

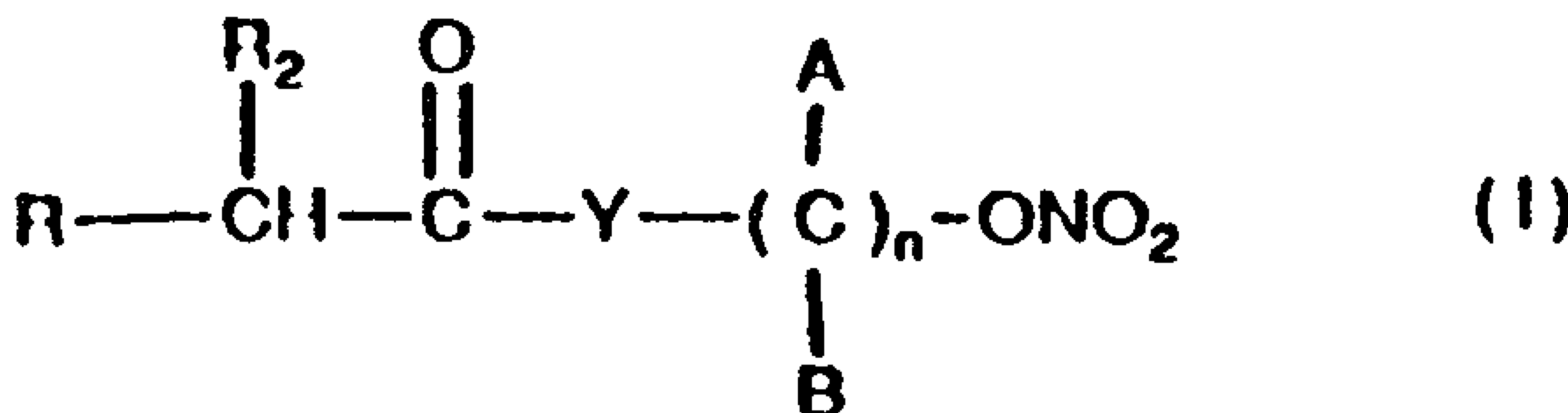


(86) Date de dépôt PCT/PCT Filing Date: 1993/11/15
(87) Date publication PCT/PCT Publication Date: 1994/06/09
(45) Date de délivrance/Issue Date: 2005/06/14
(85) Entrée phase nationale/National Entry: 1995/05/25
(86) N° demande PCT/PCT Application No.: EP 1993/003193
(87) N° publication PCT/PCT Publication No.: 1994/012463
(30) Priorité/Priority: 1992/11/26 (MI92A002699) IT

(51) Cl.Int.⁶/Int.Cl.⁶ C07C 203/04, A61K 31/40, A61K 31/38, A61K 31/215, C07C 233/22, C07D 207/337, C07D 333/24, C07C 235/34, C07D 209/46, C07D 209/88, C07C 235/78, C07D 491/052
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(54) Titre : ESTERS NITRIQUES A ACTIVITE PHARMACOLOGIQUE ET PROCEDE DE PREPARATION DE CES ESTERS

(54) Title: NITRIC ESTERS HAVING A PHARMACOLOGICAL ACTIVITY AND PROCESS FOR THEIR PREPARATION



(57) Abrégé/Abstract:

Nitric esters with pharmacological activity having general formula (I), their pharmaceutical utilisation and process for their preparation.





