 (s, 3H), 2.05 (s, 3H), 1.24 (d, <i>J</i> = 7.2 Hz, 3H), 1.12 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.09, 170.24, 162.88, 160.27, 145.65, 144.02, 142.35, 141.39, 140.04, 128.50, 128.08, 127.87, 127.71, 127.45, 127.28, 109.57, 89.53, 84.46, 73.81, 56.19, 52.59, 48.25, 20.86, 18.18, 14.98
150	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ F ₄ N ₂ O ₆ , 549.1648; found, 549.1645	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 8.1 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.37 (td, <i>J</i> = 8.5, 6.1 Hz, 1H), 7.23 (td, <i>J</i> = 8.5, 6.2 Hz, 1H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.90 – 6.68 (m, 4H), 5.89 – 5.71 (m, 1H), 4.69 (d, <i>J</i> = 9.8 Hz, 1H), 4.62 – 4.51 (m, 1H), 3.90 (s, 3H), 2.39 (s, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.11 (d, <i>J</i> = 7.7 Hz), -111.55 (d, <i>J</i> = 7.5 Hz), -112.01 (dd, <i>J</i> = 7.7, 2.6 Hz), -112.80 (dd, <i>J</i> = 7.6, 2.6 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
152	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₈ FN ₂ O ₆ , 495.1931; found, 495.1926	¹ H NMR (400 MHz, CDCl ₃) δ 8.38 (d, <i>J</i> = 8.2 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.50 – 7.37 (m, 4H), 7.37 – 7.19 (m, 6H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 5.98 (dq, <i>J</i> = 25.1, 6.4 Hz, 1H), 4.63 – 4.54 (m, 1H), 3.87 (s, 3H), 2.37 (s, 3H), 1.30 (d, <i>J</i> = 6.5 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -168.48
153	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₇ , 525.2037; found, 525.2033	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.3 Hz, 1H), 8.20 (d, <i>J</i> = 7.7 Hz, 1H), 7.49 – 7.40 (m, 4H), 7.36 – 7.21 (m, 6H), 6.93 (d, <i>J</i> = 5.5 Hz, 1H), 5.99 (dq, <i>J</i> = 25.2, 6.4 Hz, 1H), 5.71 (s, 2H), 4.68 – 4.49 (m, 1H), 3.89 (s, 3H), 2.05 (s, 3H), 1.31 (d, <i>J</i> = 6.5 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -168.67
155	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ N ₂ O ₈ , 537.2237; found, 537.2226	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 8.1 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.26 – 7.13 (m, 4H), 6.97 (d, <i>J</i> = 5.5 Hz, 1H), 6.85 – 6.71 (m, 4H), 5.71 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.64 – 4.47 (m, 1H), 3.96 (d, <i>J</i> = 9.8 Hz, 1H), 3.87 (s, 3H), 3.74 (s, 3H), 3.72 (s, 3H), 2.38 (s, 3H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.21, 168.88, 162.28, 159.42, 158.33, 158.20, 146.66, 141.53, 137.43, 133.90, 133.82, 129.02, 129.00, 114.09, 113.83, 109.74, 73.54, 56.26, 56.08, 55.19, 47.90, 20.74, 19.22, 18.08

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
156	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ F ₂ N ₂ O ₆ , 513.1837; found, 513.1833	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.6 Hz, 1H), 8.31 (d, <i>J</i> = 5.5 Hz, 1H), 7.32 – 7.18 (m, 2H), 7.12 – 6.82 (m, 7H), 5.73 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.64 – 4.43 (m, 1H), 4.06 (d, <i>J</i> = 9.8 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.15, -112.56
157	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ Cl ₂ N ₂ O ₆ , 545.1246; found, 545.1239	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.7 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.31 – 7.10 (m, 8H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 5.72 (dq, <i>J</i> = 9.8, 6.0 Hz, 1H), 4.59 – 4.50 (m, 1H), 4.01 (d, <i>J</i> = 9.8 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.10, 168.87, 162.33, 159.43, 146.68, 142.60, 142.44, 141.40, 137.46, 134.67, 134.38, 130.21, 129.95, 128.46, 128.34, 128.10, 127.45, 127.17, 126.23, 126.13, 109.80, 72.61, 56.98, 56.28, 47.82, 20.75, 19.12, 17.98
158	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₉ , 567.2342; found, 567.2338	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 8.0 Hz, 1H), 7.24 – 7.14 (m, 4H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.85 – 6.75 (m, 4H), 5.77 – 5.68 (m, 1H), 5.72 (s, 2H), 4.63 – 4.50 (m, 1H), 3.97 (d, <i>J</i> = 9.9 Hz, 1H), 3.89 (s, 3H), 3.75 (s, 3H), 3.73 (s, 3H), 2.05 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.34, 170.24, 162.88, 160.24, 158.33, 158.20, 145.70, 143.91, 142.54, 133.95, 133.82, 129.00, 114.09, 113.83, 109.55, 89.51, 73.49, 56.17, 56.10, 55.20, 48.12, 20.85, 19.23, 17.90

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
159	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₇ , 543.1943; found, 543.1941	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.9 Hz, 1H), 7.32 – 7.18 (m, 2H), 7.14 – 7.03 (m, 2H), 7.04 – 6.80 (m, 5H), 5.82 – 5.67 (m, 1H), 5.72 (s, 2H), 4.65 – 4.48 (m, 1H), 4.07 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.16, -112.59
160	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ Cl ₂ N ₂ O ₇ , 575.1352; found, 575.1349	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.3 Hz, 1H), 8.22 (d, <i>J</i> = 7.6 Hz, 1H), 7.33 – 7.10 (m, 8H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.80 – 5.65 (m, 1H), 5.72 (s, 2H), 4.60 – 4.52 (m, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 3.90 (s, 3H), 2.06 (d, <i>J</i> = 1.8 Hz, 3H), 1.26 (d, <i>J</i> = 6.0 Hz, 3H), 1.02 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.34, 170.24, 162.88, 160.24, 158.33, 158.20, 145.70, 143.91, 142.54, 133.95, 133.82, 129.00, 114.09, 113.83, 109.55, 89.51, 73.49, 56.17, 56.10, 55.20, 48.12, 20.85, 19.23, 17.90
161	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ N ₂ O ₆ , 475.1869; found, 475.1865	¹ H NMR (400 MHz, CDCl ₃) δ 8.77 – 8.53 (m, 1H), 8.40 – 8.29 (m, 1H), 7.79 – 7.62 (m, 3H), 7.61 – 7.47 (m, 1H), 7.47 – 7.34 (m, 2H), 7.34 – 7.20 (m, 2H), 7.05 – 6.94 (m, 1H), 5.83 – 5.66 (m, 1H), 4.93 – 4.77 (m, 1H), 4.37 – 4.21 (m, 1H), 3.89 (s, 3H), 2.47 – 2.37 (m, 3H), 1.63 – 1.47 (m, 3H), 0.84 – 0.67 (m, 3H)
162	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ N ₂ O ₇ , 491.1818; found, 491.1813	¹ H NMR (400 MHz, CDCl ₃) δ 8.58 – 8.43 (m, 1H), 8.40 – 8.32 (m, 1H), 7.36 – 7.19 (m, 4H), 7.13 – 7.03 (m, 4H), 7.02 – 6.97 (m, 1H), 5.17 – 5.05 (m, 1H), 4.77 – 4.64 (m, 1H), 4.35 – 4.19 (m, 1H), 3.96 – 3.85 (m, 3H), 2.40 (d, <i>J</i> = 3.6 Hz, 3H), 1.50 – 1.41 (m, 3H), 1.07 – 0.93 (m, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
163	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ N ₂ O ₇ , 505.1975; found, 505.1961	¹ H NMR (400 MHz, CDCl ₃) δ 8.52 – 8.37 (m, 1H), 8.32 – 8.24 (m, 1H), 7.80 – 7.63 (m, 3H), 7.61 – 7.47 (m, 1H), 7.45 – 7.22 (m, 4H), 7.01 – 6.92 (m, 1H), 5.83 – 5.68 (m, 3H), 4.97 – 4.73 (m, 1H), 4.38 – 4.19 (m, 1H), 3.92 (s, 3H), 2.07 (s, 3H), 1.64 – 1.49 (m, 3H), 0.90 – 0.66 (m, 3H)
164	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ N ₂ O ₈ , 521.1924; found, 521.1913	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 – 8.25 (m, 2H), 7.39 – 7.20 (m, 4H), 7.15 – 7.00 (m, 4H), 6.99 – 6.92 (m, 1H), 5.81 – 5.72 (m, 2H), 5.16 – 5.09 (m, 1H), 4.79 – 4.67 (m, 1H), 4.37 – 4.17 (m, 1H), 3.91 (s, 3H), 2.08 (s, 3H), 1.51 – 1.43 (m, 3H), 1.09 – 0.93 (m, 3H)
165	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ Br ₂ N ₂ O ₆ , 633.0236; found, 633.0230	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 6.8 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.45 – 7.31 (m, 4H), 7.18 – 7.06 (m, 4H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 5.71 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.65 – 4.46 (m, 1H), 4.00 (d, <i>J</i> = 9.5 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.05, 168.89, 162.33, 159.47, 146.65, 141.39, 139.74, 139.71, 137.49, 131.97, 131.68, 129.89, 129.78, 121.06, 120.79, 109.84, 72.56, 56.41, 56.30, 47.83, 20.76, 19.09, 17.98

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
166	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₉ N ₂ O ₆ S ₂ , 517.1467; found, 517.1465	¹ H NMR (400 MHz, CDCl ₃) δ 8.51 (d, <i>J</i> = 8.1 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.74 (d, <i>J</i> = 3.4 Hz, 1H), 6.67 (d, <i>J</i> = 2.6 Hz, 1H), 6.60 – 6.42 (m, 2H), 5.53 – 5.39 (m, 1H), 4.72 – 4.58 (m, 1H), 4.44 (d, <i>J</i> = 7.1 Hz, 1H), 3.88 (s, 3H), 2.41 – 2.38 (m, 9H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.22 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.07, 168.90, 162.33, 159.44, 146.66, 141.64, 141.56, 140.54, 138.98, 138.92, 137.47, 125.77, 125.08, 124.66, 124.42, 109.76, 74.45, 56.28, 48.01, 47.83, 20.75, 18.64, 18.21, 15.25
167	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ N ₂ O ₆ , 505.2338; found, 505.2345	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 8.0 Hz, 1H), 8.29 (d, <i>J</i> = 5.4 Hz, 1H), 7.20 – 7.10 (m, 4H), 7.10 – 6.99 (m, 4H), 6.96 (d, <i>J</i> = 5.5 Hz, 1H), 5.77 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.65 – 4.45 (m, 1H), 3.98 (d, <i>J</i> = 10.0 Hz, 1H), 3.85 (s, 3H), 2.37 (s, 3H), 2.26 (s, 3H), 2.23 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.23, 168.90, 162.28, 159.42, 146.67, 141.58, 138.67, 138.57, 137.44, 136.33, 136.02, 129.41, 129.11, 127.94, 127.91, 109.74, 73.44, 57.06, 56.27, 47.91, 20.97, 20.94, 20.76, 19.26, 17.99

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
168	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₆ , 533.2651; found, 533.2655	¹ H NMR (400 MHz, CDCl ₃) δ 8.36 (d, <i>J</i> = 8.8 Hz, 1H), 8.29 (d, <i>J</i> = 5.4 Hz, 1H), 7.19 – 7.12 (m, 4H), 7.10 – 6.98 (m, 4H), 6.94 (d, <i>J</i> = 5.5 Hz, 1H), 5.76 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.60 – 4.45 (m, 1H), 3.97 (d, <i>J</i> = 9.9 Hz, 1H), 3.84 (s, 3H), 3.00 – 2.85 (m, 1H), 2.26 (s, 3H), 2.24 (s, 3H), 1.34 (d, <i>J</i> = 7.0 Hz, 6H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 174.69, 172.32, 162.28, 159.39, 146.57, 141.98, 138.67, 138.59, 137.60, 136.31, 136.01, 129.40, 129.10, 127.95, 127.93, 109.58, 73.40, 57.05, 56.27, 47.89, 33.95, 20.97, 20.94, 19.25, 18.84, 18.04
169	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ Br ₂ N ₂ O ₇ , 663.0341; found, 663.0336	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.45 – 7.33 (m, 4H), 7.22 – 7.03 (m, 4H), 6.95 (d, <i>J</i> = 5.4 Hz, 1H), 5.83 – 5.61 (m, 1H), 5.72 (s, 2H), 4.56 (p, <i>J</i> = 7.3 Hz, 1H), 4.01 (d, <i>J</i> = 9.6 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.18, 170.25, 162.91, 160.27, 145.69, 143.97, 142.36, 139.81, 139.71, 131.97, 131.68, 129.87, 129.76, 121.06, 120.77, 109.63, 89.49, 72.51, 56.46, 56.20, 48.06, 20.87, 19.12, 17.81

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
170	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₃₁ N ₂ O ₇ S ₂ , 547.1572; found, 547.1585	¹ H NMR (400 MHz, CDCl ₃) δ 8.31 (d, <i>J</i> = 7.9 Hz, 1H), 8.27 (d, <i>J</i> = 5.3 Hz, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.75 (d, <i>J</i> = 3.4 Hz, 1H), 6.70 – 6.62 (m, 1H), 6.57 – 6.50 (m, 2H), 5.77 – 5.70 (m, 2H), 5.52 – 5.40 (m, 1H), 4.75 – 4.58 (m, 1H), 4.45 (d, <i>J</i> = 7.1 Hz, 1H), 3.90 (s, 3H), 2.40 (d, <i>J</i> = 1.2 Hz, 3H), 2.39 (d, <i>J</i> = 1.1 Hz, 3H), 2.06 (s, 3H), 1.36 – 1.14 (m, 6H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.17, 170.25, 162.90, 160.26, 145.69, 143.95, 142.56, 141.64, 140.61, 138.96, 138.93, 125.73, 125.07, 124.65, 124.41, 109.55, 89.54, 74.42, 56.18, 48.23, 47.85, 20.87, 18.66, 18.03, 15.24
171	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₇ , 535.2444; found, 535.2449	¹ H NMR (400 MHz, CDCl ₃) δ 8.33 – 8.15 (m, 2H), 7.22 – 7.10 (m, 4H), 7.10 – 6.99 (m, 4H), 6.92 (d, <i>J</i> = 5.4 Hz, 1H), 5.84 – 5.69 (m, 3H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 3.99 (d, <i>J</i> = 10.0 Hz, 1H), 3.87 (s, 3H), 2.27 (s, 3H), 2.24 (s, 3H), 2.05 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.95 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.34, 170.24, 162.87, 160.24, 145.70, 143.90, 142.59, 138.70, 138.58, 136.32, 135.99, 129.40, 129.10, 127.93, 127.90, 109.55, 89.51, 73.38, 57.07, 56.17, 48.12, 20.96, 20.93, 20.86, 19.26, 17.81
173	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₈ F ₃ N ₂ O ₆ , 545.1899; found, 545.1902	¹ H NMR (300 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.7 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.60 – 7.50 (m, 2H), 7.47 – 7.37 (m, 2H), 7.34 – 7.13 (m, 5H), 6.99 (d, <i>J</i> = 5.4 Hz, 1H), 5.83 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.65 – 4.45 (m, 1H), 4.14 (d, <i>J</i> = 9.7 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -62.56

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
174	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ Cl ₂ N ₂ O ₆ , 545.1246; found, 545.1244	¹ H NMR (300 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 8.1 Hz, 1H), 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 7.31 – 7.12 (m, 8H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 5.72 (dq, <i>J</i> = 9.5, 6.1 Hz, 1H), 4.66 – 4.47 (m, 1H), 4.03 (d, <i>J</i> = 9.5 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 1.01 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (75 MHz, CDCl ₃) δ 172.06, 168.91, 162.33, 159.45, 146.66, 141.36, 139.32, 139.27, 137.47, 132.94, 132.69, 129.51, 129.41, 129.01, 128.72, 109.85, 72.70, 56.30, 56.27, 47.83, 20.75, 19.09, 17.98
175	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₀ F ₃ N ₂ O ₇ , 575.2005; found, 575.2011	¹ H NMR (300 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.8 Hz, 1H), 7.58 – 7.49 (m, 2H), 7.42 (d, <i>J</i> = 8.2 Hz, 2H), 7.35 – 7.12 (m, 5H), 6.95 (d, <i>J</i> = 5.4 Hz, 1H), 5.84 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 5.72 (s, 2H), 4.62 – 4.48 (m, 1H), 4.15 (d, <i>J</i> = 9.8 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -62.57
176	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ Cl ₂ N ₂ O ₇ , 575.1352; found, 575.1352	¹ H NMR (300 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.8 Hz, 1H), 7.34 – 7.09 (m, 8H), 6.95 (d, <i>J</i> = 5.4 Hz, 1H), 5.81 – 5.58 (m, 3H), 4.67 – 4.44 (m, 1H), 4.04 (d, <i>J</i> = 9.5 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (75 MHz, CDCl ₃) δ 172.19, 170.28, 162.91, 160.27, 145.71, 143.95, 142.32, 139.38, 139.28, 132.94, 132.67, 129.49, 129.40, 129.01, 128.71, 109.64, 89.47, 72.65, 56.32, 56.22, 56.18, 48.05, 20.89, 20.86, 19.12, 17.81

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
178	---	(Thin film) 3387, 2984, 1737, 1673, 1603, 1579, 1506, 1451, 1368, 1304, 1268, 1199, 1159, 1136, 1045, 1007, 969, 825, 779, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ F ₂ N ₂ O ₆ , 513.1832; found, 513.1833	¹ H NMR (400 MHz, CDCl ₃) δ 8.35 (dd, <i>J</i> = 4.5, 1.3 Hz, 1H), 8.15 (d, <i>J</i> = 7.8 Hz, 1H), 7.52 (dd, <i>J</i> = 8.4, 1.4 Hz, 1H), 7.42 (dd, <i>J</i> = 8.4, 4.5 Hz, 1H), 7.33 – 7.14 (m, 4H), 7.05 – 6.86 (m, 4H), 5.82 (s, 2H), 5.72 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.59 (p, <i>J</i> = 7.3 Hz, 1H), 4.06 (d, <i>J</i> = 9.7 Hz, 1H), 2.11 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.57, -115.97
179	---	(Thin film) 3380, 2985, 1737, 1674, 1603, 1578, 1507, 1473, 1455, 1366, 1312, 1274, 1222, 1200, 1158, 1104, 1043, 1003, 968, 910, 886, 824, 792, 728	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 557.2094; found, 557.2089	¹ H NMR (400 MHz, CDCl ₃) δ 8.23 (d, <i>J</i> = 5.3 Hz, 1H), 8.18 (d, <i>J</i> = 7.8 Hz, 1H), 7.23 (ddd, <i>J</i> = 13.9, 6.9, 2.6 Hz, 4H), 7.05 – 6.84 (m, 5H), 5.78 – 5.66 (m, 3H), 4.56 (p, <i>J</i> = 7.3 Hz, 1H), 4.12 (q, <i>J</i> = 7.0 Hz, 2H), 4.05 (d, <i>J</i> = 9.7 Hz, 1H), 2.06 (s, 3H), 1.47 (t, <i>J</i> = 7.0 Hz, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.60, -115.98

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
180	---	(Thin film) 3404, 2983, 1737, 1652, 1602, 1508, 1482, 1453, 1369, 1305, 1222, 1197, 1159, 1137, 1106, 1088, 1049, 1010, 976, 911, 828, 792, 759, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₈ F ₂ NO ₆ , 512.1879; found, 512.1889	¹ H NMR (400 MHz, CDCl ₃) δ 8.13 (dd, <i>J</i> = 7.9, 1.8 Hz, 1H), 8.06 (d, <i>J</i> = 6.9 Hz, 1H), 7.45 (ddd, <i>J</i> = 8.5, 7.4, 1.8 Hz, 1H), 7.29 – 7.05 (m, 6H), 7.04 – 6.90 (m, 4H), 5.92 (d, <i>J</i> = 6.4 Hz, 1H), 5.83 (d, <i>J</i> = 6.4 Hz, 1H), 5.73 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.57 (p, <i>J</i> = 7.1 Hz, 1H), 4.06 (d, <i>J</i> = 9.7 Hz, 1H), 2.14 (s, 3H), 1.25 (d, <i>J</i> = 6.0 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.62, -116.01
181	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₄₀ H ₃₉ N ₂ O ₇ , 659.2752; found, 659.2758	¹ H NMR (400 MHz, CDCl ₃) δ 8.24 (t, <i>J</i> = 7.7 Hz, 2H), 7.57 – 7.49 (m, 8H), 7.45 – 7.37 (m, 8H), 7.32 (dt, <i>J</i> = 9.3, 5.8 Hz, 2H), 6.90 (d, <i>J</i> = 5.4 Hz, 1H), 5.89 (dq, <i>J</i> = 12.4, 6.1 Hz, 1H), 5.71 (s, 2H), 4.58 (p, <i>J</i> = 7.3 Hz, 1H), 4.16 (d, <i>J</i> = 10.0 Hz, 1H), 3.88 (s, 3H), 2.05 (s, 3H), 1.33 (d, <i>J</i> = 6.1 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.38, 170.26, 162.88, 160.23, 145.68, 143.94, 142.52, 140.73, 140.61, 140.52, 140.23, 139.89, 139.63, 128.74, 128.71, 128.55, 127.55, 127.26, 127.17, 126.99, 126.96, 109.50, 89.54, 73.27, 57.25, 56.15, 48.12, 20.87, 19.34, 17.79

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
182	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₉ H ₃₇ N ₂ O ₆ , 629.2646; found, 629.2651	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 5.1 Hz, 1H), 8.29 (d, <i>J</i> = 5.4 Hz, 1H), 7.57 – 7.47 (m, 8H), 7.41 (dd, <i>J</i> = 9.3, 6.0 Hz, 8H), 7.32 (dd, <i>J</i> = 12.1, 7.1 Hz, 2H), 6.94 (d, <i>J</i> = 5.5 Hz, 1H), 5.88 (dq, <i>J</i> = 12.3, 6.1 Hz, 1H), 4.57 (p, <i>J</i> = 7.2 Hz, 1H), 4.15 (d, <i>J</i> = 10.0 Hz, 1H), 3.87 (s, 3H), 2.38 (s, 3H), 1.31 (d, <i>J</i> = 6.1 Hz, 3H), 0.95 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (101 MHz, CDCl ₃) δ 172.24, 168.91, 162.29, 159.40, 146.63, 141.52, 140.73, 140.62, 140.47, 140.23, 139.88, 139.62, 137.45, 128.75, 128.71, 128.56, 127.54, 127.25, 127.16, 127.00, 126.96, 109.69, 73.30, 57.22, 56.25, 47.90, 20.75, 19.31, 17.97
183	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ F ₂ N ₂ O ₇ , 530.1813; found, 530.1809	¹ H NMR (500 MHz, CDCl ₃) δ 8.28 (d, <i>J</i> = 5.4 Hz, 1H), 8.15 (t, <i>J</i> = 5.6 Hz, 1H), 7.25 – 7.15 (m, 4H), 7.03 – 6.89 (m, 5H), 5.75 – 5.66 (m, 3H), 4.11 (dd, <i>J</i> = 18.3, 5.7 Hz, 1H), 4.04 (d, <i>J</i> = 9.1 Hz, 1H), 3.92 (s, 3H), 3.89 (dd, <i>J</i> = 18.3, 5.4 Hz, 1H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 170.32, 169.11, 161.72 (d, <i>J</i> = 246.0 Hz), 161.62 (d, <i>J</i> = 245.4 Hz), 160.31, 145.73, 144.02, 142.27, 136.67 (d, <i>J</i> = 26.2 Hz), 129.72, 129.66, 115.68 (d, <i>J</i> = 21.5 Hz), 115.41 (d, <i>J</i> = 22.1 Hz), 109.65, 89.48, 73.37, 56.16, 55.69, 41.33, 20.87 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.60 (m), -115.94 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
184	---	---	HRMS-ESI (m/z) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 558.2121; found, 558.2133	¹ H NMR (500 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 8.4 Hz, 1H), 7.28 – 7.18 (m, 4H), 7.01 – 6.90 (m, 5H), 5.77 – 5.65 (m, 3H), 4.56 (ddd, <i>J</i> = 8.4, 6.7, 5.3 Hz, 1H), 4.05 (d, <i>J</i> = 9.6 Hz, 1H), 3.91 (s, 3H), 2.06 (s, 3H), 1.63 – 1.52 (m, 1H), 1.40 – 1.29 (m, 1H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.61 (t, <i>J</i> = 7.4 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.56, 170.27, 163.06, 161.72 (d, <i>J</i> = 246.0 Hz), 161.66 (d, <i>J</i> = 245.2 Hz), 160.32, 145.66, 144.03, 142.38, 136.92, 129.60 (d, <i>J</i> = 10.6 Hz), 129.54 (d, <i>J</i> = 10.4 Hz), 115.63 (d, <i>J</i> = 35.4 Hz), 115.46 (d, <i>J</i> = 35.4 Hz), 109.55, 89.59, 73.22, 56.19, 56.02, 53.26, 25.24, 20.87, 19.22, 9.16 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.59 – -115.70 (m), -116.06 (ddd, <i>J</i> = 14.0, 8.7, 5.3 Hz)
185	---	---	HRMS-ESI (m/z) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₇ , 572.2283; found, 572.2286	¹ H NMR (500 MHz, CDCl ₃) δ 8.29 – 8.21 (m, 2H), 7.29 – 7.14 (m, 4H), 7.00 – 6.88 (m, 5H), 5.85 – 5.51 (m, 3H), 4.55 (dd, <i>J</i> = 9.3, 4.6 Hz, 1H), 4.05 (d, <i>J</i> = 9.6 Hz, 1H), 3.91 (s, 3H), 2.06 (s, 3H), 1.87 – 1.75 (m, 1H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.78 (d, <i>J</i> = 6.9 Hz, 3H), 0.58 (d, <i>J</i> = 6.8 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.17, 170.27, 163.21, 161.70 (d, <i>J</i> = 246.1 Hz), 161.66 (d, <i>J</i> = 245.3 Hz), 160.38, 145.62, 144.11, 142.32, 136.98, 129.54, 129.54 (d, <i>J</i> = 14.9 Hz), 115.63 (d, <i>J</i> = 32.3 Hz), 115.46 (d, <i>J</i> = 32.3 Hz), 109.54, 89.63, 73.25, 57.14, 56.19, 55.97, 31.09, 20.88, 19.27, 19.10, 17.06 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.69 (ddd, <i>J</i> = 13.8, 8.8, 5.5 Hz), -116.12 (ddd, <i>J</i> = 13.8, 8.7, 5.5 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
186	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₅ F ₂ N ₂ O ₇ , 585.2407; found, 585.2409	¹ H NMR (500 MHz, CDCl ₃) δ 8.25 (d, <i>J</i> = 5.4 Hz, 1H), 8.07 (d, <i>J</i> = 8.8 Hz, 1H), 7.28 – 7.18 (m, 4H), 7.01 – 6.91 (m, 5H), 5.74 – 5.66 (m, 3H), 4.57 (ddd, <i>J</i> = 9.6, 8.7, 5.1 Hz, 1H), 4.04 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.41 – 1.31 (m, 1H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.22 – 1.17 (m, 1H), 1.04 – 0.96 (m, 1H), 0.79 (d, <i>J</i> = 6.5 Hz, 3H), 0.74 (d, <i>J</i> = 6.6 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.38, 170.29, 163.06, 161.73 (d, <i>J</i> = 245.7 Hz), 161.67 (d, <i>J</i> = 245.4 Hz), 160.35, 145.57, 144.14, 142.22, 137.17, 136.90, 129.57 (d, <i>J</i> = 12.1 Hz), 129.50 (d, <i>J</i> = 11.8 Hz), 115.64 (d, <i>J</i> = 35.1 Hz), 115.47 (d, <i>J</i> = 35.0 Hz), 109.55, 89.60, 73.08, 56.20, 56.19, 50.69, 41.20, 24.56, 22.80, 21.63, 20.87, 19.19 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.66 (td, <i>J</i> = 9.1, 4.7 Hz), -116.21 (ddd, <i>J</i> = 13.9, 8.7, 5.3 Hz)
187	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₅ F ₂ N ₂ O ₆ , 499.1675; found, 499.1664	¹ H NMR (500 MHz, CDCl ₃) δ 8.38 – 8.23 (m, 2H), 7.27 – 7.12 (m, 4H), 7.10 – 6.83 (m, 5H), 5.69 (dq, <i>J</i> = 9.1, 6.2 Hz, 1H), 4.13 – 3.95 (m, 2H), 3.92 (s, 4H), 2.39 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 168.98, 168.92, 162.91, 161.71 (d, <i>J</i> = 245.8 Hz), 161.62 (d, <i>J</i> = 245.4 Hz), 159.51, 146.67, 141.23, 137.55, 136.79, 136.53 (d, <i>J</i> = 3.4 Hz), 129.72 (d, <i>J</i> = 2.9 Hz), 129.65 (d, <i>J</i> = 2.7 Hz), 115.67 (d, <i>J</i> = 21.3 Hz), 115.40 (d, <i>J</i> = 21.3 Hz), 109.89, 73.42, 56.31, 55.71, 41.17, 20.73, 19.11 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.55 – -115.66 (m), -115.95 (tt, <i>J</i> = 8.3, 4.0 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
188	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₆ , 527.1988; found, 527.1981	¹ H NMR (500 MHz, CDCl ₃) δ 8.39 (s, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.33 – 7.04 (m, 4H), 7.06 – 6.86 (m, 5H), 5.70 (dq, <i>J</i> = 9.4, 6.1 Hz, 1H), 4.54 (ddd, <i>J</i> = 8.6, 6.5, 5.4 Hz, 1H), 4.04 (d, <i>J</i> = 9.4 Hz, 1H), 3.91 (s, 3H), 2.38 (s, 3H), 1.62 – 1.49 (m, 1H), 1.40 – 1.30 (m, 1H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.59 (t, <i>J</i> = 7.4 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.41, 168.90, 162.46, 161.71 (d, <i>J</i> = 245.9 Hz), 161.66 (d, <i>J</i> = 245.4 Hz), 159.46, 146.63, 141.46, 137.48, 136.88, 129.63 (d, <i>J</i> = 7.8 Hz), 129.53 (d, <i>J</i> = 7.8 Hz), 115.67 (d, <i>J</i> = 21.3 Hz), 115.40 (d, <i>J</i> = 21.1 Hz), 109.74, 73.25, 56.30, 55.96, 53.02, 25.34, 20.76, 19.20, 9.04 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.62 – -115.72 (m), -116.07 (td, <i>J</i> = 9.3, 8.9, 4.1 Hz).
189	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₆ , 541.2145; found, 541.2143	¹ H NMR (500 MHz, CDCl ₃) δ 8.35 (s, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.35 – 7.16 (m, 4H), 7.08 – 6.80 (m, 5H), 5.70 (dq, <i>J</i> = 9.5, 6.1 Hz, 1H), 4.51 (dd, <i>J</i> = 9.5, 4.7 Hz, 1H), 4.04 (d, <i>J</i> = 9.5 Hz, 1H), 3.91 (s, 3H), 2.38 (s, 3H), 1.89 – 1.68 (m, 1H), 1.21 (d, <i>J</i> = 6.3 Hz, 3H), 0.76 (d, <i>J</i> = 6.9 Hz, 3H), 0.58 (d, <i>J</i> = 6.9 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.01, 168.88, 162.63, 161.69 (d, <i>J</i> = 245.9 Hz), 161.65 (d, <i>J</i> = 244.8 Hz), 159.46, 146.61, 141.54, 137.48, 136.97 (d, <i>J</i> = 3.3 Hz), 136.88 (d, <i>J</i> = 3.4 Hz), 129.65 (d, <i>J</i> = 7.9 Hz), 129.52 (d, <i>J</i> = 8.0 Hz), 115.66 (d, <i>J</i> = 21.3 Hz), 115.41 (d, <i>J</i> = 21.3 Hz), 109.71, 73.25, 56.95, 56.30, 55.91, 20.77, 19.25, 18.99, 17.09 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.67 – -115.78 (m), -116.06 – -116.17 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
190	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₆ , 555.2301; found, 555.2292	¹ H NMR (500 MHz, CDCl ₃) δ 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 8.18 (d, <i>J</i> = 8.2 Hz, 1H), 7.35 – 7.13 (m, 4H), 7.04 – 6.80 (m, 5H), 5.68 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.54 (td, <i>J</i> = 9.2, 5.2 Hz, 1H), 4.03 (d, <i>J</i> = 9.7 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 1.20 (dd, <i>J</i> = 16.3, 6.1 Hz, 4H), 1.04 (ddd, <i>J</i> = 13.9, 8.7, 5.2 Hz, 1H), 0.91 – 0.81 (m, 1H), 0.78 (d, <i>J</i> = 6.4 Hz, 3H), 0.73 (d, <i>J</i> = 6.6 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.20, 168.87, 162.46, 161.71 (d, <i>J</i> = 245.7 Hz), 161.66 (d, <i>J</i> = 245.4 Hz), 159.46, 146.57, 141.50, 137.48, 137.07 (d, <i>J</i> = 3.3 Hz), 136.89 (d, <i>J</i> = 3.3 Hz), 129.60 (d, <i>J</i> = 8.0 Hz), 129.50 (d, <i>J</i> = 8.0 Hz), 115.68 (d, <i>J</i> = 21.3 Hz), 115.40 (d, <i>J</i> = 21.3 Hz), 109.71, 73.08, 56.23, 50.54, 24.54, 22.76, 21.71, 20.76, 19.16 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.59 – -115.77 (m), -116.14 – -116.29 (m)
191	---	(Thin film) 3381, 2937, 1735, 1676, 1492, 1245, 1203, 1042	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₉ , 567.2335; found, 567.2337	¹ H NMR (300 MHz, CDCl ₃) δ 8.32 – 8.19 (m, 2H), 7.47 (dd, <i>J</i> = 7.7, 1.8 Hz, 1H), 7.23 (s, 1H), 7.24 – 7.04 (m, 2H), 6.93 (d, <i>J</i> = 5.5 Hz, 1H), 6.93 – 6.77 (m, 3H), 6.78 (dd, <i>J</i> = 8.3, 1.2 Hz, 1H), 5.95 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 5.78 – 5.66 (m, 2H), 5.01 (d, <i>J</i> = 9.8 Hz, 1H), 4.62 – 4.48 (m, 1H), 3.90 (s, 3H), 3.85 (s, 3H), 3.76 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.95 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
192	---	(Thin film) 3378, 2938, 1737, 1675, 1583, 1504, 1488, 1202, 1041	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₅ N ₂ O ₉ , 567.2341; found, 567.2337	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.26 – 7.14 (m, 1H), 7.16 (t, <i>J</i> = 7.9 Hz, 1H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.92 – 6.87 (m, 2H), 6.87 – 6.80 (m, 2H), 6.73 (ddd, <i>J</i> = 8.2, 2.6, 0.9 Hz, 1H), 6.69 (ddd, <i>J</i> = 8.2, 2.6, 0.9 Hz, 1H), 5.79 (dq, <i>J</i> = 9.7, 5.8 Hz, 1H), 5.73 – 5.69 (m, 2H), 4.71 – 4.44 (m, 1H), 3.99 (d, <i>J</i> = 10.2 Hz, 1H), 3.90 (s, 3H), 3.77 (s, 3H), 3.76 (s, 3H), 2.06 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.94 (d, <i>J</i> = 7.2 Hz, 3H)
193	---	(Thin film) 3378, 2983, 1741, 1672, 1575, 1483, 1201, 1002	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ Cl ₂ F ₂ N ₂ O ₈ , 627.1102; found, 627.1107	¹ H NMR (400 MHz, CDCl ₃) δ 8.24 (dt, <i>J</i> = 5.4, 1.3 Hz, 1H), 7.99 (d, <i>J</i> = 8.1 Hz, 1H), 7.81 (t, <i>J</i> = 8.5 Hz, 1H), 7.36 (t, <i>J</i> = 8.5 Hz, 1H), 7.19 – 7.10 (m, 1H), 7.07 – 6.98 (m, 1H), 6.99 – 6.86 (m, 3H), 6.14 – 6.04 (m, 1H), 5.70 (d, <i>J</i> = 6.4 Hz, 1H), 5.64 (d, <i>J</i> = 6.4 Hz, 1H), 4.66 (p, <i>J</i> = 7.2 Hz, 1H), 3.92 (s, 3H), 3.82 (s, 1H), 2.07 (s, 3H), 1.35 (d, <i>J</i> = 7.2 Hz, 3H), 1.22 (d, <i>J</i> = 6.9 Hz, 3H)
194	---	(Thin film) 3380, 2984, 1738, 1675, 1504, 1201, 1003	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₂ F ₂ N ₂ O ₇ , 571.2257; found, 571.225	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.15 – 7.02 (m, 2H), 7.00 – 6.84 (m, 5H), 5.76 – 5.63 (m, 3H), 4.66 – 4.49 (m, 1H), 3.97 (d, <i>J</i> = 9.8 Hz, 1H), 3.91 (s, 3H), 2.20 (d, <i>J</i> = 1.9 Hz, 3H), 2.18 (d, <i>J</i> = 1.8 Hz, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.63 (t, <i>J</i> = 9.5 Hz), -117.12 (t, <i>J</i> = 9.5 Hz)
195	---	(Thin film) 3377, 2983, 1739, 1675, 1501, 1202, 1050	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ Cl ₂ N ₂ O ₇ , 603.1657; found, 603.1659	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.9 Hz, 1H), 7.25 – 7.20 (m, 2H), 7.17 – 7.02 (m, 4H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.75 – 5.62 (m, 3H), 4.68 – 4.50 (m, 1H), 3.95 (d, <i>J</i> = 9.9 Hz, 1H), 3.91 (s, 3H), 2.31 (s, 3H), 2.28 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
196	---	(Thin film) 3379, 2987, 1741, 1673, 1507, 1486, 1453, 1203, 1002	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₈ , 559.1884; found, 559.1886	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.13 (d, <i>J</i> = 8.1 Hz, 1H), 7.85 (tt, <i>J</i> = 7.6, 1.9 Hz, 1H), 7.47 (tt, <i>J</i> = 7.7, 1.8 Hz, 1H), 7.28 – 7.20 (m, 1H), 7.22 – 7.11 (m, 2H), 7.09 – 6.99 (m, 1H), 7.01 – 6.79 (m, 3H), 6.29 – 6.20 (m, 1H), 5.71 (d, <i>J</i> = 6.4 Hz, 1H), 5.67 (d, <i>J</i> = 6.4 Hz, 1H), 4.75 – 4.57 (m, 1H), 3.91 (s, 3H), 3.48 (d, <i>J</i> = 6.1 Hz, 1H), 2.07 (s, 3H), 1.34 – 1.21 (m, 6H)
197	---	(Thin film) 3379, 3282, 2984, 2107, 1738, 1674, 1503, 1202, 1043, 1004	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₁ N ₂ O ₇ , 555.2125; found, 555.2126	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.46 – 7.34 (m, 5H), 7.26 – 7.15 (m, 3H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.87 – 5.68 (m, 3H), 4.62 – 4.48 (m, 1H), 4.07 (d, <i>J</i> = 9.8 Hz, 1H), 3.91 (s, 3H), 3.05 (s, 1H), 3.03 (s, 1H), 2.06 (s, 3H), 1.34 – 1.22 (m, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H)
198	---	(Thin film) 3379, 2964, 1736, 1675, 1505, 1202, 1042, 1003	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₇ , 563.2753; found, 563.2752	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.24 – 7.18 (m, 4H), 7.14 – 7.03 (m, 5H), 6.93 (d, <i>J</i> = 5.5 Hz, 1H), 5.87 – 5.69 (m, 3H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 3.99 (d, <i>J</i> = 10.1 Hz, 1H), 3.90 (d, <i>J</i> = 1.0 Hz, 3H), 2.68 – 2.48 (m, 4H), 2.06 (d, <i>J</i> = 1.1 Hz, 3H), 1.24 (d, <i>J</i> = 7.1 Hz, 3H), 1.22 – 1.10 (m, 6H), 0.88 (d, <i>J</i> = 7.2 Hz, 2H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
199	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₇ , 525.2032; found, 525.2045	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.3 Hz, 1H), 8.21 (d, <i>J</i> = 7.9 Hz, 1H), 7.31 – 7.22 (m, 5H), 7.21 – 7.12 (m, 1H), 7.00 – 6.81 (m, 3H), 5.81 – 5.74 (m, 1H), 5.72 (d, <i>J</i> = 0.8 Hz, 2H), 4.54 (p, <i>J</i> = 7.2 Hz, 1H), 4.05 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.31, 170.28, 162.87, 161.70 (d, <i>J</i> = 245.6 Hz), 160.25, 145.69, 143.97, 142.50, 141.20, 137.03 (d, <i>J</i> = 3.3 Hz), 129.60 (d, <i>J</i> = 7.8 Hz), 128.59, 128.02, 126.80, 115.60 (d, <i>J</i> = 21.3 Hz), 109.52, 89.55, 73.11, 57.04, 56.18, 48.05, 20.87, 19.18, 17.74
201	---	---	ESIMS <i>m/z</i> 661.1 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 7.89 (d, <i>J</i> = 8.0 Hz, 1H), 7.56 (d, <i>J</i> = 2.2 Hz, 1H), 7.48 (d, <i>J</i> = 2.2 Hz, 1H), 7.34 (dd, <i>J</i> = 8.5, 4.2 Hz, 2H), 7.18 (ddd, <i>J</i> = 10.5, 8.4, 2.2 Hz, 2H), 6.97 (d, <i>J</i> = 5.4 Hz, 1H), 5.79 (q, <i>J</i> = 6.3 Hz, 1H), 5.68 (d, <i>J</i> = 6.3 Hz, 1H), 5.61 (d, <i>J</i> = 6.4 Hz, 1H), 4.63 – 4.52 (m, 1H), 3.92 (s, 3H), 3.55 (s, 1H), 2.07 (s, 3H), 1.27 (d, <i>J</i> = 7.2 Hz, 3H), 1.18 (d, <i>J</i> = 6.3 Hz, 3H) ¹³ C NMR (126 MHz, acetone- <i>d</i> ₆) δ 166.30, 165.13, 158.33, 155.10, 140.60, 139.16, 138.49, 137.43, 137.10, 127.58, 126.60, 126.48, 125.21, 123.17, 122.62, 119.99, 119.77, 104.55, 84.15, 73.35, 69.04, 51.05, 43.24, 26.40, 15.69, 9.20

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
202	---	---	ESIMS <i>m/z</i> 627.1 ([M] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 7.91 (d, <i>J</i> = 8.0 Hz, 1H), 7.33 – 7.27 (m, 3H), 7.21 (dd, <i>J</i> = 10.4, 2.1 Hz, 1H), 7.11 (ddd, <i>J</i> = 8.5, 2.2, 0.8 Hz, 1H), 7.06 (ddd, <i>J</i> = 8.6, 2.1, 0.9 Hz, 1H), 6.97 (d, <i>J</i> = 5.4 Hz, 1H), 5.80 (q, <i>J</i> = 6.3 Hz, 1H), 5.68 (d, <i>J</i> = 6.3 Hz, 1H), 5.61 (d, <i>J</i> = 6.3 Hz, 1H), 4.63 – 4.51 (m, 1H), 3.92 (s, 3H), 3.54 (s, 1H), 2.07 (s, 3H), 1.25 (d, <i>J</i> = 7.2 Hz, 3H), 1.18 (d, <i>J</i> = 6.4 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.43, 170.32, 163.50, 160.30, 157.99 (d, <i>J</i> = 249.5 Hz), 157.96 (d, <i>J</i> = 249.3 Hz), 145.76, 145.20 (d, <i>J</i> = 5.8 Hz), 143.73, 143.09 (d, <i>J</i> = 6.1 Hz), 142.58, 130.53 (d, <i>J</i> = 3.2 Hz), 122.14 (d, <i>J</i> = 3.8 Hz), 121.85 (d, <i>J</i> = 3.5 Hz), 120.23 (d, <i>J</i> = 17.8 Hz), 120.05 (d, <i>J</i> = 17.8 Hz), 114.70 (d, <i>J</i> = 22.5 Hz), 114.34 (d, <i>J</i> = 23.0 Hz), 109.72, 89.34, 78.60, 74.30, 56.24, 48.39, 30.94, 20.86, 17.51, 14.43
203	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ Cl ₂ N ₂ O ₇ , 603.1659; found, 603.1666	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.26 – 7.19 (m, 2H), 7.10 (dd, <i>J</i> = 8.5, 2.2 Hz, 2H), 7.03 (ddd, <i>J</i> = 13.4, 8.2, 2.3 Hz, 2H), 6.94 (d, <i>J</i> = 5.5 Hz, 1H), 5.77 – 5.62 (m, 3H), 4.56 (p, <i>J</i> = 7.2 Hz, 1H), 3.95 (d, <i>J</i> = 10.0 Hz, 1H), 3.91 (s, 3H), 2.33 (s, 3H), 2.31 (s, 3H), 2.06 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.30, 170.28, 162.90, 160.27, 145.70, 143.97, 142.42, 139.64, 139.47, 136.51, 136.11, 133.06, 132.71, 130.74, 130.63, 129.42, 129.12, 126.63, 126.49, 109.57, 89.52, 72.78, 56.44, 56.19, 48.06, 20.87, 20.17, 20.09, 19.19 17.82

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
204	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ FN ₂ O ₆ , 495.1926; found, 495.1920	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.30 – 7.22 (m, 6H), 7.19 – 7.13 (m, 1H), 7.01 – 6.93 (m, 3H), 5.76 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.58 – 4.49 (m, 1H), 4.05 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.19, 168.90, 162.27, 161.69 (d, <i>J</i> = 245.6 Hz), 159.42, 146.64, 141.51, 141.14, 137.46, 137.02 (d, <i>J</i> = 3.2 Hz), 129.60 (d, <i>J</i> = 7.8 Hz), 128.59, 128.04, 126.81, 115.59 (d, <i>J</i> = 21.2 Hz), 109.72, 73.14, 56.99, 56.28, 47.81, 20.74, 19.15, 17.92
206	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ Cl ₂ N ₂ O ₆ , 573.1554; found, 573.1551	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.22 (dd, <i>J</i> = 17.1, 8.2 Hz, 2H), 7.09 (dd, <i>J</i> = 7.2, 2.2 Hz, 2H), 7.06 – 6.96 (m, 3H), 5.69 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.61 – 4.47 (m, 1H), 3.96 – 3.92 (m, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.32 (s, 3H), 2.30 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.16, 168.91, 162.30, 159.45, 146.64, 141.45, 139.58, 137.47, 136.50, 136.10, 133.05, 132.71, 130.73, 130.63, 129.41, 129.12, 126.64, 126.51, 109.76, 72.82, 56.34, 47.83, 20.75, 20.16, 20.09, 19.16, 18.00

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
207	52 – 65	---	HRMS-FAB (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₆ , 555.2301; found, 555.2311	¹ H NMR (500 MHz, CDCl ₃) δ 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 8.29 (br s, 1H), 7.26 – 7.18 (m, 4H), 7.01 – 6.88 (m, 5H), 5.70 (dq, <i>J</i> = 9.5, 6.1 Hz, 1H), 4.64 – 4.48 (m, 1H), 4.04 (d, <i>J</i> = 9.5 Hz, 1H), 3.88 (s, 3H), 1.39 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 176.0, 172.3, 162.2, 161.7 (d, <i>J</i> = 245.8 Hz), 161.6 (d, <i>J</i> = 245.6 Hz), 159.4, 146.5, 142.1, 137.8, 136.9, 136.8, 129.6 (d, <i>J</i> = 8.0 Hz), 129.5 (d, <i>J</i> = 7.8 Hz), 115.7 (d, <i>J</i> = 21.3 Hz), 115.4 (d, <i>J</i> = 21.3 Hz), 109.5, 73.0, 56.3, 56.1, 47.8, 39.1, 27.2, 19.1, 18.1 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -115.7, -116.0
208	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₆ , 541.2145; found, 541.2159	¹ H NMR (400 MHz, CDCl ₃) δ 8.30 (d, <i>J</i> = 5.4 Hz, 2H), 7.28 – 7.14 (m, 4H), 7.02 – 6.89 (m, 5H), 5.70 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.63 – 4.48 (m, 1H), 4.04 (d, <i>J</i> = 9.5 Hz, 1H), 3.87 (s, 3H), 2.93 (hept, <i>J</i> = 7.0 Hz, 1H), 1.34 (d, <i>J</i> = 7.0 Hz, 6H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 174.69, 172.21, 162.69, 162.61, 162.28, 160.74, 160.66, 159.43, 146.54, 141.81, 137.65, 136.86, 136.84, 129.64, 129.57, 129.51, 115.76, 115.59, 115.46, 115.30, 109.61, 73.03, 56.29, 56.07, 47.79, 33.94, 19.12, 18.80, 18.04

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
209	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 557.209; found, 557.2094	¹ H NMR (400 MHz, CDCl ₃) δ 8.45 – 8.25 (m, 2H), 7.30 – 7.15 (m, 4H), 7.05 – 6.86 (m, 5H), 5.71 (dtd, <i>J</i> = 9.7, 7.3, 6.8, 5.5 Hz, 1H), 4.53 (tt, <i>J</i> = 8.3, 6.6 Hz, 1H), 4.04 (d, <i>J</i> = 9.6 Hz, 1H), 3.88 (d, <i>J</i> = 1.2 Hz, 3H), 3.80 (td, <i>J</i> = 6.6, 1.2 Hz, 2H), 3.39 (d, <i>J</i> = 1.2 Hz, 3H), 2.97 (td, <i>J</i> = 6.7, 1.3 Hz, 2H), 1.22 (dd, <i>J</i> = 6.3, 1.3 Hz, 3H), 0.98 (dd, <i>J</i> = 7.2, 1.3 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.13, 169.42, 162.70, 162.61, 162.25, 160.74, 160.66, 159.46, 146.69, 141.44, 137.34, 136.87, 136.84, 136.81, 129.63, 129.56, 129.50, 115.77, 115.60, 115.47, 115.30, 109.78, 73.06, 67.57, 58.76, 56.31, 56.08, 47.81, 34.62, 19.12, 17.99
210	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₉ F ₂ N ₂ O ₆ , 539.1985; found, 539.1988	¹ H NMR (400 MHz, CDCl ₃) δ 8.33 (dd, <i>J</i> = 19.6, 5.4 Hz, 2H), 7.25 – 7.16 (m, 4H), 7.03 – 6.88 (m, 5H), 5.70 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.65 – 4.52 (m, 1H), 4.04 (d, <i>J</i> = 9.6 Hz, 1H), 3.90 (s, 3H), 1.95 (tt, <i>J</i> = 8.0, 4.6 Hz, 1H), 1.25 (dd, <i>J</i> = 4.6, 3.1 Hz, 2H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (dt, <i>J</i> = 8.1, 3.5 Hz, 2H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.45, 172.20, 162.70, 162.61, 162.26, 160.74, 160.66, 159.50, 146.56, 141.80, 137.45, 136.87, 136.85, 136.83, 129.64, 129.57, 129.50, 115.76, 115.59, 115.47, 115.30, 109.68, 73.03, 56.31, 56.08, 47.75, 19.13, 18.09, 13.00, 9.27

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
211	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₇ , 571.2242; found, 571.225	¹ H NMR (400 MHz, CDCl ₃) δ 8.25 (t, <i>J</i> = 6.2 Hz, 2H), 7.32 – 7.11 (m, 4H), 7.04 – 6.85 (m, 5H), 5.79 – 5.65 (m, 3H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 4.04 (d, <i>J</i> = 9.7 Hz, 1H), 3.87 (s, 3H), 2.53 (hept, <i>J</i> = 7.0 Hz, 1H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.12 (d, <i>J</i> = 7.0 Hz, 6H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 176.25, 172.25, 162.88, 162.70, 162.60, 160.74, 160.65, 160.26, 145.54, 144.21, 142.02, 136.94, 136.92, 136.86, 136.83, 129.60, 129.56, 129.54, 129.49, 115.77, 115.60, 115.47, 115.30, 109.53, 89.88, 73.01, 56.13, 48.05, 33.85, 19.15, 18.66, 17.81
212	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₈ , 587.2199; found, 587.2217	¹ H NMR (400 MHz, CDCl ₃) δ 8.23 (dd, <i>J</i> = 16.1, 6.6 Hz, 2H), 7.25 – 7.18 (m, 4H), 7.02 – 6.89 (m, 5H), 5.82 – 5.66 (m, 3H), 4.54 (p, <i>J</i> = 7.3 Hz, 1H), 4.08 (s, 2H), 4.04 (d, <i>J</i> = 9.7 Hz, 1H), 3.89 (s, 3H), 3.58 (q, <i>J</i> = 7.0 Hz, 2H), 1.25 – 1.20 (m, 6H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.20, 170.05, 162.84, 162.70, 162.61, 160.75, 160.65, 160.21, 145.73, 143.95, 142.23, 136.95, 136.92, 136.85, 136.83, 129.60, 129.56, 129.54, 129.50, 115.78, 115.61, 115.47, 115.30, 109.70, 89.55, 73.04, 67.78, 67.17, 56.23, 56.14, 53.46, 48.04, 19.15, 17.81, 15.00, 14.95

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
213	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₆ , 555.2301; found, 555.2315	¹ H NMR (400 MHz, CDCl ₃) δ 8.45 – 8.22 (m, 2H), 7.30 – 7.15 (m, 4H), 7.04 – 6.89 (m, 5H), 5.71 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.63 – 4.45 (m, 1H), 4.04 (d, <i>J</i> = 9.6 Hz, 1H), 3.89 (s, 3H), 2.68 (t, <i>J</i> = 7.6 Hz, 2H), 1.76 (p, <i>J</i> = 7.6 Hz, 2H), 1.54 – 1.37 (m, 2H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 – 0.88 (m, 6H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.17, 171.61, 162.70, 162.61, 162.31, 160.74, 160.66, 159.47, 146.56, 141.61, 137.57, 136.87, 136.85, 136.82, 129.63, 129.57, 129.50, 115.76, 115.60, 115.47, 115.30, 109.69, 73.05, 56.26, 56.08, 47.80, 33.64, 29.70, 26.61, 22.20, 19.12, 18.02, 13.76
214	---	(Thin film) 3388, 2970, 2363, 2029, 1738, 1677, 1604, 1508, 1449, 1414, 1366, 1307, 1218, 1203, 1159, 1139, 1113, 1042, 1000, 970, 908, 831, 806, 793, 778, 731, 711, 682, 670, 663	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₆ BrF ₂ N ₂ O ₆ , 593.0921; found, 593.0925	¹ H NMR (400 MHz, CDCl ₃) δ 8.28 (d, <i>J</i> = 7.8 Hz, 1H), 8.17 (d, <i>J</i> = 4.9 Hz, 1H), 7.68 (d, <i>J</i> = 4.9 Hz, 1H), 7.30 – 7.16 (m, 4H), 7.05 – 6.90 (m, 3H), 5.81 – 5.69 (m, 3H), 4.54 (p, <i>J</i> = 7.3 Hz, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 1H), 2.09 (s, 3H), 1.59 (s, 1H), 1.31 – 1.21 (m, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
215	---	(Thin film) 3380, 2985, 2362, 1769, 1738, 1674, 1609, 1591, 1572, 1513, 1434, 1367, 1310, 1277, 1202, 1175, 1150, 1113, 1051, 1009, 952, 907, 825, 805, 731, 668, 657	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ F ₄ N ₂ O ₆ , 549.1643; found, 549.1655	¹ H NMR (300 MHz, CDCl ₃) δ 8.38 (d, <i>J</i> = 8.0 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.18 – 6.88 (m, 7H), 5.64 (dq, <i>J</i> = 9.5, 6.3 Hz, 1H), 4.64 – 4.47 (m, 1H), 4.00 (d, <i>J</i> = 9.3 Hz, 1H), 3.91 (s, 3H), 2.39 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -136.31 (ddd, <i>J</i> = 20.1, 11.2, 8.2 Hz), -136.74 (ddd, <i>J</i> = 20.3, 11.3, 7.8 Hz), -139.14 – -139.50 (m), -139.70 (dddd, <i>J</i> = 21.4, 10.6, 7.7, 4.1 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
216	---	(Thin film) 3375, 2984, 2361, 2132, 1770, 1738, 1676, 1590, 1572, 1499, 1452, 1437, 1367, 1311, 1251, 1199, 1175, 1098, 1061, 1010, 952, 907, 828, 805, 782, 764, 733, 687, 668, 657, 651	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ Cl ₂ F ₂ N ₂ O ₆ , 581.1052; found, 581.1061	¹ H NMR (300 MHz, CDCl ₃) δ 8.38 (d, <i>J</i> = 8.3 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.26 (ddd, <i>J</i> = 11.5, 7.2, 2.1 Hz, 2H), 7.18 – 6.95 (m, 5H), 5.63 (dq, <i>J</i> = 9.3, 6.1 Hz, 1H), 4.65 – 4.49 (m, 1H), 4.00 (d, <i>J</i> = 9.4 Hz, 1H), 3.91 (s, 3H), 2.39 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.85 – -117.26 (m), -117.29 – -117.50 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
217	---	(Thin film) 3383, 2983, 1771, 1736, 1676, 1591, 1572, 1503, 1451, 1437, 1366, 1311, 1277, 1237, 1201, 1176, 1119, 1099, 1051, 1009, 949, 907, 825, 805, 790, 733, 668, 657	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₆ , 541.2145; found, 541.2156	¹ H NMR (300 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 8.2 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.14 – 6.96 (m, 5H), 6.96 – 6.81 (m, 2H), 5.68 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.53 (dt, <i>J</i> = 8.2, 7.1 Hz, 1H), 3.94 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.22 (dd, <i>J</i> = 6.7, 1.9 Hz, 6H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -119.90 – -120.14 (m), -120.50 – -120.65 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
218	---	(Thin film) 3376, 2988, 2363, 1742, 1675, 1609, 1580, 1515, 1454, 1435, 1368, 1310, 1284, 1236, 1203, 1181, 1149, 1120, 1043, 1004, 970, 910, 873, 829, 754, 734	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ F ₄ N ₂ O ₇ , 579.1749; found, 579.1762	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.18 – 6.85 (m, 7H), 5.72 (s, 2H), 5.65 (dq, <i>J</i> = 10.5, 6.2 Hz, 1H), 4.58 (p, <i>J</i> = 7.3 Hz, 1H), 4.01 (d, <i>J</i> = 9.4 Hz, 1H), 3.91 (s, 3H), 2.07 (s, 3H), 1.25 (d, <i>J</i> = 5.9 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -136.29 (ddd, <i>J</i> = 20.1, 11.2, 8.0 Hz), -136.73 (ddd, <i>J</i> = 20.1, 11.3, 8.0 Hz), -139.16 – -139.43 (m), -139.64 – -139.84 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
219	---	(Thin film) 3393, 2986, 2364, 1742, 1676, 1580, 1499, 1454, 1437, 1408, 1367, 1310, 1250, 1202, 1180, 1148, 1101, 1061, 1044, 1004, 972, 911, 829, 732, 720, 687	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ Cl ₂ F ₂ N ₂ O ₇ , 611.1158; found, 611.1169	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (dd, <i>J</i> = 5.4, 1.1 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.35 – 7.19 (m, 2H), 7.20 – 7.01 (m, 4H), 6.96 (dd, <i>J</i> = 5.5, 1.1 Hz, 1H), 5.72 (d, <i>J</i> = 1.1 Hz, 2H), 5.64 (dddd, <i>J</i> = 11.6, 9.1, 5.3, 3.3 Hz, 1H), 4.65 – 4.51 (m, 1H), 4.01 (d, <i>J</i> = 9.5 Hz, 1H), 3.92 (d, <i>J</i> = 1.1 Hz, 3H), 2.07 (d, <i>J</i> = 1.1 Hz, 3H), 1.30 – 1.21 (m, 3H), 1.09 (dd, <i>J</i> = 7.1, 1.1 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.92 – -117.10 (m), -117.36 – -117.53 (m)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
220	---	(Thin film) 3375, 2986, 1738, 1675, 1579, 1501, 1452, 1437, 1366, 1310, 1275, 1237, 1202, 1180, 1151, 1118, 1101, 1043, 1003, 970, 909, 828, 785, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₇ , 571.2250; found, 571.2265	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.05 (td, <i>J</i> = 9.7, 8.2, 4.2 Hz, 4H), 6.98 – 6.82 (m, 3H), 5.78 – 5.54 (m, 3H), 4.63 – 4.48 (m, 1H), 3.95 (d, <i>J</i> = 10.1 Hz, 1H), 3.91 (s, 3H), 2.22 (dd, <i>J</i> = 6.4, 2.0 Hz, 6H), 2.06 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (471 MHz, CDCl ₃) δ -120.03 (dt, <i>J</i> = 9.7, 5.9 Hz), -120.57 (dd, <i>J</i> = 8.8, 5.4 Hz)
221	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ Cl ₄ N ₂ O ₇ , 643.0567; found, 643.0578	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.20 (d, <i>J</i> = 7.8 Hz, 1H), 7.42 – 7.29 (m, 4H), 7.12 (dd, <i>J</i> = 8.3, 2.2 Hz, 1H), 7.08 (dd, <i>J</i> = 8.3, 2.2 Hz, 1H), 6.95 (d, <i>J</i> = 5.4 Hz, 1H), 5.72 (s, 2H), 5.70 – 5.58 (m, 1H), 4.58 (p, <i>J</i> = 7.2 Hz, 1H), 4.00 (d, <i>J</i> = 9.5 Hz, 1H), 3.91 (s, 3H), 2.07 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.13, 170.29, 162.96, 160.28, 145.71, 144.01, 142.25, 140.34, 133.06, 132.72, 131.62, 131.29, 130.94, 130.67, 130.34, 130.11, 127.32, 109.64, 89.50, 72.10, 56.20, 55.71, 48.07, 20.88, 19.07, 17.85

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
222	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₇ Cl ₂ F ₂ N ₂ O ₇ , 611.1158; found, 611.1175	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.20 (d, <i>J</i> = 7.8 Hz, 1H), 7.32 (td, <i>J</i> = 8.3, 7.6 Hz, 2H), 7.11 – 6.93 (m, 4H), 5.72 (d, <i>J</i> = 0.5 Hz, 3H), 5.71 – 5.60 (m, 1H), 4.67 – 4.51 (m, 1H), 4.03 (d, <i>J</i> = 9.3 Hz, 1H), 3.91 (s, 3H), 2.07 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.10, 170.29, 162.95, 160.29, 158.15 (d, <i>J</i> = 250.2 Hz), 158.01 (d, <i>J</i> = 249.8 Hz), 145.70, 144.03, 142.24, 141.03 (d, <i>J</i> = 6.5 Hz), 131.08, 130.80, 124.51 (d, <i>J</i> = 3.5 Hz), 124.40 (d, <i>J</i> = 3.6 Hz), 120.03 (d, <i>J</i> = 17.6 Hz), 119.73 (d, <i>J</i> = 17.7 Hz), 116.55 (d, <i>J</i> = 21.8 Hz), 109.64, 89.51, 72.15, 56.20, 55.99, 48.05, 20.87, 19.03, 17.84
223	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ Cl ₄ N ₂ O ₆ , 613.0461; found, 613.0468	¹ H NMR (300 MHz, CDCl ₃) δ 8.80 (d, <i>J</i> = 6.6 Hz, 1H), 8.49 (d, <i>J</i> = 6.8 Hz, 1H), 7.58 (d, <i>J</i> = 6.6 Hz, 1H), 7.40 – 7.27 (m, 4H), 7.14 – 7.01 (m, 2H), 5.67 – 5.52 (m, 1H), 4.61 – 4.46 (m, 1H), 4.18 (s, 3H), 4.10 (d, <i>J</i> = 9.9 Hz, 1H), 2.44 (s, 3H), 1.27 (dd, <i>J</i> = 6.3, 3.1 Hz, 6H) ¹³ C NMR (126 MHz, CDCl ₃) δ 174.00, 171.63, 170.13, 140.79, 140.20, 133.07, 132.34, 131.62, 130.97, 130.85, 130.55, 130.04, 127.30, 126.71, 108.57, 72.40, 58.02, 55.48, 34.67, 18.65, 16.34

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
224	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ Cl ₂ F ₂ N ₂ O ₆ , 581.1052; found, 581.1059	¹ H NMR (300 MHz, CDCl ₃) δ 8.88 (d, <i>J</i> = 6.7 Hz, 1H), 8.49 (d, <i>J</i> = 6.7 Hz, 1H), 7.67 (d, <i>J</i> = 6.7 Hz, 1H), 7.38 – 7.28 (m, 2H), 7.09 – 6.95 (m, 4H), 5.68 – 5.49 (m, 1H), 4.59 – 4.48 (m, 1H), 4.21 (s, 3H), 4.12 (d, <i>J</i> = 9.8 Hz, 1H), 2.44 (s, 3H), 1.31 – 1.24 (m, 6H) ¹³ C NMR (126 MHz, CDCl ₃) δ 174.30, 171.60, 170.11, 157.88 (d, <i>J</i> = 307.7 Hz), 141.43 (d, <i>J</i> = 6.1 Hz), 140.87 (d, <i>J</i> = 6.2 Hz), 131.11, 130.71, 124.43, 123.96 (d, <i>J</i> = 3.6 Hz), 120.02 (d, <i>J</i> = 17.7 Hz), 119.27 (d, <i>J</i> = 17.3 Hz), 116.85 (d, <i>J</i> = 21.3 Hz), 116.32 (d, <i>J</i> = 21.5 Hz), 108.58, 72.61, 58.04, 55.77, 50.35, 31.59, 18.66, 16.35 ¹⁹ F NMR (471 MHz, CDCl ₃) δ -113.83 – -113.93 (m), -114.77 (t, <i>J</i> = 8.7 Hz)
225	---	---	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₇ , 543.1937; found, 543.1949	¹ H NMR (300 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.13 (d, <i>J</i> = 7.8 Hz, 1H), 7.25 – 7.14 (m, 4H), 6.93 (dddd, <i>J</i> = 18.3, 8.7, 6.6, 2.1 Hz, 5H), 5.75 – 5.61 (m, 3H), 4.64 – 4.42 (m, 1H), 4.05 (d, <i>J</i> = 8.9 Hz, 1H), 3.91 (s, 3H), 2.05 (s, 3H), 1.31 (d, <i>J</i> = 7.1 Hz, 3H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) δ 171.93, 170.30, 162.76, 162.66, 160.62, 160.36, 145.64, 144.15, 142.26, 136.92, 136.54, 129.80, 129.74, 129.69, 129.62, 115.71, 115.54, 115.42, 115.25, 109.59, 89.62, 73.10, 56.21, 55.59, 48.03, 20.86, 18.95, 18.06

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
226	---	(Thin film) 3375, 2982, 1704, 1623, 1527, 1448, 1367, 1346, 1239, 1215, 1165, 1117, 1094, 1043, 863, 803, 786, 729, 679	HRMS-ESI (<i>m/z</i>) [M+Na] ⁺ calcd for C ₂₃ H ₂₃ F ₆ NNaO ₄ , 514.1423; found, 514.1428	¹ H NMR (400 MHz, CDCl ₃) δ 6.95 – 6.77 (m, 4H), 5.57 (dq, <i>J</i> = 9.0, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 7.8 Hz, 1H), 4.27 – 4.13 (m, 1H), 3.93 (d, <i>J</i> = 9.0 Hz, 1H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -132.38 (d, <i>J</i> = 20.6 Hz), -132.83 (d, <i>J</i> = 20.6 Hz), -160.90 (t, <i>J</i> = 20.5 Hz), -161.25 (t, <i>J</i> = 20.6 Hz)
227	---	(Thin film) 2939, 2031, 1744, 1620, 1526, 1447, 1345, 1234, 1217, 1118, 1041, 1005, 872, 826, 802, 752, 729, 707, 680, 666, 659	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₁₆ F ₆ NO ₂ , 392.1080; found, 392.1083	¹ H NMR (400 MHz, methanol- <i>d</i> ₄) δ 7.36 – 7.17 (m, 4H), 5.83 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.26 (d, <i>J</i> = 10.1 Hz, 1H), 4.00 (q, <i>J</i> = 7.2 Hz, 1H), 3.31 (p, <i>J</i> = 1.7 Hz, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.08 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, methanol- <i>d</i> ₄) δ -137.08 (d, <i>J</i> = 20.0 Hz), -137.39 (d, <i>J</i> = 19.9 Hz), -166.29 (t, <i>J</i> = 19.9 Hz), -166.61 (t, <i>J</i> = 19.9 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
228	---	(Thin film) 3373, 2942, 1738, 1649, 1622, 1577, 1525, 1481, 1446, 1344, 1262, 1239, 1214, 1148, 1117, 1094, 1040, 984, 954, 909, 849, 801, 727, 678	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₁ F ₆ N ₂ O ₅ , 543.1349; found, 543.1362	¹ H NMR (400 MHz, CDCl ₃) δ 11.93 (s, 1H), 8.29 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 6.94 – 6.77 (m, 5H), 5.58 (dq, <i>J</i> = 9.0, 6.2 Hz, 1H), 4.65 – 4.49 (m, 1H), 3.94 (d, <i>J</i> = 5.5 Hz, 4H), 1.25 (dd, <i>J</i> = 9.4, 6.7 Hz, 6H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -132.34 (d, <i>J</i> = 20.7 Hz), -132.74 (d, <i>J</i> = 20.5 Hz), -160.82 (t, <i>J</i> = 20.5 Hz), -161.08 (t, <i>J</i> = 20.5 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
229	---	(Thin film) 3384, 2985, 1770, 1741, 1676, 1622, 1592, 1572, 1527, 1447, 1368, 1345, 1312, 1237, 1199, 1176, 1117, 1095, 1042, 1010, 954, 909, 846, 828, 803, 729, 680	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₃ F ₆ N ₂ O ₆ , 585.1455; found, 585.1464	¹ H NMR (400 MHz, CDCl ₃) δ 8.37 (d, <i>J</i> = 7.6 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.01 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 (dd, <i>J</i> = 8.1, 6.3 Hz, 2H), 6.82 (dd, <i>J</i> = 8.1, 6.2 Hz, 2H), 5.56 (dq, <i>J</i> = 8.7, 6.2 Hz, 1H), 4.65 – 4.50 (m, 1H), 3.94 (d, <i>J</i> = 8.8 Hz, 1H), 3.91 (s, 3H), 2.38 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.18 (d, <i>J</i> = 7.2 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -132.51 (d, <i>J</i> = 20.5 Hz), -132.94 (d, <i>J</i> = 20.4 Hz), -161.06 (t, <i>J</i> = 20.5 Hz), -161.30 (t, <i>J</i> = 20.6 Hz)

Cmpd. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
230	---	(Thin film) 3384, 2987, 1743, 1675, 1622, 1579, 1526, 1506, 1447, 1366, 1344, 1311, 1237, 1201, 1180, 1149, 1117, 1101, 1040, 1003, 971, 911, 830, 803, 728, 679	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₅ F ₆ N ₂ O ₇ , 615.1560; found, 615.1570	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.20 (d, <i>J</i> = 7.7 Hz, 1H), 6.96 (d, <i>J</i> = 5.4 Hz, 1H), 6.90 (dd, <i>J</i> = 8.2, 6.3 Hz, 2H), 6.84 (dd, <i>J</i> = 8.0, 6.2 Hz, 2H), 5.72 (d, <i>J</i> = 1.0 Hz, 2H), 5.58 (dq, <i>J</i> = 8.9, 6.2 Hz, 1H), 4.59 (p, <i>J</i> = 7.3 Hz, 1H), 3.96 (d, <i>J</i> = 8.8 Hz, 1H), 3.92 (s, 3H), 2.07 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.17 (d, <i>J</i> = 7.3 Hz, 3H) ¹⁹ F NMR (376 MHz, CDCl ₃) δ -132.49 (d, <i>J</i> = 20.7 Hz), -132.92 (d, <i>J</i> = 20.6 Hz), -161.02 (t, <i>J</i> = 20.6 Hz), -161.33 (t, <i>J</i> = 20.6 Hz)
232	---	---	ESIMS <i>m/z</i> 320 ([M+H] ⁺)	---
233	---	---	ESIMS <i>m/z</i> 420 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.21 (ddd, <i>J</i> = 11.8, 8.4, 5.2 Hz, 4H), 6.98 (td, <i>J</i> = 8.6, 5.6 Hz, 4H), 5.67 (dq, <i>J</i> = 9.2, 6.2 Hz, 1H), 4.80 (d, <i>J</i> = 7.8 Hz, 1H), 4.06 (dd, <i>J</i> = 21.8, 8.4 Hz, 2H), 1.43 (s, 9H), 1.18 (dd, <i>J</i> = 12.5, 6.7 Hz, 6H) ¹³ C NMR (126 MHz, CDCl ₃) δ 172.42, 162.70, 162.62, 160.74, 160.67, 136.89, 136.87, 129.74, 129.67, 129.61, 115.76, 115.59, 115.47, 115.30, 79.79, 72.77, 55.76, 49.40, 30.93, 28.30, 19.00, 18.30

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
234	12280271		(Thin film) 3367, 2979, 1708, 1495, 1162, 1049, 731	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₄ , 470.2113; found, 470.2110	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 – 7.17 (m, 1H), 7.14 (dd, <i>J</i> = 8.4, 5.8 Hz, 1H), 6.91 – 6.76 (m, 4H), 5.60 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.94 (d, <i>J</i> = 8.0 Hz, 1H), 4.42 (d, <i>J</i> = 9.8 Hz, 1H), 4.12 (qd, <i>J</i> = 7.2, 2.5 Hz, 1H), 2.37 (s, 3H), 2.32 (s, 3H), 1.42 (s, 9H), 1.29 (d, <i>J</i> = 6.1 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.52, -117.01.
235	12280271		(Thin film) 3440, 2963, 1708, 1365, 1164, 1051, 908, 731	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₃₁ H ₄₅ NNaO ₄ , 518.3241; found, 518.3245	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 – 7.17 (m, 8H), 5.77 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.97 (d, <i>J</i> = 7.9 Hz, 1H), 4.10 (dq, <i>J</i> = 14.6, 7.2 Hz, 1H), 3.95 (d, <i>J</i> = 10.3 Hz, 1H), 1.41 (s, 9H), 1.26 (s, 9H), 1.25 – 1.20 (m, 12H), 0.64 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.88, 154.92, 149.54, 149.34, 138.80, 138.25, 127.65, 127.61, 125.59, 125.29, 79.54, 73.50, 57.27, 49.13, 34.34, 34.29, 31.30, 28.31, 19.36, 17.73.

Cmpd. No.	^1H NMR	MP (°C)	IR (cm^{-1})	MASS	NMR (^1H , ^{13}C , ^{19}F)
236	^1H NMR (400 MHz, CDCl_3) δ 7.24 – 7.17 (m, 4H), 7.16 – 7.05 (m, 4H), 5.76 (dq, J = 10.2, 6.1 Hz, 1H), 4.97 (d, J = 7.9 Hz, 1H), 4.09 (dq, J = 17.8, 7.3 Hz, 1H), 3.95 (d, J = 10.3 Hz, 1H), 2.82 (dhept, J = 9.4, 6.9 Hz, 2H), 1.41 (s, 9H), 1.22 (d, J = 6.2 Hz, 3H), 1.17 (dd, J = 11.6, 6.9 Hz, 12H), 0.67 (d, J = 7.2 Hz, 3H).		(Thin film) 3373, 2960, 1711, 1163, 1050, 731	HRMS-ESI (m/z) ([M+Na] $^+$) calcd for $\text{C}_{29}\text{H}_{41}\text{NNaO}_4$, 490.2928; found, 490.2931	^{13}C NMR (101 MHz, CDCl_3) δ 172.87, 154.93, 147.27, 147.10, 139.20, 138.70, 127.91, 127.88, 126.75, 126.44, 79.54, 73.45, 57.42, 49.16, 33.64, 33.60, 28.31, 24.00, 23.97, 23.91, 19.35, 17.79.
237	^1H NMR (400 MHz, CDCl_3) δ 7.16 – 6.89 (m, 6H), 5.73 (dq, J = 10.2, 6.1 Hz, 1H), 5.04 – 4.90 (m, 1H), 4.19 – 4.02 (m, 1H), 3.88 (d, J = 10.3 Hz, 1H), 2.17 (dd, J = 10.4, 9.0 Hz, 12H), 1.41 (s, 9H), 1.22 (d, J = 6.1 Hz, 3H), 0.79 (d, J = 7.1 Hz, 3H).		(Thin film) 3364, 2976, 1712, 1501, 1450, 1162, 1052, 731	HRMS-ESI (m/z) ([M+Na] $^+$) calcd for $\text{C}_{27}\text{H}_{37}\text{NNaO}_4$, 462.2615; found, 462.2623	

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
238	122802739			ESIMS <i>m/z</i> 442 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.23 (ddd, <i>J</i> = 16.6, 8.5, 5.3 Hz, 4H), 6.97 (td, <i>J</i> = 8.7, 2.2 Hz, 4H), 5.69 (dq, <i>J</i> = 9.1, 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 7.3 Hz, 1H), 4.08 (dd, <i>J</i> = 21.8, 8.3 Hz, 2H), 1.43 (s, 9H), 1.18 (dd, <i>J</i> = 13.2, 6.7 Hz, 6H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.40, 162.91, 162.84, 160.46, 160.40, 154.90, 136.97, 136.94, 136.66, 129.81, 129.73, 129.69, 129.61, 129.53, 115.76, 115.71, 115.55, 115.50, 115.43, 115.22, 79.65, 77.45, 77.13, 76.81, 72.71, 55.71, 49.44, 28.25, 18.92, 18.10.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
239	12508741			ESIMS <i>m/z</i> 420 ([M+H] ⁺)	¹H NMR (400 MHz, CDCl₃) δ 7.23 (ddd, <i>J</i> = 15.9, 8.7, 5.4 Hz, 4H), 6.97 (dtd, <i>J</i> = 8.7, 6.4, 2.1 Hz, 4H), 5.71 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.98 (d, <i>J</i> = 7.8 Hz, 1H), 4.14 (dq, <i>J</i> = 14.9, 7.6 Hz, 1H), 4.03 (d, <i>J</i> = 9.8 Hz, 1H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) δ 172.75, 162.96, 162.88, 160.51, 160.43, 154.94, 137.01, 136.97, 136.86, 136.82, 129.58, 129.53, 129.51, 129.45, 115.80, 115.59, 115.49, 115.28, 79.71, 72.86, 56.20, 49.18, 28.28, 19.17, 18.02.
240	12509165		(Thin film) 3355, 2978, 1711, 1599, 1500, 1162, 954	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₆ , 502.2012; found, 502.2021	¹H NMR (400 MHz, CDCl₃) δ 7.34 (dd, <i>J</i> = 8.6, 6.7 Hz, 1H), 7.12 (dd, <i>J</i> = 8.7, 6.7 Hz, 1H), 6.64 – 6.44 (m, 4H), 5.85 (dq, <i>J</i> = 9.5, 6.1 Hz, 1H), 4.96 (d, <i>J</i> = 7.8 Hz, 1H), 4.81 (d, <i>J</i> = 9.8 Hz, 1H), 4.23 – 4.02 (m, 1H), 3.82 (s, 3H), 3.74 (s, 3H), 1.42 (s, 9H), 1.20 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹F NMR (376 MHz, CDCl₃) δ -113.46, -113.83.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
241	12513781			ESIMS <i>m/z</i> 398 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 - 7.13 (m, 10H), 5.83 (q, <i>J</i> = 6.4 Hz, 1H), 5.00 (d, <i>J</i> = 5.4 Hz, 1H), 4.26 - 4.12 (m, 1H), 1.73 (s, 3H), 1.41 (s, 9H), 1.15 (d, <i>J</i> = 6.3 Hz, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.77, 154.93, 146.56, 145.15, 128.16, 128.10, 127.92, 127.40, 126.28, 126.14, 79.69, 75.78, 50.38, 49.39, 28.31, 23.89, 18.37, 15.98.
242	12518327		(Thin film) 3375, 2980, 2934, 2229, 1739, 1708, 1605, 1504	ESIMS <i>m/z</i> 434 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.65 - 7.56 (m, 4H), 7.43 - 7.33 (m, 4H), 5.85 - 5.73 (m, 1H), 4.87 (d, <i>J</i> = 7.9 Hz, 1H), 4.19 (dd, <i>J</i> = 9.3, 2.7 Hz, 1H), 4.17 - 4.01 (m, 1H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.85 (d, <i>J</i> = 7.2 Hz, 3H).
243	12518331		(Thin film) 3357, 2982, 1709, 1617, 1455	ESIMS <i>m/z</i> 520 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.56 (t, <i>J</i> = 8.1 Hz, 4H), 7.44 - 7.36 (m, 4H), 5.89 - 5.76 (m, 1H), 4.89 (d, <i>J</i> = 7.8 Hz, 1H), 4.19 (d, <i>J</i> = 9.8 Hz, 1H), 4.12 (t, <i>J</i> = 7.5 Hz, 1H), 1.41 (s, 9H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.79 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
244	12315748		(Thin film) 3361, 2978, 1709, 1494, 1450, 1365, 1162, 1050, 1029, 731, 701	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₃ H ₃₀ NO ₄ , 384.2169; found, 384.2169	1:1 mixture of diastereomers. ¹ H NMR (500 MHz, CDCl ₃) δ 7.32 – 7.23 (m, 8H), 7.22 – 7.13 (m, 2H), 5.84 – 5.72 (m, 1H), 4.93 (d, <i>J</i> = 7.9 Hz, 1H), 4.77 (d, <i>J</i> = 6.2 Hz, 1H), 4.15 – 4.00 (m, 2H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.3 Hz, 3H), 1.22 (d, <i>J</i> = 6.0 Hz, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H), 0.76 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.83, 172.30, 154.93, 141.50, 141.26, 128.77, 128.73, 128.49, 128.46, 128.23, 128.20, 128.08, 128.05, 126.90, 126.87, 126.66, 79.64, 73.11, 73.03, 57.97, 57.54, 49.46, 49.17, 34.67, 28.32, 25.28, 20.70, 19.30, 19.10, 18.31, 18.00.
245	12315879		(Thin film) 3374, 2977, 1711, 1592, 1489, 1247, 1163, 1029	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ Cl ₂ NNaO ₆ , 534.1421; found, 534.1427	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 (d, <i>J</i> = 8.2 Hz, 1H), 7.09 (d, <i>J</i> = 8.1 Hz, 1H), 6.87 (dd, <i>J</i> = 8.2, 2.0 Hz, 1H), 6.83 (dd, <i>J</i> = 8.1, 2.0 Hz, 1H), 6.79 (dd, <i>J</i> = 14.8, 2.0 Hz, 2H), 5.84 (dq, <i>J</i> = 12.4, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 7.3 Hz, 1H), 4.81 (d, <i>J</i> = 9.7 Hz, 1H), 4.26 – 4.01 (m, 1H), 3.82 (s, 3H), 3.74 (s, 3H), 1.42 (s, 9H), 1.20 (d, <i>J</i> = 6.1 Hz, 3H), 0.89 (d, <i>J</i> = 7.2 Hz, 3H)