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WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : C07C 203/04, A61K 31/21, C07D 333/22, 209/46, 491/04, A61K 31/40, 31/38, C07D 207/337, 209/88, 333/24, A61K 31/16, C07C 235/78, 235/34, 233/21	A1	(11) International Publication Number: WO 94/12463 (43) International Publication Date: 9 June 1994 (09.06.94)
(21) International Application Number: PCT/EP93/03193 (22) International Filing Date: 15 November 1993 (15.11.93) (30) Priority Data: MI92A002699 26 November 1992 (26.11.92) IT (71) Applicant (for all designated States except US): HCT-HEALTH CARE TRADING LTD. [IE/IE]; Dame Street, Dublin 2 (IE). (72) Inventor; and (75) Inventor/Applicant (for US only): ARENA, Barbara [IT/IT]; Via Toti, 22, I-20052 Monza (IT). (74) Agent: TRUPIANO, Roberto; Brevetti Europa S.r.l., Piazza Bernini, 6, I-20133 Milano (IT).		(81) Designated States: AU, BR, CA, CZ, FI, HU, JP, KP, KR, NO, NZ, PL, RO, RU, SK, UA, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
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(57) Abstract		
Nitric esters with pharmacological activity having general formula (I), their pharmaceutical utilisation and process for their preparation.		
$\text{R}-\overset{\text{R}_2}{\underset{ }{\text{CH}}}-\overset{\text{O}}{\underset{ }{\text{C}}}-\text{Y}-\overset{\text{A}}{\underset{ }{\underset{\text{B}}{ }}{\text{C}}}_n-\text{ONO}_2 \quad (I)$		

43(2), 109 (1991); T.H.LUSHER, C.M.BOULANGER, Y.DOHI, Z.YANG, Hypertension, 19,117 (1992)], on whose basis the integrity of vasal endothelium is thought to be a basic barrier against the onset of pathological processes in several organs and apparatuses.

Such protection barrier, and therefore the integrity of the vasal endothelium, is ensured physiologically by the presence of nitric oxide and prostacyclin.

The treatment with non steroid drugs having an anti-inflammatory activity, such as, for instance, 2-(3-benzoylphenyl)propionic acid or ketoprofen, causes the inhibition of cyclo-oxygenase, an enzyme which synthesizes the precursor of prostacyclin.

As a consequence, having so inhibited the production of prostacyclin, the reserve of same in the tissues is markedly depauperated, and therefore the integrity of vasal endothelium is compromised.

As said, because of this endothelial damage due to the reduction of prostacyclin, diffuse pathological process break out which affect the gastrointestinal apparatus, liver and kidneys.

OBJECTS OF THE INVENTION

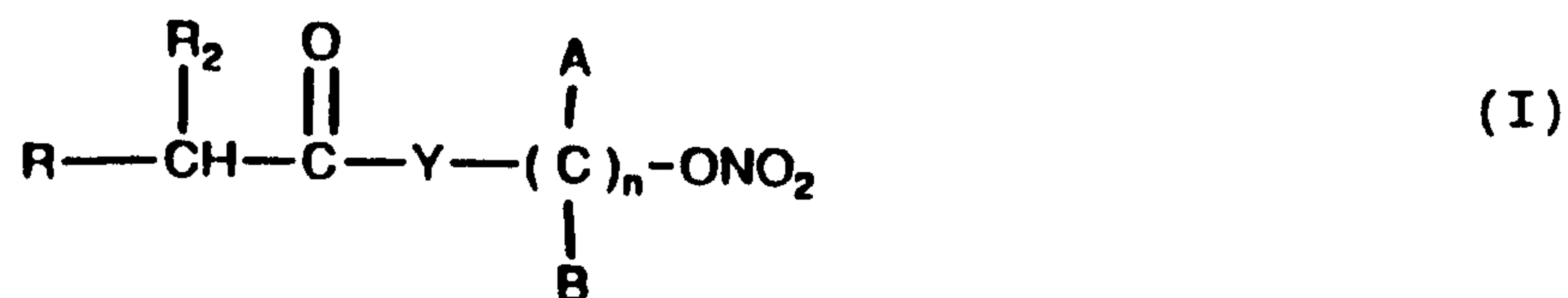
Object of the present invention is that to provide a group of products which, while ensuring the maintenance of the pharmacological activity characteristic of the known anti-inflammatory agents, are capable of eliminating the adverse reactions caused by the treatment with

said agents.

Another object of the present invention is the realization of a process for the preparation of a group of products having an anti-inflammatory activity while being exempt from the adverse reactions which are typical of anti-inflammatory agents.

DESCRIPTION OF THE INVENTION

These and still other objects and associated advantages which will appear from the following description, are obtained with nitric esters having the following general formula:



where:

A and B are chosen among hydrogen, linear or branched, substituted or non substituted alkyl chains, R is chosen among

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