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
246	12515893		(Thin film) 3360, 2980, 1710, 1598, 1500, 1274, 1160, 1040, 990, 821	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₅ F ₂ NNaO ₆ , 530.2325; found, 530.2336	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 (dd, <i>J</i> = 8.5, 6.8 Hz, 1H), 7.14 (dd, <i>J</i> = 8.5, 6.8 Hz, 1H), 6.61 – 6.43 (m, 4H), 5.87 (dq, <i>J</i> = 12.6, 6.3 Hz, 1H), 4.97 (d, <i>J</i> = 6.9 Hz, 1H), 4.80 (d, <i>J</i> = 10.1 Hz, 1H), 4.21 – 4.07 (m, 1H), 4.06 – 3.78 (m, 4H), 1.56 – 1.34 (m, 15H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.72, -114.20.
247	12515897		(Thin film) 3358, 2979, 1711, 1592, 1491, 1247, 1162, 1042	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₅ Cl ₂ NNaO ₆ , 562.1734; found, 562.1737	¹ H NMR (400 MHz, CDCl ₃) δ 7.27 (d, <i>J</i> = 8.1 Hz, 1H), 7.10 (d, <i>J</i> = 8.2 Hz, 1H), 6.84 (dd, <i>J</i> = 5.6, 2.6 Hz, 1H), 6.81 (dd, <i>J</i> = 8.2, 2.0 Hz, 1H), 6.75 (dd, <i>J</i> = 14.9, 2.0 Hz, 2H), 5.86 (dq, <i>J</i> = 12.2, 6.1 Hz, 1H), 4.98 (d, <i>J</i> = 6.9 Hz, 1H), 4.80 (d, <i>J</i> = 10.0 Hz, 1H), 4.23 – 4.07 (m, 1H), 4.07 – 3.75 (m, 4H), 1.52 – 1.34 (m, 15H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
248	1251889		(Thin film) 3360, 2977, 1712, 1504, 1259, 1161, 1044	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₉ H ₄₁ NNaO ₆ , 522.2826; found, 522.2819	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 (d, <i>J</i> = 7.7 Hz, 1H), 7.12 (d, <i>J</i> = 7.8 Hz, 1H), 6.69 – 6.52 (m, 4H), 5.89 (dq, <i>J</i> = 12.3, 6.1 Hz, 1H), 5.03 (d, <i>J</i> = 6.7 Hz, 1H), 4.88 (d, <i>J</i> = 10.2 Hz, 1H), 4.10 (q, <i>J</i> = 12.8, 9.8 Hz, 1H), 4.05 – 3.78 (m, 4H), 2.26 (s, 3H), 2.24 (s, 3H), 1.53 – 1.33 (m, 15H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.86 (d, <i>J</i> = 7.1 Hz, 3H).
249	1251890			ESIMS <i>m/z</i> 528 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.02 – 7.89 (m, 4H), 7.40 – 7.29 (m, 4H), 5.89 – 5.75 (m, 1H), 4.91 (d, <i>J</i> = 8.0 Hz, 1H), 4.35 (q, <i>J</i> = 7.1 Hz, 2H), 4.34 (q, <i>J</i> = 7.1 Hz, 2H), 4.18 (d, <i>J</i> = 9.9 Hz, 1H), 4.16 – 4.03 (m, 1H), 1.41 (s, 9H), 1.37 (t, <i>J</i> = 7.1 Hz, 6H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.81 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.71, 172.69, 166.18, 166.10, 145.69, 145.36, 130.18, 129.91, 129.56, 129.31, 128.25, 128.12, 72.36, 60.98, 60.95, 57.67, 28.29, 19.18, 18.09, 14.29, 14.28.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
250	12518181		(Thin film) 3378, 2979, 1707, 1592, 1453, 1134, 1050, 731	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₆ , 502.2012; found, 502.2022	¹ H NMR (400 MHz, CDCl ₃) δ 6.65 – 6.51 (m, 4H), 6.46 (tt, <i>J</i> = 10.3, 2.3 Hz, 2H), 5.67 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.98 (d, <i>J</i> = 7.9 Hz, 1H), 4.14 (dd, <i>J</i> = 10.5, 4.8 Hz, 1H), 3.92 (d, <i>J</i> = 9.9 Hz, 1H), 3.76 (s, 3H), 3.75 (s, 3H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -110.64, -111.21.
251	12518183		(Thin film) 3375, 2978, 1708, 1593, 1456, 1149, 1059, 729	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₈ , 526.2411; found, 526.2409	¹ H NMR (400 MHz, CDCl ₃) δ 6.45 (dd, <i>J</i> = 4.5, 2.2 Hz, 4H), 6.28 (dt, <i>J</i> = 13.7, 2.2 Hz, 2H), 5.73 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 5.00 (d, <i>J</i> = 7.9 Hz, 1H), 4.12 (tt, <i>J</i> = 7.1, 3.3 Hz, 1H), 3.87 (d, <i>J</i> = 10.4 Hz, 1H), 3.75 (s, 6H), 3.73 (s, 6H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.84, 160.97, 160.78, 154.94, 143.51, 143.22, 106.45, 106.20, 98.58, 98.44, 79.63, 72.69, 58.27, 55.28, 55.26, 49.25, 28.31, 19.27, 18.07.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
252	12518189		(Thin film) 3370, 2978, 1708, 1594, 1454, 1292, 1153, 1051, 729	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₆ , 494.2513; found, 494.2510	¹ H NMR (400 MHz, CDCl ₃) δ 6.69 (s, 2H), 6.66 – 6.62 (m, 2H), 6.54 (s, 1H), 6.50 (s, 1H), 5.72 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 5.00 (d, <i>J</i> = 7.9 Hz, 1H), 4.22 – 4.00 (m, 1H), 3.86 (d, <i>J</i> = 10.4 Hz, 1H), 3.74 (s, 3H), 3.73 (s, 3H), 2.28 (s, 3H), 2.25 (s, 3H), 1.41 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.80 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.85, 159.78, 159.65, 154.93, 142.79, 142.49, 139.72, 139.28, 121.29, 112.72, 112.69, 111.34, 110.84, 79.59, 72.99, 57.93, 55.12, 55.11, 49.24, 28.32, 21.65, 21.58, 19.31, 18.02.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
253	12518191		(Thin film) 3377, 2978, 1711, 1508, 1252, 1163, 1041, 732	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₆ , 494.2513; found, 494.2493	¹ H NMR (400 MHz, CDCl ₃) δ 7.00 (ddd, <i>J</i> = 13.3, 7.6, 0.9 Hz, 2H), 6.85 – 6.68 (m, 4H), 5.78 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 5.11 – 4.82 (m, 1H), 4.12 (qd, <i>J</i> = 7.1, 2.3 Hz, 1H), 3.94 (d, <i>J</i> = 10.2 Hz, 1H), 3.79 (s, 3H), 3.78 (s, 3H), 2.14 (s, 3H), 2.12 (s, 3H), 1.41 (s, 9H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.80 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.87, 157.86, 157.65, 154.93, 140.45, 140.25, 130.75, 130.47, 125.22, 124.79, 119.74, 119.69, 109.82, 109.77, 79.64, 73.09, 57.95, 55.27, 55.25, 49.29, 28.32, 19.35, 18.06, 15.80, 15.75.
254	12518193		(Thin film) 3377, 2979, 1706, 1513, 1274, 1161, 1025, 729	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₆ , 502.2012; found, 502.2008	¹ H NMR (400 MHz, CDCl ₃) δ 7.06 – 6.92 (m, 4H), 6.88 (td, <i>J</i> = 8.7, 4.6 Hz, 2H), 5.63 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.99 (d, <i>J</i> = 7.9 Hz, 1H), 4.13 (p, <i>J</i> = 6.9 Hz, 1H), 3.91 (d, <i>J</i> = 9.6 Hz, 1H), 3.84 (s, 3H), 3.83 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -134.14, -134.59.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
255	12518198		(Thin film) 3376, 2978, 1711, 1502, 1247, 1163, 1052, 730	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₆ , 494.2513; found, 494.2515	¹ H NMR (400 MHz, CDCl ₃) δ 7.05 (ddd, <i>J</i> = 7.8, 4.8, 2.3 Hz, 2H), 7.01 (d, <i>J</i> = 2.2 Hz, 2H), 6.70 (t, <i>J</i> = 8.8 Hz, 2H), 5.68 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.98 (d, <i>J</i> = 7.9 Hz, 1H), 4.12 (ddp, <i>J</i> = 11.8, 7.9, 4.3 Hz, 1H), 3.85 (d, <i>J</i> = 10.2 Hz, 1H), 3.76 (s, 3H), 3.74 (s, 3H), 2.16 (s, 3H), 2.14 (s, 3H), 1.41 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.87, 156.53, 156.36, 154.94, 133.77, 133.55, 130.40, 130.30, 126.81, 126.38, 126.06, 125.86, 110.05, 109.91, 79.58, 73.47, 56.31, 55.32, 55.27, 49.28, 28.32, 19.34, 18.15, 16.32, 16.24.
256	12518197		(Thin film) 3355, 2978, 1712, 1497, 1223, 1161, 1047, 730	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₈ , 526.2411; found, 526.2405	¹ H NMR (400 MHz, CDCl ₃) δ 7.04 (d, <i>J</i> = 3.0 Hz, 1H), 6.86 (d, <i>J</i> = 3.0 Hz, 1H), 6.74 (dd, <i>J</i> = 19.1, 8.9 Hz, 2H), 6.66 (ddd, <i>J</i> = 9.1, 6.3, 3.0 Hz, 2H), 5.88 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 5.03 (d, <i>J</i> = 7.8 Hz, 1H), 4.91 (d, <i>J</i> = 10.1 Hz, 1H), 4.12 (m, 1H), 3.80 (s, 3H), 3.73 (s, 3H), 3.71 (s, 3H), 3.70 (s, 3H), 1.41 (s, 9H), 1.30 – 1.19 (m, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
257	12518199		(Thin film) 3364, 2978, 1710, 1497, 1245, 1160, 1045, 730	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NNaO ₆ , 494.2513; found, 494.2507	¹ H NMR (400 MHz, CDCl ₃) δ 7.05 (d, <i>J</i> = 8.4 Hz, 1H), 6.99 (d, <i>J</i> = 8.3 Hz, 1H), 6.88 (d, <i>J</i> = 2.7 Hz, 1H), 6.81 (d, <i>J</i> = 2.7 Hz, 1H), 6.63 (ddd, <i>J</i> = 15.9, 8.3, 2.7 Hz, 2H), 5.63 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.99 (d, <i>J</i> = 7.9 Hz, 1H), 4.43 (d, <i>J</i> = 10.1 Hz, 1H), 3.72 (s, 3H), 3.72 (s, 3H), 2.32 (s, 3H), 2.26 (s, 3H), 1.46 – 1.39 (m, 10H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H).
258	12518457			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₇ NO ₈ Na, 526.2411; found, 526.2405	¹ H NMR (400 MHz, CDCl ₃) δ 7.08 – 6.91 (m, 3H), 6.89 – 6.82 (m, 1H), 6.76 (ddd, <i>J</i> = 8.0, 3.8, 1.7 Hz, 2H), 5.76 – 5.53 (m, 1H), 5.15 – 5.07 (m, 1H), 5.07 – 4.93 (m, 1H), 4.21 – 4.03 (m, 1H), 3.90 – 3.80 (m, 9H), 3.76 – 3.72 (m, 3H), 1.47 – 1.37 (m, 9H), 1.24 (t, <i>J</i> = 6.0 Hz, 3H), 1.14 (d, <i>J</i> = 6.9 Hz, 1H), 0.86 (d, <i>J</i> = 7.0 Hz, 2H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.73, 172.19, 152.83, 152.74, 147.49, 147.21, 135.15, 135.02, 134.77, 134.64, 123.63, 123.58, 123.52, 120.98, 120.94, 120.51, 120.38, 110.86, 110.74, 110.67, 73.58, 60.35, 60.29, 60.20, 55.65, 42.03, 41.98, 28.31, 18.90, 18.77, 18.52, 18.19.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
259	1241884		(Thin film) 3362, 2981, 1713, 1618, 1501, 1475, 1430, 1293, 1252, 1165, 1102, 1058, 951, 748	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₂₉ F ₄ NO ₆ Na, 538.1823; found, 538.1826	¹ H NMR (400 MHz, CDCl ₃) δ 7.09 – 7.02 (m, 1H), 6.88 – 6.74 (m, 3H), 5.70 – 5.59 (m, 1H), 4.95 (d, <i>J</i> = 7.9 Hz, 1H), 4.85 (d, <i>J</i> = 9.7 Hz, 1H), 4.22 – 4.07 (m, 1H), 3.97 (d, <i>J</i> = 2.4 Hz, 3H), 3.86 (d, <i>J</i> = 2.1 Hz, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.67, 154.91, 151.50, 151.26 (d, <i>J</i> = 11.3 Hz), 149.47 (d, <i>J</i> = 11.3 Hz), 149.28 (d, <i>J</i> = 11.5 Hz), 147.24, 147.18, 147.03, 146.97, 145.35, 145.24, 143.36, 143.25, 129.90 (d, <i>J</i> = 3.5 Hz), 129.59, 123.09 – 122.78 (m), 122.38, 110.96 – 110.60 (m), 79.81, 72.19, 61.23, 61.17, 49.21, 42.46, 28.29, 18.87, 18.29.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
260	1261863		(Thin film) 3382, 2977, 2930, 1715, 1501, 1453, 1365, 1249, 1167, 1049, 811, 734	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NO ₄ Na, 462.2615; found, 462.2615	¹ H NMR (400 MHz, CDCl ₃) δ 7.07 – 6.84 (m, 6H), 5.64 (dq, <i>J</i> = 11.9, 5.9 Hz, 1H), 4.96 (d, <i>J</i> = 8.1 Hz, 1H), 4.44 (d, <i>J</i> = 10.3 Hz, 1H), 4.18 – 4.02 (m, 1H), 2.35 (s, 3H), 2.29 (s, 3H), 2.27 (s, 3H), 2.25 (s, 3H), 1.42 (s, 9H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.97, 154.93, 139.18, 138.55, 135.43, 135.04, 133.58, 133.35, 130.57, 130.28, 128.58, 127.87, 127.22, 126.90, 79.67, 74.72, 49.26, 47.36, 34.67, 28.32, 21.26, 21.22, 19.77, 19.73, 18.86.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
261	1231885		(Thin film) 3364, 2977, 1713, 1499, 1452, 1365, 1209, 1164, 1049, 731	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₇ NO ₄ Na, 462.2615; found, 462.2614	¹ H NMR (400 MHz, CDCl ₃) δ 7.15 (d, <i>J</i> = 8.5 Hz, 1H), 7.11 (d, <i>J</i> = 8.5 Hz, 1H), 6.96 – 6.88 (m, 4H), 5.64 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.9 Hz, 1H), 4.42 (d, <i>J</i> = 10.0 Hz, 1H), 4.17 – 4.05 (m, 1H), 2.34 (s, 3H), 2.30 (s, 3H), 2.25 (s, 3H), 2.22 (s, 3H), 1.42 (s, 9H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 0.84 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.88, 154.95, 136.54, 136.39, 136.19, 136.07, 135.85, 135.52, 131.49, 131.16, 127.74, 127.12, 126.82, 126.56, 79.63, 74.68, 49.24, 46.84, 34.67, 31.59, 28.32, 20.84, 20.10, 20.06, 18.94.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
262	12518857		(Thin film) 3381, 2979, 1711, 1609, 1589, 1495, 1454, 1366, 1241, 1165, 1049, 810, 729	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NO ₄ Na, 470.2113; found, 470.2120	¹ H NMR (400 MHz, CDCl ₃) δ 7.11 (dd, <i>J</i> = 8.4, 6.0 Hz, 1H), 7.07 (dd, <i>J</i> = 8.5, 6.0 Hz, 1H), 7.00 (dd, <i>J</i> = 10.6, 2.6 Hz, 1H), 6.90 (dd, <i>J</i> = 10.3, 2.7 Hz, 1H), 6.87 – 6.77 (m, 2H), 5.55 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 7.2 Hz, 1H), 4.45 (dt, <i>J</i> = 9.6, 1.2 Hz, 1H), 4.20 – 4.08 (m, 1H), 2.34 (s, 3H), 2.28 (s, 3H), 1.42 (s, 9H), 1.31 (d, <i>J</i> = 6.2 Hz, 3H), 0.89 (d, <i>J</i> = 7.3 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.77, 161.36 (d, <i>J</i> = 243.9 Hz), 161.32 (d, <i>J</i> = 243.5 Hz), 154.96, 140.69 (d, <i>J</i> = 6.7 Hz), 140.10 (d, <i>J</i> = 6.4 Hz), 132.38 (d, <i>J</i> = 3.2 Hz), 132.07, 132.01, 131.69 (d, <i>J</i> = 7.9 Hz), 114.83 (d, <i>J</i> = 22.3 Hz), 114.34 (d, <i>J</i> = 22.2 Hz), 113.67 (d, <i>J</i> = 20.7 Hz), 113.35 (d, <i>J</i> = 20.7 Hz), 79.79, 73.85, 49.16, 47.74, 34.67, 31.59, 28.31, 19.39, 19.35, 18.82, 18.05.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
263	12418889		(Thin film) 2978, 1710, 1497, 1454, 1366, 1249, 1209, 1160, 1036, 814, 728	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NO ₆ , 502.2012; found, 502.2011	¹ H NMR (400 MHz, CDCl ₃) δ 7.01 – 6.86 (m, 3H), 6.82 (dd, <i>J</i> = 5.8, 3.1 Hz, 1H), 6.74 – 6.64 (m, 2H), 5.82 (dq, <i>J</i> = 12.0, 6.2 Hz, 1H), 4.97 (d, <i>J</i> = 7.8 Hz, 1H), 4.67 (d, <i>J</i> = 10.5 Hz, 1H), 4.21 – 4.09 (m, 1H), 3.74 (s, 6H), 1.42 (s, 9H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 0.89 (d, <i>J</i> = 7.3 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.70, 156.13, 155.90, 155.74, 155.57, 154.90, 154.24, 154.00, 127.94 (d, <i>J</i> = 15.8 Hz), 127.63 (d, <i>J</i> = 16.2 Hz), 116.24 (d, <i>J</i> = 24.9 Hz), 115.97 (d, <i>J</i> = 24.8 Hz), 115.14, 114.12, 113.16 (d, <i>J</i> = 8.3 Hz), 113.03 (d, <i>J</i> = 8.2 Hz), 79.69, 71.79, 55.70, 49.15, 43.38, 34.66, 28.30, 19.00, 18.12.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
264	12418861		(Thin film) 2978, 2936, 1712, 1623, 1585, 1506, 1445, 1366, 1288, 1159, 1031, 950, 834, 731	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NO ₆ Na, 502.2012; found, 502.2016	¹ H NMR (400 MHz, CDCl ₃) δ 7.27 (t, <i>J</i> = 8.6 Hz, 1H), 7.16 (t, <i>J</i> = 8.5 Hz, 1H), 6.65 – 6.50 (m, 4H), 5.82 – 5.72 (m, 1H), 4.96 (d, <i>J</i> = 7.9 Hz, 1H), 4.60 (d, <i>J</i> = 10.2 Hz, 1H), 4.21 – 4.09 (m, 1H), 3.75 (s, 3H), 3.74 (s, 3H), 1.42 (s, 9H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.92 (d, <i>J</i> = 7.3 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.73, 161.24 (d, <i>J</i> = 245.7 Hz), 161.01 (d, <i>J</i> = 246.0 Hz), 159.73 (d, <i>J</i> = 11.1 Hz), 159.50 (d, <i>J</i> = 11.3 Hz), 154.93, 129.86 (d, <i>J</i> = 5.8 Hz), 129.31, 119.70 (d, <i>J</i> = 14.6 Hz), 119.41 (d, <i>J</i> = 15.1 Hz), 110.15 (d, <i>J</i> = 2.9 Hz), 109.77 (d, <i>J</i> = 3.0 Hz), 101.81 (d, <i>J</i> = 26.8 Hz), 79.67, 72.07, 55.51, 49.19, 41.73, 28.31, 19.01, 18.24.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
265	12318863		(Thin film) 2982, 1714, 1507, 1456, 1417, 1327, 1243, 1212, 1166, 1123, 1033, 860, 739	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₁ F ₆ NO ₆ Na, 602.1948; found, 602.1948	¹ H NMR (400 MHz, CDCl ₃) δ 7.53 (d, <i>J</i> = 8.0 Hz, 1H), 7.31 (d, <i>J</i> = 8.0 Hz, 1H), 7.16 (d, <i>J</i> = 7.6 Hz, 1H), 7.14 – 7.10 (m, 1H), 7.01 (dd, <i>J</i> = 15.7, 1.7 Hz, 2H), 6.01 – 5.91 (m, 1H), 4.97 (d, <i>J</i> = 9.7 Hz, 1H), 4.93 (d, <i>J</i> = 8.0 Hz, 1H), 4.18 – 4.06 (m, 1H), 3.89 (s, 3H), 3.81 (s, 3H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.77, 157.43, 154.92, 132.51, 132.36, 130.03, 129.43, 125.01, 122.84, 117.27 (q, <i>J</i> = 3.9 Hz), 116.99 (q, <i>J</i> = 3.3 Hz), 107.64 (q, <i>J</i> = 3.0 Hz), 107.44 (q, <i>J</i> = 4.1 Hz), 79.75, 71.76, 55.70, 49.17, 28.29, 18.94, 18.11.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
266	12818961		(Thin film) 3355, 2961, 1712, 1493, 1366, 1266, 1160, 1095	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₇ H ₃₅ F ₂ NO ₆ Na, 530.2325; found, 530.2331	¹ H NMR (400 MHz, CDCl ₃) δ 7.39 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.27 – 7.22 (m, 1H), 7.16 – 7.05 (m, 2H), 6.98 – 6.89 (m, 2H), 5.58 (dq, <i>J</i> = 8.8, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 7.4 Hz, 1H), 4.68 (d, <i>J</i> = 9.1 Hz, 1H), 4.61 (d, <i>J</i> = 12.4 Hz, 1H), 4.53 (d, <i>J</i> = 12.5 Hz, 1H), 4.42 (d, <i>J</i> = 12.3 Hz, 2H), 4.18 – 4.06 (m, 1H), 3.42 (s, 3H), 3.41 (s, 3H), 1.42 (s, 9H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.52, -115.88.
267	12818963		(Thin film) 3356, 2977, 1712, 1494, 1366, 1160, 1116, 1096	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₉ H ₃₉ F ₂ NO ₆ Na, 558.2638; found, 558.2638	¹ H NMR (400 MHz, CDCl ₃) δ 7.40 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.24 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.13 (t, <i>J</i> = 3.2 Hz, 1H), 7.10 (t, <i>J</i> = 3.2 Hz, 1H), 6.96 – 6.88 (m, 2H), 5.59 (dq, <i>J</i> = 8.7, 6.2 Hz, 1H), 4.98 (d, <i>J</i> = 7.5 Hz, 1H), 4.69 (d, <i>J</i> = 8.9 Hz, 1H), 4.65 (d, <i>J</i> = 12.5 Hz, 1H), 4.59 (d, <i>J</i> = 12.6 Hz, 1H), 4.46 (d, <i>J</i> = 12.5 Hz, 1H), 4.45 (d, <i>J</i> = 12.6 Hz, 1H), 4.20 – 4.06 (m, 1H), 3.62 – 3.44 (m, 4H), 1.42 (s, 9H), 1.32 – 1.18 (m, 9H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.64, -115.97.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
268	12519423		(Thin film) 3372, 2978, 2936, 2835, 1713, 1582, 1500, 1457, 1366, 1306, 1257, 1211, 1166, 1098, 1048, 910, 752, 734	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₇ NO ₆ Na, 494.2513; found, 494.2490	¹ H NMR (400 MHz, CDCl ₃) δ 7.07 (q, <i>J</i> = 8.0 Hz, 4H), 6.93 (dd, <i>J</i> = 7.7, 3.2 Hz, 2H), 6.85 (t, <i>J</i> = 7.5 Hz, 2H), 6.74 – 6.62 (m, 4H), 5.65 (dq, <i>J</i> = 9.3, 6.1, 3.1 Hz, 2H), 4.96 (d, <i>J</i> = 7.4 Hz, 1H), 4.81 (s, 1H), 4.60 (dd, <i>J</i> = 9.9, 6.0 Hz, 2H), 4.09 (dt, <i>J</i> = 15.3, 6.9 Hz, 2H), 3.79 (s, 6H), 3.77 (s, 3H), 3.76 (s, 3H), 2.27 (d, <i>J</i> = 7.5 Hz, 6H), 2.20 (s, 6H), 1.43 (s, 9H), 1.42 – 1.38 (m, 12H), 1.26 (t, <i>J</i> = 6.0 Hz, 6H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H).
269	12519424		(Thin film) 3357, 2978, 1712, 1500, 1467, 1452, 1420, 1365, 1250, 1207, 1162, 1091, 1053, 1006, 909, 866, 765, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₇ NO ₆ Na, 494.2513; found, 494.2509	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 (dd, <i>J</i> = 7.6, 1.4 Hz, 2H), 7.14 (d, <i>J</i> = 7.7 Hz, 2H), 7.11 – 6.99 (m, 4H), 6.99 – 6.87 (m, 4H), 5.73 – 5.49 (m, 2H), 5.20 (d, <i>J</i> = 7.3 Hz, 1H), 5.14 – 4.98 (m, 3H), 4.11 (s, 2H), 3.81 (s, 3H), 3.76 (s, 3H), 3.74 (s, 3H), 3.71 (s, 3H), 2.35 – 2.23 (m, 12H), 1.43 (d, <i>J</i> = 12.5 Hz, 18H), 1.26 (dd, <i>J</i> = 6.2, 2.1 Hz, 6H), 1.09 (d, <i>J</i> = 6.8 Hz, 3H), 0.82 (d, <i>J</i> = 7.1 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
270	122,233,267		(Thin film) 3364, 2976, 2935, 2836, 1711, 1608, 1585, 1504, 1453	ESIMS <i>m/z</i> 521 ([M+NH ₄] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 (d, <i>J</i> = 8.5 Hz, 1H), 7.11 (d, <i>J</i> = 8.4 Hz, 1H), 6.41 (dt, <i>J</i> = 5.2, 2.6 Hz, 2H), 6.37 (dt, <i>J</i> = 5.6, 2.7 Hz, 2H), 5.84 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 5.01 (d, <i>J</i> = 7.9 Hz, 1H), 4.79 (d, <i>J</i> = 9.9 Hz, 1H), 4.18 – 4.06 (m, 1H), 3.81 (s, 3H), 3.74 (s, 6H), 3.73 (s, 3H), 1.42 (s, 9H), 1.20 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H).
271	122,233,267		(Thin film) 3365, 2977, 2934, 1712, 1611, 1504, 1452	ESIMS <i>m/z</i> 489 ([M+NH ₄] ⁺)	¹ H NMR (300 MHz, CDCl ₃) δ 7.28 (d, <i>J</i> = 7.8 Hz, 1H), 7.13 – 7.03 (m, 1H), 6.69 – 6.56 (m, 4H), 5.86 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 5.01 (d, <i>J</i> = 7.8 Hz, 1H), 4.88 (d, <i>J</i> = 9.9 Hz, 1H), 4.20 – 3.98 (m, 1H), 3.81 (s, 3H), 3.73 (s, 3H), 2.27 (s, 3H), 2.26 (s, 3H), 1.41 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.85 (d, <i>J</i> = 7.1 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
272	12521373		(Thin film) 3366, 2978, 2933, 2835, 1714, 1501, 1453	ESIMS <i>m/z</i> 489 ([M+NH ₄] ⁺)	¹ H NMR (300 MHz, CDCl ₃) δ 7.18 (d, <i>J</i> = 2.1 Hz, 1H), 7.03 (d, <i>J</i> = 2.2 Hz, 1H), 6.95 – 6.88 (m, 2H), 6.73 (d, <i>J</i> = 8.3 Hz, 1H), 6.68 (d, <i>J</i> = 8.3 Hz, 1H), 5.83 (dq, <i>J</i> = 12.2, 6.1 Hz, 1H), 5.03 (d, <i>J</i> = 7.9 Hz, 1H), 4.93 (d, <i>J</i> = 10.3 Hz, 1H), 4.19 – 4.05 (m, 1H), 3.81 (s, 3H), 3.72 (s, 3H), 2.24 (s, 3H), 2.21 (s, 3H), 1.42 (d, <i>J</i> = 0.6 Hz, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H).
273	12521375			ESIMS <i>m/z</i> 480 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.05 - 6.93 (m, 2H), 6.91 - 6.75 (m, 4H), 5.71 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 7.9 Hz, 1H), 4.20 - 4.07 (m, 1H), 3.96 (d, <i>J</i> = 10.0 Hz, 1H), 3.86 (s, 3H), 3.85 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -137.12, -137.69.
274	12521377			ESIMS <i>m/z</i> 472 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.22 - 7.04 (m, 2H), 6.77 - 6.56 (m, 4H), 5.60 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.95 (d, <i>J</i> = 7.9 Hz, 1H), 4.36 (d, <i>J</i> = 10.0 Hz, 1H), 4.20 - 4.03 (m, 1H), 3.75 (s, 3H), 3.73 (s, 3H), 2.35 (s, 3H), 2.31 (s, 3H), 1.42 (s, 9H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 0.87 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Ex. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
275	12321671			ESIMS <i>m/z</i> 432 ([M+H] ⁺)	
276	12321713			ESIMS <i>m/z</i> 432 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.35 - 7.28 (m, 2H), 7.25 - 7.20 (m, 2H), 7.20 - 7.09 (m, 2H), 6.65 - 6.51 (m, 2H), 5.81 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.53 (d, <i>J</i> = 10.1 Hz, 1H), 4.19 - 4.04 (m, 1H), 3.83 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.78 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.26.
277	12321717			ESIMS <i>m/z</i> 416 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 - 7.20 (m, 5H), 7.19 - 7.10 (m, 1H), 6.92 - 6.81 (m, 2H), 5.75 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.91 (d, <i>J</i> = 8.0 Hz, 1H), 4.26 (d, <i>J</i> = 10.3 Hz, 1H), 4.18 - 4.02 (m, 1H), 2.38 (s, 3H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.79 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.70.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
278	12521749			ESIMS <i>m/z</i> 432 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.32 - 7.12 (m, 6H), 6.59 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.52 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.79 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 5.00 (d, <i>J</i> = 8.2 Hz, 1H), 4.51 (d, <i>J</i> = 10.2 Hz, 1H), 4.19 - 4.04 (m, 1H), 3.75 (s, 3H), 1.41 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.59.
279	12521757			ESIMS <i>m/z</i> 416 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.38 - 7.15 (m, 6H), 6.90 - 6.77 (m, 2H), 5.72 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.97 (d, <i>J</i> = 8.4 Hz, 1H), 4.23 (d, <i>J</i> = 10.1 Hz, 1H), 4.19 - 4.03 (m, 1H), 2.31 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -117.14.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
280	12224189			ESIMS <i>m/z</i> 446 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.19 (d, <i>J</i> = 8.0 Hz, 2H), 7.13 (dt, <i>J</i> = 8.1, 6.5 Hz, 1H), 7.04 (d, <i>J</i> = 7.9 Hz, 2H), 6.61 - 6.50 (m, 2H), 5.78 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.8 Hz, 1H), 4.49 (d, <i>J</i> = 9.8 Hz, 1H), 3.82 (s, 3H), 2.26 (s, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.47.
281	12224191			ESIMS <i>m/z</i> 430 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 - 7.25 (m, 1H), 7.16 - 7.09 (m, 2H), 7.04 (d, <i>J</i> = 7.8 Hz, 2H), 6.91 - 6.80 (m, 2H), 5.72 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 8.0 Hz, 1H), 4.22 (d, <i>J</i> = 10.2 Hz, 1H), 4.18 - 4.02 (m, 1H), 2.37 (s, 3H), 2.25 (s, 3H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.91.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
282	12324193			ESIMS <i>m/z</i> 446 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.26 (dd, <i>J</i> = 8.5, 6.5 Hz, 1H), 7.16 (d, <i>J</i> = 8.1 Hz, 2H), 7.06 (d, <i>J</i> = 8.0 Hz, 2H), 6.58 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.52 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.77 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 5.01 (d, <i>J</i> = 8.4 Hz, 1H), 4.48 (d, <i>J</i> = 10.3 Hz, 1H), 4.19 - 4.04 (m, 1H), 3.76 (s, 3H), 2.27 (s, 3H), 1.41 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.85 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.81.
283	12324195			ESIMS <i>m/z</i> 430 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 (dd, <i>J</i> = 8.6, 5.8 Hz, 1H), 7.14 - 7.04 (m, 4H), 6.87 - 6.77 (m, 2H), 5.70 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.97 (d, <i>J</i> = 7.8 Hz, 1H), 4.19 (d, <i>J</i> = 10.3 Hz, 1H), 4.17 - 4.02 (m, 1H), 2.31 (s, 3H), 2.28 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.81 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -117.35.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
284	12824209			ESIMS <i>m/z</i> 450 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.35 - 7.22 (m, 2H), 7.12 (dd, <i>J</i> = 8.4, 6.5 Hz, 1H), 6.98 - 6.84 (m, 2H), 6.71 - 6.48 (m, 2H), 5.78 (dq, <i>J</i> = 12.1, 6.3 Hz, 1H), 4.91 (d, <i>J</i> = 8.0 Hz, 1H), 4.49 (d, <i>J</i> = 9.9 Hz, 1H), 4.25 - 4.02 (m, 1H), 3.82 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.84 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.92, -116.53.
285	12824211			ESIMS <i>m/z</i> 434 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 - 7.16 (m, 3H), 7.00 - 6.79 (m, 4H), 5.70 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.89 (s, 1H), 4.25 (d, <i>J</i> = 10.2 Hz, 1H), 4.18 - 4.04 (m, 1H), 2.36 (s, 3H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.87 (d, <i>J</i> = 7.0 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.06, -116.38.

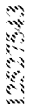
Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
286	12280223			ESIMS <i>m/z</i> 450 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 - 7.19 (m, 3H), 6.99 - 6.90 (m, 2H), 6.60 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.54 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.74 (dq, <i>J</i> = 11.9, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.8 Hz, 1H), 4.48 (d, <i>J</i> = 10.2 Hz, 1H), 4.19 - 4.05 (m, 1H), 3.77 (s, 3H), 1.42 (s, 9H), 1.20 (d, <i>J</i> = 6.2 Hz, 3H), 0.86 (d, <i>J</i> = 7.3 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.32, -116.11.
287	12280237			ESIMS <i>m/z</i> 434 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 (dd, <i>J</i> = 8.6, 5.7 Hz, 1H), 7.24 - 7.11 (m, 2H), 7.01 - 6.93 (m, 2H), 6.92 - 6.69 (m, 2H), 5.67 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 6.4 Hz, 1H), 4.22 (d, <i>J</i> = 10.0 Hz, 1H), 4.18 - 4.01 (m, 1H), 2.29 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.53, -116.86.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
288	123456789		(Thin film) 3364, 2978, 1709, 1600, 1496, 1161	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₅ , 486.2063; found, 486.2063	¹ H NMR (400 MHz, CDCl ₃) δ 7.21 (dd, <i>J</i> = 8.5, 6.6 Hz, 1H), 7.16 (dd, <i>J</i> = 8.5, 5.9 Hz, 1H), 6.82 (tt, <i>J</i> = 8.4, 4.1 Hz, 2H), 6.59 (td, <i>J</i> = 8.2, 2.5 Hz, 1H), 6.53 (dd, <i>J</i> = 10.8, 2.4 Hz, 1H), 5.67 (dq, <i>J</i> = 12.3, 6.1 Hz, 1H), 4.97 (d, <i>J</i> = 6.5 Hz, 1H), 4.73 (d, <i>J</i> = 10.2 Hz, 1H), 4.25 – 4.04 (m, 1H), 3.78 (s, 3H), 2.42 (s, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.52, -116.98.
289	123456789		(Thin film) 3364, 2979, 1710, 1601, 1501, 1162	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₄ H ₂₈ F ₃ NNaO ₅ , 490.1812; found, 490.1809	¹ H NMR (400 MHz, CDCl ₃) δ 7.32 – 7.27 (m, 1H), 7.23 – 7.14 (m, 1H), 6.81 – 6.71 (m, 2H), 6.61 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.54 (dd, <i>J</i> = 10.8, 2.5 Hz, 1H), 5.79 (dq, <i>J</i> = 11.8, 6.1 Hz, 1H), 4.95 (d, <i>J</i> = 7.1 Hz, 1H), 4.76 (d, <i>J</i> = 10.1 Hz, 1H), 4.21 – 4.05 (m, 1H), 3.76 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.3 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.15 (d, <i>J</i> = 44.2 Hz), -112.17 (d, <i>J</i> = 44.3 Hz), -112.91.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
290	128, 283, 293		(Thin film) 3365, 2979, 1709, 1497, 1450, 1160	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₅ H ₃₁ F ₂ NNaO ₅ , 486.2063; found, 486.2067	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 (dd, <i>J</i> = 8.4, 6.2 Hz, 1H), 7.03 (dd, <i>J</i> = 8.6, 6.6 Hz, 1H), 6.80 (d, <i>J</i> = 8.7 Hz, 2H), 6.58 (d, <i>J</i> = 9.2 Hz, 2H), 5.65 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.93 (d, <i>J</i> = 6.9 Hz, 1H), 4.73 (d, <i>J</i> = 9.9 Hz, 1H), 4.18 – 4.04 (m, 1H), 3.84 (s, 3H), 2.28 (s, 3H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.85 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.94, -117.45.
291	128, 283, 293		(Thin film) 3364, 2980, 1711, 1499, 1163	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₄ H ₂₈ F ₃ NNaO ₄ , 474.1862; found, 474.1863	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 (dd, <i>J</i> = 8.1, 5.8 Hz, 1H), 7.18 – 7.07 (m, 1H), 6.90 – 6.75 (m, 4H), 5.67 (dq, <i>J</i> = 11.7, 6.5 Hz, 1H), 4.92 (d, <i>J</i> = 6.7 Hz, 1H), 4.61 (d, <i>J</i> = 10.1 Hz, 1H), 4.19 – 3.95 (m, 1H), 2.29 (s, 3H), 1.42 (s, 9H), 1.27 (d, <i>J</i> = 6.3 Hz, 3H), 0.85 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.50 (d, <i>J</i> = 7.3 Hz), -112.52 (d, <i>J</i> = 7.1 Hz), -116.50.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
292	123,246,37		(Thin film) 3363, 2979, 2939, 2838, 1712, 1586, 1477		¹ H NMR (400 MHz, CDCl ₃) for both diastereomers of a 1:1 mixture d 7.18 - 7.09 (m, 2H), 7.01 - 6.87 (m, 10H), 5.76 - 5.58 (m, 2H), 5.03 (d, <i>J</i> = 5.4 Hz, 1H), 5.01 (d, <i>J</i> = 4.9 Hz, 1H), 5.01 - 4.90 (m, 2H), 4.20 - 4.06 (m, 2H), 3.92 (d, <i>J</i> = 2.1 Hz, 3H), 3.89 (d, <i>J</i> = 2.0 Hz, 3H), 3.81 (d, <i>J</i> = 1.9 Hz, 3H), 3.80 (d, <i>J</i> = 1.9 Hz, 3H), 1.44 (s, 9H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.6 Hz, 3H), 1.23 (d, <i>J</i> = 6.3 Hz, 3H), 1.17 (d, <i>J</i> = 7.1 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H).
293	123,246,37		(Thin film) 3364, 2980, 2839, 1712, 1495, 1455		¹ H NMR (400 MHz, CDCl ₃) major diastereomer of a 2:1 mixture d 7.15 (dt, <i>J</i> = 9.6, 3.0 Hz, 1H), 6.93 (td, <i>J</i> = 8.8, 8.2, 3.1 Hz, 1H), 6.89 – 6.81 (m, 2H), 6.80 – 6.68 (m, 2H), 5.84 (dd, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.98 (s, 1H), 4.86 (d, <i>J</i> = 9.2 Hz, 1H), 4.24 – 4.07 (m, 1H), 3.82 (s, 3H), 3.74 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.3 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
294	128,8819			ESIMS <i>m/z</i> 412 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.19 – 7.10 (m, 2H), 7.10 – 7.07 (m, 4H), 7.03 – 6.98 (m, 1H), 6.98 – 6.92 (m, 1H), 5.76 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.94 (d, <i>J</i> = 7.9 Hz, 1H), 4.18 – 4.03 (m, 1H), 3.94 (d, <i>J</i> = 10.3 Hz, 1H), 2.30 (s, 3H), 2.28 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.76 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) missing one aromatic C signal due to overlap d 172.84, 141.56, 141.27, 138.32, 137.91, 128.87, 128.87, 128.60, 128.34, 127.62, 127.30, 125.06, 124.89, 73.20, 57.91, 53.39, 49.25, 28.31, 21.46, 21.42, 19.32, 18.01.
295	128,8819			ESIMS <i>m/z</i> 416 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.32 – 7.21 (m, 5H), 7.21 – 7.15 (m, 1H), 6.86 (dd, <i>J</i> = 8.0, 1.7 Hz, 1H), 6.79 (dd, <i>J</i> = 11.3, 1.6 Hz, 1H), 5.85 – 5.72 (m, 1H), 5.04 – 4.94 (m, 1H), 4.39 (d, <i>J</i> = 10.1 Hz, 1H), 4.14 (p, <i>J</i> = 7.4, 6.8 Hz, 1H), 2.26 (s, 3H), 1.42 (s, 9H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.90 – 0.81 (m, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -118.88.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
296				ESIMS <i>m/z</i> 434 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.28 – 7.17 (m, 3H), 6.99 – 6.93 (m, 2H), 6.88 (dd, <i>J</i> = 8.0, 1.7 Hz, 1H), 6.80 (dd, <i>J</i> = 11.2, 1.6 Hz, 1H), 5.74 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.98 (d, <i>J</i> = 7.9 Hz, 1H), 4.37 (d, <i>J</i> = 10.0 Hz, 1H), 4.22 – 4.07 (m, 1H), 2.27 (s, 3H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.5 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.62, -118.85.
297				ESIMS <i>m/z</i> 430 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.22 (t, <i>J</i> = 8.0 Hz, 1H), 7.19 – 7.13 (m, 2H), 7.07 (d, <i>J</i> = 7.9 Hz, 2H), 6.85 (dd, <i>J</i> = 8.0, 1.8 Hz, 1H), 6.77 (dd, <i>J</i> = 11.2, 1.6 Hz, 1H), 5.83 – 5.69 (m, 1H), 5.03 (d, <i>J</i> = 8.0 Hz, 1H), 4.35 (d, <i>J</i> = 10.3 Hz, 1H), 4.19 – 4.05 (m, 1H), 2.27 (s, 3H), 2.24 (s, 3H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.86 (d, <i>J</i> = 8.4 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -118.95.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
298	122802			ESIMS <i>m/z</i> 416 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 - 7.22 (m, 4H), 7.22 - 7.11 (m, 1H), 7.12 - 7.02 (m, 2H), 6.91 (dd, <i>J</i> = 9.4, 8.2 Hz, 1H), 5.74 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.92 (d, <i>J</i> = 7.9 Hz, 1H), 4.17 - 4.04 (m, 1H), 3.97 (d, <i>J</i> = 10.2 Hz, 1H), 2.23 (d, <i>J</i> = 1.9 Hz, 3H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.76 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -120.18.
299	122803			ESIMS <i>m/z</i> 464 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.23 (dd, <i>J</i> = 8.6, 6.6 Hz, 1H), 7.07 - 7.01 (m, 2H), 6.88 (t, <i>J</i> = 9.3 Hz, 1H), 6.60 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.54 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.72 (dq, <i>J</i> = 11.8, 6.0 Hz, 1H), 4.95 (d, <i>J</i> = 8.0 Hz, 1H), 4.44 (d, <i>J</i> = 10.3 Hz, 1H), 4.19 - 4.07 (m, 1H), 3.78 (s, 3H), 2.22 (d, <i>J</i> = 1.9 Hz, 3H), 1.42 (s, 9H), 1.20 (d, <i>J</i> = 6.1 Hz, 3H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.49, -120.41.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
300	12528107			ESIMS <i>m/z</i> 448 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.24 (dd, <i>J</i> = 9.6, 5.6 Hz, 1H), 7.16 (t, <i>J</i> = 7.9 Hz, 1H), 6.85 (dt, <i>J</i> = 10.4, 2.4 Hz, 3H), 6.79 (dt, <i>J</i> = 11.3, 1.1 Hz, 1H), 5.70 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.99 (d, <i>J</i> = 8.0 Hz, 1H), 4.61 (d, <i>J</i> = 10.1 Hz, 1H), 4.22 – 4.09 (m, 1H), 2.39 (s, 3H), 2.26 (s, 3H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.47, -118.10.
301	12528111			ESIMS <i>m/z</i> 452 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.30 – 7.21 (m, 2H), 6.92 – 6.85 (m, 1H), 6.85 – 6.74 (m, 3H), 5.84 – 5.73 (m, 1H), 4.97 (d, <i>J</i> = 7.9 Hz, 1H), 4.68 (d, <i>J</i> = 10.0 Hz, 1H), 4.22 – 4.07 (m, 1H), 2.28 (s, 3H), 1.42 (s, 9H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.90 (d, <i>J</i> = 7.3 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.63 (d, <i>J</i> = 7.5 Hz), -112.07 (d, <i>J</i> = 7.0 Hz), -118.16.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
302	122.99, 123.79		(Thin film) 3366, 2979, 2932, 1713, 1496, 1452, 1365, 1306, 1248, 1211, 1165, 1053, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₄ H ₃₂ NO ₄ , 398.2326; found, 398.2328	¹ H NMR (400 MHz, CDCl ₃) δ 7.29 – 7.21 (m, 4H), 7.19 – 7.13 (m, 3H), 7.09 (d, <i>J</i> = 7.9 Hz, 2H), 5.77 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.92 (d, <i>J</i> = 7.9 Hz, 1H), 4.17 – 4.04 (m, 1H), 3.99 (d, <i>J</i> = 10.3 Hz, 1H), 2.28 (s, 3H), 1.41 (s, 9H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.75 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.83, 154.94, 141.81, 138.26, 136.50, 129.98, 129.46, 128.47, 127.93 (d, <i>J</i> = 3.6 Hz), 126.56, 120.94, 79.63, 73.17, 57.62, 49.18, 34.67, 28.31, 20.97, 19.30, 18.00.
303	122.99, 123.18		(Thin film) 3371, 2978, 2931, 1712, 1495, 1451, 1365, 1165, 1051, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₄ H ₃₂ NO ₄ , 398.2326; found, 398.2324	¹ H NMR (400 MHz, CDCl ₃) δ 7.26 (d, <i>J</i> = 4.5 Hz, 5H), 7.18 (d, <i>J</i> = 7.9 Hz, 2H), 7.05 (d, <i>J</i> = 7.9 Hz, 2H), 5.77 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.94 (d, <i>J</i> = 7.9 Hz, 1H), 4.18 – 4.05 (m, 1H), 3.99 (d, <i>J</i> = 10.0 Hz, 1H), 2.26 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.80 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.83, 154.94, 141.52, 138.41, 136.15, 129.12, 128.73, 128.21, 128.05, 127.95, 126.79, 124.35, 79.63, 73.17, 57.47, 49.21, 34.67, 28.31, 20.94, 19.30, 18.08.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
304	12529183		(Thin film) 3371, 2979, 2932, 1712, 1508, 1452, 1366, 1222, 1160, 1053, 816	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₄ H ₃₀ FNO ₄ Na, 438.2051; found, 438.2052	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 – 7.20 (m, 2H), 7.15 (d, <i>J</i> = 8.1 Hz, 2H), 7.07 (d, <i>J</i> = 7.9 Hz, 2H), 6.96 (t, <i>J</i> = 8.7 Hz, 2H), 5.72 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.93 (d, <i>J</i> = 7.9 Hz, 1H), 4.17 – 4.06 (m, 1H), 3.99 (d, <i>J</i> = 9.8 Hz, 1H), 2.27 (s, 3H), 1.42 (s, 9H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.81 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.80, 161.65 (d, <i>J</i> = 245.5 Hz), 154.94, 138.13, 137.32 (d, <i>J</i> = 3.2 Hz), 136.35, 129.52 (d, <i>J</i> = 7.9 Hz), 129.22, 127.89, 126.12 (d, <i>J</i> = 7.8 Hz), 115.56 (d, <i>J</i> = 21.3 Hz), 79.68, 73.01, 56.60, 49.19, 34.67, 31.59, 28.31, 20.95, 19.22, 18.07.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
305	12529185		(Thin film) 3371, 2979, 2933, 1710, 1509, 1452, 1366, 1222, 1160, 1051, 699	ESIMS <i>m/z</i> 402.2 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.31 – 7.23 (m, 7H), 6.98 – 6.92 (m, 2H), 5.75 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 7.8 Hz, 1H), 4.18 – 4.07 (m, 1H), 4.02 (d, <i>J</i> = 10.0 Hz, 1H), 1.42 (s, 9H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.80, 161.61 (d, <i>J</i> = 245.2 Hz), 154.93, 141.02, 137.26 (d, <i>J</i> = 3.4 Hz), 129.55 (d, <i>J</i> = 7.9 Hz), 128.86, 127.99, 127.05, 115.29 (d, <i>J</i> = 21.2 Hz), 79.74, 73.05, 57.10, 49.18, 34.67, 28.31, 19.29, 18.12.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
306	12829187		(Thin film) 3371, 2979, 2932, 1712, 1509, 1452, 1366, 1222, 1161, 1052, 815	ESIMS <i>m/z</i> 438.2 ([M+Na] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 7.26 – 7.21 (m, 2H), 7.14 (d, <i>J</i> = 8.2 Hz, 2H), 7.09 (d, <i>J</i> = 8.1 Hz, 2H), 6.98 – 6.90 (m, 2H), 5.73 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.91 (d, <i>J</i> = 8.0 Hz, 1H), 4.17 – 4.06 (m, 1H), 3.98 (d, <i>J</i> = 10.2 Hz, 1H), 2.29 (s, 3H), 1.42 (s, 9H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.80, 161.56 (d, <i>J</i> = 245.0 Hz), 154.93, 138.04, 137.58 (d, <i>J</i> = 3.3 Hz), 136.69, 129.54, 129.43 (d, <i>J</i> = 7.8 Hz), 127.82, 115.25 (d, <i>J</i> = 21.2 Hz), 79.72, 73.11, 56.76, 49.18, 34.67, 28.31, 20.97, 19.28, 18.12.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
307	122,292,337		(Thin film) 3370, 2980, 2936, 1712, 1503, 1453, 1366, 1164, 1053, 966, 851, 698	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₃ H ₂₈ F ₂ NO ₄ , 420.1981; found, 420.1995	¹ H NMR (400 MHz, CDCl ₃) δ 7.33 – 7.24 (m, 5H), 7.22 – 7.14 (m, 1H), 6.86 – 6.73 (m, 2H), 5.84 – 5.72 (m, 1H), 4.90 (d, <i>J</i> = 8.0 Hz, 1H), 4.40 (d, <i>J</i> = 10.2 Hz, 1H), 4.18 – 4.05 (m, 1H), 1.42 (s, 9H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.78 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.74, 162.98 – 161.09 (m), 160.06 (dd, <i>J</i> = 169.5, 12.1 Hz), 154.93, 140.15, 129.79, 128.61, 128.22, 127.00, 124.39 (d, <i>J</i> = 18.6 Hz), 111.62 (d, <i>J</i> = 19.5 Hz), 104.70 – 103.41 (m), 79.71, 72.30, 49.40, 49.15, 34.67, 28.31, 18.97, 17.99.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
308	12529249		(Thin film) 3364, 2980, 2933, 1713, 1502, 1453, 1366, 1164, 1053, 966, 850	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₄ H ₂₉ F ₂ NO ₄ Na, 456.1957; found, 456.1953	¹ H NMR (400 MHz, CDCl ₃) δ 7.25 – 7.20 (m, 1H), 7.18 (d, <i>J</i> = 8.1 Hz, 2H), 7.07 (d, <i>J</i> = 7.6 Hz, 2H), 6.85 – 6.72 (m, 2H), 5.76 (dtd, <i>J</i> = 9.5, 6.8, 5.5 Hz, 1H), 4.92 (d, <i>J</i> = 7.8 Hz, 1H), 4.36 (d, <i>J</i> = 10.0 Hz, 1H), 4.19 – 4.01 (m, 1H), 2.27 (s, 3H), 1.42 (s, 9H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.82 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.74, 161.98 (dd, <i>J</i> = 167.8, 11.9 Hz), 160.01 (dd, <i>J</i> = 167.8, 11.9 Hz), 154.93, 137.05, 136.57, 129.90, 129.24, 128.11, 124.66 (d, <i>J</i> = 11.5 Hz), 111.57 (d, <i>J</i> = 20.4 Hz), 104.69 – 102.95 (m), 79.70, 72.38, 49.18, 48.94, 28.31, 20.97, 18.97, 18.07.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
309	12529211		(Thin film) 3364, 2981, 1711, 1604, 1502, 1454, 1380, 1366, 1224, 1161, 1053, 966, 851,	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₂₃ H ₂₆ F ₃ NO ₄ Na, 460.1706; found, 460.1712	¹ H NMR (400 MHz, CDCl ₃) δ 7.29 – 7.19 (m, 3H), 6.99 – 6.93 (m, 2H), 6.86 – 6.75 (m, 2H), 5.81 – 5.70 (m, 1H), 4.90 (d, <i>J</i> = 7.9 Hz, 1H), 4.37 (d, <i>J</i> = 10.1 Hz, 1H), 4.21 – 4.06 (m, 1H), 1.42 (s, 9H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.85 (dd, <i>J</i> = 7.8, 1.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.71, 162.85, 162.71, 161.37, 161.28, 160.87, 160.75, 159.39, 159.30, 154.93, 135.92, 129.76 (d, <i>J</i> = 7.7 Hz), 115.44 (d, <i>J</i> = 21.3 Hz), 111.71 (d, <i>J</i> = 18.0 Hz), 104.71 – 103.96 (m), 79.80, 72.20, 49.16, 48.78, 34.67, 28.30, 18.99, 18.09.
310	12546347			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₃₈ NO ₂ , 396.2897; found, 396.2896	
311	12546315			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₄ H ₃₄ NO ₂ , 368.2584; found, 368.2584	¹ H NMR (400 MHz, Acetone-d ₆) δ 7.31 – 7.21 (m, 4H), 7.15 (ddd, <i>J</i> = 10.9, 8.5, 2.5 Hz, 4H), 5.87 (dq, <i>J</i> = 10.0, 6.0 Hz, 1H), 4.05 (d, <i>J</i> = 10.5 Hz, 1H), 3.85 (q, <i>J</i> = 7.2 Hz, 1H), 3.31 (dt, <i>J</i> = 3.3, 1.7 Hz, 3H), 2.91 – 2.73 (m, 2H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.19 (t, <i>J</i> = 6.7 Hz, 12H), 0.81 (dd, <i>J</i> = 7.3, 2.8 Hz, 3H).

Cmpd. No.	Fig. 5	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
312	12506313			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₂ , 340.2271; found, 340.2273	
313	12506669			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₀ H ₂₄ F ₂ NO ₂ , 348.1770; found, 348.1780	¹ H NMR (400 MHz, Acetone-d ₆) δ 7.34 (dd, <i>J</i> = 8.7, 5.7 Hz, 1H), 7.26 (dd, <i>J</i> = 8.7, 5.8 Hz, 1H), 7.02 – 6.80 (m, 5H), 5.75 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.59 (d, <i>J</i> = 9.8 Hz, 1H), 3.96 (q, <i>J</i> = 7.2 Hz, 1H), 3.72 – 3.60 (m, 2H), 2.40 (s, 3H), 2.37 (s, 3H), 1.34 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.3 Hz, 3H). ¹⁹ F NMR (376 MHz, Acetone) δ -119.66, -120.05.
314	12508743			ESIMS <i>m/z</i> 320 ([M+H] ⁺)	
315	12508748			ESIMS <i>m/z</i> 320 ([M+H] ⁺)	
316	12510405			ESIMS <i>m/z</i> 380.5 ([M+H] ⁺)	
317	12510411			ESIMS <i>m/z</i> 374.4 ([M+H] ⁺)	

Cmpd. No.	MS m/z	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
318	12513787			ESIMS <i>m/z</i> 298 ([M+H] ⁺)	
319	12513336			ESIMS <i>m/z</i> 334 ([M+H] ⁺)	
320	12513339			ESIMS <i>m/z</i> 420 ([M+H] ⁺)	
321	12513349			ESIMS <i>m/z</i> 428 ([M+H] ⁺)	
322	12513765		(Thin film) 2851, 1740, 1494, 1451, 1253, 1231, 1204, 1117, 1080, 1046, 871, 746, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₂₂ NO ₂ , 284.1645; found, 284.1644	
323	12513901			ESIMS <i>m/z</i> 412.3 ([M+H] ⁺)	
324	12513903			ESIMS <i>m/z</i> 408.4 ([M+H] ⁺)	
325	12513906			ESIMS <i>m/z</i> 440.3 ([M+H] ⁺)	
326	12513907			ESIMS <i>m/z</i> 400.4 ([M+H] ⁺)	

Cmpd. No.	MS (m/z)	MP (°C)	IR (cm^{-1})	MASS	NMR (^1H , ^{13}C , ^{19}F)
327	12517447			ESIMS m/z 404 ([M+H] $^+$)	
328	12517449			ESIMS m/z 372 ([M+H] $^+$)	
329	12517451			ESIMS m/z 372 ([M+H] $^+$)	
330	12517453			ESIMS m/z 380 ([M+H] $^+$)	
331	12517455			ESIMS m/z 380 ([M+H] $^+$)	
332	12518201			HRMS-ESI (m/z) ([M+H] $^+$) calcd for $\text{C}_{20}\text{H}_{24}\text{F}_2\text{NO}_4$, 380.1668; found, 380.1649	^1H NMR (500 MHz, Methanol- d_4) δ 6.74 (dddd, J = 17.6, 8.0, 3.7, 1.8 Hz, 4H), 6.58 (ddt, J = 12.2, 10.0, 2.3 Hz, 2H), 5.83 (dq, J = 10.2, 6.1 Hz, 1H), 4.13 (d, J = 10.3 Hz, 1H), 3.93 (q, J = 7.2 Hz, 1H), 3.78 (s, 3H), 3.77 (s, 3H), 1.28 (d, J = 6.2 Hz, 3H), 1.00 (d, J = 7.3 Hz, 3H) (NH protons not observed). ^{19}F NMR (471 MHz, Methanol- d_4) δ -112.85 (t, J = 10.0 Hz), -113.22 (t, J = 10.3 Hz).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
333	12518203			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₆ , 404.2068; found, 404.2038	¹ H NMR (500 MHz, Methanol-d ₄) δ 6.51 (dd, <i>J</i> = 5.2, 2.3 Hz, 4H), 6.35 (dt, <i>J</i> = 13.0, 2.2 Hz, 2H), 5.82 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 3.99 (d, <i>J</i> = 10.4 Hz, 1H), 3.89 (q, <i>J</i> = 7.2 Hz, 1H), 3.75 (s, 6H), 3.74 (s, 6H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 0.96 (d, <i>J</i> = 7.3 Hz, 3H) (NH protons not observed).
334	12518207			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₄ , 372.2169; found, 372.2146	¹ H NMR (500 MHz, Methanol-d ₄) δ 6.75 (d, <i>J</i> = 4.0 Hz, 2H), 6.69 (dt, <i>J</i> = 6.6, 1.9 Hz, 2H), 6.61 (s, 1H), 6.58 (d, <i>J</i> = 2.3 Hz, 1H), 5.82 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 3.97 (d, <i>J</i> = 10.5 Hz, 1H), 3.85 (q, <i>J</i> = 7.3 Hz, 1H), 3.75 (s, 3H), 3.74 (s, 3H), 2.29 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) (NH protons not observed).
335	12518209			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₄ , 372.2169; found, 372.2146	¹ H NMR (500 MHz, Methanol-d ₄) δ 6.75 (d, <i>J</i> = 4.0 Hz, 2H), 6.69 (dt, <i>J</i> = 6.6, 1.9 Hz, 2H), 6.61 (s, 1H), 6.58 (d, <i>J</i> = 2.3 Hz, 1H), 5.82 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 3.97 (d, <i>J</i> = 10.5 Hz, 1H), 3.85 (q, <i>J</i> = 7.3 Hz, 1H), 3.75 (s, 3H), 3.74 (s, 3H), 2.29 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H) (NH protons not observed).

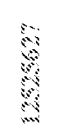
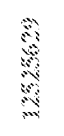
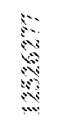
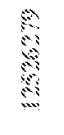
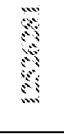
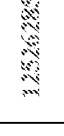
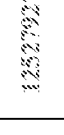
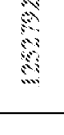
Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
336	12318211			ESIMS m/z 372.1 ([M+H] ⁺)	¹ H NMR (500 MHz, Methanol-d ₄) δ 7.03 (dd, J = 11.9, 7.5 Hz, 2H), 6.92 – 6.80 (m, 4H), 5.88 (dq, J = 10.5, 6.1 Hz, 1H), 4.05 (d, J = 10.4 Hz, 1H), 3.88 (q, J = 7.2 Hz, 1H), 3.80 (d, J = 1.0 Hz, 6H), 2.12 (s, 3H), 2.11 (s, 3H), 1.26 (d, J = 6.1 Hz, 3H), 0.90 (d, J = 7.2 Hz, 3H) (NH protons not observed).
337	12318213			HRMS-ESI (m/z) ([M+H] ⁺) calcd for C ₂₀ H ₂₄ F ₂ NO ₄ , 380.1668; found, 380.1667	¹ H NMR (500 MHz, Methanol-d ₄) δ 7.15 – 7.06 (m, 4H), 7.03 (q, J = 8.5 Hz, 2H), 5.77 (dq, J = 10.1, 6.2 Hz, 1H), 4.06 (d, J = 10.0 Hz, 1H), 3.93 (q, J = 7.3 Hz, 1H), 3.83 (s, 3H), 3.82 (s, 3H), 1.25 (d, J = 6.1 Hz, 3H), 1.00 (d, J = 7.3 Hz, 3H) (NH protons not observed). ¹⁹ F NMR (471 MHz, Methanol-d ₄) δ -136.28 (dd, J = 12.6, 8.5 Hz), -136.53 (dd, J = 12.6, 8.9 Hz).
338	12318215			ESIMS m/z 372.1 ([M+H] ⁺)	¹ H NMR (500 MHz, Methanol-d ₄) δ 7.14 – 7.03 (m, 4H), 6.80 (dd, J = 12.7, 8.4 Hz, 2H), 5.77 (dq, J = 10.3, 6.2 Hz, 1H), 3.92 (d, J = 10.4 Hz, 1H), 3.86 (q, J = 7.2 Hz, 1H), 3.78 (s, 3H), 3.76 (s, 3H), 2.15 (s, 3H), 2.14 (s, 3H), 1.23 (d, J = 6.1 Hz, 3H), 0.92 (d, J = 7.3 Hz, 3H) (NH protons not observed).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
339	12518217			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₆ , 404.2068; found, 404.2059	¹ H NMR (500 MHz, Methanol-d ₄) δ 7.03 (d, <i>J</i> = 3.0 Hz, 1H), 6.90 – 6.80 (m, 3H), 6.75 (ddd, <i>J</i> = 8.9, 4.5, 3.1 Hz, 2H), 5.99 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.91 (d, <i>J</i> = 10.2 Hz, 1H), 3.89 (q, <i>J</i> = 7.2 Hz, 1H), 3.81 (s, 3H), 3.73 (s, 3H), 3.73 (s, 3H), 3.70 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H) (NH protons not observed).
340	12518845		(Thin film) 2938, 1742, 1617, 1501, 1473, 1429, 1293, 1233, 1189, 1119, 1050, 950, 785	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₀ H ₂₂ F ₄ NO ₄ , 416.1479; found, 416.1479	
341	12518867		(Thin film) 2866, 1742, 1500, 1454, 1378, 1226, 1113, 1048, 808, 792, 737	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₂ , 340.2271; found, 340.2269	
342	12518869		(Thin film) 2863, 1748, 1736, 1526, 1500, 1456, 1376, 1238, 1187, 1116, 1048, 810, 791, 751	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₃₀ NO ₂ , 340.2271; found, 340.2274	

Cmpd. No.	Fig. 5	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
343	12518871		(Thin film) 2878, 1751, 1738, 1587, 1526, 1494, 1459, 1240, 1226, 1188, 1130, 1048, 811, 754	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₀ H ₂₄ F ₂ NO ₂ , 348.1770; found, 348.1771	
344	12518873		(Thin film) 2962, 1747, 1596, 1497, 1234, 1205, 1114, 1052, 1034, 829, 811, 713	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₀ H ₂₄ F ₂ NO ₄ , 380.1668; found, 380.1665	
345	12518875		(Thin film) 2839, 1744, 1622, 1583, 1506, 1444, 1287, 1254, 1193, 1116, 1050, 1030, 872, 833	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₀ H ₂₄ F ₂ NO ₄ , 380.1668; found, 380.1671	
346	12518877		(Thin film) 2941, 1742, 1615, 1588, 1457, 1417, 1326, 1241, 1171, 1116, 1032, 873, 859, 740	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₂ H ₂₄ F ₆ NO ₄ , 480.1604; found, 480.1607	
347	12518868			ESIMS <i>m/z</i> 408.2 ([M+H] ⁺)	

Cmpd. No.	M_n (g/mol)	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
348	12518971			ESIMS m/z 436.2 ([M+H] ⁺)	
349	12519821			ESIMS m/z 404.1 ([M+H] ⁺)	
350	12520117			ESIMS m/z 372.1 ([M+H] ⁺)	
351	12520119			ESIMS m/z 372.1 ([M+H] ⁺)	
352	12521379			ESIMS m/z 380 ([M+H] ⁺)	
353	12521381			ESIMS m/z 372 ([M+H] ⁺)	
354	12522145			ESIMS m/z 332 ([M+H] ⁺)	
355	12522147			ESIMS m/z 316 ([M+H] ⁺)	
356	12522181			ESIMS m/z 332 ([M+H] ⁺)	
357	12522183			ESIMS m/z 316 ([M+H] ⁺)	

Cmpd. No.	SMILES	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
358	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 346 ([M+H] ⁺)	
359	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 330 ([M+H] ⁺)	
360	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 346 ([M+H] ⁺)	
361	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 350 ([M+H] ⁺)	
362	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 334 ([M+H] ⁺)	
363	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 350 ([M+H] ⁺)	
364	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 334 ([M+H] ⁺)	
365	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 312([M+H] ⁺)	
366	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 364.2 ([M+H] ⁺)	
367	CC1=CC=C(C=C1)C2=CC=CC=C2			ESIMS <i>m/z</i> 368.2 ([M+H] ⁺)	

Cmpd. No.	SMILES	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
368				ESIMS <i>m/z</i> 364.2 ([M+H] ⁺)	
369				ESIMS <i>m/z</i> 352.2 ([M+H] ⁺)	
370				ESIMS <i>m/z</i> 316([M+H] ⁺)	
371				ESIMS <i>m/z</i> 334([M+H] ⁺)	
372				ESIMS <i>m/z</i> 330 ([M+H] ⁺)	
373				ESIMS <i>m/z</i> 348([M+H] ⁺)	
374				ESIMS <i>m/z</i> 352 ([M+H] ⁺)	
375				ESIMS <i>m/z</i> 316 ([M+H] ⁺)	
376				ESIMS <i>m/z</i> 364 ([M+H] ⁺)	

Cmpd. No.	Fig. 5	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
377	12329191		(Thin film) 3408, 2920, 1740, 1512, 1495, 1452, 1232, 1198, 1114, 1048, 734, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₉ H ₂₄ NO ₂ , 298.1802; found, 298.1798	
378	12329193		(Thin film) 2877, 1749, 1599, 1515, 1493, 1452, 1228, 1193, 1139, 1119, 1055, 744, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₉ H ₂₄ NO ₂ , 298.1802; found, 298.1795	
379	12329195		(Thin film) 2879, 1747, 1602, 1508, 1454, 1227, 1197, 1116, 1053, 814, 733	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₉ H ₂₃ FNO ₂ , 316.1707; found, 316.1703	
380	12329197		(Thin film) 2896, 1741, 1604, 1509, 1453, 1226, 1117, 1047, 732, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₂₁ FNO ₂ , 302.1551; found, 302.1548	
381	12329199		(Thin film) 2919, 1741, 1603, 1509, 1459, 1229, 1117, 1049, 813	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₉ H ₂₃ FNO ₂ , 316.1707; found, 316.1705	

Cmpd. No.	Fig. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
382	125		(Thin film) 3396, 2936, 1743, 1619, 1602, 1503, 1454, 1235, 1208, 1145, 1116, 966, 850, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₂₀ F ₂ NO ₂ , 320.1457; found, 320.1451	
383	126		(Thin film) 3440, 2924, 1743, 1603, 1502, 1234, 1208, 1116, 1100, 1083, 966, 849	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₉ H ₂₂ F ₂ NO ₂ , 334.1613; found, 334.1606	
384	127		(Thin film) 3384, 2935, 1743, 1603, 1503, 1228, 1117, 966, 850	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₁₉ F ₃ NO ₂ , 338.1362; found, 338.1356	
385	128		(Thin film) 3384, 2935, 1743, 1603, 1503, 1228, 1117, 966, 850	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₁₈ H ₁₉ F ₃ NO ₂ , 338.1362; found, 338.1356	

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
386	2546171			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₅ , 471.1728; found, 471.1726.	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (d, <i>J</i> = 0.6 Hz, 1H), 8.31 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.22 (dddd, <i>J</i> = 11.7, 8.5, 5.3, 2.6 Hz, 4H), 7.02 – 6.89 (m, 4H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.72 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.60 – 4.46 (m, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 1H), 3.94 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 171.56, 168.60, 162.98, 162.87, 160.54, 160.42, 155.41, 148.75, 140.43, 136.83, 136.80, 136.73, 136.70, 130.36, 129.54, 129.46, 115.83, 115.62, 115.50, 115.29, 109.46, 73.32, 56.14, 56.08, 47.87, 30.92, 19.12, 17.67.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
387	12345678			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₂₅H₂₅F₂N₂O₅, 471.1723; found, 471.1726.	¹H NMR (400 MHz, CDCl₃) δ 12.08 (d, <i>J</i> = 0.7 Hz, 1H), 8.20 (d, <i>J</i> = 8.0 Hz, 1H), 7.99 (d, <i>J</i> = 5.2 Hz, 1H), 7.24 – 7.13 (m, 4H), 7.03 – 6.93 (m, 2H), 6.93 – 6.84 (m, 3H), 5.69 (dq, <i>J</i> = 9.1, 6.2 Hz, 1H), 4.59 – 4.45 (m, 1H), 4.05 (d, <i>J</i> = 9.0 Hz, 1H), 3.96 (s, 3H), 1.34 (d, <i>J</i> = 7.2 Hz, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) δ 171.26, 168.55, 162.94, 162.84, 160.49, 160.40, 155.44, 148.78, 140.44, 136.82, 136.79, 136.46, 136.43, 130.35, 129.74, 129.67, 129.65, 129.57, 115.76, 115.55, 115.46, 115.24, 109.50, 99.99, 73.34, 56.11, 55.66, 47.80, 18.95, 17.74.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
388	12547121		(Thin film) 3371, 2981, 1735, 1649, 1495, 1261, 954, 800, 728	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₅ , 499.2039; found, 499.2044	¹ H NMR (500 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.32 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.24 (dd, <i>J</i> = 8.7, 5.8 Hz, 1H), 7.14 (dd, <i>J</i> = 8.6, 5.8 Hz, 1H), 6.92 – 6.72 (m, 5H), 5.64 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 4.44 (d, <i>J</i> = 9.7 Hz, 1H), 3.94 (s, 3H), 2.38 (s, 3H), 2.31 (s, 3H), 1.31 (d, <i>J</i> = 6.1 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (471 MHz, CDCl ₃) δ -116.46 (td, <i>J</i> = 8.8, 5.7 Hz), -116.87 (td, <i>J</i> = 9.0, 5.9 Hz).
389	12547123		(Thin film) 3370, 2962, 1735, 1649, 1527, 1264, 1145, 801, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₃ H ₄₃ N ₂ O ₅ , 547.3166; found, 547.3163	¹ H NMR (500 MHz, CDCl ₃) δ 12.12 (s, 1H), 8.38 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.29 (d, <i>J</i> = 8.3 Hz, 2H), 7.25 (s, 6H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.80 (dq, <i>J</i> = 10.3, 6.2 Hz, 1H), 4.48 (p, <i>J</i> = 7.3 Hz, 1H), 3.98 (d, <i>J</i> = 10.3 Hz, 1H), 3.93 (s, 3H), 1.28 – 1.25 (m, 12H), 1.24 (s, 9H), 0.83 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.76, 168.50, 155.32, 149.63, 149.44, 148.70, 140.42, 138.71, 138.13, 130.51, 127.66, 127.63, 125.64, 125.36, 109.37, 74.03, 57.25, 56.05, 47.78, 34.37, 34.32, 31.31, 31.30, 19.33, 17.40.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
390	122802		(Thin film) 3370, 2959, 1734, 1649, 1527, 1450, 1280, 1145, 1045, 801, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₉ N ₂ O ₅ , 519.2853; found, 519.2848	¹ H NMR (500 MHz, CDCl ₃) δ 12.12 (s, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.23 (dd, <i>J</i> = 8.3, 2.6 Hz, 5H), 7.13 (d, <i>J</i> = 7.9 Hz, 2H), 7.09 (d, <i>J</i> = 7.9 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.80 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 4.49 (p, <i>J</i> = 7.3 Hz, 1H), 3.98 (d, <i>J</i> = 10.2 Hz, 1H), 3.93 (s, 3H), 2.82 (tp, <i>J</i> = 13.9, 6.9 Hz, 2H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.20 (d, <i>J</i> = 6.9 Hz, 6H), 1.16 (d, <i>J</i> = 6.9 Hz, 6H), 0.86 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.75, 168.50, 155.32, 148.70, 147.36, 147.20, 140.41, 139.09, 138.58, 130.51, 127.91, 126.79, 126.50, 109.37, 73.97, 57.39, 56.05, 47.80, 33.64, 33.62, 23.98, 23.97, 23.93, 19.31, 17.45.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
391	12807131		(Thin film) 3370, 2959, 1734, 1649, 1576, 1450, 1262, 1147, 1050, 800, 728	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₅ , 491.2540; found, 491.2540	¹ H NMR (500 MHz, CDCl ₃) δ 12.12 (s, 1H), 8.36 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.07 – 6.89 (m, 6H), 6.86 (d, <i>J</i> = 5.3 Hz, 1H), 5.76 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.52 (p, <i>J</i> = 7.3 Hz, 1H), 3.94 (s, 3H), 3.91 (d, <i>J</i> = 10.3 Hz, 1H), 2.17 (dd, <i>J</i> = 20.2, 12.3 Hz, 12H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.72, 168.48, 155.32, 148.69, 140.38, 139.15, 138.98, 136.84, 136.38, 135.01, 134.59, 130.50, 129.93, 129.62, 129.33, 129.28, 125.27, 124.99, 109.35, 73.76, 57.12, 56.05, 47.88, 19.88, 19.79, 19.30, 19.29, 19.24, 17.67.
392	12807133		(Thin film) 3358, 2936, 1749, 1659, 1508, 1223, 1131	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₂ F ₅ N ₂ O ₅ , 525.1443; found, 525.1451	¹ H NMR (400 MHz, CDCl ₃) δ 11.51 – 11.26 (m, 1H), 8.72 – 8.46 (m, 1H), 8.10 – 7.95 (m, 1H), 7.24 – 7.13 (m, 4H), 7.03 – 6.82 (m, 5H), 5.88 – 5.70 (m, 1H), 5.31 – 5.11 (m, 1H), 4.12 – 4.04 (m, 1H), 4.01 – 3.93 (m, 3H), 1.32 – 1.25 (m, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
393	1251044		(Thin film) 3371, 2939, 1734, 1649, 1599, 1500, 1277, 1150, 1034, 953	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1926	¹ H NMR (300 MHz, CDCl ₃) δ 12.11 (d, <i>J</i> = 0.7 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.3 Hz, 1H), 7.35 (dd, <i>J</i> = 8.5, 6.7 Hz, 1H), 7.25 – 7.08 (m, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.61 – 6.45 (m, 4H), 5.89 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.83 (d, <i>J</i> = 9.7 Hz, 1H), 4.71 – 4.44 (m, 1H), 3.94 (s, 3H), 3.83 (s, 3H), 3.73 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H).
394	12513919			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₉ N ₂ O ₅ , 448.2071; found, 449.2081.	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.41 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 - 7.12 (m, 10H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.87 (q, <i>J</i> = 6.3 Hz, 1H), 4.59 (p, <i>J</i> = 7.2 Hz, 1H), 3.94 (s, 3H), 1.75 (s, 3H), 1.20 - 1.14 (m, 6H). ¹³ C NMR (101 MHz, CDCl ₃) δ 171.61, 168.58, 155.36, 148.74, 146.44, 144.98, 140.40, 130.48, 128.16, 128.10, 127.93, 127.35, 126.33, 126.16, 109.43, 76.21, 56.06, 50.40, 48.00, 23.98, 17.94, 15.94.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
395	12514323		(Thin film) 3370, 2981, 1734, 1648, 1575, 1527, 1494, 1480, 1450, 1279, 1262, 1242, 1144, 1047, 909, 729, 702	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₇ N ₂ O ₅ , 435.1914; found, 435.1924	1:1 mixture of diastereomers. ¹ H NMR (500 MHz, CDCl ₃) δ 12.14 (s, 1H), 12.09 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 8.24 (d, <i>J</i> = 7.9 Hz, 1H), 8.00 (d, <i>J</i> = 5.2 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 – 7.17 (m, 9H), 7.16 – 7.10 (m, 1H), 6.88 (d, <i>J</i> = 5.2 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.88 – 5.75 (m, 1H), 4.56 – 4.44 (m, 1H), 4.07 (d, <i>J</i> = 5.6 Hz, 1H), 4.05 (d, <i>J</i> = 6.1 Hz, 1H), 3.95 (s, 3H), 3.94 (s, 1H), 1.29 (d, <i>J</i> = 7.2 Hz, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H).
396	12514341		(Thin film) 3372, 2985, 2228, 1738, 1649, 1576, 1529, 1504, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ N ₄ O ₅ , 485.1819; found, 485.1824	¹ H NMR (400 MHz, CDCl ₃) δ 11.96 (s, 1H), 8.24 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (t, <i>J</i> = 5.4 Hz, 1H), 7.63 – 7.59 (m, 2H), 7.57 – 7.50 (m, 2H), 7.40 – 7.37 (m, 2H), 7.37 – 7.33 (m, 2H), 6.93 – 6.84 (m, 1H), 5.83 – 5.71 (m, 1H), 4.61 – 4.46 (m, 1H), 4.21 (d, <i>J</i> = 9.3 Hz, 1H), 3.96 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.13 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
397	128,183,343		(Thin film) 2984, 1739, 1681, 1617, 1577, 1530, 1482	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₅ F ₆ N ₂ O ₅ , 571.1662; found, 571.1671	¹ H NMR (400 MHz, CDCl ₃) δ 12.01 (s, 1H), 8.31 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.57 (d, <i>J</i> = 8.1 Hz, 2H), 7.52 (d, <i>J</i> = 8.3 Hz, 2H), 7.42 (d, <i>J</i> = 8.3 Hz, 2H), 7.39 (d, <i>J</i> = 8.3 Hz, 2H), 6.87 (d, <i>J</i> = 5.3 Hz, 1H), 5.90 – 5.82 (m, 1H), 4.59 – 4.48 (m, 1H), 4.22 (d, <i>J</i> = 9.6 Hz, 1H), 3.94 (s, 3H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -62.66, -62.69.
398	128,183,344		(Thin film) 3364, 2981, 1713, 1650, 1607, 1529, 1481, 1418	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₅ N ₂ O ₉ , 579.2337; found, 579.2349	¹ H NMR (400 MHz, CDCl ₃) δ 12.03 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 8.00 – 7.95 (m, 3H), 7.93 (d, <i>J</i> = 8.4 Hz, 2H), 7.38 (d, <i>J</i> = 8.4 Hz, 2H), 7.35 (d, <i>J</i> = 8.3 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.86 (dp, <i>J</i> = 9.1, 7.1, 6.6 Hz, 1H), 4.60 – 4.50 (m, 1H), 4.35 (qd, <i>J</i> = 7.1, 2.8 Hz, 4H), 4.22 (d, <i>J</i> = 9.7 Hz, 1H), 3.93 (s, 3H), 1.37 (t, <i>J</i> = 7.2 Hz, 3H), 1.37 (t, <i>J</i> = 7.1 Hz, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
399	12213915		(Thin film) 3364, 2939, 1734, 1649, 1488, 1449, 1243	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ Cl ₂ N ₂ O ₇ , 563.1346; found, 563.1354	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.34 (d, <i>J</i> = 7.9 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 (d, <i>J</i> = 8.3 Hz, 1H), 7.09 (d, <i>J</i> = 8.7 Hz, 1H), 6.86 (d, <i>J</i> = 5.3 Hz, 1H), 6.85 – 6.80 (m, 3H), 6.74 (d, <i>J</i> = 2.0 Hz, 1H), 5.88 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.83 (d, <i>J</i> = 9.7 Hz, 1H), 4.54 (p, <i>J</i> = 7.2 Hz, 1H), 3.94 (s, 3H), 3.83 (s, 3H), 3.74 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H).
400	12213919		(Thin film) 3373, 2980, 1734, 1649, 1598, 1480, 1263, 1161, 1040	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ F ₂ N ₂ O ₇ , 559.225; found, 559.2258	¹ H NMR (400 MHz, CDCl ₃) δ 12.12 (s, 1H), 8.36 (d, <i>J</i> = 7.9 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 (dd, <i>J</i> = 8.5, 6.8 Hz, 1H), 7.15 (dd, <i>J</i> = 9.0, 6.9 Hz, 1H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 6.62 – 6.39 (m, 4H), 5.99 – 5.89 (m, 1H), 4.82 (d, <i>J</i> = 10.1 Hz, 1H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 4.03 – 3.81 (m, 7H), 1.47 (t, <i>J</i> = 7.0 Hz, 3H), 1.40 (t, <i>J</i> = 7.0 Hz, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.62, -114.03.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
401	12312921		(Thin film) 3367, 2980, 1735, 1650, 1576, 1528, 1243, 1147, 1041	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ Cl ₂ N ₂ O ₇ , 591.1659; found, 591.1662	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.36 (d, <i>J</i> = 7.9 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.29 (d, <i>J</i> = 8.3 Hz, 1H), 7.11 (d, <i>J</i> = 8.2 Hz, 1H), 6.85 (d, <i>J</i> = 5.3 Hz, 1H), 6.80 (dd, <i>J</i> = 8.2, 2.0 Hz, 2H), 6.77 (d, <i>J</i> = 2.0 Hz, 1H), 6.70 (d, <i>J</i> = 2.1 Hz, 1H), 5.92 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.82 (d, <i>J</i> = 10.0 Hz, 1H), 4.62 – 4.47 (m, 1H), 4.03 – 3.81 (m, 7H), 1.47 (t, <i>J</i> = 6.9 Hz, 3H), 1.39 (t, <i>J</i> = 6.9 Hz, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H).
402	12312923		(Thin film) 3374, 2976, 1733, 1649, 1527, 1450, 1261, 1142, 1044	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₉ N ₂ O ₇ , 551.2752; found, 551.2716	¹ H NMR (400 MHz, CDCl ₃) δ 12.17 (s, 1H), 8.40 (d, <i>J</i> = 7.9 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.28 (d, <i>J</i> = 7.8 Hz, 1H), 7.13 (d, <i>J</i> = 7.6 Hz, 1H), 6.84 (d, <i>J</i> = 5.3 Hz, 1H), 6.70 – 6.50 (m, 4H), 5.96 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 4.90 (d, <i>J</i> = 10.2 Hz, 1H), 4.53 (p, <i>J</i> = 7.2 Hz, 1H), 4.05 – 3.80 (m, 7H), 2.26 (s, 3H), 2.22 (s, 3H), 1.47 (t, <i>J</i> = 7.0 Hz, 3H), 1.39 (t, <i>J</i> = 6.9 Hz, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
403	12216547			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1944; found, 531.1937	¹ H NMR (400 MHz, CDCl ₃) δ 12.04 (d, <i>J</i> = 0.7 Hz, 1H), 8.31 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.05 - 6.90 (m, 2H), 6.90 - 6.77 (m, 5H), 5.73 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.63 - 4.47 (m, 1H), 3.99 (d, <i>J</i> = 9.9 Hz, 1H), 3.94 (s, 3H), 3.86 (s, 3H), 3.85 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.08 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -137.02, -137.51.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
404	12216851			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₂₉H₃₅N₂O₇, 523.2432; found, 523.2426	¹H NMR (400 MHz, CDCl₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.20 (d, <i>J</i> = 8.6 Hz, 1H), 7.16 - 7.08 (m, 1H), 6.86 (d, <i>J</i> = 5.3 Hz, 1H), 6.71 - 6.63 (m, 3H), 6.59 (d, <i>J</i> = 2.8 Hz, 1H), 5.65 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.61 - 4.46 (m, 1H), 4.39 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 3.75 (s, 3H), 3.72 (s, 3H), 2.37 (s, 3H), 2.30 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) δ 171.70, 168.56, 157.82, 157.67, 155.37, 148.74, 140.37, 137.93, 137.69, 131.88, 131.34, 130.50, 128.88, 128.13, 116.26, 116.08, 111.28, 110.86, 109.41, 75.02, 56.04, 55.08, 47.93, 46.22, 20.36, 20.30, 18.82, 17.78.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
405	12817487		(Thin film) 3368, 2937, 2837, 1732, 1650, 1609, 1578, 1529, 1504	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₉ , 555.2337; found, 555.2327	¹ H NMR (300 MHz, CDCl ₃) δ 12.16 (s, 1H), 8.37 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 (d, <i>J</i> = 8.4 Hz, 1H), 7.11 (d, <i>J</i> = 8.4 Hz, 1H), 6.85 (d, <i>J</i> = 5.3 Hz, 1H), 6.42 – 6.34 (m, 3H), 6.32 (d, <i>J</i> = 2.5 Hz, 1H), 5.88 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.82 (d, <i>J</i> = 9.9 Hz, 1H), 4.61 – 4.46 (m, 1H), 3.94 (s, 3H), 3.82 (s, 3H), 3.75 (s, 3H), 3.74 (s, 3H), 3.73 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H).
406	12817489		(Thin film) 3373, 2936, 1734, 1650, 1611, 1577, 1529, 1505	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2437	¹ H NMR (300 MHz, CDCl ₃) δ 12.16 (d, <i>J</i> = 0.6 Hz, 1H), 8.38 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.30 (d, <i>J</i> = 7.8 Hz, 1H), 7.10 (d, <i>J</i> = 8.1 Hz, 1H), 6.85 (dd, <i>J</i> = 5.3, 0.6 Hz, 1H), 6.70 – 6.59 (m, 3H), 6.57 – 6.53 (m, 1H), 5.92 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.90 (d, <i>J</i> = 9.9 Hz, 1H), 4.60 – 4.43 (m, 1H), 3.94 (s, 3H), 3.83 (s, 3H), 3.72 (s, 3H), 2.27 (s, 3H), 2.24 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
407	12317461		(Thin film) 3370, 2937, 2936, 1734, 1650, 1576, 1528, 1501	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2429	¹ H NMR (300 MHz, CDCl ₃) δ 12.16 (d, <i>J</i> = 0.6 Hz, 1H), 8.38 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.20 (d, <i>J</i> = 2.2 Hz, 1H), 7.05 (d, <i>J</i> = 2.2 Hz, 1H), 6.98 – 6.84 (m, 2H), 6.85 (dd, <i>J</i> = 5.4, 0.6 Hz, 1H), 6.74 (d, <i>J</i> = 8.3 Hz, 1H), 6.64 (d, <i>J</i> = 8.3 Hz, 1H), 5.88 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.96 (d, <i>J</i> = 10.3 Hz, 1H), 4.60 – 4.45 (m, 1H), 3.94 (s, 3H), 3.82 (s, 3H), 3.72 (s, 3H), 2.24 (s, 3H), 2.21 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H).
408	12317463		(Thin film) 3368, 2940, 2839, 1736, 1650, 1577, 1528, 1478, 1453, 1434	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1942	¹ H NMR (300 MHz, CDCl ₃) for both diastereomers of a 1:1 mixture δ 12.14 (d, <i>J</i> = 0.7 Hz, 1H), 12.07 (d, <i>J</i> = 0.6 Hz, 1H), 8.32 (d, <i>J</i> = 8.6 Hz, 1H), 8.29 (d, <i>J</i> = 8.4 Hz, 1H), 7.98 (d, <i>J</i> = 5.3 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.20 – 7.11 (m, 2H), 7.01 – 6.82 (m, 12H), 5.82 – 5.63 (m, 2H), 5.04 (d, <i>J</i> = 10.1 Hz, 1H), 5.03 (d, <i>J</i> = 9.3 Hz, 1H), 4.63 – 4.42 (m, 2H), 3.96 (s, 3H), 3.95 (s, 3H), 3.93 (d, <i>J</i> = 2.1 Hz, 3H), 3.90 (d, <i>J</i> = 2.1 Hz, 3H), 3.78 (d, <i>J</i> = 1.8 Hz, 3H), 3.78 (d, <i>J</i> = 1.8 Hz, 3H), 1.37 (d, <i>J</i> = 7.2 Hz, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.13 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
409	12511466		(Thin film) 3368, 2940, 2839, 1736, 1650, 1528, 1495, 1482	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1937	¹ H NMR (300 MHz, CDCl ₃) for the major isomer of a 2:1 mixture of diastereomers d 12.09 (d, <i>J</i> = 0.6 Hz, 1H), 8.37 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.16 (dd, <i>J</i> = 9.6, 2.9 Hz, 1H), 6.96 (dd, <i>J</i> = 9.3, 3.2 Hz, 1H), 6.90 – 6.75 (m, 4H), 6.72 (d, <i>J</i> = 4.7 Hz, 1H), 5.98 – 5.79 (m, 1H), 4.91 – 4.83 (m, 1H), 4.62 – 4.46 (m, 1H), 3.94 (s, 3H), 3.83 (s, 3H), 3.73 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
410	12518433			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₉ , 555.2337; found, 555.2317	¹ H NMR (300 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 12.20 (s, 1H), 12.11 (s, 1H), 8.37 (d, <i>J</i> = 7.8 Hz, 2H), 7.97 (t, <i>J</i> = 5.2 Hz, 2H), 7.09 – 6.81 (m, 10H), 6.78 – 6.68 (m, 4H), 5.79 – 5.59 (m, 2H), 5.11 (dd, <i>J</i> = 9.8, 6.2 Hz, 2H), 4.52 (dp, <i>J</i> = 10.0, 7.1 Hz, 2H), 3.95 (s, 3H), 3.94 (s, 3H), 3.89 (s, 3H), 3.86 (s, 3H), 3.84 (s, 3H), 3.83 (s, 3H), 3.81 (s, 3H), 3.79 (s, 3H), 3.73 (s, 3H), 3.70 (s, 3H), 1.35 (d, <i>J</i> = 7.2 Hz, 3H), 1.27 (d, <i>J</i> = 4.7 Hz, 3H), 1.25 (d, <i>J</i> = 4.7 Hz, 3H), 1.08 (d, <i>J</i> = 7.2 Hz, 3H) ¹³ C NMR (126 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 171.68, 171.35, 168.48, 168.46, 155.31, 155.29, 152.81, 152.79, 152.74, 152.72, 148.71, 148.67, 147.33, 147.31, 147.15, 147.12, 140.36, 134.98, 134.79, 134.67, 134.47, 130.57, 130.50, 123.69, 123.65, 123.62, 121.03, 120.94, 120.41, 120.24, 110.79, 110.57, 110.55, 109.35, 109.33, 73.98, 60.39, 60.37, 60.27, 56.07, 56.05, 55.65, 55.57, 55.55, 47.92, 47.90, 41.96, 41.92, 18.80, 18.72, 18.04, 17.74.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
411	12318461			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₂₉H₃₅N₂O₇, 523.2439; found, 523.2409	¹H NMR (300 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 12.20 (d, <i>J</i> = 0.5 Hz, 1H), 12.11 (d, <i>J</i> = 0.5 Hz, 1H), 8.36 (d, <i>J</i> = 7.8 Hz, 2H), 7.98 (dd, <i>J</i> = 5.9, 5.2 Hz, 2H), 7.32 (ddd, <i>J</i> = 12.0, 7.2, 2.1 Hz, 2H), 7.17 – 7.09 (m, 2H), 7.09 – 6.80 (m, 10H), 5.76 – 5.57 (m, 2H), 5.08 (t, <i>J</i> = 9.6 Hz, 2H), 4.59 – 4.41 (m, 2H), 3.96 (s, 3H), 3.94 (s, 3H), 3.83 (s, 3H), 3.79 (s, 3H), 3.69 (s, 3H), 3.68 (s, 3H), 2.36 – 2.19 (m, 12H), 1.33 – 1.23 (m, 9H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (126 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 171.66, 171.15, 168.48, 168.46, 156.89, 156.80, 156.76, 155.32, 148.74, 148.69, 140.38, 140.33, 133.98, 133.84, 133.74, 133.69, 131.21, 131.19, 131.02, 130.98, 130.56, 130.47, 130.09, 130.04, 129.77, 129.74, 126.86, 126.71, 126.59, 126.34, 123.84, 123.80, 123.73, 109.36, 74.58, 74.50, 60.29, 60.22, 60.19, 56.08, 56.07, 47.89, 47.85, 41.76, 41.70, 19.02, 18.93, 18.03, 17.65, 16.69, 16.66, 16.48, 16.45.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
412	12518468				¹H NMR (400 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 12.18 (s, 1H), 12.11 (s, 1H), 8.36 (d, <i>J</i> = 7.9 Hz, 1H), 8.28 (d, <i>J</i> = 7.7 Hz, 1H), 8.06 – 7.91 (m, 2H), 7.11 – 7.00 (m, 4H), 6.95 (t, <i>J</i> = 8.6 Hz, 2H), 6.89 – 6.82 (m, 4H), 6.70 (d, <i>J</i> = 8.2 Hz, 2H), 6.65 (dd, <i>J</i> = 8.0, 4.5 Hz, 2H), 5.70 (ddq, <i>J</i> = 12.3, 6.1, 3.3, 2.6 Hz, 2H), 4.62 (dd, <i>J</i> = 12.2, 9.9 Hz, 2H), 4.49 (dp, <i>J</i> = 22.0, 7.2 Hz, 2H), 3.94 (s, 3H), 3.93 (s, 3H), 3.79 (s, 3H), 3.79 (s, 3H), 3.75 (s, 3H), 3.74 (s, 3H), 2.29 (s, 3H), 2.26 (s, 3H), 2.19 (s, 3H), 2.18 (s, 3H), 1.35 – 1.25 (m, 9H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 171.69, 171.27, 168.52, 157.74, 157.55, 155.32, 148.73, 140.69, 140.38, 140.12, 139.96, 130.52, 126.17, 126.11, 125.90, 125.55, 125.38, 120.47, 120.38, 119.87, 119.66, 109.38, 108.32, 74.97, 74.87, 56.03, 55.46, 55.43, 47.92, 47.89, 47.53, 18.74, 18.72, 17.98, 17.69, 11.84, 11.74, 11.42.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
413	12218445		(Thin film) 3374, 2941, 1737, 1650, 1529, 1501, 1476, 1453, 1431, 1281, 1263, 1243, 1058, 952, 801	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₇ F ₄ N ₂ O ₇ , 567.1749; found, 567.1750	¹ H NMR (400 MHz, CDCl ₃) δ 12.03 (s, 1H), 8.28 (d, <i>J</i> = 8.0 Hz, 1H), 7.96 (d, <i>J</i> = 5.3 Hz, 1H), 7.05 (ddd, <i>J</i> = 8.4, 5.6, 2.2 Hz, 1H), 6.89 – 6.72 (m, 4H), 5.67 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.86 (d, <i>J</i> = 9.6 Hz, 1H), 4.56 (dt, <i>J</i> = 8.1, 7.0 Hz, 1H), 3.97 (d, <i>J</i> = 2.4 Hz, 3H), 3.95 (s, 3H), 3.83 (d, <i>J</i> = 2.1 Hz, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.20 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.48, 168.61, 155.43, 148.73, 147.12 (d, <i>J</i> = 7.3 Hz), 146.96 (d, <i>J</i> = 7.6 Hz), 145.26 (d, <i>J</i> = 13.9 Hz), 143.28 (d, <i>J</i> = 13.8 Hz), 140.44, 130.25, 129.70, 129.47, 123.09 (dd, <i>J</i> = 8.2, 3.8 Hz), 122.45 – 122.20 (m), 110.82 (d, <i>J</i> = 17.3 Hz), 110.57, 109.47, 72.53, 61.22 (d, <i>J</i> = 4.1 Hz), 61.16 (d, <i>J</i> = 3.6 Hz), 56.11, 47.96, 42.46, 18.74, 17.75.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
414	128, 168, 47		(Thin film) 3369, 2925, 1735, 1650, 1576, 1528, 1501, 1481, 1451, 1331, 1280, 1263, 1212, 1145, 1045, 801, 733	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₅ , 491.2540; found, 491.2536	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.11 – 7.00 (m, 3H), 6.94 – 6.84 (m, 4H), 5.73 – 5.64 (m, 1H), 4.55 – 4.44 (m, 2H), 3.94 (s, 3H), 2.36 (s, 3H), 2.28 (s, 3H), 2.26 (s, 6H), 1.30 (d, <i>J</i> = 6.1 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.84, 168.52, 155.34, 148.73, 140.40, 139.09, 138.45, 135.47, 135.11, 133.53, 133.33, 130.60, 130.49, 130.27, 128.60, 127.81, 127.27, 126.95, 109.39, 75.10, 56.07, 47.89, 47.34, 21.29, 21.22, 19.79, 19.75, 18.78, 17.66.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
415	12218649		(Thin film) 3369, 2937, 1734, 1649, 1576, 1527, 1500, 1480, 1450, 1329, 1280, 1262, 1242, 1139, 1043, 908, 799, 728	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₅ , 491.2540; found, 491.2536	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.18 (d, <i>J</i> = 7.9 Hz, 1H), 7.12 (d, <i>J</i> = 7.7 Hz, 1H), 6.98 – 6.89 (m, 3H), 6.87 – 6.81 (m, 2H), 5.69 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.58 – 4.48 (m, 1H), 4.45 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 2.35 (s, 3H), 2.29 (s, 3H), 2.25 (s, 3H), 2.21 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.71, 168.51, 155.32, 148.69, 140.38, 136.43, 136.33, 136.15, 135.95, 135.90, 135.58, 131.50, 131.15, 130.49, 127.77, 127.05, 126.85, 126.58, 109.37, 75.04, 56.06, 47.89, 46.81, 20.84, 20.80, 20.12, 20.07, 18.85, 17.71.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
416	122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000		(Thin film) 3369, 2938, 1736, 1649, 1576, 1528, 1494, 1480, 1452, 1326, 1279, 1263, 1240, 1184, 1145, 1044, 910, 803, 728	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₅ , 499.2039; found, 499.2035	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.36 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.12 (dd, <i>J</i> = 8.4, 6.0 Hz, 1H), 7.06 – 7.00 (m, 2H), 6.93 – 6.77 (m, 4H), 5.60 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.61 – 4.50 (m, 1H), 4.48 (d, <i>J</i> = 9.6 Hz, 1H), 3.94 (s, 3H), 2.35 (s, 3H), 2.28 (s, 3H), 1.34 (d, <i>J</i> = 6.2 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.60, 168.60, 161.36 (d, <i>J</i> = 244.0 Hz), 155.35, 148.72, 140.57 (d, <i>J</i> = 6.5 Hz), 140.48, 139.99 (d, <i>J</i> = 6.6 Hz), 132.34 (d, <i>J</i> = 3.2 Hz), 132.07 (d, <i>J</i> = 7.8 Hz), 132.00 (d, <i>J</i> = 3.3 Hz), 131.72 (d, <i>J</i> = 7.9 Hz), 130.39, 114.85 (d, <i>J</i> = 22.3 Hz), 114.32 (d, <i>J</i> = 22.3 Hz), 113.72 (d, <i>J</i> = 20.7 Hz), 113.42 (d, <i>J</i> = 20.5 Hz), 109.44, 74.21, 56.08, 47.79, 47.70, 19.41, 19.36, 18.76, 17.68.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
417	12518833		(Thin film) 3367, 2940, 1738, 1650, 1530, 1498, 1482, 1453, 1281, 1264, 1242, 1210, 1149, 1037, 802, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1931	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.01 – 6.90 (m, 2H), 6.88 – 6.80 (m, 3H), 6.71 (ddd, <i>J</i> = 8.9, 3.9, 3.1 Hz, 1H), 6.64 (ddd, <i>J</i> = 8.9, 3.9, 3.1 Hz, 1H), 5.85 (dq, <i>J</i> = 12.2, 6.1 Hz, 1H), 4.70 (d, <i>J</i> = 10.4 Hz, 1H), 4.61 – 4.52 (m, 1H), 3.94 (s, 3H), 3.74 (s, 6H), 1.31 (d, <i>J</i> = 6.1 Hz, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.53, 168.53, 155.99 (d, <i>J</i> = 24.2 Hz), 155.76 – 155.59 (m), 155.32, 154.09 (d, <i>J</i> = 24.6 Hz), 148.70, 140.40, 130.42, 127.85 (d, <i>J</i> = 15.9 Hz), 127.56 (d, <i>J</i> = 16.3 Hz), 116.26 (d, <i>J</i> = 24.9 Hz), 115.93 (d, <i>J</i> = 24.8 Hz), 115.16, 114.19, 113.04 (d, <i>J</i> = 8.2 Hz), 109.39, 72.25, 56.07, 55.69, 47.85, 43.42, 18.94, 17.72.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
418	12518885		(Thin film) 3369, 2938, 1737, 1650, 1623, 1577, 1529, 1507, 1481, 1443, 1320, 1282, 1264, 1242, 1195, 1154, 1031, 951, 849, 834, 800, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1933	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.27 (t, <i>J</i> = 8.6 Hz, 1H), 7.16 (t, <i>J</i> = 8.5 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.64 – 6.54 (m, 3H), 6.47 (dd, <i>J</i> = 12.1, 2.6 Hz, 1H), 5.79 (dq, <i>J</i> = 12.0, 6.1 Hz, 1H), 4.66 – 4.52 (m, 2H), 3.94 (s, 3H), 3.75 (s, 3H), 3.72 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.14 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.55, 168.55, 161.19 (d, <i>J</i> = 245.6 Hz), 161.00 (d, <i>J</i> = 245.8 Hz), 159.75 (d, <i>J</i> = 11.3 Hz), 159.47 (d, <i>J</i> = 11.3 Hz), 155.35, 148.69, 140.39, 130.42, 129.87 (d, <i>J</i> = 6.2 Hz), 129.23 (d, <i>J</i> = 5.9 Hz), 119.53 (d, <i>J</i> = 14.6 Hz), 119.33 (d, <i>J</i> = 15.0 Hz), 110.16 (d, <i>J</i> = 3.0 Hz), 109.66 (d, <i>J</i> = 3.0 Hz), 109.38, 101.82 (d, <i>J</i> = 26.7 Hz), 101.59 (d, <i>J</i> = 26.6 Hz), 72.49, 56.05, 55.48 (d, <i>J</i> = 6.8 Hz), 47.90, 41.70, 18.91, 17.79.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
419	12238667		(Thin film) 3370, 2941, 1737, 1651, 1616, 1577, 1529, 1454, 1417, 1326, 1241, 1119, 1080, 1032, 905, 860, 801, 738	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₉ F ₆ N ₂ O ₇ , 631.1873; found, 631.1876	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.54 (d, <i>J</i> = 7.8 Hz, 1H), 7.30 (d, <i>J</i> = 8.0 Hz, 1H), 7.12 (dd, <i>J</i> = 7.9, 1.6 Hz, 2H), 7.04 (d, <i>J</i> = 1.8 Hz, 1H), 6.98 (d, <i>J</i> = 1.7 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.99 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 5.00 (d, <i>J</i> = 9.4 Hz, 1H), 4.59 – 4.48 (m, 1H), 3.94 (s, 3H), 3.89 (s, 3H), 3.81 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.62, 168.58, 157.53, 155.38, 148.73, 140.44, 132.32 (d, <i>J</i> = 8.6 Hz), 130.37, 130.18, 130.04, 129.47, 125.02, 122.83, 117.30, 116.98, 109.43, 107.83 – 106.97 (m), 72.18, 56.07, 55.75, 55.69, 47.82, 18.89, 17.66.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
420	12518707		(Thin film) 3369, 2940, 1737, 1592, 1453, 1135, 1057, 849, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1924	¹ H NMR (500 MHz, CDCl ₃) δ 12.04 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.65 – 6.52 (m, 4H), 6.45 (ddt, <i>J</i> = 24.3, 10.5, 2.2 Hz, 2H), 5.69 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.61 – 4.50 (m, 1H), 3.97 – 3.91 (m, 4H), 3.77 (s, 3H), 3.75 (s, 3H), 1.29 – 1.24 (m, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (471 MHz, CDCl ₃) δ -110.48 – -110.65 (m), - 111.08 (t, <i>J</i> = 10.0 Hz).
421	12518711		(Thin film) 3371, 2938, 1735, 1593, 1454, 1204, 1150, 1063, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₉ , 555.2337; found, 555.2329	¹ H NMR (500 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.46 – 6.43 (m, 4H), 6.27 (dt, <i>J</i> = 26.6, 2.2 Hz, 2H), 5.75 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.58 – 4.47 (m, 1H), 3.94 (s, 3H), 3.89 (d, <i>J</i> = 10.5 Hz, 1H), 3.76 (s, 6H), 3.74 (s, 6H), 1.30 – 1.23 (m, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.70, 168.53, 160.93, 160.75, 155.32, 148.71, 143.38, 143.10, 140.39, 130.45, 109.36, 106.42, 106.08, 98.42, 98.35, 73.11, 58.22, 56.06, 55.30, 55.26, 47.87, 19.21, 17.70.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
422	1228715		(Thin film) 3372, 2937, 1735, 1594, 1528, 1452, 1151, 1065, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2434	¹ H NMR (500 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.36 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.69 (dd, <i>J</i> = 3.8, 1.8 Hz, 2H), 6.64 (t, <i>J</i> = 1.9 Hz, 2H), 6.55 (t, <i>J</i> = 2.0 Hz, 1H), 6.49 (t, <i>J</i> = 1.9 Hz, 1H), 5.75 (dq, <i>J</i> = 10.5, 6.2 Hz, 1H), 4.58 – 4.48 (m, 1H), 3.94 (s, 3H), 3.89 (d, <i>J</i> = 10.5 Hz, 1H), 3.76 (s, 3H), 3.73 (s, 3H), 2.29 (s, 3H), 2.25 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.74, 168.51, 159.74, 159.61, 155.32, 148.70, 142.68, 142.37, 140.40, 139.79, 139.36, 130.47, 121.27, 121.12, 112.62, 112.61, 111.34, 110.82, 109.36, 73.43, 57.89, 56.06, 55.15, 55.11, 47.86, 21.69, 21.61, 19.25, 17.66.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
423	12518719		(Thin film) 3370, 2937, 1734, 1649, 1528, 1452, 1260, 1137, 1039, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2434	¹ H NMR (500 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.02 (dd, <i>J</i> = 7.5, 0.9 Hz, 1H), 6.97 (dd, <i>J</i> = 7.6, 0.8 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.80 (dt, <i>J</i> = 7.5, 2.1 Hz, 2H), 6.74 (d, <i>J</i> = 1.6 Hz, 1H), 6.71 (d, <i>J</i> = 1.6 Hz, 1H), 5.80 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.58 – 4.47 (m, 1H), 3.96 (d, <i>J</i> = 10.3 Hz, 1H), 3.94 (s, 3H), 3.80 (s, 3H), 3.78 (s, 3H), 2.14 (s, 3H), 2.11 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H).
424	12518721		(Thin film) 3370, 2938, 1736, 1515, 1442, 1275, 1216, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₇ , 531.1937; found, 531.1935	¹ H NMR (500 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.01 – 6.91 (m, 4H), 6.91 – 6.79 (m, 3H), 5.65 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.61 – 4.51 (m, 1H), 3.94 (s, 3H), 3.92 (d, <i>J</i> = 9.7 Hz, 1H), 3.85 (s, 3H), 3.83 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.13 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (471 MHz, CDCl ₃) δ -134.12 (dd, <i>J</i> = 12.1, 8.5 Hz), -134.58 (dd, <i>J</i> = 12.1, 8.7 Hz).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
425	1231872		(Thin film) 3370, 2941, 1734, 1649, 1503, 1243, 1135, 1033, 801, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2428	¹ H NMR (500 MHz, CDCl ₃) δ 12.13 (d, <i>J</i> = 0.6 Hz, 1H), 8.36 (d, <i>J</i> = 8.1 Hz, 1H), 7.98 (d, <i>J</i> = 5.1 Hz, 1H), 7.06 (ddd, <i>J</i> = 9.0, 7.1, 2.4 Hz, 2H), 7.01 (d, <i>J</i> = 2.0 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.72 (d, <i>J</i> = 8.4 Hz, 1H), 6.68 (d, <i>J</i> = 8.4 Hz, 1H), 5.71 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.58 – 4.48 (m, 1H), 3.94 (s, 3H), 3.88 (d, <i>J</i> = 10.1 Hz, 1H), 3.77 (s, 3H), 3.74 (s, 3H), 2.16 (s, 3H), 2.12 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.1 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
426	12518731		(Thin film) 3372, 2940, 1735, 1650, 1498, 1223, 1047, 804, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₉ , 555.2337; found, 555.2304	¹ H NMR (500 MHz, CDCl ₃) δ 12.14 (s, 1H), 8.38 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.05 (d, <i>J</i> = 3.0 Hz, 1H), 6.88 (d, <i>J</i> = 3.1 Hz, 1H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 6.77 (d, <i>J</i> = 8.9 Hz, 1H), 6.72 – 6.55 (m, 3H), 5.94 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.93 (d, <i>J</i> = 10.1 Hz, 1H), 4.60 – 4.49 (m, 1H), 3.94 (s, 3H), 3.82 (s, 3H), 3.74 (s, 3H), 3.71 (s, 6H), 1.28 – 1.22 (m, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.72, 168.47, 155.28, 153.41, 153.37, 151.78, 151.70, 148.67, 140.35, 130.55, 130.51, 116.43, 115.36, 112.05, 112.00, 111.68, 111.46, 109.31, 73.26, 56.27, 56.05, 55.62, 55.57, 47.90, 18.87, 17.81.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
427	12518733		(Thin film) 3370, 2939, 1736, 1529, 1452, 1243, 1143, 1043, 801, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₅ N ₂ O ₇ , 523.2439; found, 523.2420	¹ H NMR (500 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.36 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.06 (d, <i>J</i> = 8.4 Hz, 1H), 6.95 (d, <i>J</i> = 8.4 Hz, 1H), 6.90 (d, <i>J</i> = 2.7 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.82 (d, <i>J</i> = 2.7 Hz, 1H), 6.66 (dd, <i>J</i> = 8.4, 2.7 Hz, 1H), 6.60 (dd, <i>J</i> = 8.3, 2.7 Hz, 1H), 5.67 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.58 – 4.49 (m, 1H), 4.46 (d, <i>J</i> = 10.1 Hz, 1H), 3.94 (s, 3H), 3.74 (s, 3H), 3.73 (s, 3H), 2.34 (s, 3H), 2.26 (s, 3H), 1.32 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H).
428	12518937		(Thin film) 3368, 2933, 1736, 1648, 1528, 1492, 1481, 1263, 1094	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ F ₂ N ₂ O ₇ , 560.2283; found, 560.2285	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (s, 1H), 8.32 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.43 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.23 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.11 (dd, <i>J</i> = 9.6, 2.8 Hz, 1H), 7.04 (dd, <i>J</i> = 9.6, 2.8 Hz, 1H), 6.96 – 6.89 (m, 2H), 6.87 (d, <i>J</i> = 5.2 Hz, 1H), 5.63 (dq, <i>J</i> = 8.7, 6.2 Hz, 1H), 4.71 (d, <i>J</i> = 8.8 Hz, 1H), 4.63 (d, <i>J</i> = 12.4 Hz, 1H), 4.58 – 4.36 (m, 4H), 3.94 (s, 3H), 3.43 (s, 3H), 3.38 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.46, -115.76.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
429	12518939		(Thin film) 3369, 2975, 1736, 1649, 1527, 1481, 1262, 1093	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ F ₂ N ₂ O ₇ , 587.2563; found, 587.2559	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.45 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.21 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.12 (dd, <i>J</i> = 9.6, 2.8 Hz, 1H), 7.07 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 6.94 – 6.84 (m, 3H), 5.73 – 5.56 (m, 1H), 4.78 – 4.63 (m, 2H), 4.60 – 4.38 (m, 4H), 3.94 (s, 3H), 3.62 – 3.42 (m, 4H), 1.33 – 1.25 (m, 6H), 1.23 (t, <i>J</i> = 7.0 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.57, -115.85.
430	12521475			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₆ , 483.1931; found, 483.1928	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.3 Hz, 1H), 7.48 – 7.07 (m, 6H), 6.85 (d, <i>J</i> = 5.3 Hz, 1H), 6.58 (t, <i>J</i> = 8.3 Hz, 2H), 5.85 (dd, <i>J</i> = 10.1, 6.0 Hz, 1H), 4.72 – 4.38 (m, 2H), 3.93 (s, 3H), 3.83 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.13.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
431	12521477			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1982; found, 467.1976	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.36 - 7.07 (m, 6H), 6.94 - 6.78 (m, 3H), 5.78 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 4.52 (p, <i>J</i> = 7.3 Hz, 1H), 4.29 (d, <i>J</i> = 10.3 Hz, 1H), 3.93 (s, 3H), 2.39 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.60.
432	12521479			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₆ , 483.1931; found, 483.1931	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.47 - 7.20 (m, 5H), 7.20 - 7.10 (m, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.57 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.49 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.83 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.61 - 4.49 (m, 2H), 3.94 (s, 3H), 3.76 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.49.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
433	12321637			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1982; found, 467.1974	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.35 (dd, <i>J</i> = 8.7, 5.7 Hz, 1H), 7.31 - 7.13 (m, 5H), 6.92 - 6.80 (m, 2H), 6.76 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 5.75 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 4.26 (d, <i>J</i> = 10.1 Hz, 1H), 3.93 (s, 3H), 2.30 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.99.
434	12321869			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₀ FN ₂ O ₆ , 497.2088; found, 497.2077	¹ H NMR (400 MHz, CDCl ₃) δ 12.12 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.19 (d, <i>J</i> = 8.0 Hz, 2H), 7.17 - 7.08 (m, 1H), 7.01 (d, <i>J</i> = 8.0 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.64 - 6.51 (m, 2H), 5.82 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.63 - 4.41 (m, 2H), 3.94 (s, 3H), 3.83 (s, 3H), 2.25 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.38.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
435	12521871			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₀ FN ₂ O ₅ , 481.2139; found, 481.2133	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.38 - 7.26 (m, 1H), 7.13 (d, <i>J</i> = 8.1 Hz, 2H), 7.00 (d, <i>J</i> = 8.0 Hz, 2H), 6.95 - 6.80 (m, 3H), 5.76 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 4.25 (d, <i>J</i> = 10.2 Hz, 1H), 3.93 (s, 3H), 2.38 (s, 3H), 2.24 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.80.
436	12521873			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₀ FN ₂ O ₆ , 497.2088; found, 497.2076	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.33 - 7.22 (m, 1H), 7.19 - 7.13 (m, 2H), 7.06 (d, <i>J</i> = 7.8 Hz, 2H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 6.56 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.48 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.80 (dq, <i>J</i> = 10.4, 6.1 Hz, 1H), 4.62 - 4.44 (m, 2H), 3.94 (s, 3H), 3.76 (s, 3H), 2.28 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.69.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
437	12521877			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₀ FN ₂ O ₅ , 481.2139; found, 481.2121	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.33 (dd, <i>J</i> = 8.7, 5.8 Hz, 1H), 7.18 - 7.00 (m, 4H), 6.94 - 6.81 (m, 2H), 6.74 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 5.73 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.52 (p, <i>J</i> = 7.3 Hz, 1H), 4.22 (d, <i>J</i> = 10.3 Hz, 1H), 3.94 (s, 3H), 2.29 (s, 3H), 2.28 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -117.22.
438	12521149			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₆ , 501.1837; found, 501.1829	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 - 7.23 (m, 2H), 7.12 (dd, <i>J</i> = 8.2, 6.5 Hz, 1H), 6.94 - 6.80 (m, 3H), 6.64 - 6.52 (m, 2H), 5.81 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.61 - 4.38 (m, 2H), 3.94 (s, 3H), 3.83 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.82, -116.36.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
439	12524151			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₅ , 485.1888; found, 485.1874	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.33 - 7.12 (m, 3H), 6.97 - 6.83 (m, 5H), 5.73 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.68 - 4.46 (m, 1H), 4.28 (d, <i>J</i> = 10.1 Hz, 1H), 3.94 (s, 3H), 2.36 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.88, -116.28.
440	12524157			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₆ , 501.1837; found, 501.1824	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.30 - 7.19 (m, 3H), 6.99 - 6.90 (m, 2H), 6.86 (d, <i>J</i> = 5.3 Hz, 1H), 6.57 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.50 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.92 - 5.68 (m, 1H), 4.64 - 4.40 (m, 2H), 3.94 (s, 3H), 3.76 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.15, -116.03.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
441	12524463			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₅ , 485.1888; found, 485.1876	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.96 (d, <i>J</i> = 5.2 Hz, 1H), 7.33 (dd, <i>J</i> = 8.7, 5.7 Hz, 1H), 7.19 (dd, <i>J</i> = 8.5, 5.4 Hz, 2H), 7.02 - 6.90 (m, 2H), 6.91 - 6.82 (m, 2H), 6.77 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 5.71 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.53 (p, <i>J</i> = 7.3 Hz, 1H), 4.26 (d, <i>J</i> = 9.9 Hz, 1H), 3.93 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.42, -116.65.
442	12524903		(Thin film) 3376, 2929, 1736, 1650, 1576, 1529, 1481, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₁ N ₂ O ₅ , 463.2224; found, 463.2227	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (s, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.20 - 7.13 (m, 1H), 7.12 - 7.06 (m, 5H), 7.03 - 6.97 (m, 1H), 6.96 - 6.92 (m, 1H), 6.85 (d, <i>J</i> = 5.2 Hz, 1H), 5.79 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.57 - 4.44 (m, 1H), 3.97 (d, <i>J</i> = 10.4 Hz, 1H), 3.93 (s, 3H), 2.31 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
443	12542631			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₆ , 516.2021; found, 516.2018	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.35 (d, <i>J</i> = 7.7 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.23 (dd, <i>J</i> = 8.5, 6.6 Hz, 1H), 7.17 (dd, <i>J</i> = 8.6, 5.8 Hz, 1H), 6.90 – 6.73 (m, 2H), 6.57 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.49 (dd, <i>J</i> = 10.8, 2.5 Hz, 1H), 5.70 (dq, <i>J</i> = 10.1, 6.1 Hz, 2H), 4.75 (d, <i>J</i> = 10.2 Hz, 1H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 3.94 (s, 3H), 3.76 (s, 3H), 2.43 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.36, -116.89.
444	12542633			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₆ F ₃ N ₂ O ₆ , 519.1737; found, 519.1734	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.29 (dd, <i>J</i> = 8.4, 6.7 Hz, 1H), 7.25 – 7.14 (m, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.81 – 6.70 (m, 2H), 6.56 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.50 (dd, <i>J</i> = 10.8, 2.5 Hz, 1H), 5.82 (dq, <i>J</i> = 11.5, 6.2 Hz, 1H), 4.78 (d, <i>J</i> = 10.1 Hz, 1H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 3.94 (s, 3H), 3.75 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.12 (d, <i>J</i> = 7.5 Hz), -112.18 (d, <i>J</i> = 7.5 Hz), -112.75

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
445	12522635			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₆ , 516.2021; found, 516.2021	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (s, 1H), 8.33 (d, <i>J</i> = 7.9 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 (dd, <i>J</i> = 8.6, 5.8 Hz, 1H), 7.03 (dd, <i>J</i> = 8.3, 6.7 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 6.81 (td, <i>J</i> = 8.5, 2.8 Hz, 1H), 6.75 (dd, <i>J</i> = 9.7, 2.7 Hz, 1H), 6.62 – 6.51 (m, 2H), 5.69 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.76 (d, <i>J</i> = 9.8 Hz, 1H), 4.53 (p, <i>J</i> = 7.2 Hz, 1H), 3.94 (s, 3H), 3.84 (s, 3H), 2.26 (s, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.84, -117.29.
446	12522633			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₆ F ₃ N ₂ O ₅ , 504.1821; found, 504.1818	¹ H NMR (400 MHz, CDCl ₃) δ 12.04 (s, 1H), 8.31 (d, <i>J</i> = 7.8 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 (dd, <i>J</i> = 8.6, 5.7 Hz, 1H), 7.18 – 7.07 (m, 1H), 6.90 – 6.72 (m, 5H), 5.70 (dq, <i>J</i> = 11.7, 6.4 Hz, 1H), 4.64 (d, <i>J</i> = 10.0 Hz, 1H), 4.54 (p, <i>J</i> = 7.2 Hz, 1H), 3.94 (s, 3H), 2.27 (s, 3H), 1.29 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -111.40 (d, <i>J</i> = 7.6 Hz), -112.58 (d, <i>J</i> = 7.6 Hz), -116.32.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
447	128,262,287		(Thin film) 3373, 2980, 2938, 1737, 1650, 1576, 1530, 1481, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1977; found, 467.1974	¹ H NMR (400 MHz, CDCl ₃) δ 12.30 – 12.00 (m, 1H), 8.36 (d, <i>J</i> = 8.0 Hz, 1H), 7.96 (dd, <i>J</i> = 5.2, 1.5 Hz, 1H), 7.39 – 7.12 (m, 6H), 6.89 – 6.82 (m, 2H), 6.72 (dd, <i>J</i> = 11.3, 1.6 Hz, 1H), 5.82 (dq, <i>J</i> = 9.8, 6.0 Hz, 1H), 4.56 (p, <i>J</i> = 7.3 Hz, 1H), 4.41 (d, <i>J</i> = 10.1 Hz, 1H), 3.92 (s, 3H), 2.23 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -118.95.
448	128,262,289		(Thin film) 3377, 2983, 1737, 1650, 1577, 1530, 1510, 1481, 1453, 1440	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₅ , 485.1883; found, 485.1877	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.29 – 7.23 (m, 2H), 7.21 (t, <i>J</i> = 7.9 Hz, 1H), 7.00 – 6.93 (m, 2H), 6.89 – 6.84 (m, 2H), 6.75 – 6.71 (m, 1H), 5.81 – 5.68 (m, 1H), 4.60 – 4.49 (m, 1H), 4.39 (d, <i>J</i> = 10.1 Hz, 1H), 3.94 (s, 3H), 2.24 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.10 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.56, -118.95.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
449	12336293		(Thin film) 3378, 2982, 2932, 1738, 1650, 1576, 1530, 1481, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₃₀ FN ₂ O ₅ , 481.2133; found, 481.2133	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (s, 1H), 8.36 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.1 Hz, 1H), 7.28 – 7.12 (m, 3H), 7.08 (d, <i>J</i> = 7.8 Hz, 2H), 6.88 – 6.81 (m, 2H), 6.71 (d, <i>J</i> = 11.2 Hz, 1H), 5.80 (dq, <i>J</i> = 12.1, 6.2 Hz, 1H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 4.38 (d, <i>J</i> = 10.1 Hz, 1H), 3.92 (s, 3H), 2.28 (s, 3H), 2.22 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.09 (d, <i>J</i> = 7.0 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -119.09.
450	12336293		(Thin film) 3373, 2982, 1737, 1651, 1577, 1530, 1482, 1453	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₅ , 499.2039; found, 499.2033	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.24 (dd, <i>J</i> = 9.4, 5.5 Hz, 1H), 7.15 (t, <i>J</i> = 7.9 Hz, 1H), 6.90 – 6.78 (m, 4H), 6.75 – 6.67 (m, 1H), 5.79 – 5.68 (m, 1H), 4.64 (d, <i>J</i> = 10.2 Hz, 1H), 4.61 – 4.52 (m, 1H), 3.94 (s, 3H), 2.39 (s, 3H), 2.24 (s, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.13 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.44, -118.17.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
451	12526297		(Thin film) 3375, 2982, 2939, 1739, 1651, 1577, 1530, 1504, 1481, 1453	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₆ F ₃ N ₂ O ₅ , 503.1788; found, 503.1784	¹ H NMR (400 MHz, CDCl ₃) δ 12.06 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.32 – 7.20 (m, 2H), 6.91 – 6.70 (m, 5H), 5.86 – 5.76 (m, 1H), 4.70 (d, <i>J</i> = 10.0 Hz, 1H), 4.62 – 4.51 (m, 1H), 3.94 (s, 3H), 2.25 (s, 3H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 1.12 (d, <i>J</i> = 7.3 Hz, 3H).
452	12527931			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1982; found, 467.1969	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 - 7.19 (m, 4H), 7.17 - 7.12 (m, 1H), 7.12 - 7.02 (m, 2H), 6.91 (dd, <i>J</i> = 9.3, 8.3 Hz, 1H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.77 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.59 - 4.46 (m, 1H), 3.99 (d, <i>J</i> = 10.2 Hz, 1H), 3.94 (s, 3H), 2.23 (d, <i>J</i> = 1.9 Hz, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -120.09.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
453	125,279,333			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₇ H ₂₉ F ₂ N ₂ O ₆ , 515.1993; found, 515.1980	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (s, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.97 (d, <i>J</i> = 5.2 Hz, 1H), 7.25 - 7.20 (m, 1H), 7.12 - 7.01 (m, 2H), 6.93 - 6.82 (m, 2H), 6.57 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.50 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.76 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.61 - 4.48 (m, 1H), 4.45 (d, <i>J</i> = 10.2 Hz, 1H), 3.94 (s, 3H), 3.77 (s, 3H), 2.22 (d, <i>J</i> = 1.9 Hz, 3H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 1.07 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.33, -120.33.
454	125,279,333		(Thin film) 3373, 2980, 2938, 1735, 1649, 1576, 1528, 1495, 1480, 1451, 1332, 1280, 1263, 1242, 1213, 1144, 1048, 799, 733, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₉ N ₂ O ₅ , 449.2071; found, 449.2063	¹ H NMR (400 MHz, CDCl ₃) δ 12.10 (d, <i>J</i> = 0.6 Hz, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 - 7.27 (m, 2H), 7.24 - 7.15 (m, 4H), 7.15 - 7.06 (m, 3H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.81 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.57 - 4.46 (m, 1H), 4.02 (d, <i>J</i> = 10.2 Hz, 1H), 3.94 (s, 3H), 2.28 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.68, 168.51, 155.33, 148.70, 141.68, 140.40, 138.15, 136.55, 130.48, 129.48, 128.48, 127.93, 126.59, 109.38, 73.63, 57.57, 56.07, 47.85, 20.98, 19.24, 17.61.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
455	12521929		(Thin film) 3367, 2981, 2938, 1736, 1649, 1576, 1529, 1480, 1451, 1333, 1281, 1263, 1213, 1146, 1048, 801, 734, 700	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₉ N ₂ O ₅ , 449.2071; found, 449.2068	¹ H NMR (400 MHz, CDCl ₃) δ 12.11 (d, <i>J</i> = 0.6 Hz, 1H), 8.35 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.29 – 7.24 (m, 4H), 7.20 – 7.15 (m, 3H), 7.03 (d, <i>J</i> = 7.9 Hz, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.80 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.58 – 4.47 (m, 1H), 4.02 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 2.25 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.65, 168.50, 155.33, 148.69, 141.41, 140.38, 138.28, 136.20, 130.47, 129.12, 128.74, 128.05, 127.90, 126.82, 109.36, 73.61, 57.44, 56.06, 47.86, 20.92, 19.23, 17.67.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
456	122,479,463		(Thin film) 3369, 2982, 2937, 1735, 1649, 1576, 1528, 1508, 1480, 1451, 1329, 1280, 1263, 1218, 1157, 1049, 815, 800, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1977; found, 467.1974	¹ H NMR (400 MHz, CDCl ₃) δ 12.09 (s, 1H), 8.34 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.25 – 7.21 (m, 2H), 7.18 – 7.13 (m, 2H), 7.04 (d, <i>J</i> = 7.9 Hz, 2H), 7.00 – 6.92 (m, 2H), 6.86 (d, <i>J</i> = 5.2 Hz, 1H), 5.75 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.59 – 4.47 (m, 1H), 4.02 (d, <i>J</i> = 9.8 Hz, 1H), 3.94 (s, 3H), 2.26 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.61, 168.52, 161.66 (d, <i>J</i> = 245.6 Hz), 155.35, 148.71, 140.40, 138.01, 137.20 (d, <i>J</i> = 3.3 Hz), 136.40, 130.44, 129.53 (d, <i>J</i> = 7.9 Hz), 129.22, 127.84, 115.57 (d, <i>J</i> = 21.1 Hz), 109.39, 73.44, 56.56, 56.07, 47.85, 20.92, 19.14, 17.66.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
457	1282, 1368		(Thin film) 3373, 2982, 2938, 1736, 1649, 1576, 1529, 1509, 1480, 1452, 1330, 1280, 1263, 1242, 1220, 1159, 1048, 815, 799, 732, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₆ FN ₂ O ₅ , 453.1820; found, 453.1810	¹ H NMR (300 MHz, CDCl ₃) δ 12.07 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.33 – 7.19 (m, 7H), 6.96 – 6.88 (m, 2H), 6.87 (dd, <i>J</i> = 5.3, 0.6 Hz, 1H), 5.78 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.61 – 4.47 (m, 1H), 4.05 (d, <i>J</i> = 10.0 Hz, 1H), 3.94 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.62, 168.57, 161.59 (d, <i>J</i> = 245.2 Hz), 155.38, 148.73, 140.92, 140.43, 137.11 (d, <i>J</i> = 3.5 Hz), 130.39, 129.53 (d, <i>J</i> = 7.8 Hz), 128.88, 127.99, 127.08, 115.29 (d, <i>J</i> = 21.2 Hz), 109.43, 73.50, 57.03, 56.08, 47.87, 19.21, 17.69.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
458	1252, 736, 71		(Thin film) 3366, 2979, 2939, 1736, 1649, 1576, 1529, 1509, 1481, 1451, 1332, 1264, 1242, 1220, 1159, 1049, 815, 800, 770, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₈ FN ₂ O ₅ , 467.1977; found, 467.1969	¹ H NMR (300 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.30 – 7.21 (m, 2H), 7.14 (d, <i>J</i> = 8.3 Hz, 2H), 7.09 (d, <i>J</i> = 8.2 Hz, 2H), 6.95 – 6.84 (m, 3H), 5.76 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.59 – 4.47 (m, 1H), 4.01 (d, <i>J</i> = 10.1 Hz, 1H), 3.94 (s, 3H), 2.29 (s, 3H), 1.25 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.61, 168.55, 161.53 (d, <i>J</i> = 244.9 Hz), 155.37, 148.71, 140.41, 137.93, 137.41 (d, <i>J</i> = 3.3 Hz), 136.72, 130.39, 129.54, 129.41 (d, <i>J</i> = 7.9 Hz), 127.82, 115.24 (d, <i>J</i> = 21.3 Hz), 109.41, 73.55, 56.67, 56.07, 47.87, 20.96, 19.20, 17.68.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
459	12527969		(Thin film) 3376, 2984, 2938, 1737, 1649, 1576, 1529, 1503, 1481, 1452, 1327, 1281, 1263, 1243, 1212, 1146, 1050, 966, 849, 800, 733, 699	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₅ F ₂ N ₂ O ₅ , 471.1726; found, 471.1726	¹ H NMR (400 MHz, CDCl ₃) δ 12.07 (d, <i>J</i> = 0.6 Hz, 1H), 8.32 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.35 – 7.20 (m, 5H), 7.19 – 7.10 (m, 1H), 6.88 – 6.75 (m, 3H), 5.88 – 5.77 (m, 1H), 4.58 – 4.47 (m, 1H), 4.42 (d, <i>J</i> = 10.1 Hz, 1H), 3.94 (s, 3H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.56, 168.54, 162.05 (dd, <i>J</i> = 172.5, 11.9 Hz), 161.09 – 159.28 (m), 155.35, 148.72, 140.42, 140.02, 130.41, 130.23 – 129.63 (m), 128.61, 128.18, 127.03, 124.46 – 123.89 (m), 111.63 (d, <i>J</i> = 21.2 Hz), 109.41, 104.54 – 103.81 (m), 72.76, 56.08, 49.36, 47.83, 18.90, 17.60.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
460	12227371		(Thin film) 3370, 2983, 2937, 1737, 1649, 1576, 1529, 1502, 1481, 1452, 1439, 1329, 1281, 1264, 1243, 1211, 1147, 1050, 966, 849, 801, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₆ H ₂₇ F ₂ N ₂ O ₅ , 485.1883; found, 485.1880	¹ H NMR (400 MHz, CDCl ₃) δ 12.08 (d, <i>J</i> = 0.6 Hz, 1H), 8.33 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.26 – 7.21 (m, 1H), 7.20 – 7.15 (m, 2H), 7.07 – 7.01 (m, 2H), 6.88 – 6.85 (m, 1H), 6.84 – 6.74 (m, 2H), 5.86 – 5.72 (m, 1H), 4.59 – 4.48 (m, 1H), 4.39 (d, <i>J</i> = 9.9 Hz, 1H), 3.94 (s, 3H), 2.26 (s, 3H), 1.28 (d, <i>J</i> = 6.3 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.55, 168.53, 161.99 (dd, <i>J</i> = 171.0, 11.9 Hz), 160.02 (dd, <i>J</i> = 170.8, 11.7 Hz), 155.36, 148.72, 140.41, 136.92, 136.63, 130.43, 129.97 – 129.69 (m), 129.24, 128.06, 124.73 – 124.42 (m), 111.58 (d, <i>J</i> = 17.7 Hz), 109.40, 104.83 – 103.37 (m), 72.82, 56.08, 48.91, 47.85, 20.95, 18.90, 17.67.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
461	12527973		(Thin film) 3371, 2984, 2939, 1738, 1649, 1604, 1577, 1529, 1503, 1481, 1452, 1439, 1326, 1281, 1264, 1242, 1223, 1160, 1050, 966, 849, 810, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₅ H ₂₄ F ₃ N ₂ O ₅ , 489.1632; found, 489.1624	¹ H NMR (400 MHz, CDCl ₃) δ 12.05 (d, <i>J</i> = 0.6 Hz, 1H), 8.30 (d, <i>J</i> = 8.0 Hz, 1H), 7.98 (d, <i>J</i> = 5.2 Hz, 1H), 7.31 – 7.17 (m, 3H), 6.97 – 6.75 (m, 5H), 5.83 – 5.73 (m, 1H), 4.59 – 4.49 (m, 1H), 4.40 (d, <i>J</i> = 10.0 Hz, 1H), 3.95 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 1.08 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 171.51, 168.59, 162.96 – 162.09 (m), 161.43 – 159.21 (m), 155.41, 148.74, 140.45, 135.75, 130.33, 129.73 (d, <i>J</i> = 8.0 Hz), 124.13 (dd, <i>J</i> = 15.2, 3.7 Hz), 115.43 (d, <i>J</i> = 21.3 Hz), 111.73 (d, <i>J</i> = 25.0 Hz), 109.46, 104.30 (t, <i>J</i> = 25.8 Hz), 72.66, 56.10, 48.70, 47.86, 18.91, 17.67.

HRMS-ESI (m/z)
 $([M+H]^+)$
 calcd for
 $C_{28}H_{29}F_2N_2O_7$,
 543.1931; found,
 543.1937.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
463	2.346236			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₂₈H₂₉F₂N₂O₇, 543.1931; found, 543.1937.	¹H NMR (400 MHz, CDCl₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.20 (d, <i>J</i> = 7.9 Hz, 1H), 7.28 – 7.17 (m, 4H), 7.02 – 6.89 (m, 5H), 5.76 – 5.66 (m, 3H), 4.55 (p, <i>J</i> = 7.3 Hz, 1H), 4.04 (d, <i>J</i> = 9.7 Hz, 1H), 3.90 (s, 3H), 2.05 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (101 MHz, CDCl₃) δ 172.24, 170.26, 162.95, 162.90, 162.86, 160.51, 160.42, 160.28, 145.68, 143.98, 142.41, 136.94, 136.91, 136.86, 136.82, 129.62, 129.57, 129.54, 129.49, 115.79, 115.58, 115.49, 115.28, 109.58, 89.51, 73.04, 56.18, 56.13, 48.05, 20.85, 19.14, 17.81.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
464	12537983		(Thin film) 3378, 2984, 1738, 1676, 1496, 1202, 1003, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₇ , 571.2250; found, 571.2265	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.3 Hz, 1H), 8.21 (d, <i>J</i> = 7.9 Hz, 1H), 7.26 – 7.22 (m, 1H), 7.14 (dd, <i>J</i> = 8.6, 5.8 Hz, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.89 – 6.77 (m, 4H), 5.73 (s, 2H), 5.62 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.56 (p, <i>J</i> = 7.2 Hz, 1H), 4.44 (d, <i>J</i> = 9.8 Hz, 1H), 3.91 (s, 3H), 2.38 (s, 3H), 2.33 (s, 3H), 2.06 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.30, 170.26, 162.91, 161.19 (d, <i>J</i> = 245.6 Hz), 161.10 (d, <i>J</i> = 245.0 Hz), 160.28, 145.70, 143.98, 142.43, 139.12 (d, <i>J</i> = 7.4 Hz), 138.81 (d, <i>J</i> = 7.5 Hz), 134.89 (d, <i>J</i> = 3.3 Hz), 134.39 (d, <i>J</i> = 3.2 Hz), 129.37 (d, <i>J</i> = 8.2 Hz), 128.75 (d, <i>J</i> = 8.3 Hz), 117.41 (d, <i>J</i> = 20.9 Hz), 117.10 (d, <i>J</i> = 20.9 Hz), 112.94 (d, <i>J</i> = 20.9 Hz), 112.63 (d, <i>J</i> = 20.8 Hz), 109.59, 89.52, 74.29, 56.19, 48.07, 46.40, 20.86, 20.20, 20.12, 18.82, 17.86. ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.57, -117.03.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
465	12507991		(Thin film) 3379, 2962, 1737, 1676, 1506, 1201, 1004, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₆ H ₄₇ N ₂ O ₇ , 619.3378; found, 619.3388	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.32 – 7.20 (m, 8H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 5.79 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 5.73 – 5.70 (m, 2H), 4.50 (p, <i>J</i> = 7.2 Hz, 1H), 3.98 (d, <i>J</i> = 10.2 Hz, 1H), 3.89 (s, 3H), 2.05 (s, 3H), 1.27 – 1.22 (m, 21H), 0.78 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.43, 170.23, 162.84, 160.24, 149.56, 149.37, 145.69, 143.91, 142.62, 138.80, 138.26, 127.69, 127.65, 125.60, 125.33, 109.49, 89.55, 73.71, 57.25, 56.15, 48.04, 34.36, 34.31, 31.30, 20.85, 19.34, 17.50.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
466	122802		(Thin film) 3378, 2959, 1737, 1676, 1506, 1202, 1044, 1004, 828, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₄ H ₄₃ N ₂ O ₇ , 591.3065; found, 591.3077	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.8 Hz, 1H), 7.28 – 7.19 (m, 4H), 7.16 – 7.06 (m, 4H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 5.78 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 5.72 (d, <i>J</i> = 0.9 Hz, 2H), 4.51 (p, <i>J</i> = 7.2 Hz, 1H), 3.98 (d, <i>J</i> = 10.2 Hz, 1H), 3.89 (s, 3H), 2.81 (dh, <i>J</i> = 10.6, 6.9 Hz, 2H), 2.05 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.18 (dd, <i>J</i> = 13.6, 6.9 Hz, 12H), 0.81 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.42, 170.24, 162.85, 160.24, 147.29, 147.13, 145.69, 143.92, 142.63, 139.19, 138.71, 127.95, 127.92, 126.75, 126.48, 109.49, 89.55, 73.66, 57.39, 56.16, 48.05, 33.65, 33.61, 23.99, 23.97, 23.93, 20.86, 19.33, 17.57.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
467	12507997		(Thin film) 3388, 2979, 1756, 1677, 1503, 1203, 1044, 1004, 970, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₇ , 563.2752; found, 563.2764	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.3 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.07 – 6.90 (m, 7H), 5.82 – 5.67 (m, 3H), 4.54 (p, <i>J</i> = 7.2 Hz, 1H), 3.90 (s, 3H), 2.17 (t, <i>J</i> = 11.4 Hz, 12H), 2.06 (s, 3H), 1.28 – 1.20 (m, 4H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.41, 170.25, 162.84, 160.23, 145.69, 143.90, 142.67, 139.25, 139.11, 136.78, 136.34, 134.93, 134.51, 129.90, 129.62, 129.39, 129.38, 125.30, 125.08, 109.48, 89.55, 73.49, 57.11, 56.16, 48.12, 20.86, 19.87, 19.80, 19.32, 19.29, 19.24, 17.80.
468	12508029			ESIMS <i>m/z</i> 541.2 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.7 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.32 – 7.21 (m, 1H), 7.14 (dd, <i>J</i> = 8.5, 5.8 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.83 (ddd, <i>J</i> = 15.6, 10.1, 7.6 Hz, 4H), 5.62 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.62 – 4.50 (m, 1H), 4.43 (d, <i>J</i> = 9.7 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 2.36 (s, 3H), 2.31 (s, 3H), 1.29 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.52, -116.96.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
469	1258831		(Thin film) 3379, 2962, 1772, 1677, 1508, 1198, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₅ H ₄₅ N ₂ O ₆ , 589.3272; found, 589.3289	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.26 (d, <i>J</i> = 12.1 Hz, 8H), 6.98 (d, <i>J</i> = 5.4 Hz, 1H), 5.78 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.56 – 4.43 (m, 1H), 3.97 (d, <i>J</i> = 10.2 Hz, 1H), 3.88 (s, 3H), 2.37 (s, 3H), 1.25 (d, <i>J</i> = 12.6 Hz, 21H), 0.77 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.32, 168.88, 162.23, 159.40, 149.55, 149.37, 146.64, 141.60, 138.76, 138.25, 137.43, 127.70, 127.65, 125.60, 125.32, 109.67, 73.75, 57.22, 56.25, 47.81, 34.35, 34.31, 31.31, 31.30, 20.73, 19.32, 17.69.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
470	12508033		(Thin film) 3379, 2960, 1772, 1677, 1509, 1201, 1175, 1047, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₃ H ₄₁ N ₂ O ₆ , 561.2959; found, 561.2977	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.6 Hz, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.22 (dd, <i>J</i> = 8.3, 2.5 Hz, 4H), 7.15 – 7.04 (m, 4H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 5.78 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.54 – 4.43 (m, 1H), 3.97 (d, <i>J</i> = 10.2 Hz, 1H), 3.89 (s, 3H), 2.82 (dp, <i>J</i> = 11.9, 6.9 Hz, 2H), 2.37 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.18 (dd, <i>J</i> = 14.7, 6.9 Hz, 12H), 0.80 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.31, 168.89, 162.23, 159.41, 147.28, 147.13, 146.64, 141.61, 139.14, 138.70, 137.43, 127.96, 127.92, 126.75, 126.47, 109.68, 73.70, 57.36, 56.25, 47.83, 33.64, 33.61, 23.97, 23.93, 20.74, 19.31, 17.75.
471	12508035		(Thin film) 3379, 2978, 1771, 1676, 1505, 1450, 1310, 1199, 1050, 907, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₆ , 533.2646; found, 533.2659	¹ H NMR (400 MHz, CDCl ₃) δ 8.48 – 8.37 (m, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.09 – 6.90 (m, 7H), 5.74 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.58 – 4.46 (m, 1H), 3.98 – 3.83 (m, 4H), 2.38 (s, 3H), 2.17 (dd, <i>J</i> = 12.4, 11.0 Hz, 12H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.92 (d, <i>J</i> = 7.1 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
472	12514037		(Thin film) 3382, 2982, 1737, 1677, 1501, 1202	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₉ , 603.2149; found, 603.2163	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.9 Hz, 1H), 7.38 (m, 1H), 7.13 (m, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.61 – 6.47 (m, 4H), 5.87 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 5.72 (s, 2H), 4.84 (d, <i>J</i> = 9.6 Hz, 1H), 4.64 – 4.48 (m, 1H), 3.90 (s, 3H), 3.82 (s, 3H), 3.74 (s, 3H), 2.06 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H).
473	12514038		(Thin film) 3367, 2985, 1749, 1694, 1506, 1201, 1130, 828	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₆ F ₅ N ₂ O ₇ , 597.1655; found, 597.1672	¹ H NMR (400 MHz, CDCl ₃) δ 8.77 – 8.42 (m, 1H), 8.42 – 8.15 (m, 1H), 7.26 – 7.15 (m, 4H), 7.06 – 6.86 (m, 5H), 5.84 – 5.66 (m, 3H), 5.37 – 5.19 (m, 1H), 4.13 – 4.03 (m, 1H), 4.04 – 3.83 (m, 3H), 2.09 – 1.99 (m, 3H), 1.30 – 1.16 (m, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
474	125,146,167			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ N ₂ O ₇ , 521.2282; found, 521.2292.	¹ H NMR (300 MHz, CDCl ₃) δ 8.28 (t, <i>J</i> = 7.2 Hz, 2H), 7.35 - 7.12 (m, 10H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 5.86 (q, <i>J</i> = 6.3 Hz, 1H), 5.75 - 5.68 (m, 2H), 4.62 (p, <i>J</i> = 7.2 Hz, 1H), 3.90 (s, 3H), 2.06 (s, 3H), 1.75 (s, 3H), 1.16 (d, <i>J</i> = 6.3 Hz, 3H), 1.12 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.27, 170.20, 162.88, 160.26, 146.57, 145.66, 145.11, 143.98, 142.56, 128.18, 128.09, 127.92, 127.40, 126.28, 126.11, 109.53, 89.54, 75.94, 56.17, 50.41, 48.23, 23.95, 20.84, 18.13, 15.97.
475	125,146,167		(Thin film) 3379, 2940, 1769, 1736, 1677, 1598, 1500, 1277, 1192, 1174, 1151, 1033, 953	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2055	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 4.6 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.37 (dd, <i>J</i> = 8.5, 6.7 Hz, 1H), 7.12 (dd, <i>J</i> = 8.3, 6.7 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.63 - 6.44 (m, 4H), 5.86 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.83 (d, <i>J</i> = 9.5 Hz, 1H), 4.62 - 4.45 (m, 1H), 3.90 (s, 3H), 3.82 (s, 3H), 3.73 (s, 3H), 2.38 (s, 3H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.49, -113.81.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
476	12514345		(Thin film) 3382, 3028, 2984, 1736, 1677, 1498, 1451, 1436, 1310, 1201, 1043, 967, 910, 829, 728, 703	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₁ N ₂ O ₇ , 507.2126; found, 507.2141	1:1 mixture of diastereomers. ¹ H NMR (500 MHz, CDCl ₃) δ 8.52 – 8.46 (m, 1H), 8.20 (d, <i>J</i> = 7.6 Hz, 1H), 8.16 (d, <i>J</i> = 7.5 Hz, 1H), 7.33 – 7.10 (m, 11H), 5.86 – 5.74 (m, 3H), 4.61 – 4.48 (m, 1H), 4.10 – 4.04 (m, 1H), 4.02 (s, 3H), 2.06 (s, 3H), 2.05 (s, 3H), 1.31 (d, <i>J</i> = 7.1 Hz, 3H), 1.28 – 1.20 (m, 3H), 0.91 (d, <i>J</i> = 7.2 Hz, 3H).
477	12514346		(Thin film) 3376, 2985, 2228, 1769, 1738, 1674, 1505	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₇ N ₄ O ₆ , 527.1925; found, 527.1931	¹ H NMR (400 MHz, CDCl ₃) δ 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 7.60 (d, <i>J</i> = 8.3 Hz, 2H), 7.54 (d, <i>J</i> = 8.3 Hz, 2H), 7.41 – 7.30 (m, 4H), 7.03 (d, <i>J</i> = 5.5 Hz, 1H), 5.76 (dq, <i>J</i> = 8.8, 6.1 Hz, 1H), 4.60 – 4.52 (m, 1H), 4.20 (d, <i>J</i> = 9.0 Hz, 1H), 3.95 (d, <i>J</i> = 9.9 Hz, 1H), 3.92 (s, 3H), 2.39 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.08 (d, <i>J</i> = 7.2 Hz, 3H)
478	12514347		(Thin film) 3387, 2986, 1772, 1739, 1677, 1617, 1509	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₇ F ₆ N ₂ O ₆ , 613.1768; found, 613.178	¹ H NMR (400 MHz, CDCl ₃) δ 8.38 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 – 8.29 (m, 1H), 7.56 (d, <i>J</i> = 7.9 Hz, 2H), 7.52 (d, <i>J</i> = 8.5 Hz, 2H), 7.44 – 7.36 (m, 4H), 7.01 (dd, <i>J</i> = 5.5, 3.5 Hz, 1H), 5.88 – 5.79 (m, 1H), 4.59 – 4.53 (m, 1H), 4.22 (d, <i>J</i> = 9.2 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 1.28 – 1.22 (m, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
479	12515383		(Thin film) 3379, 2980, 1772, 1714, 1678, 1508	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₃ H ₃₇ N ₂ O ₁₀ , 621.2443; found, 621.2451	¹ H NMR (400 MHz, CDCl ₃) δ 8.38 (d, <i>J</i> = 8.7 Hz, 1H), 8.32 – 8.29 (m, 1H), 7.97 (d, <i>J</i> = 8.3 Hz, 2H), 7.93 (d, <i>J</i> = 8.2 Hz, 2H), 7.38 (d, <i>J</i> = 8.3 Hz, 2H), 7.34 (d, <i>J</i> = 8.4 Hz, 2H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 5.85 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.59 – 4.50 (m, 1H), 4.38 – 4.30 (m, 4H), 4.21 (d, <i>J</i> = 9.7 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 1.36 (t, <i>J</i> = 7.3 Hz, 6H), 1.25 (d, <i>J</i> = 6.3 Hz, 3H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H).
480	12518026		(Thin film) 3379, 2983, 1714, 1676, 1607, 1507	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₄ H ₃₉ N ₂ O ₁₁ , 651.2548; found, 651.2560	¹ H NMR (400 MHz, CDCl ₃) δ 8.28 – 8.24 (m, 1H), 8.20 (d, <i>J</i> = 7.8 Hz, 1H), 8.00 – 7.92 (m, 4H), 7.42 – 7.31 (m, 4H), 6.95 (d, <i>J</i> = 5.4 Hz, 1H), 5.85 (dp, <i>J</i> = 9.4, 7.2, 6.6 Hz, 1H), 5.73 – 5.67 (m, 2H), 4.56 (p, <i>J</i> = 6.9 Hz, 1H), 4.39 – 4.28 (m, 4H), 4.22 (d, <i>J</i> = 9.7 Hz, 1H), 3.91 (d, <i>J</i> = 1.5 Hz, 3H), 2.06 (s, 3H), 1.37 (t, <i>J</i> = 7.2 Hz, 6H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
481	12518985		(Thin film) 3379, 2939, 1737, 1677, 1490, 1247, 1202, 1033	HRMS-ESI (<i>m/z</i>) ([M+Na] ⁺) calcd for C ₃₀ H ₃₂ Cl ₂ N ₂ NaO ₉ , 657.1377; found, 657.1387	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.22 (d, <i>J</i> = 7.9 Hz, 1H), 7.34 (d, <i>J</i> = 8.3 Hz, 1H), 7.09 (d, <i>J</i> = 8.0 Hz, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.88 – 6.82 (m, 2H), 6.81 (s, 1H), 6.76 (d, <i>J</i> = 2.0 Hz, 1H), 5.86 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 5.72 (s, 2H), 4.84 (d, <i>J</i> = 9.6 Hz, 1H), 4.57 (p, <i>J</i> = 7.2 Hz, 1H), 3.90 (s, 3H), 3.83 (s, 3H), 3.74 (s, 3H), 2.06 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H).
482	12518987		(Thin film) 3380, 2981, 1736, 1677, 1597, 1500, 1274, 1202, 1003	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₇ F ₂ N ₂ O ₉ , 631.2462; found, 631.2461	¹ H NMR (400 MHz, CDCl ₃) δ 8.25 (t, <i>J</i> = 6.6 Hz, 2H), 7.34 (dd, <i>J</i> = 8.5, 6.9 Hz, 1H), 7.13 (td, <i>J</i> = 7.9, 6.7, 4.7 Hz, 1H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.60 – 6.36 (m, 4H), 5.90 (dq, <i>J</i> = 10.2, 6.2 Hz, 1H), 5.73 (s, 2H), 4.83 (d, <i>J</i> = 10.1 Hz, 1H), 4.63 – 4.48 (m, 1H), 4.08 – 3.79 (m, 7H), 2.06 (s, 3H), 1.47 (t, <i>J</i> = 6.9 Hz, 3H), 1.40 (t, <i>J</i> = 6.9 Hz, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.76, -114.20.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
483	12515923		(Thin film) 3378, 2980, 1736, 1677, 1591, 1491, 1247, 1201, 1040	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₇ Cl ₂ N ₂ O ₉ , 663.1871; found, 663.1877	¹ H NMR (400 MHz, CDCl ₃) δ 8.29 – 8.19 (m, 2H), 7.31 (d, <i>J</i> = 8.3 Hz, 1H), 7.11 (d, <i>J</i> = 8.2 Hz, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.86 – 6.73 (m, 3H), 6.72 (d, <i>J</i> = 2.0 Hz, 1H), 5.89 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 5.73 (s, 2H), 4.83 (d, <i>J</i> = 9.8 Hz, 1H), 4.57 (p, <i>J</i> = 7.2 Hz, 1H), 4.05 – 3.83 (m, 7H), 2.06 (s, 3H), 1.47 (t, <i>J</i> = 6.9 Hz, 3H), 1.39 (t, <i>J</i> = 6.9 Hz, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H).
484	12515931		(Thin film) 3378, 2978, 1758, 1734, 1676, 1504, 1200, 1043	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₄ H ₄₃ N ₂ O ₉ , 623.2963; found, 623.2962	¹ H NMR (400 MHz, CDCl ₃) δ 8.29 – 8.18 (m, 2H), 7.30 (d, <i>J</i> = 7.8 Hz, 1H), 7.13 (d, <i>J</i> = 7.7 Hz, 1H), 6.92 (d, <i>J</i> = 5.4 Hz, 1H), 6.67 – 6.57 (m, 3H), 6.54 (s, 1H), 5.93 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 5.72 (s, 1H), 5.72 (s, 1H), 4.90 (d, <i>J</i> = 10.1 Hz, 1H), 4.55 (p, <i>J</i> = 7.1 Hz, 1H), 4.04 – 3.81 (m, 7H), 2.26 (s, 3H), 2.23 (s, 3H), 2.05 (d, <i>J</i> = 1.8 Hz, 3H), 1.47 (t, <i>J</i> = 7.0 Hz, 3H), 1.39 (t, <i>J</i> = 7.0 Hz, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
485	12516666			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2051; found, 573.2044	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 6.9 Hz, 1H), 8.29 (d, <i>J</i> = 5.4 Hz, 1H), 7.05 - 6.92 (m, 3H), 6.89 (dd, <i>J</i> = 8.1, 2.1 Hz, 1H), 6.82 (dddd, <i>J</i> = 15.8, 8.3, 4.0, 2.1 Hz, 3H), 5.72 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.65 - 4.48 (m, 1H), 3.99 (d, <i>J</i> = 9.8 Hz, 1H), 3.88 (s, 3H), 3.85 (s, 6H), 2.38 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.02 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -137.20, -137.68.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
486	12316589			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2542; found, 565.2535	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (d, <i>J</i> = 7.8 Hz, 1H), 8.28 (d, <i>J</i> = 5.4 Hz, 1H), 7.21 (d, <i>J</i> = 8.5 Hz, 1H), 7.17 - 7.09 (m, 1H), 6.96 (d, <i>J</i> = 5.5 Hz, 1H), 6.79 - 6.57 (m, 4H), 5.63 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.64 - 4.50 (m, 1H), 4.38 (d, <i>J</i> = 9.9 Hz, 1H), 3.86 (s, 3H), 3.73 (s, 3H), 3.71 (s, 3H), 2.38 (s, 3H), 2.35 (s, 3H), 2.31 (s, 3H), 1.29 (d, <i>J</i> = 6.1 Hz, 3H), 1.01 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.25, 168.81, 162.28, 159.43, 157.80, 157.67, 146.63, 141.55, 137.98, 137.71, 137.44, 131.95, 131.46, 128.85, 128.22, 116.24, 116.03, 111.25, 110.94, 109.75, 74.80, 56.24, 55.05, 47.92, 46.23, 20.71, 20.36, 20.28, 18.88, 18.08.
487	12316589			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₉ , 603.2157; found, 603.2150	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.06 - 6.92 (m, 3H), 6.92 - 6.74 (m, 4H), 5.84 - 5.61 (m, 3H), 4.56 (p, <i>J</i> = 7.3 Hz, 1H), 4.00 (d, <i>J</i> = 9.8 Hz, 1H), 3.91 (s, 3H), 3.86 (s, 6H), 2.06 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -137.20, -137.72.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
488	12517467		(Thin film) 3383, 2938, 2837, 1770, 1733, 1677, 1609, 1586, 1505, 1453	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₁₀ , 597.2443; found, 597.2438	¹ H NMR (500 MHz, CDCl ₃) δ 8.44 (s, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 (d, <i>J</i> = 8.5 Hz, 1H), 7.10 (d, <i>J</i> = 8.4 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.42 – 6.34 (m, 4H), 5.85 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.81 (d, <i>J</i> = 9.8 Hz, 1H), 4.59 – 4.49 (m, 1H), 3.90 (s, 3H), 3.82 (s, 3H), 3.75 (s, 3H), 3.74 (s, 3H), 3.73 (s, 3H), 2.38 (s, 3H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H).
489	12517471		(Thin film) 3382, 2937, 1771, 1733, 1677, 1572, 1505, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2541	¹ H NMR (500 MHz, CDCl ₃) δ 8.44 (s, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.31 (d, <i>J</i> = 7.7 Hz, 1H), 7.10 (d, <i>J</i> = 8.1 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.69 – 6.65 (m, 1H), 6.65 – 6.62 (m, 2H), 6.60 – 6.54 (m, 1H), 5.89 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.90 (d, <i>J</i> = 9.8 Hz, 1H), 4.58 – 4.48 (m, 1H), 3.90 (s, 3H), 3.82 (s, 3H), 3.73 (s, 3H), 2.38 (s, 3H), 2.27 (s, 3H), 2.25 (s, 3H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 0.95 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
490	12517473		(Thin film) 3383, 2937, 2836, 1772, 1735, 1678, 1502, 1453	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2538	¹ H NMR (500 MHz, CDCl ₃) δ 8.45 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.22 (d, <i>J</i> = 2.1 Hz, 1H), 7.03 (d, <i>J</i> = 2.2 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.93 (ddd, <i>J</i> = 8.3, 2.3, 0.8 Hz, 1H), 6.89 (ddd, <i>J</i> = 8.2, 2.2, 0.8 Hz, 1H), 6.73 (d, <i>J</i> = 8.3 Hz, 1H), 6.67 (d, <i>J</i> = 8.2 Hz, 1H), 5.85 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.95 (d, <i>J</i> = 10.0 Hz, 1H), 4.58 – 4.46 (m, 1H), 3.90 (s, 3H), 3.82 (s, 3H), 3.72 (s, 3H), 2.38 (s, 3H), 2.25 (s, 3H), 2.21 (s, 3H), 1.22 (d, <i>J</i> = 6.1 Hz, 3H), 0.95 (d, <i>J</i> = 7.1 Hz, 3H).
491	12517479		(Thin film) 3382, 2985, 2941, 2840, 1771, 1736, 1677, 1578, 1508, 1479	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2042	¹ H NMR (500 MHz, CDCl ₃) for both isomers of a 1:1 mixture of diastereomers d 8.40 (s, 1H), 8.38 (s, 1H), 8.32 (d, <i>J</i> = 5.0 Hz, 1H), 8.31 (d, <i>J</i> = 5.3 Hz, 1H), 7.21 – 7.13 (m, 2H), 7.03 – 6.83 (m, 12H), 5.76 – 5.63 (m, 2H), 5.04 (d, <i>J</i> = 11.9 Hz, 1H), 5.02 (d, <i>J</i> = 11.2 Hz, 1H), 4.63 – 4.47 (m, 2H), 3.93 (d, <i>J</i> = 2.0 Hz, 3H), 3.92 (s, 3H), 3.91 – 3.89 (m, 6H), 3.80 (d, <i>J</i> = 1.7 Hz, 3H), 3.76 (d, <i>J</i> = 1.6 Hz, 3H), 2.39 (s, 3H), 2.38 (s, 3H), 1.31 (d, <i>J</i> = 7.2 Hz, 3H), 1.29 – 1.22 (m, 6H), 1.03 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
492	12517483		(Thin film) 3383, 2941, 2839, 1770, 1736, 1677, 1592, 1495	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2045	¹ H NMR (500 MHz, CDCl ₃) for the major isomer of a 2:1 mixture of diastereomers d 8.44 (s, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.18 (dd, <i>J</i> = 9.7, 3.0 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.96 (dd, <i>J</i> = 9.5, 3.0 Hz, 1H), 6.87 – 6.79 (m, 2H), 6.76 (dd, <i>J</i> = 9.0, 4.6 Hz, 1H), 6.72 (d, <i>J</i> = 4.6 Hz, 1H), 5.87 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.88 (d, <i>J</i> = 9.6 Hz, 1H), 4.60 – 4.53 (m, 1H), 3.90 (s, 3H), 3.83 (s, 3H), 3.74 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
493	12518467			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₃₂H₃₉N₂O₁₁, 627.2548; found, 627.2546	¹H NMR (500 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 8.26 (t, <i>J</i> = 5.1 Hz, 4H), 7.07 (ddd, <i>J</i> = 13.9, 7.9, 1.1 Hz, 2H), 7.00 – 6.89 (m, 6H), 6.85 (td, <i>J</i> = 8.8, 8.0, 1.3 Hz, 2H), 6.78 – 6.72 (m, 4H), 5.75 – 5.71 (m, 4H), 5.71 – 5.62 (m, 2H), 5.12 (dd, <i>J</i> = 13.7, 9.8 Hz, 2H), 4.63 – 4.47 (m, 2H), 3.91 (s, 3H), 3.90 (s, 3H), 3.89 (s, 3H), 3.86 (s, 3H), 3.84 (s, 3H), 3.83 (s, 3H), 3.81 (s, 3H), 3.80 (s, 3H), 3.74 (s, 3H), 3.71 (s, 3H), 2.06 (s, 6H), 1.32 (d, <i>J</i> = 7.1 Hz, 3H), 1.26 (d, <i>J</i> = 6.0 Hz, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (126 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 172.36, 171.98, 170.28, 162.82, 162.78, 160.26, 160.23, 152.82, 152.78, 152.71, 147.42, 147.31, 147.19, 147.11, 145.68, 143.95, 143.93, 142.70, 142.64, 135.14, 134.87, 134.78, 134.61, 123.66, 123.62, 121.05, 120.97, 120.46, 120.33, 110.74, 110.61, 110.55, 109.44, 99.98, 89.63, 89.59, 73.81, 73.75, 60.40, 60.36, 60.31, 60.25, 56.17, 56.16, 55.64, 55.59, 48.18, 48.12, 41.96, 41.83, 29.28, 20.88, 18.86, 18.71, 18.41, 17.91.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
494	12818463			HRMS-ESI (<i>m/z</i>) ([M+H]⁺) calcd for C₃₄H₄₃N₂O₁₁, 655.2861; found, 655.2858	¹H NMR (500 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 8.40 – 8.28 (m, 2H), 8.26 (dd, <i>J</i> = 5.3, 3.7 Hz, 2H), 7.07 (ddd, <i>J</i> = 13.1, 8.0, 1.2 Hz, 2H), 7.03 – 6.89 (m, 6H), 6.88 – 6.80 (m, 2H), 6.75 (td, <i>J</i> = 5.6, 2.8 Hz, 4H), 5.81 – 5.72 (m, 4H), 5.72 – 5.62 (m, 2H), 5.12 (dd, <i>J</i> = 13.4, 9.8 Hz, 2H), 4.54 (dp, <i>J</i> = 17.6, 7.2 Hz, 2H), 3.89 (s, 3H), 3.89 (s, 3H), 3.88 (s, 3H), 3.86 (s, 3H), 3.84 (s, 3H), 3.83 (s, 3H), 3.81 (s, 3H), 3.80 (s, 3H), 3.74 (s, 3H), 3.71 (s, 3H), 2.54 (pd, <i>J</i> = 7.0, 4.2 Hz, 2H), 1.32 (d, <i>J</i> = 7.1 Hz, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.14 (d, <i>J</i> = 3.1 Hz, 6H), 1.13 (d, <i>J</i> = 3.1 Hz, 6H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹³C NMR (126 MHz, CDCl₃) for 1:1 mixture of diastereomers δ 176.26, 176.24, 172.37, 171.99, 162.79, 162.73, 160.25, 160.21, 152.82, 152.78, 152.70, 147.42, 147.32, 147.19, 147.11, 145.53, 144.22, 144.16, 142.27, 135.14, 134.88, 134.79, 134.62, 123.66, 123.62, 121.06, 120.97, 120.47, 120.33, 110.76, 110.74, 110.61, 110.55, 109.39, 99.98, 90.02, 89.95, 73.79, 73.73, 60.40, 60.36, 60.31, 60.26, 56.12, 56.10, 55.64, 55.59, 48.18, 48.12, 41.96, 41.82, 33.87, 33.85, 18.85, 18.68, 18.41, 17.91.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
495	12518471			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₁₀ , 597.2443; found, 597.2434	¹ H NMR (500 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 8.45 (s, 2H), 8.32 (d, <i>J</i> = 3.9 Hz, 1H), 8.31 (d, <i>J</i> = 3.9 Hz, 1H), 7.07 (ddd, <i>J</i> = 12.2, 8.0, 1.3 Hz, 2H), 7.01 – 6.89 (m, 6H), 6.89 – 6.79 (m, 2H), 6.75 (td, <i>J</i> = 6.8, 1.5 Hz, 4H), 5.73 – 5.60 (m, 2H), 5.12 (d, <i>J</i> = 10.1 Hz, 1H), 5.10 (d, <i>J</i> = 9.5 Hz, 1H), 4.61 – 4.52 (m, 1H), 4.52 – 4.44 (m, 1H), 3.91 (s, 3H), 3.90 (s, 3H), 3.89 (s, 3H), 3.86 (s, 3H), 3.83 (s, 3H), 3.83 (s, 3H), 3.81 (s, 3H), 3.80 (s, 3H), 3.73 (s, 3H), 3.72 (s, 3H), 2.39 (s, 3H), 2.38 (s, 3H), 1.30 (d, <i>J</i> = 7.1 Hz, 3H), 1.27 – 1.22 (m, 6H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 172.26, 171.87, 168.91, 162.22, 162.18, 159.42, 159.39, 152.82, 152.77, 152.70, 147.40, 147.32, 147.18, 147.11, 146.63, 141.62, 137.45, 137.41, 135.11, 134.85, 134.76, 134.60, 123.66, 123.64, 121.06, 120.97, 120.48, 120.33, 110.74, 110.61, 110.55, 109.65, 73.83, 73.78, 60.40, 60.38, 60.31, 60.28, 56.28, 56.26, 55.65, 55.63, 55.58, 48.01, 47.91, 41.81, 20.76, 18.84, 18.68, 18.48, 18.07.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
496	125.18.473 125.18.473			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2538	¹ H NMR (500 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 8.43 (s, 2H), 8.32 (d, <i>J</i> = 4.4 Hz, 1H), 8.31 (d, <i>J</i> = 4.4 Hz, 1H), 7.39 – 7.30 (m, 2H), 7.13 (t, <i>J</i> = 9.0 Hz, 2H), 7.05 – 6.86 (m, 10H), 5.74 – 5.58 (m, 2H), 5.09 (d, <i>J</i> = 9.7 Hz, 1H), 5.06 (d, <i>J</i> = 9.1 Hz, 1H), 4.53 (dq, <i>J</i> = 15.5, 7.5 Hz, 2H), 3.91 (s, 3H), 3.90 (s, 3H), 3.83 (s, 3H), 3.79 (s, 3H), 3.70 (s, 3H), 3.68 (s, 3H), 2.39 (s, 3H), 2.38 (s, 3H), 2.30 (s, 3H), 2.29 (s, 3H), 2.25 (s, 6H), 1.30 – 1.23 (m, 9H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 172.25, 171.70, 168.90, 162.23, 162.17, 159.44, 159.40, 156.93, 156.89, 156.82, 156.75, 146.64, 146.57, 141.65, 141.59, 137.42, 134.11, 133.96, 133.86, 133.76, 131.20, 131.14, 131.04, 130.95, 130.03, 129.76, 129.70, 126.87, 126.70, 126.65, 126.37, 123.81, 109.65, 74.38, 74.32, 60.31, 60.23, 60.20, 56.29, 56.27, 47.98, 47.84, 41.65, 20.75, 19.06, 18.90, 18.41, 18.00, 16.68, 16.47.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
497	12316475			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2529	¹ H NMR (400 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 8.50 – 8.23 (m, 4H), 7.13 – 6.92 (m, 8H), 6.86 (t, <i>J</i> = 7.1 Hz, 2H), 6.73 – 6.63 (m, 4H), 5.77 – 5.58 (m, 2H), 4.61 (t, <i>J</i> = 9.4 Hz, 2H), 4.49 (dp, <i>J</i> = 26.5, 7.1 Hz, 2H), 3.90 (s, 3H), 3.89 (s, 3H), 3.79 (s, 3H), 3.78 (s, 3H), 3.76 (s, 3H), 3.75 (s, 3H), 2.38 (d, <i>J</i> = 0.9 Hz, 6H), 2.28 (s, 3H), 2.26 (s, 3H), 2.20 (s, 3H), 2.18 (s, 3H), 1.27 (dt, <i>J</i> = 6.4, 3.2 Hz, 9H), 0.96 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) for 1:1 mixture of diastereomers δ 172.28, 171.77, 168.85, 162.24, 159.41, 157.72, 157.55, 146.61, 141.63, 140.75, 140.51, 140.12, 137.47, 126.12, 126.08, 125.91, 125.42, 120.51, 120.39, 119.92, 119.76, 109.64, 108.32, 74.77, 74.71, 56.26, 55.45, 53.40, 48.08, 47.90, 47.55, 20.72, 18.81, 18.67, 18.29, 17.98, 11.80, 11.73, 11.43.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
498	12518559		(Thin film) 3384, 2942, 1771, 1737, 1677, 1501, 1475, 1430, 1308, 1200, 1175, 1100, 1057, 950, 908, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₂₉ F ₄ N ₂ O ₈ , 609.1855; found, 609.1851	¹ H NMR (400 MHz, CDCl ₃) δ 8.35 (d, <i>J</i> = 5.5 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.07 (ddd, <i>J</i> = 8.2, 5.7, 2.2 Hz, 1H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.86 – 6.72 (m, 3H), 5.70 – 5.62 (m, 1H), 4.85 (d, <i>J</i> = 9.4 Hz, 1H), 4.62 – 4.54 (m, 1H), 3.97 (d, <i>J</i> = 2.3 Hz, 3H), 3.91 (s, 3H), 3.83 (d, <i>J</i> = 2.0 Hz, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 1.11 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.04, 168.90, 162.27, 159.48, 149.41, 147.34 – 146.78 (m), 146.60, 143.34, 141.37, 137.50, 129.96 – 129.37 (m), 123.61 – 122.42 (m), 110.81 (d, <i>J</i> = 13.5 Hz), 110.68 (d, <i>J</i> = 13.2 Hz), 109.78, 72.31, 61.44 – 60.78 (m), 56.31, 47.89, 42.40, 20.74, 18.77, 18.11.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
499	122518344		(Thin film) 3381, 2938, 1771, 1734, 1677, 1504, 1451, 1310, 1198, 1175, 1147, 1043, 908, 806, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₆ , 533.2646; found, 533.2651	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.11 – 6.83 (m, 7H), 5.66 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.57 – 4.48 (m, 1H), 4.45 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.35 (s, 3H), 2.29 (s, 3H), 2.27 (s, 3H), 2.25 (s, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 0.94 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.41, 168.91, 162.25, 159.41, 146.64, 141.58, 139.12, 138.59, 137.44, 135.40, 135.07, 133.59, 133.35, 130.56, 130.27, 128.60, 127.91, 127.20, 126.91, 109.68, 74.87, 56.27, 47.90, 47.34, 21.28, 21.22, 20.75, 19.79, 19.73, 18.86, 17.98.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
500	122,182,63		(Thin film) 3384, 2938, 1771, 1735, 1677, 1505, 1451, 1309, 1198, 1174, 1100, 1043, 908, 804, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₆ , 533.2646; found, 533.2642	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (s, 1H), 8.31 (d, <i>J</i> = 5.5 Hz, 1H), 7.18 (d, <i>J</i> = 7.9 Hz, 1H), 7.12 (d, <i>J</i> = 8.6 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.96 – 6.85 (m, 4H), 5.66 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.57 – 4.48 (m, 1H), 4.43 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.34 (s, 3H), 2.30 (s, 3H), 2.25 (s, 3H), 2.21 (s, 3H), 1.28 (d, <i>J</i> = 6.1 Hz, 3H), 0.96 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.30, 168.92, 162.24, 159.41, 146.64, 141.59, 137.43, 136.50, 136.40, 136.19, 136.10, 135.84, 135.52, 131.49, 131.15, 127.76, 127.14, 126.81, 126.59, 109.67, 74.83, 56.27, 47.89, 46.82, 20.84, 20.81, 20.76, 20.13, 20.07, 18.92, 18.03.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
501	12218465		(Thin film) 3379, 2983, 1770, 1738, 1677, 1496, 1453, 1310, 1199, 1176, 1148, 1043, 909, 808, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₆ , 541.2145; found, 541.2146	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.13 – 6.98 (m, 4H), 6.91 (dd, <i>J</i> = 10.3, 2.8 Hz, 1H), 6.81 (dtd, <i>J</i> = 12.5, 8.2, 2.7 Hz, 2H), 5.57 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.61 – 4.51 (m, 1H), 4.46 (d, <i>J</i> = 9.6 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.34 (s, 3H), 2.29 (s, 3H), 1.32 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.15, 168.90, 162.31, 161.35 (d, <i>J</i> = 243.7 Hz), 159.42, 146.68, 141.44, 140.63 (d, <i>J</i> = 6.5 Hz), 140.14 (d, <i>J</i> = 6.7 Hz), 137.47, 132.40 (d, <i>J</i> = 3.1 Hz), 132.06 (d, <i>J</i> = 2.0 Hz), 132.01 (d, <i>J</i> = 3.1 Hz), 131.69 (d, <i>J</i> = 7.8 Hz), 114.83 (d, <i>J</i> = 22.2 Hz), 114.37 (d, <i>J</i> = 22.3 Hz), 113.65 (d, <i>J</i> = 20.8 Hz), 113.37 (d, <i>J</i> = 20.6 Hz), 109.75, 74.02, 56.28, 47.77, 47.72, 20.75, 19.42, 19.35, 18.83, 18.00.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
502	12218367		(Thin film) 3378, 2940, 1770, 1738, 1677, 1498, 1207, 1176, 1151, 1037, 816, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2047	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.6 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.01 – 6.97 (m, 1H), 6.96 – 6.91 (m, 2H), 6.88 (d, <i>J</i> = 9.3 Hz, 1H), 6.86 – 6.81 (m, 1H), 6.70 (dt, <i>J</i> = 9.0, 3.5 Hz, 1H), 6.65 (dt, <i>J</i> = 9.0, 3.5 Hz, 1H), 5.83 (dq, <i>J</i> = 12.0, 6.1 Hz, 1H), 4.69 (d, <i>J</i> = 10.3 Hz, 1H), 4.57 (p, <i>J</i> = 7.3 Hz, 1H), 3.90 (s, 3H), 3.74 (s, 6H), 2.38 (s, 3H), 1.30 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.11, 168.90, 162.25, 159.42, 155.73 (d, <i>J</i> = 1.8 Hz), 155.57 (d, <i>J</i> = 2.0 Hz), 155.19 (d, <i>J</i> = 238.6 Hz), 154.96 (d, <i>J</i> = 238.7 Hz), 146.63, 141.51, 137.44, 127.90 (d, <i>J</i> = 15.8 Hz), 127.66 (d, <i>J</i> = 16.2 Hz), 116.23 (d, <i>J</i> = 24.8 Hz), 115.96 (d, <i>J</i> = 24.9 Hz), 115.16, 114.23, 113.21 – 112.82 (m), 109.69, 72.01, 56.28, 55.71, 47.85, 43.39, 20.75, 18.96, 18.05.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
503	12218369		(Thin film) 3379, 2938, 1770, 1736, 1676, 1623, 1585, 1506, 1444, 1310, 1195, 1175, 1154, 1031, 907, 832, 803, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2044	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.29 (t, <i>J</i> = 8.7 Hz, 1H), 7.16 (t, <i>J</i> = 8.5 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.65 – 6.55 (m, 3H), 6.51 (dd, <i>J</i> = 12.0, 2.6 Hz, 1H), 5.78 (dq, <i>J</i> = 12.1, 6.2 Hz, 1H), 4.66 – 4.52 (m, 2H), 3.90 (s, 3H), 3.75 (s, 3H), 3.72 (s, 3H), 2.38 (s, 3H), 1.27 (d, <i>J</i> = 6.2 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.11, 168.91, 162.24, 161.24 (d, <i>J</i> = 245.7 Hz), 161.01 (d, <i>J</i> = 245.9 Hz), 159.72 (d, <i>J</i> = 11.2 Hz), 159.46 (d, <i>J</i> = 11.3 Hz), 159.44, 146.60, 141.51, 137.44, 129.90 (d, <i>J</i> = 5.4 Hz), 129.34 (d, <i>J</i> = 5.6 Hz), 119.60 (d, <i>J</i> = 14.6 Hz), 119.45 (d, <i>J</i> = 15.0 Hz), 110.13 (d, <i>J</i> = 3.0 Hz), 109.85 – 109.61 (m), 101.99 – 101.44 (m), 72.26, 56.28, 55.50, 55.46, 47.88, 41.64, 20.75, 18.93, 18.13.

Cmpd. No.	Reg. D	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
504	12518571		(Thin film) 3381, 2942, 1772, 1728, 1679, 1508, 1456, 1417, 1327, 1242, 1172, 1121, 1033, 904, 739	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₁ F ₆ N ₂ O ₈ , 673.1979; found, 673.1985	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.54 (d, <i>J</i> = 8.0 Hz, 1H), 7.30 (d, <i>J</i> = 7.8 Hz, 1H), 7.12 (d, <i>J</i> = 8.0 Hz, 2H), 7.04 – 6.97 (m, 3H), 6.01 – 5.91 (m, 1H), 4.99 (d, <i>J</i> = 9.3 Hz, 1H), 4.60 – 4.46 (m, 1H), 3.90 (s, 3H), 3.89 (s, 3H), 3.81 (s, 3H), 2.38 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.17, 162.27, 159.47, 157.54, 157.39, 146.61, 141.44, 137.49, 132.44, 130.44 – 129.46 (m), 117.00, 109.74, 107.51 (d, <i>J</i> = 25.6 Hz), 99.99, 71.95, 56.28, 55.73, 55.69, 47.82, 43.70, 20.73, 18.89, 17.97.
505	12518663		(Thin film) 3375, 2939, 1770, 1677, 1592, 1509, 1195, 1136, 1059, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2034	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.66 – 6.53 (m, 4H), 6.45 (ddt, <i>J</i> = 14.8, 10.5, 2.3 Hz, 2H), 5.67 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.62 – 4.49 (m, 1H), 3.94 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 3.76 (s, 3H), 3.75 (s, 3H), 2.38 (s, 3H), 1.25 (d, <i>J</i> = 7.6 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -110.67, -111.17.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
506	1251888		(Thin film) 3375, 2938, 1770, 1677, 1593, 1203, 1152, 1064, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₁₀ , 597.2443; found, 597.2442	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.7 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.45 (dd, <i>J</i> = 6.5, 2.3 Hz, 4H), 6.28 (dt, <i>J</i> = 17.4, 2.3 Hz, 2H), 5.74 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.59 – 4.48 (m, 1H), 3.93 – 3.86 (m, 4H), 3.76 (s, 6H), 3.74 (s, 6H), 2.38 (s, 3H), 1.28 – 1.22 (m, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.26, 168.86, 162.29, 160.95, 160.78, 159.43, 146.64, 143.47, 143.25, 141.64, 137.47, 109.69, 106.48, 106.26, 98.54, 98.44, 72.91, 58.21, 56.26, 55.30, 55.28, 47.92, 20.73, 19.23, 18.01.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
507	12518887 12518887		(Thin film) 3384, 2939, 1771, 1677, 1593, 1508, 1172, 1152, 1066, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2540	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.69 (d, <i>J</i> = 1.5 Hz, 2H), 6.64 (dt, <i>J</i> = 4.2, 1.9 Hz, 2H), 6.54 (t, <i>J</i> = 1.9 Hz, 1H), 6.49 (t, <i>J</i> = 1.9 Hz, 1H), 5.73 (dq, <i>J</i> = 10.3, 6.1 Hz, 1H), 4.59 – 4.47 (m, 1H), 3.89 (s, 4H), 3.75 (s, 3H), 3.73 (s, 3H), 2.38 (s, 3H), 2.28 (s, 3H), 2.25 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.30, 168.86, 162.27, 159.77, 159.64, 159.43, 146.64, 142.75, 142.51, 141.67, 139.73, 139.31, 137.46, 121.35, 121.29, 112.68, 111.36, 110.95, 109.68, 73.23, 57.88, 56.26, 55.15, 55.13, 47.91, 29.30, 21.67, 21.60, 20.73, 19.27, 17.96.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
508	122,122802 122,122803		(Thin film) 3376, 2939, 1771, 1678, 1508, 1201, 1040, 734	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2538	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 7.9 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.06 – 6.94 (m, 3H), 6.80 (ddd, <i>J</i> = 7.7, 6.1, 1.7 Hz, 2H), 6.73 (dd, <i>J</i> = 14.2, 1.6 Hz, 2H), 5.79 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.60 – 4.47 (m, 1H), 3.96 (d, <i>J</i> = 10.1 Hz, 1H), 3.89 (s, 3H), 3.79 (s, 3H), 3.79 (s, 3H), 2.38 (s, 3H), 2.14 (s, 3H), 2.11 (s, 3H), 1.24 (d, <i>J</i> = 6.4 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.31, 168.86, 162.28, 159.44, 157.84, 157.65, 146.62, 141.65, 140.39, 140.28, 137.48, 130.75, 130.48, 125.19, 124.79, 119.76, 119.68, 109.94, 109.85, 109.69, 73.32, 57.89, 56.26, 55.29, 47.93, 29.30, 20.73, 19.30, 17.97, 15.80, 15.75.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
509	12518893		(Thin film) 3373, 2939, 1770, 1676, 1513, 1276, 1201, 1026, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₈ , 573.2043; found, 573.2033	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 7.9 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.04 – 6.91 (m, 5H), 6.86 (dt, <i>J</i> = 11.1, 8.7 Hz, 2H), 5.63 (dq, <i>J</i> = 9.4, 6.1 Hz, 1H), 4.64 – 4.51 (m, 1H), 3.92 (d, <i>J</i> = 9.5 Hz, 1H), 3.90 (s, 3H), 3.84 (s, 3H), 3.82 (s, 3H), 2.38 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -134.20, -134.64.
510	12518893		(Thin film) 3386, 2939, 1771, 1677, 1504, 1201, 1176, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2526	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (s, 1H), 8.31 (d, <i>J</i> = 5.5 Hz, 1H), 7.12 – 6.94 (m, 5H), 6.70 (dd, <i>J</i> = 14.1, 8.4 Hz, 2H), 5.69 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.60 – 4.49 (m, 1H), 3.89 (s, 3H), 3.87 (d, <i>J</i> = 10.6 Hz, 1H), 3.77 (s, 3H), 3.74 (s, 3H), 2.38 (s, 3H), 2.16 (s, 3H), 2.14 (s, 3H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.95 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.30, 168.86, 162.26, 159.43, 156.52, 156.35, 146.63, 141.69, 137.46, 133.70, 133.57, 130.50, 130.37, 126.79, 126.37, 126.10, 125.87, 110.05, 109.92, 109.67, 73.70, 56.26, 56.23, 55.31, 55.29, 47.94, 20.73, 19.29, 18.08, 16.32, 16.25.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
511	12518897		(Thin film) 3387, 2940, 1771, 1678, 1499, 1223, 1046, 808, 732	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₁₀ , 597.2443; found, 597.2410	¹ H NMR (400 MHz, CDCl ₃) δ 8.50 – 8.35 (m, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.07 (d, <i>J</i> = 3.0 Hz, 1H), 6.97 (d, <i>J</i> = 5.5 Hz, 1H), 6.87 (d, <i>J</i> = 3.0 Hz, 1H), 6.80 – 6.60 (m, 4H), 5.91 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 4.93 (d, <i>J</i> = 10.0 Hz, 1H), 4.62 – 4.45 (m, 1H), 3.89 (s, 3H), 3.81 (s, 3H), 3.74 (s, 3H), 3.71 (s, 3H), 3.70 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.29, 168.87, 162.24, 159.40, 153.47, 153.45, 151.89, 151.77, 146.63, 141.73, 137.43, 130.69, 116.44, 115.43, 112.14, 112.11, 111.84, 111.55, 109.63, 73.04, 56.33, 56.29, 56.25, 55.68, 55.59, 47.96, 43.90, 29.30, 20.73, 18.91, 18.13.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
512	12518899		(Thin film) 3381, 2939, 1771, 1677, 1502, 1200, 1175, 1043, 731	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₇ N ₂ O ₈ , 565.2544; found, 565.2543	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 (d, <i>J</i> = 8.0 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.05 (d, <i>J</i> = 8.3 Hz, 1H), 7.01 – 6.94 (m, 2H), 6.90 (d, <i>J</i> = 2.7 Hz, 1H), 6.82 (d, <i>J</i> = 2.7 Hz, 1H), 6.63 (ddd, <i>J</i> = 18.7, 8.4, 2.7 Hz, 2H), 5.65 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.59 – 4.49 (m, 1H), 4.45 (d, <i>J</i> = 10.0 Hz, 1H), 3.89 (s, 3H), 3.73 (s, 3H), 3.73 (s, 3H), 2.38 (s, 3H), 2.32 (s, 3H), 2.27 (s, 3H), 1.31 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.26, 168.85, 162.28, 159.43, 157.92, 157.89, 146.64, 141.63, 140.31, 139.86, 137.47, 131.43, 131.10, 128.88, 128.61, 114.65, 113.69, 111.27, 111.11, 109.70, 74.59, 56.26, 55.19, 47.90, 47.86, 29.30, 20.73, 19.29, 19.25, 18.90, 17.99.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
513	12518941		(Thin film) 3381, 2940, 1740, 1675, 1592, 1505, 1200, 1134, 1045, 829, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₉ , 603.2149; found, 603.2137	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 6.94 (d, <i>J</i> = 5.4 Hz, 1H), 6.60 (dddd, <i>J</i> = 13.2, 10.8, 3.9, 1.8 Hz, 4H), 6.45 (ddt, <i>J</i> = 13.9, 10.5, 2.3 Hz, 2H), 5.76 – 5.63 (m, 3H), 4.57 (p, <i>J</i> = 7.3 Hz, 1H), 3.95 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 3.77 (s, 3H), 3.75 (s, 3H), 2.06 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -110.67, -111.20.
514	12518943		(Thin film) 3382, 2937, 1737, 1675, 1593, 1457, 1202, 1150, 1062, 829, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₁₁ , 627.2548; found, 627.2555	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.46 (dd, <i>J</i> = 7.4, 2.2 Hz, 4H), 6.28 (dt, <i>J</i> = 16.6, 2.2 Hz, 2H), 5.81 – 5.68 (m, 3H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 3.96 – 3.86 (m, 4H), 3.76 (s, 6H), 3.74 (s, 6H), 2.06 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.37, 170.22, 162.89, 160.96, 160.79, 160.25, 145.70, 143.93, 143.51, 143.26, 142.65, 109.51, 106.49, 106.24, 98.54, 98.43, 89.57, 72.87, 58.24, 56.17, 55.30, 55.28, 48.14, 20.85, 19.25, 17.84.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
515	12818945		(Thin film) 3382, 2937, 1738, 1676, 1594, 1504, 1293, 1202, 1152	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₉ , 595.2650; found, 595.2647	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.70 (s, 2H), 6.65 (dt, <i>J</i> = 5.7, 1.9 Hz, 2H), 6.55 (t, <i>J</i> = 1.7 Hz, 1H), 6.50 (t, <i>J</i> = 1.7 Hz, 1H), 5.80 – 5.66 (m, 3H), 4.54 (p, <i>J</i> = 7.2 Hz, 1H), 3.93 – 3.87 (m, 4H), 3.75 (d, <i>J</i> = 7.3 Hz, 6H), 2.29 (s, 3H), 2.25 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.95 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.41, 170.22, 162.88, 160.25, 159.77, 159.65, 145.70, 143.93, 142.79, 142.70, 142.52, 139.73, 139.31, 121.35, 121.30, 112.69, 111.36, 110.92, 109.50, 89.57, 73.19, 57.91, 56.16, 55.15, 55.14, 48.13, 29.30, 21.67, 21.60, 20.85, 19.29, 17.79.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
516	12818997		(Thin film) 3382, 2936, 1737, 1676, 1505, 1202, 1040, 969, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₉ , 595.2650; found, 595.2639	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.21 (d, <i>J</i> = 7.8 Hz, 1H), 7.05 – 6.96 (m, 2H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.81 (td, <i>J</i> = 7.4, 1.6 Hz, 2H), 6.76 (d, <i>J</i> = 1.6 Hz, 1H), 6.72 (d, <i>J</i> = 1.6 Hz, 1H), 5.79 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 5.72 (d, <i>J</i> = 1.4 Hz, 2H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 3.97 (d, <i>J</i> = 10.2 Hz, 1H), 3.90 (s, 3H), 3.80 (s, 3H), 3.79 (s, 3H), 2.14 (s, 3H), 2.11 (s, 3H), 2.06 (s, 3H), 1.26 (d, <i>J</i> = 6.2 Hz, 3H), 0.94 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.43, 170.21, 162.89, 160.26, 157.85, 157.65, 145.68, 143.94, 142.67, 140.44, 140.28, 130.75, 130.48, 125.19, 124.78, 119.75, 119.67, 109.94, 109.86, 109.52, 89.56, 73.28, 57.91, 56.17, 55.29, 55.28, 48.16, 20.85, 19.32, 17.82, 15.80, 15.75.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
517	12518909		(Thin film) 3382, 2984, 1739, 1675, 1512, 1275, 1202, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₀ H ₃₃ F ₂ N ₂ O ₉ , 603.2149; found, 603.2137	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.9 Hz, 1H), 7.04 – 6.92 (m, 5H), 6.87 (q, <i>J</i> = 8.7 Hz, 2H), 5.72 (s, 2H), 5.64 (dq, <i>J</i> = 9.5, 6.2 Hz, 1H), 4.65 – 4.48 (m, 1H), 3.93 (d, <i>J</i> = 9.7 Hz, 1H), 3.91 (s, 3H), 3.84 (s, 3H), 3.83 (s, 3H), 2.06 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.06 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -134.20, -134.65.
518	12518911		(Thin film) 3382, 2941, 1737, 1676, 1503, 1248, 1203, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₉ , 595.2650; found, 595.2645	¹ H NMR (400 MHz, CDCl ₃) δ 8.27 (s, 1H), 8.23 (d, <i>J</i> = 7.9 Hz, 1H), 7.11 – 6.99 (m, 5H), 6.93 (d, <i>J</i> = 5.3 Hz, 1H), 6.71 (dd, <i>J</i> = 12.0, 8.4 Hz, 2H), 5.74 – 5.65 (m, 3H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 3.90 (s, 3H), 3.77 (s, 3H), 3.75 (s, 3H), 2.16 (s, 3H), 2.14 (s, 3H), 2.06 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.43, 170.22, 162.87, 160.26, 156.53, 156.36, 145.68, 143.94, 142.72, 133.75, 133.58, 130.48, 130.36, 126.81, 126.38, 126.10, 125.87, 110.06, 109.93, 109.49, 89.58, 73.66, 56.27, 56.16, 55.33, 55.30, 48.16, 20.85, 19.32, 17.91, 16.33, 16.25.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
519	12518913		(Thin film) 3381, 2939, 1737, 1676, 1498, 1233, 1043, 729	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₁₁ , 627.2548; found, 627.2541	¹ H NMR (400 MHz, CDCl ₃) δ 8.25 (dd, <i>J</i> = 6.5, 3.4 Hz, 2H), 7.07 (d, <i>J</i> = 3.0 Hz, 1H), 6.92 (d, <i>J</i> = 5.4 Hz, 1H), 6.87 (d, <i>J</i> = 3.1 Hz, 1H), 6.77 (d, <i>J</i> = 8.8 Hz, 1H), 6.71 (d, <i>J</i> = 8.8 Hz, 1H), 6.66 (ddd, <i>J</i> = 11.1, 8.9, 3.0 Hz, 2H), 5.92 (dq, <i>J</i> = 9.9, 6.1 Hz, 1H), 5.72 (d, <i>J</i> = 1.7 Hz, 2H), 4.94 (d, <i>J</i> = 10.0 Hz, 1H), 4.56 (p, <i>J</i> = 7.2 Hz, 1H), 3.89 (s, 3H), 3.81 (s, 3H), 3.74 (s, 3H), 3.72 (s, 3H), 3.71 (s, 3H), 2.06 (s, 3H), 1.25 (d, <i>J</i> = 6.3 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.39, 170.22, 162.84, 160.23, 153.47, 153.45, 151.89, 151.78, 145.68, 143.88, 142.78, 130.73, 130.69, 116.45, 115.38, 112.14, 112.13, 111.83, 111.55, 109.45, 89.59, 73.02, 56.34, 56.29, 56.15, 55.67, 55.59, 48.17, 43.90, 20.86, 18.91, 17.97.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
520	12418915		(Thin film) 3382, 2937, 1739, 1677, 1500, 1455, 1202, 1042, 730	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₂ H ₃₉ N ₂ O ₉ , 595.2650; found, 595.2652	¹ H NMR (400 MHz, CDCl ₃) δ 8.26 (d, <i>J</i> = 5.4 Hz, 1H), 8.23 (d, <i>J</i> = 7.8 Hz, 1H), 7.05 (d, <i>J</i> = 8.5 Hz, 1H), 6.98 (d, <i>J</i> = 8.4 Hz, 1H), 6.93 (d, <i>J</i> = 5.4 Hz, 1H), 6.90 (d, <i>J</i> = 2.7 Hz, 1H), 6.82 (d, <i>J</i> = 2.7 Hz, 1H), 6.63 (ddd, <i>J</i> = 18.1, 8.3, 2.7 Hz, 2H), 5.72 (d, <i>J</i> = 1.6 Hz, 2H), 5.66 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.56 (p, <i>J</i> = 7.3 Hz, 1H), 4.46 (d, <i>J</i> = 10.1 Hz, 1H), 3.90 (s, 3H), 3.73 (s, 6H), 2.33 (s, 3H), 2.28 (s, 3H), 2.06 (s, 3H), 1.32 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 172.37, 170.22, 162.89, 160.25, 157.92, 157.89, 145.69, 143.92, 142.66, 140.37, 139.85, 131.44, 131.11, 128.89, 128.62, 114.67, 113.64, 111.28, 111.11, 109.52, 89.57, 74.55, 56.17, 55.19, 48.13, 47.87, 29.30, 20.86, 19.30, 19.26, 18.88, 17.81.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
521	12518943		(Thin film) 3380, 2933, 1769, 1737, 1677, 1496, 1195, 1174, 1095	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₁ H ₃₅ F ₂ N ₂ O ₈ , 602.2389; found, 602.2395	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 7.1 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.44 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.23 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.11 (dd, <i>J</i> = 9.6, 2.8 Hz, 1H), 7.07 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.96 – 6.87 (m, 2H), 5.60 (dq, <i>J</i> = 8.5, 6.2 Hz, 1H), 4.69 (d, <i>J</i> = 8.8 Hz, 1H), 4.62 (d, <i>J</i> = 12.4 Hz, 1H), 4.60 – 4.53 (m, 1H), 4.50 (d, <i>J</i> = 12.6 Hz, 1H), 4.44 (d, <i>J</i> = 12.5 Hz, 1H), 4.40 (d, <i>J</i> = 12.5 Hz, 1H), 3.90 (s, 3H), 3.43 (s, 3H), 3.38 (s, 3H), 2.39 (s, 3H), 1.28 (d, <i>J</i> = 6.2 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.57, -115.90.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
522	12518943		(Thin film) 3385, 2976, 1770, 1738, 1678, 1506, 1200, 1175, 1155, 1096	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₃₃ H ₃₉ F ₂ N ₂ O ₈ , 629.2669; found, 629.2666	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 6.4 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.45 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.21 (dd, <i>J</i> = 8.7, 5.6 Hz, 1H), 7.17 – 7.05 (m, 2H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.97 – 6.82 (m, 2H), 5.62 (dq, <i>J</i> = 8.2, 6.2 Hz, 1H), 4.70 (d, <i>J</i> = 8.7 Hz, 1H), 4.67 (d, <i>J</i> = 12.7 Hz, 1H), 4.62 – 4.50 (m, 2H), 4.48 (d, <i>J</i> = 12.5 Hz, 1H), 4.43 (d, <i>J</i> = 12.7 Hz, 1H), 3.90 (s, 3H), 3.62 – 3.45 (m, 4H), 2.39 (s, 3H), 1.30 – 1.25 (m, 6H), 1.23 (t, <i>J</i> = 7.0 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.69, -115.98.
523	12521649			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₇ , 525.2037; found, 525.2025	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 6.8 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.36 – 7.28 (m, 2H), 7.26 – 7.18 (m, 2H), 7.18 – 7.10 (m, 2H), 6.97 (d, <i>J</i> = 5.5 Hz, 1H), 6.67 – 6.46 (m, 2H), 5.83 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.62 – 4.46 (m, 2H), 3.87 (s, 3H), 3.82 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.91 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.24.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
524	12521611			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₆ , 509.2088; found, 509.2083	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 7.9 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.35 - 7.17 (m, 5H), 7.17 - 7.08 (m, 1H), 6.97 (d, <i>J</i> = 5.5 Hz, 1H), 6.93 - 6.79 (m, 2H), 5.77 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.60 - 4.47 (m, 1H), 4.28 (d, <i>J</i> = 10.2 Hz, 1H), 3.87 (s, 3H), 2.38 (s, 6H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.66.
525	12521613			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₇ , 525.2037; found, 525.2035	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 8.1 Hz, 1H), 8.30 (d, <i>J</i> = 5.6 Hz, 1H), 7.35 - 7.21 (m, 5H), 7.17 (ddt, <i>J</i> = 6.5, 5.4, 1.8 Hz, 1H), 6.98 (d, <i>J</i> = 5.4 Hz, 1H), 6.58 (td, <i>J</i> = 8.3, 2.6 Hz, 1H), 6.51 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.81 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.63 - 4.43 (m, 2H), 3.87 (s, 3H), 3.75 (s, 3H), 2.38 (s, 3H), 2.15 (s, 3H), , 0.99 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.59.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
526	12521618			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₆ , 509.2088; found, 509.2079	¹ H NMR (400 MHz, CDCl ₃) δ 8.47 - 8.36 (m, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.35 (dd, <i>J</i> = 8.7, 5.7 Hz, 1H), 7.30 - 7.15 (m, 5H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.85 (td, <i>J</i> = 8.4, 2.8 Hz, 1H), 6.79 (dd, <i>J</i> = 9.8, 2.8 Hz, 1H), 5.73 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.60 - 4.47 (m, 1H), 4.26 (d, <i>J</i> = 10.0 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.30 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.96 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -117.14.
527	12521879			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₂ FN ₂ O ₇ , 539.2193; found, 539.2180	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 5.0 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.23 - 7.19 (m, 2H), 7.19 - 7.10 (m, 1H), 7.03 (d, <i>J</i> = 7.9 Hz, 2H), 6.97 (d, <i>J</i> = 5.5 Hz, 1H), 6.63 - 6.50 (m, 2H), 5.80 (dq, <i>J</i> = 9.6, 6.1 Hz, 1H), 4.61 - 4.46 (m, 2H), 3.88 (s, 3H), 3.81 (s, 3H), 2.38 (s, 3H), 2.25 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.95 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.44.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
528	12521881			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₂ FN ₂ O ₆ , 523.2244; found, 523.2235	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 8.6 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.28 (dd, <i>J</i> = 8.8, 5.9 Hz, 1H), 7.18 - 7.10 (m, 2H), 7.02 (d, <i>J</i> = 7.9 Hz, 2H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.92 - 6.78 (m, 2H), 5.74 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.62 - 4.45 (m, 1H), 4.24 (d, <i>J</i> = 10.1 Hz, 1H), 3.88 (s, 3H), 2.38 (s, 3H), 2.37 (s, 3H), 2.24 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.88.
529	12521883			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₂ FN ₂ O ₇ , 539.2193; found, 539.2182	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.9 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.37 - 7.23 (m, 1H), 7.20 - 7.12 (m, 2H), 7.06 (d, <i>J</i> = 7.8 Hz, 2H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.57 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.50 (dd, <i>J</i> = 11.0, 2.6 Hz, 1H), 5.78 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.69 - 4.41 (m, 2H), 3.89 (s, 3H), 3.76 (s, 3H), 2.38 (s, 3H), 2.27 (s, 3H), 1.21 (d, <i>J</i> = 6.1 Hz, 3H), 0.98 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.82.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
530	12321885			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₂ FN ₂ O ₆ , 523.2244; found, 523.2229	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 (dd, <i>J</i> = 8.7, 5.8 Hz, 1H), 7.20 - 7.04 (m, 4H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.84 (td, <i>J</i> = 8.5, 2.9 Hz, 1H), 6.77 (dd, <i>J</i> = 9.6, 2.4 Hz, 1H), 5.71 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.61 - 4.45 (m, 1H), 4.21 (d, <i>J</i> = 10.1 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.30 (s, 3H), 2.28 (s, 3H), 1.23 (d, <i>J</i> = 6.0 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -117.33.
531	12321883			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₇ , 543.1943; found, 543.1936	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 6.0 Hz, 1H), 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 7.35 - 7.22 (m, 2H), 7.13 (dd, <i>J</i> = 8.3, 6.4 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.96 - 6.84 (m, 2H), 6.65 - 6.51 (m, 2H), 5.79 (dq, <i>J</i> = 9.7, 6.2 Hz, 1H), 4.64 - 4.47 (m, 2H), 3.88 (s, 3H), 3.81 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.92, -116.48.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
532	12524138			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₆ , 527.1993; found, 527.1984	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 8.2 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.29 - 7.19 (m, 3H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.94 - 6.81 (m, 4H), 5.71 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.60 - 4.49 (m, 1H), 4.26 (d, <i>J</i> = 10.0 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.35 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 1.02 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.02, -116.38.
533	12524167			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₇ , 543.1943; found, 543.1928	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 5.8 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 - 7.18 (m, 3H), 7.02 - 6.89 (m, 3H), 6.58 (td, <i>J</i> = 8.4, 2.5 Hz, 1H), 6.52 (dd, <i>J</i> = 10.9, 2.6 Hz, 1H), 5.76 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.60 - 4.46 (m, 2H), 3.88 (s, 3H), 3.75 (s, 3H), 2.38 (s, 3H), 1.21 (d, <i>J</i> = 6.2 Hz, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.26, -116.11.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
534	125244163			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₆ , 527.1993; found, 527.1985	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 8.1 Hz, 1H), 8.30 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 (dd, <i>J</i> = 8.6, 5.7 Hz, 1H), 7.23 - 7.13 (m, 2H), 7.04 - 6.92 (m, 3H), 6.86 (td, <i>J</i> = 8.5, 2.8 Hz, 1H), 6.80 (dd, <i>J</i> = 9.7, 2.8 Hz, 1H), 5.69 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.63 - 4.45 (m, 1H), 4.24 (d, <i>J</i> = 9.8 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.28 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.54, -116.80.
535	125244164		(Thin film) 3385, 2982, 1771, 1737, 1679, 1605, 1508	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₃ N ₂ O ₆ , 505.233; found, 505.2333	¹ H NMR (400 MHz, CDCl ₃) δ 8.49 – 8.39 (m, 1H), 8.30 (d, <i>J</i> = 5.5 Hz, 1H), 7.19 – 7.05 (m, 6H), 7.01 – 6.92 (m, 3H), 5.78 (dq, <i>J</i> = 10.2, 6.1 Hz, 1H), 4.59 – 4.46 (m, 1H), 3.96 (d, <i>J</i> = 10.2 Hz, 1H), 3.86 (s, 3H), 2.37 (s, 3H), 2.30 (s, 3H), 2.27 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
536	128,256,43		(Thin film) 3377, 2985, 1771, 1736, 1677, 1502, 1195	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 557.2094; found, 557.2082	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 5.6 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.23 (dd, <i>J</i> = 8.5, 6.6 Hz, 1H), 7.16 (dd, <i>J</i> = 8.6, 5.9 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.81 (qd, <i>J</i> = 9.1, 8.3, 2.8 Hz, 2H), 6.57 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.51 (dd, <i>J</i> = 10.8, 2.5 Hz, 1H), 5.68 (dq, <i>J</i> = 10.0, 6.1 Hz, 1H), 4.74 (d, <i>J</i> = 10.0 Hz, 1H), 4.62 – 4.49 (m, 1H), 3.90 (s, 3H), 3.76 (s, 3H), 2.42 (s, 3H), 2.38 (s, 3H), 1.21 (d, <i>J</i> = 5.9 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.52, -117.02.
537	128,256,43		(Thin film) 3376, 2940, 1770, 1737, 1678, 1601, 1502, 1196	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₈ F ₃ N ₂ O ₇ , 561.1843; found, 561.1836	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (d, <i>J</i> = 6.1 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.31 (dd, <i>J</i> = 8.4, 6.7 Hz, 1H), 7.23 – 7.14 (m, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.84 – 6.68 (m, 2H), 6.58 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.52 (dd, <i>J</i> = 10.8, 2.5 Hz, 1H), 5.86 – 5.73 (m, 1H), 4.78 (d, <i>J</i> = 9.9 Hz, 1H), 4.65 – 4.43 (m, 1H), 3.90 (s, 3H), 3.75 (s, 3H), 2.38 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
538	122,226,47		(Thin film) 3378, 2986, 1770, 1736, 1677, 1501, 1196	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 557.2094; found, 557.2091	¹ H NMR (400 MHz, CDCl ₃) δ 8.44 – 8.37 (m, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 (dd, <i>J</i> = 8.5, 5.8 Hz, 1H), 7.04 (dd, <i>J</i> = 8.4, 6.8 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 – 6.74 (m, 2H), 6.64 – 6.53 (m, 2H), 5.67 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.74 (d, <i>J</i> = 9.8 Hz, 1H), 4.62 – 4.45 (m, 1H), 3.90 (s, 3H), 3.84 (s, 3H), 2.38 (s, 3H), 2.27 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.98 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -112.97, -117.43.
539	122,226,48		(Thin film) 3377, 2983, 1771, 1738, 1677, 1502, 1201	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₈ F ₃ N ₂ O ₆ , 545.1894; found, 545.1896	¹ H NMR (400 MHz, CDCl ₃) δ 8.43 – 8.35 (m, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 (dd, <i>J</i> = 8.6, 5.7 Hz, 1H), 7.19 – 7.07 (m, 1H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.90 – 6.74 (m, 4H), 5.68 (dq, <i>J</i> = 12.0, 6.1 Hz, 1H), 4.62 (d, <i>J</i> = 9.9 Hz, 1H), 4.61 – 4.49 (m, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.28 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H).

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
540	125,863,337		(Thin film) 3388, 2985, 1771, 1737, 1679, 1572, 1508, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₆ , 509.2082; found, 509.2078	¹ H NMR (300 MHz, CDCl ₃) δ 8.43 (d, <i>J</i> = 8.0 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.37 – 7.21 (m, 5H), 7.24 – 7.14 (m, 1H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.89 – 6.84 (m, 1H), 6.79 – 6.72 (m, 1H), 5.90 – 5.72 (m, 1H), 4.56 (dq, <i>J</i> = 8.1, 7.1 Hz, 1H), 4.41 (d, <i>J</i> = 10.0 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.24 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H).
541	125,863,383		(Thin film) 3378, 2984, 1771, 1737, 1679, 1509	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₉ F ₂ N ₂ O ₆ , 527.1988; found, 527.1975	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 8.2 Hz, 1H), 8.31 (dd, <i>J</i> = 5.5, 1.2 Hz, 1H), 7.29 – 7.17 (m, 3H), 7.07 – 6.89 (m, 3H), 6.87 (dd, <i>J</i> = 8.0, 1.7 Hz, 1H), 6.80 – 6.72 (m, 1H), 5.75 (dq, <i>J</i> = 9.7, 6.1 Hz, 1H), 4.62 – 4.50 (m, 1H), 4.39 (d, <i>J</i> = 9.8 Hz, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.25 (s, 3H), 1.26 – 1.21 (m, 3H), 1.01 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -115.67, -118.89.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
542	12526386		(Thin film) 3390, 2984, 1772, 1737, 1678, 1508, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₂ FN ₂ O ₆ , 523.2239; found, 523.2241	¹ H NMR (400 MHz, CDCl ₃) δ 8.48 – 8.36 (m, 1H), 8.29 (d, <i>J</i> = 5.6 Hz, 1H), 7.26 – 7.21 (m, 1H), 7.20 – 7.16 (m, 2H), 7.07 (d, <i>J</i> = 7.9 Hz, 2H), 6.96 (d, <i>J</i> = 5.5 Hz, 1H), 6.84 (dd, <i>J</i> = 8.1, 1.9 Hz, 1H), 6.74 (dd, <i>J</i> = 11.3, 2.2 Hz, 1H), 5.83 – 5.73 (m, 1H), 4.63 – 4.50 (m, 1H), 4.37 (d, <i>J</i> = 10.1 Hz, 1H), 3.86 (s, 3H), 2.37 (s, 3H), 2.27 (s, 3H), 2.22 (s, 3H), 1.24 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -119.02.
543	12526387		(Thin film) 3384, 2983, 1772, 1737, 1679, 1591, 1507, 1452	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₆ , 541.2145; found, 541.2138	¹ H NMR (400 MHz, CDCl ₃) δ 8.42 (d, <i>J</i> = 7.9 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.24 (dd, <i>J</i> = 9.6, 5.7 Hz, 1H), 7.17 (t, <i>J</i> = 7.9 Hz, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 – 6.82 (m, 3H), 6.75 (dd, <i>J</i> = 11.3, 2.2 Hz, 1H), 5.72 (dq, <i>J</i> = 9.8, 6.1 Hz, 1H), 4.63 (d, <i>J</i> = 10.0 Hz, 1H), 4.62 – 4.51 (m, 1H), 3.89 (s, 3H), 2.39 (s, 3H), 2.38 (s, 3H), 2.24 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.05 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -116.51, -118.10.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
544	122,263,389		(Thin film) 3381, 2984, 1771, 1739, 1678, 1504, 1453, 1432	HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₂₈ F ₃ N ₂ O ₆ ; 545.1894; found, 545.1885	¹ H NMR (400 MHz, CDCl ₃) δ 8.45 – 8.39 (m, 1H), 8.31 (d, <i>J</i> = 5.5 Hz, 1H), 7.32 – 7.20 (m, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 – 6.84 (m, 1H), 6.84 – 6.73 (m, 3H), 5.85 – 5.74 (m, 1H), 4.70 (d, <i>J</i> = 9.9 Hz, 1H), 4.63 – 4.52 (m, 1H), 3.89 (s, 3H), 2.38 (s, 3H), 2.25 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 1.04 (d, <i>J</i> = 7.2 Hz, 3H).
545	122,263,389		(Thin film) 3378, 2982, 1770, 1734, 1675, 1508, 1451, 1309, 1200, 1174, 1046, 907, 802, 730, 699	ESIMS <i>m/z</i> 491.2 ([M+H] ⁺)	¹ H NMR (500 MHz, CDCl ₃) δ 8.41 (s, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.31 – 7.27 (m, 2H), 7.22 (t, <i>J</i> = 7.7 Hz, 2H), 7.17 (d, <i>J</i> = 8.1 Hz, 2H), 7.15 – 7.10 (m, 1H), 7.09 (d, <i>J</i> = 7.9 Hz, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 5.79 (dq, <i>J</i> = 10.1, 6.1 Hz, 1H), 4.57 – 4.47 (m, 1H), 4.01 (d, <i>J</i> = 10.1 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.28 (s, 3H), 1.24 (d, <i>J</i> = 6.2 Hz, 3H), 0.88 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.24, 168.91, 162.24, 159.40, 146.64, 141.73, 141.57, 138.27, 137.43, 136.47, 129.44, 128.46, 127.99, 126.56, 109.68, 73.36, 57.53, 56.27, 47.83, 20.97, 20.75, 19.24, 17.92.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
546	122,299.77		(Thin film) 3381, 2982, 1770, 1734, 1675, 1507, 1435, 1309, 1199, 1174, 1045, 907, 804, 729, 699	ESIMS <i>m/z</i> 491.2 ([M+H] ⁺)	¹ H NMR (500 MHz, CDCl ₃) δ 8.42 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.29 – 7.23 (m, 4H), 7.18 (td, <i>J</i> = 6.0, 2.8 Hz, 3H), 7.04 (d, <i>J</i> = 7.9 Hz, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 5.79 (dq, <i>J</i> = 9.8, 6.2 Hz, 1H), 4.57 – 4.49 (m, 1H), 4.02 (d, <i>J</i> = 9.9 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.25 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.93 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.23, 168.92, 162.25, 159.41, 146.64, 141.59, 138.34, 137.44, 136.15, 129.13, 128.72, 128.09, 127.99, 126.77, 109.68, 73.38, 57.41, 56.28, 47.87, 20.94, 20.76, 19.25, 18.00.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
547	125,29379		(Thin film) 3380, 2982, 1770, 1735, 1676, 1507, 1451, 1310, 1200, 1175, 1158, 1047, 908, 816, 769, 729	ESIMS <i>m/z</i> 509.1 ([M+H] ⁺)	¹ H NMR (500 MHz, CDCl ₃) δ 8.41 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.23 (dd, <i>J</i> = 8.7, 5.3 Hz, 2H), 7.18 – 7.13 (m, 2H), 7.05 (d, <i>J</i> = 7.8 Hz, 2H), 7.01 – 6.93 (m, 3H), 5.74 (dq, <i>J</i> = 9.6, 6.2 Hz, 1H), 4.58 – 4.50 (m, 1H), 4.01 (d, <i>J</i> = 9.6 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.26 (s, 3H), 1.22 (d, <i>J</i> = 6.2 Hz, 3H), 0.94 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.18, 168.91, 162.26, 161.64 (d, <i>J</i> = 245.3 Hz), 159.43, 146.63, 141.54, 138.05, 137.45, 137.32 (d, <i>J</i> = 3.3 Hz), 136.34, 129.56 (d, <i>J</i> = 7.8 Hz), 129.22, 127.94, 115.53 (d, <i>J</i> = 21.3 Hz), 109.70, 73.21, 56.51, 56.28, 47.85, 20.94, 20.75, 19.15, 17.99.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
548	115, 27, 481		(Thin film) 3379, 2983, 1770, 1736, 1676, 1509, 1452, 1310, 1201, 1175, 1046, 908, 817, 732, 700	ESIMS <i>m/z</i> 495.1 ([M+H] ⁺)	¹ H NMR (500 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.33 – 7.23 (m, 6H), 7.23 – 7.17 (m, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.93 (t, <i>J</i> = 8.6 Hz, 2H), 5.76 (dq, <i>J</i> = 9.9, 6.2 Hz, 1H), 4.55 (p, <i>J</i> = 7.2 Hz, 1H), 4.05 (d, <i>J</i> = 9.8 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 1.23 (d, <i>J</i> = 6.2 Hz, 3H), 0.97 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.17, 168.91, 162.28, 161.59 (d, <i>J</i> = 245.0 Hz), 159.44, 146.64, 141.48, 141.04, 137.47, 137.16 (d, <i>J</i> = 3.4 Hz), 129.60 (d, <i>J</i> = 7.9 Hz), 128.84, 128.02, 127.02, 115.28 (d, <i>J</i> = 21.1 Hz), 109.74, 73.24, 57.00, 56.28, 47.83, 20.75, 19.22, 18.02.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
549	122,798.3		(Thin film) 3380, 2983, 1770, 1735, 1676, 1507, 1451, 1436, 1310, 1201, 1175, 1046, 908, 816, 731	ESIMS <i>m/z</i> 509.1 ([M+H] ⁺)	¹ H NMR (500 MHz, CDCl ₃) δ 8.39 (s, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.28 – 7.21 (m, 2H), 7.14 (d, <i>J</i> = 8.2 Hz, 2H), 7.09 (d, <i>J</i> = 7.9 Hz, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.95 – 6.89 (m, 2H), 5.74 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.58 – 4.50 (m, 1H), 4.00 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.29 (s, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.97 (d, <i>J</i> = 7.1 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.18, 168.91, 162.27, 161.54 (d, <i>J</i> = 245.1 Hz), 159.44, 146.63, 141.50, 138.06, 137.48 (d, <i>J</i> = 3.6 Hz), 136.65, 129.49 (d, <i>J</i> = 8.3 Hz), 127.86, 115.24 (d, <i>J</i> = 21.3 Hz), 109.73, 73.30, 56.66, 56.28, 47.83, 20.98, 20.75, 19.22, 18.02.

Cmpd. No.	Reg. ID	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
550	118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 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717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000		(Thin film) 3380, 2984, 1770, 1737, 1676, 1503, 1452, 1310, 1200, 1175, 1148, 1048, 907, 731	ESIMS <i>m/z</i> 513.2 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.39 (d, <i>J</i> = 8.1 Hz, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.34 – 7.22 (m, 5H), 7.20 – 7.14 (m, 1H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.85 – 6.74 (m, 2H), 5.80 (dtd, <i>J</i> = 9.9, 7.3, 6.7, 5.4 Hz, 1H), 4.55 (dt, <i>J</i> = 8.1, 7.1 Hz, 1H), 4.41 (d, <i>J</i> = 10.0 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 1.27 (d, <i>J</i> = 6.1 Hz, 3H), 0.92 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.13, 168.91, 162.27, 162.03 (dd, <i>J</i> = 168.8, 12.1 Hz), 160.96 – 159.14 (m), 159.43, 146.64, 141.50, 140.06, 137.46, 129.88 (dd, <i>J</i> = 9.6, 5.6 Hz), 128.60, 128.27, 126.99, 124.68 – 124.00 (m), 111.60 (dd, <i>J</i> = 21.3, 3.6 Hz), 109.72, 104.55 – 103.34 (m), 72.51, 56.28, 49.35, 47.80, 20.75, 18.92, 17.92.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
551	118, 29, 38, 7		(Thin film) 3384, 2983, 1771, 1737, 1677, 1502, 1452, 1310, 1201, 1175, 1148, 1049, 966, 908, 732	ESIMS <i>m/z</i> 527.2 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.32 (d, <i>J</i> = 5.5 Hz, 1H), 7.25 – 7.16 (m, 3H), 7.05 (d, <i>J</i> = 7.9 Hz, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.84 – 6.73 (m, 2H), 5.77 (dtd, <i>J</i> = 9.5, 6.5, 5.2 Hz, 1H), 4.59 – 4.51 (m, 1H), 4.38 (d, <i>J</i> = 9.8 Hz, 1H), 3.90 (s, 3H), 2.38 (s, 3H), 2.26 (s, 3H), 1.25 (d, <i>J</i> = 6.2 Hz, 3H), 0.96 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.12, 168.92, 162.78 – 159.09 (m), 146.64, 141.53, 137.46, 136.96, 136.56, 129.88 (d, <i>J</i> = 5.7 Hz), 129.24, 128.16, 124.64 (d, <i>J</i> = 15.0 Hz), 111.52 (d, <i>J</i> = 20.8 Hz), 109.71, 104.49 – 103.84 (m), 72.59, 56.28, 48.90, 47.84, 20.96, 20.75, 18.92, 18.00.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
552	125,27991		(Thin film) 3384, 2985, 1770, 1737, 1676, 1503, 1201, 1175, 1160, 1148, 966, 847, 825, 811, 732	ESIMS <i>m/z</i> 531.2 ([M+H] ⁺)	¹ H NMR (400 MHz, CDCl ₃) δ 8.37 (d, <i>J</i> = 6.0 Hz, 1H), 8.32 (d, <i>J</i> = 5.4 Hz, 1H), 7.28 – 7.18 (m, 3H), 7.00 (d, <i>J</i> = 5.5 Hz, 1H), 6.97 – 6.90 (m, 2H), 6.86 – 6.75 (m, 2H), 5.76 (dtd, <i>J</i> = 9.7, 6.5, 5.2 Hz, 1H), 4.62 – 4.48 (m, 1H), 4.39 (d, <i>J</i> = 9.8 Hz, 1H), 3.91 (s, 3H), 2.38 (s, 3H), 1.26 (d, <i>J</i> = 6.1 Hz, 3H), 1.00 (d, <i>J</i> = 7.2 Hz, 3H). ¹³ C NMR (126 MHz, CDCl ₃) δ 172.05, 168.91, 163.09 – 159.02 (m), 146.63, 141.42, 137.50, 135.78, 129.82 (d, <i>J</i> = 8.2 Hz), 124.23 (d, <i>J</i> = 11.3 Hz), 115.42 (d, <i>J</i> = 21.3 Hz), 111.98 – 111.29 (m), 109.77, 104.80 – 103.42 (m), 72.42, 56.30, 48.69, 47.81, 20.75, 18.93, 18.00.

Cmpd. No.	Reg. No.	MP (°C)	IR (cm ⁻¹)	MASS	NMR (¹ H, ¹³ C, ¹⁹ F)
553	125,288,315			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₈ H ₃₀ FN ₂ O ₆ , 509.2088; found, 509.2074	¹ H NMR (400 MHz, CDCl ₃) δ 8.41 (d, <i>J</i> = 7.4 Hz, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.32 - 7.20 (m, 4H), 7.19 - 7.11 (m, 1H), 7.12 - 7.02 (m, 2H), 6.98 (d, <i>J</i> = 5.5 Hz, 1H), 6.90 (dd, <i>J</i> = 9.6, 8.1 Hz, 1H), 5.76 (dq, <i>J</i> = 10.0, 6.2 Hz, 1H), 4.59 - 4.45 (m, 1H), 3.99 (d, <i>J</i> = 10.1 Hz, 1H), 3.88 (s, 3H), 2.37 (s, 3H), 2.22 (d, <i>J</i> = 2.0 Hz, 3H), 1.23 (d, <i>J</i> = 6.1 Hz, 3H), 0.90 (d, <i>J</i> = 7.2 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -120.17.
554	125,288,317			HRMS-ESI (<i>m/z</i>) ([M+H] ⁺) calcd for C ₂₉ H ₃₁ F ₂ N ₂ O ₇ , 557.2099; found, 557.2091	¹ H NMR (400 MHz, CDCl ₃) δ 8.40 (s, 1H), 8.31 (d, <i>J</i> = 5.4 Hz, 1H), 7.32 - 7.23 (m, 1H), 7.11 - 7.01 (m, 2H), 6.99 (d, <i>J</i> = 5.5 Hz, 1H), 6.88 (t, <i>J</i> = 9.3 Hz, 1H), 6.58 (td, <i>J</i> = 8.3, 2.5 Hz, 1H), 6.52 (dd, <i>J</i> = 10.9, 2.5 Hz, 1H), 5.74 (dq, <i>J</i> = 10.1, 6.2 Hz, 1H), 4.55 (dq, <i>J</i> = 8.1, 7.2 Hz, 1H), 4.46 (d, <i>J</i> = 10.1 Hz, 1H), 3.90 (s, 3H), 3.77 (s, 3H), 2.38 (s, 3H), 2.21 (d, <i>J</i> = 1.9 Hz, 3H), 1.20 (d, <i>J</i> = 6.1 Hz, 3H), 0.99 (d, <i>J</i> = 7.1 Hz, 3H). ¹⁹ F NMR (376 MHz, CDCl ₃) δ -113.46, -120.45.

*Cmpd. No. – Compound Number

Table 3. Biological Testing Rating Scale

Rating Table for Fungal Pathogens	
% Control	Rating
> 80	A
≤ 80	B
Not Tested	C
No Activity Observed in the Reported Assay	D

Table 4. Biological Activity – Puccrt and SEPTTR Disease Control in High and Low**5 Volume Applications**

Cmpd. No.	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
	1DP*	3DC*	1DP*	3DC*	1DP*	3DC*	1DP*	3DC*
89	C	C	C	C	C	C	C	C
90	A	A	A	A	C	C	C	C
91	A	B	A	D	C	C	C	C
92	A	A	A	A	A	B	A	A
93	B	D	A	B	C	C	C	C
95	C	C	C	C	C	C	C	C
96	A	A	A	A	C	C	C	C
97	B	D	A	A	C	C	C	C
98	A	A	A	A	C	C	C	C
99	A	B	A	A	C	C	C	C
100	A	A	A	A	C	C	C	C
101	D	D	B	D	C	C	C	C
102	B	D	B	B	C	C	C	C
103	A	B	A	A	C	C	C	C
104	A	D	B	A	C	C	C	C
105	A	A	A	A	C	C	C	C
106	A	D	A	A	C	C	C	C
107	A	B	A	A	C	C	C	C
109	B	D	D	B	C	C	C	C

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
110	A	D	A	A	C	C	C	C
111	B	D	B	A	C	C	C	C
112	D	D	B	B	C	C	C	C
113	A	B	A	B	C	C	C	C
114	A	A	A	A	C	C	C	C
115	B	D	A	A	C	C	C	C
116	B	D	B	B	C	C	C	C
117	A	B	A	A	C	C	C	C
118	A	A	B	A	C	C	C	C
119	D	D	A	B	C	C	C	C
120	A	B	A	A	C	C	C	C
121	A	B	A	A	C	C	C	C
122	D	D	B	B	C	C	C	C
123	B	D	B	A	C	C	C	C
124	A	A	A	A	C	C	C	C
125	A	A	A	A	C	C	C	C
127	B	D	B	D	C	C	C	C
128	B	D	A	B	C	C	C	C
129	A	B	A	A	C	C	C	C
130	B	D	A	D	C	C	C	C
131	A	D	A	A	C	C	C	C
132	A	B	A	A	C	C	C	C
133	A	A	A	A	C	C	C	C
135	B	D	B	D	C	C	C	C
136	A	B	A	B	C	C	C	C
137	A	B	A	A	C	C	C	C
138	C	C	C	C	D	B	A	B
139	C	C	C	C	A	A	A	A
140	C	C	C	C	A	B	A	A
141	C	C	C	C	A	A	A	A
142	C	C	C	C	A	A	A	A
143	C	C	C	C	B	D	D	B
144	C	C	C	C	B	B	B	B
145	C	C	C	C	A	A	A	A
146	C	C	C	C	A	A	A	A
147	C	C	C	C	B	B	B	A
148	C	C	C	C	A	A	A	A

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
149	C	C	C	C	B	B	A	A
150	C	C	C	C	A	A	A	A
152	C	C	C	C	B	B	A	A
153	C	C	C	C	B	B	A	A
155	C	C	C	C	A	A	A	A
156	C	C	C	C	A	A	A	A
157	C	C	C	C	A	A	A	A
158	C	C	C	C	A	A	A	A
159	C	C	C	C	A	A	A	A
160	C	C	C	C	A	B	A	A
161	C	C	C	C	D	D	B	A
162	C	C	C	C	D	D	D	B
163	C	C	C	C	B	D	B	A
164	C	C	C	C	D	D	B	D
165	C	C	C	C	A	B	A	A
166	C	C	C	C	B	D	B	B
167	C	C	C	C	A	A	A	A
168	C	C	C	C	A	B	A	A
169	C	C	C	C	A	B	A	A
170	C	C	C	C	B	B	B	B
171	C	C	C	C	A	A	A	A
173	C	C	C	C	A	B	A	A
174	C	C	C	C	A	B	A	A
175	C	C	C	C	A	A	A	A
176	C	C	C	C	A	A	A	A
178	C	C	C	C	B	D	A	A
179	C	C	C	C	B	D	A	A
180	C	C	C	C	D	D	B	D
181	C	C	C	C	D	D	B	B
182	C	C	C	C	D	B	D	B
183	C	C	C	C	A	A	A	B
184	C	C	C	C	A	A	A	A
185	C	C	C	C	A	B	A	A
186	C	C	C	C	B	D	A	B
187	C	C	C	C	A	B	B	B
188	C	C	C	C	A	B	A	A
189	C	C	C	C	A	B	A	A

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
190	C	C	C	C	B	D	B	B
191	C	C	C	C	A	A	A	A
192	C	C	C	C	A	A	A	A
193	C	C	C	C	B	D	A	A
194	C	C	C	C	A	B	A	A
195	C	C	C	C	A	B	A	B
196	C	C	C	C	D	D	A	B
197	C	C	C	C	A	A	A	A
198	C	C	C	C	A	B	A	A
199	C	C	C	C	A	A	A	A
201	C	C	C	C	B	D	A	A
202	C	C	C	C	D	D	A	A
203	C	C	C	C	A	B	A	A
204	C	C	C	C	A	A	A	A
206	C	C	C	C	A	B	A	A
207	C	C	C	C	D	D	A	A
208	C	C	C	C	A	B	A	A
209	C	C	C	C	A	B	A	A
210	C	C	C	C	A	B	A	A
211	C	C	C	C	A	A	A	A
212	C	C	C	C	A	A	A	A
213	C	C	C	C	B	B	A	A
214	C	C	C	C	D	D	D	D
215	C	C	C	C	A	D	A	A
216	C	C	C	C	A	B	A	B
217	C	C	C	C	A	B	A	A
218	C	C	C	C	A	B	A	A
219	C	C	C	C	A	D	A	A
220	C	C	C	C	A	B	A	A
221	C	C	C	C	B	D	B	A
222	C	C	C	C	A	D	A	A
223	C	C	C	C	B	D	B	B
224	C	C	C	C	B	D	A	A
225	C	C	C	C	D	D	D	D
228	C	C	C	C	C	C	C	C
229	C	C	C	C	D	D	D	B
230	C	C	C	C	D	D	D	D
386	B	D	B	D	C	C	C	C
387	A	B	A	B	C	C	C	C

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
388	B	B	A	A	C	C	C	C
389	A	D	D	D	C	C	C	C
390	A	B	A	D	C	C	C	C
391	A	A	A	A	C	C	C	C
392	A	B	A	D	C	C	C	C
393	C	C	C	C	C	C	C	C
394	B	D	A	B	C	C	C	C
395	A	A	A	A	C	C	C	C
396	A	A	A	A	C	C	C	C
397	A	D	A	A	C	C	C	C
398	B	B	B	B	C	C	C	C
399	A	A	A	A	C	C	C	C
400	A	A	A	A	C	C	C	C
401	A	B	A	A	C	C	C	C
402	A	B	A	B	C	C	C	C
403	A	B	A	A	C	C	C	C
404	A	A	A	A	C	C	C	C
405	A	A	A	A	C	C	C	C
406	A	A	A	A	C	C	C	C
407	A	A	A	A	C	C	C	C
408	A	B	A	A	C	C	C	C
409	A	D	A	A	C	C	C	C
410	B	D	B	B	C	C	C	C
411	A	B	A	A	C	C	C	C
412	C	C	C	C	C	C	C	C
413	A	B	A	A	C	C	C	C
414	B	D	A	B	C	C	C	C
415	A	B	A	A	C	C	C	C
416	A	D	A	B	C	C	C	C
417	A	D	B	B	C	C	C	C
418	A	A	A	A	C	C	C	C
419	B	D	B	B	C	C	C	C
420	B	D	B	D	C	C	C	C
421	D	D	D	D	C	C	C	C
422	D	D	B	D	C	C	C	C
423	A	A	A	A	C	C	C	C
424	A	B	A	A	C	C	C	C
425	A	A	A	A	C	C	C	C
426	A	D	A	A	C	C	C	C

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
427	B	D	B	B	C	C	C	C
428	B	D	B	A	C	C	C	C
429	B	D	B	B	C	C	C	C
430	A	B	A	A	C	C	C	C
431	A	A	A	A	C	C	C	C
432	B	A	A	A	C	C	C	C
433	A	A	A	A	C	C	C	C
434	A	A	A	A	C	C	C	C
435	A	A	A	A	C	C	C	C
436	A	A	A	A	C	C	C	C
437	A	A	A	A	C	C	C	C
438	A	A	A	A	C	C	C	C
439	A	A	A	A	C	C	C	C
440	A	A	A	A	C	C	C	C
441	A	B	A	A	C	C	C	C
442	A	A	A	A	C	C	C	C
443	A	A	A	A	C	C	C	C
444	A	A	A	A	C	C	C	C
445	A	B	A	A	C	C	C	C
446	A	B	A	A	C	C	C	C
447	A	A	A	A	C	C	C	C
448	A	A	A	A	C	C	C	C
449	A	A	A	A	C	C	C	C
450	A	B	A	A	C	C	C	C
451	A	A	A	A	C	C	C	C
452	A	A	A	A	C	C	C	C
453	A	A	A	A	C	C	C	C
454	A	A	A	A	C	C	C	C
455	A	A	A	A	C	C	C	C
456	A	A	A	A	C	C	C	C
457	A	A	A	A	C	C	C	C
458	A	A	A	A	C	C	C	C
459	A	A	A	A	C	C	C	C
460	A	A	A	A	C	C	C	C
461	A	A	A	A	C	C	C	C
462	C	C	C	C	D	D	D	B
463	C	C	C	C	D	D	D	B

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
464	C	C	C	C	A	A	A	A
465	C	C	C	C	B	D	D	D
466	C	C	C	C	B	D	A	B
467	C	C	C	C	B	B	A	B
468	C	C	C	C	A	B	A	A
469	C	C	C	C	B	D	D	D
470	C	C	C	C	B	B	B	B
471	C	C	C	C	A	B	A	A
472	C	C	C	C	A	A	A	A
473	C	C	C	C	B	B	A	A
474	C	C	C	C	B	D	A	A
475	C	C	C	C	A	A	A	A
476	C	C	C	C	A	A	A	A
477	C	C	C	C	B	B	A	A
478	C	C	C	C	B	D	A	B
479	C	C	C	C	D	D	A	B
480	C	C	C	C	D	B	D	D
481	C	C	C	C	B	B	B	A
482	C	C	C	C	B	A	B	A
483	C	C	C	C	B	B	A	B
484	C	C	C	C	A	B	A	B
485	C	C	C	C	A	A	A	A
486	C	C	C	C	A	B	A	A
487	C	C	C	C	A	A	B	A
488	C	C	C	C	A	B	A	A
489	C	C	C	C	A	A	A	A
490	C	C	C	C	A	B	A	A
491	C	C	C	C	A	B	A	A
492	C	C	C	C	B	B	A	A
493	C	C	C	C	B	B	B	B
494	C	C	C	C	B	B	B	B
495	C	C	C	C	B	B	B	D
496	C	C	C	C	A	B	A	A
497	C	C	C	C	A	B	A	B
498	C	C	C	C	A	B	A	A
499	C	C	C	C	B	D	A	A
500	C	C	C	C	A	B	A	A
501	C	C	C	C	B	B	A	B

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
502	C	C	C	C	A	B	B	D
503	C	C	C	C	A	B	A	A
504	C	C	C	C	A	D	B	B
505	C	C	C	C	B	D	B	D
506	C	C	C	C	D	D	D	D
507	C	C	C	C	D	D	B	D
508	C	C	C	C	A	A	A	A
509	C	C	C	C	A	B	B	B
510	C	C	C	C	A	A	A	A
511	C	C	C	C	D	B	D	D
512	C	C	C	C	D	D	D	D
513	C	C	C	C	B	D	D	D
514	C	C	C	C	D	D	D	D
515	C	C	C	C	D	D	D	D
516	C	C	C	C	A	A	A	A
517	C	C	C	C	A	B	D	B
518	C	C	C	C	A	A	A	A
519	C	C	C	C	B	B	A	B
520	C	C	C	C	D	D	D	D
521	C	C	C	C	B	B	A	B
522	C	C	C	C	B	D	A	B
523	C	C	C	C	A	A	A	A
524	C	C	C	C	A	A	A	A
525	C	C	C	C	A	A	A	A
526	C	C	C	C	A	B	A	A
527	C	C	C	C	A	B	A	A
528	C	C	C	C	A	B	A	A
529	C	C	C	C	A	B	A	A
530	C	C	C	C	A	D	A	A
531	C	C	C	C	A	A	A	A
532	C	C	C	C	A	A	A	A
533	C	C	C	C	A	A	A	A
534	C	C	C	C	A	B	A	A
535	C	C	C	C	A	A	A	A
536	C	C	C	C	A	B	A	A
537	C	C	C	C	A	A	A	A
538	C	C	C	C	A	B	A	A
539	C	C	C	C	A	B	A	A
540	C	C	C	C	A	B	A	A

	HV activity at 100 ppm				LV activity at 121.5 g/H			
	PUCCRT*		SEPTTR*		PUCCRT*		SEPTTR*	
541	C	C	C	C	A	B	A	A
542	C	C	C	C	A	B	A	A
543	C	C	C	C	A	B	A	A
544	C	C	C	C	A	A	A	A
545	C	C	C	C	A	A	A	A
546	C	C	C	C	A	A	A	A
547	C	C	C	C	A	A	A	A
548	C	C	C	C	A	A	A	A
549	C	C	C	C	A	A	A	A
550	C	C	C	C	A	A	A	A
551	C	C	C	C	A	A	A	A
552	C	C	C	C	A	A	A	A
553	C	C	C	C	A	A	A	A
554	C	C	C	C	A	A	A	A

*Cmpd. No. – Compound Number

*PUCCRT – Wheat Brown Rust (*Puccinia triticina*)

*SEPTTR – Wheat Leaf Blotch (*Zymoseptoria tritici*)

*1DP – 1 Day Protectant

*3DC – 3 Day Curative

*g/H – Grams Per Hectare

*ppm – Parts Per Million

Table 5. Biological Activity – Disease Control at 100 ppm

	ALTESO*	CERCBE*	COLLLA*	LEPTNO*
Cmpd. No.	1DP*			
92	B	A	A	A
139	B	A	A	A
140	A	A	A	A
141	B	A	A	A
142	A	A	A	A
145	A	A	A	A
146	A	A	A	A
148	B	A	A	A
150	A	A	A	A
167	A	A	A	A
171	B	A	A	A

	ALTESO*	CERCBE*	COLLLA*	LEPTNO*
Cmpd. No.	1DP*			
174	B	A	A	A
176	B	A	A	A
199	A	A	A	A
204	A	A	A	A
464	B	A	A	A
468	A	A	A	A
472	B	A	A	A
475	B	A	A	A
524	A	A	A	A
528	B	A	A	A
532	B	A	A	A

*Cmpd. No. – Compound Number

*ALTESO – Tomato Early Blight (*Alternaria solani*)

5 *CERCBE – Leaf Spot of Sugar Beets (*Cercospora beticola*)

*COLLLA – Cucumber Anthracnose (*Colletotricum lagenarium*)

*LEPTNO – Wheat Glume Blotch (*Leptosphaeria nodorum*)

*1DP – 1 Day Protectant

10 **Table 6. Biological Activity – Disease Control at 100 ppm**

	PYRIOR*	RHYNSE*	VENTIN*
Cmpd. No.	1DP*		
92	C	A	C
139	A	A	A
140	A	C	A
141	A	A	A
142	A	A	A
145	A	A	A
146	A	A	A
148	A	A	A
150	A	A	A
167	A	A	C
171	A	A	C
174	A	A	B
176	A	A	A
199	A	A	C
204	A	A	C
464	A	A	A

	PYRIOR*	RHYNSE*	VENTIN*
Cmpd. No.	1DP*		
468	A	A	A
472	A	A	A
475	A	A	B
524	A	A	A
528	A	A	A
532	C	A	C

*Cmpd. No. – Compound Number

*PYRIOR – Rice Blast (*Pyricularia oryzae*)

*RHYNSE – Barley Scald (*Rhynchosporium secalis*)

*VENTIN – Apple Scab (*Venturia inaequalis*)

*1DP – 1 Day Protectant

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Table 7. Biological Activity – Disease Control at 25 ppm

	PHAKPA*	
Cmpd. No.	1DP*	3DC*
139	A	B
140	B	D
141	A	B
142	A	B
92	B	B
145	A	B
146	A	B
148	A	B
150	A	A
158	A	B
167	A	B
169	A	D
171	A	B
173	B	D
174	A	B
175	B	D
176	B	B
199	A	B
204	A	B
207	B	D
208	A	B
209	A	B

Cmpd. No.	PHAKPA*	
	1DP*	3DC*
210	A	D
211	A	B
212	B	D
213	A	B
464	A	A
468	A	B
472	A	B
475	A	B
493	D	D
494	D	D
495	B	D
496	B	D
497	D	D
498	A	B
499	B	B
500	A	B
501	B	B
502	B	D
503	A	D
504	B	D
505	D	D
506	D	D
507	D	D
508	B	D
509	D	D
510	B	D
511	D	D
512	D	D
513	D	D
514	D	D
515	D	D
516	B	D
517	B	D
518	B	D
519	D	B
520	D	D
521	B	D
522	B	D
523	A	B

Cmpd. No.	PHAKPA*	
	1DP*	3DC*
524	A	B
525	A	B
526	A	D
527	A	B
528	A	B
529	A	B
530	A	B
531	A	B
532	A	B
533	A	B
534	A	B
535	B	D
536	A	B
537	A	B
538	B	B
539	A	B
540	A	B
541	A	B
542	B	D
543	A	B
544	A	B
545	B	D
546	A	B
547	A	B
548	A	D
549	B	D
550	A	B
551	A	B
552	A	B
553	B	D
554	B	D

*Cmpd. No. – Compound Number

*PHAKPA – Asian Soybean Rust (*Phakopsora pachyrhizi*)

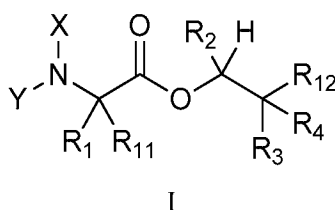
*1DP – 1 Day Protectant

*3DC – 3 Day Curative

CLAIMS

What is claimed is:

1. A compound of Formula I

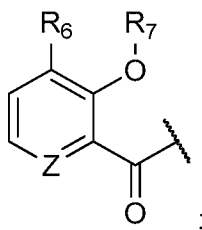


wherein:

X is hydrogen or C(O)R₅;

Y is hydrogen, C(O)R₅, or Q;

Q is



wherein: Z is N or CH;

R₁ is hydrogen or alkyl, substituted with 0, 1 or multiple R₈;

R₂ is methyl;

R₃ is chosen from aryl or heteroaryl, each optionally substituted with 0, 1 or multiple R₈;

R₄ is chosen from hydrogen, halo, hydroxyl, alkyl or alkoxy;

R₅ is chosen from alkoxy or benzyloxy, each optionally substituted with 0, 1, or multiple R₈;

R₆ is chosen from hydrogen, alkoxy, or halo, each optionally substituted with 0, 1, or multiple R₈;

R₇ is chosen from hydrogen, -C(O)R₉, or -CH₂OC(O)R₉;

R₈ is chosen from hydrogen, alkyl, aryl, acyl, halo, alkenyl, alkynyl, alkoxy, cyano or heterocyclyl, each optionally substituted with 0, 1, or multiple R₁₀;

R₉ is chosen from alkyl, alkoxy, or aryl, each optionally substituted with 0, 1, or multiple R₈;

5 R₁₀ is chosen from hydrogen, alkyl, aryl, acyl, halo, alkenyl, alkoxy, or heterocyclyl.

R₁₁ is chosen from hydrogen or alkyl, substituted with 0, 1 or multiple R₈; and

R₁₂ is chosen from aryl or heteroaryl, each optionally substituted with 0, 1 or multiple R₈.

2. The compound according to Claim 1, wherein X and Y are hydrogen.

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3. The compound according to Claim 2, wherein R₁ and R₁₁ are independently chosen from hydrogen or alkyl.

4. The compound according to Claim 2, wherein R₃ and R₁₂ are independently aryl, each optionally substituted with 0, 1 or multiple R₈.

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5. The compound according to Claim 2, wherein R₄ is H.

6. The compound according to Claim 2, wherein R₁ and R₁₁ are independently chosen from hydrogen or alkyl, R₃ and R₁₂ are independently aryl, each optionally substituted with 0, 1 or multiple R₈, and R₄ is H.

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7. The compound according to Claim 1, wherein X is C(O)R₅ and Y is hydrogen.

8. The compound according to Claim 7, wherein R₁ and R₁₁ are independently chosen from hydrogen or alkyl.

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9. The compound according to Claim 7, wherein R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 .

10. The compound according to Claim 7, wherein R_4 is H.

5

11. The compound according to Claim 7, wherein R_1 and R_{11} are independently chosen from hydrogen or alkyl, R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 , and R_4 is H.

10

12. The compound according to Claim 1, wherein X is hydrogen and Y is Q.

13. The compound according to Claim 12, wherein Z is N.

14. The compound according to Claim 13, wherein R_6 is alkoxy.

15

15. The compound according to Claim 14, wherein R_7 is hydrogen.

16. The compound according to Claim 15, wherein R_1 and R_{11} are independently chosen from hydrogen or alkyl.

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17. The compound according to Claim 15, wherein R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 .

18. The compound according to Claim 15, wherein R_4 is H.

25

19. The compound according to Claim 15, wherein R_1 and R_{11} are independently chosen from hydrogen or alkyl, R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 , and R_4 is H.
- 5 20. The compound according to Claim 14, wherein R_7 is chosen from $-C(O)R_9$, or $-CH_2OC(O)R_9$.
21. The compound according to Claim 20, wherein R_1 and R_{11} are independently chosen from hydrogen or alkyl.
- 10 22. The compound according to Claim 20, wherein R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 .
23. The compound according to Claim 20, wherein R_4 is H.
- 15 24. The compound according to Claim 20, wherein R_1 and R_{11} are independently chosen from hydrogen or alkyl, R_3 and R_{12} are independently aryl, each optionally substituted with 0, 1 or multiple R_8 , and R_4 is H.
- 20 25. The compound according to Claim 24, wherein R_9 is chosen from $-CH_3$, $-CH_2OCH_2CH_3$, $-CH_2CH_2OCH_3$, $-CH(CH_3)_2$, $-CH_2CH_2CH_2CH_3$, $-cyclopropyl$.
26. A composition for the control of a fungal pathogen including mixtures of at least one of the compounds of Claim 1 and another pesticide including fungicides, insecticides, 25 nematocides, miticides, arthropodicides, bactericides and combinations thereof.
27. A composition for the control of a fungal pathogen including mixtures of at least one of the compounds of Claim 15 and another pesticide including fungicides, insecticides, nematocides, miticides, arthropodicides, bactericides and combinations thereof.

28. A composition for the control of a fungal pathogen including mixtures of at least one of the compounds of Claim 20 and another pesticide including fungicides, insecticides, nematocides, miticides, arthropodocides, bactericides and combinations thereof.

5

29. A method for the control and prevention of fungal attack on a plant, the method including the step of:

applying a fungicidally effective amount of at least one of the compounds of any of Claims 1-25 to at least one of the plant, an area adjacent to the plant, soil adapted to support growth of the plant, a root of the plant, and foliage of the plant.

10

30. A method for the control and prevention of fungal attack on a plant, the method including the step of:

applying a fungicidally effective amount of at least one of the compositions of any of Claims 26-28 to at least one of the plant, an area adjacent to the plant, soil adapted to support growth of the plant, a root of the plant, and foliage of the plant.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/066760

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C07C 229/08 (2016.01)

CPC - C07C 229/34 (2016.02)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - C07C 229/08, 229/34 (2016.01)

CPC - C07C 229/08, 229/34 (2016.02)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 562/5530; IPC(8) - C07C 229/08, 229/34; CPC - C07C 229/08, 229/34 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Orbit, STN, Google Patents, PubChem, SureChEMBL, Google.

Search terms used: aminoacetate, amino acetate, glycinate, aminoacetic, amino acetic, glycine, ester, diphenyl, dinaphthalenyl, dianthracenyl.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2011/0034493 A1 (BOEBEL et al) 10 February 2011 (10.02.2011) entire document	1-6, 26
A	IIS 2013/0090298 A1 (GREEN CROSS CORPORATION) 11 April 2013 (11.04.2013) entire document	1-6, 26
A	PubChem. Substance Record for SID 74383515. Deposit Date: 2009-06-11 [retrieved on 28 January 2016]. Retrieved from the Internet: <URL: https://pubchem.ncbi.nlm.nih.gov/substance/74383515#section=Top >. entire document	1-6, 26

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

21 March 2016

Date of mailing of the international search report

14 APR 2016

Name and mailing address of the ISA/

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenhaver

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/066760

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Extra Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-6, 26

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

Continued from Box No. III Observations where unity of invention is lacking

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees need to be paid.

Group I+: claims 1-30 are drawn to compounds of Formula I, compositions thereof, and methods thereof.

The first invention of Group I+ is restricted to a compound of Formula I wherein: X is hydrogen; Y is hydrogen; R1 is hydrogen; R2 is methyl; R3 is aryl, which is unsubstituted; R4 is hydrogen; R11 is hydrogen; R12 is aryl, which is unsubstituted; compositions thereof; and methods thereof. It is believed that claims 1-6 and 26 read on this first named invention and thus these claims will be searched without fee to the extent that they read on the above embodiment.

Applicant is invited to elect additional formula(e) for each additional compound to be searched in a specific combination by paying an additional fee for each set of election. Each additional elected formula(e) requires the selection of a single definition for each compound variable. An exemplary election would be a compound of Formula I wherein: X is C(O)R5; Y is hydrogen; R1 is hydrogen; R2 is methyl; R3 is heteroaryl, which is unsubstituted; R4 is hydroxyl; R5 is benzyloxy, which is substituted with one R8; R8 is cyano, which is unsubstituted; R11 is alkyl, which is unsubstituted; R12 is aryl, which is unsubstituted; compositions thereof; and methods thereof. Additional formula(e) will be searched upon the payment of additional fees. Applicants must specify the claims that read on any additional elected inventions. Applicants must further indicate, if applicable, the claims which read on the first named invention if different than what was indicated above for this group. Failure to clearly identify how any paid additional invention fees are to be applied to the "+" group(s) will result in only the first claimed invention to be searched/examined.

The inventions listed in Groups I+ do not relate to a single general inventive concept under PCT Rule 13.1, because under PCT Rule 13.2 they lack the same or corresponding special technical features for the following reasons:

The Groups I+ formulae do not share a significant structural element requiring the selection of alternatives for the compound variables X, Y, R1, R2, R3, R4, R11, and R12.

The Groups I+ share the technical features of a compound having the core structure of Formula I; a composition for the control of a fungal pathogen including mixtures of at least one compound and another pesticide including fungicides, insecticides, nematocides, miticides, arthropodocides, bactericides and combinations thereof; and a method for the control and prevention of fungal attack on a plant, the method including the step of: applying a fungicidally effective amount of at least one compounds to at least one of the plant, an area adjacent to the plant, soil adapted to support growth of the plant, a root of the plant, and foliage of the plant. However, these shared technical features do not represent a contribution over the prior art.

Specifically, US 2011/0034493 A1 to Boebel et al. teach a compound having the core structure of Formula I wherein: X is hydrogen; Y is Q; Z is N; R1 is hydrogen; R2 is methyl; R6 is alkoxy; R7 is hydrogen; (See Para. [0076], Such other fungicides may include... picolinamide UK-2A...; picolinamide UK-2A has the core structure of Formula I as evidenced by Substance Record for SID 74383515 to PubChem); a composition for the control of a fungal pathogen (See Paras. [0079] and Para. [0022]) including mixtures of at least one compound and another pesticide including fungicides, insecticides, nematocides, miticides, arthropodocides, bactericides and combinations thereof (See Para. [0075], the formulations may optionally include combinations that contain other pesticidal compounds. Such additional pesticidal compounds may be fungicides, insecticides, herbicides, nematocides.; Para. [0076]); and a method for the control and prevention of fungal attack on a plant (See Paras. [0079]), the method including the step of: applying a fungicidally effective amount of at least one compounds to at least one of the plant, an area adjacent to the plant, soil adapted to support growth of the plant, a root of the plant, and foliage of the plant (See Paras. [0022] and [0023]; Para. [0079]; Paras. [0075] and [0076]).

The inventions listed in Groups I+ therefore lack unity under Rule 13 because they do not share a same or corresponding special technical feature.