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(71) Applicants *(for all designated States except US)*: **ACTIVX BIOSCIENCES, INC.** [US/US]; 11025 North Torrey Pines Road, Suite 120, La Jolla, CA 92037 (US). **KYORIN PHARMACEUTICAL CO., LTD** [JP/JP]; 5, Kanda Surugadai, 2-chome, Chiyoda-ku, Tokyo, 101-8311 (JP).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **COCIORVA, Oana** [RO/US]; 5307 Renaissance Avenue, San Diego, CA 92122 (US). **LI, Bei** [US/US]; 4020 Santa Nella Place, San Diego, CA 92130 (US). **SZARDENINGS, Katrin** [US/US]; 5971 Seacrest View Road, San Diego, CA 92121 (US). **FUKUDA, Yasmuchi** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP). **NOMURA, Masahiro** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP). **SETO, Shigeki** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP). **YUMOTO, Kazuhiro** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP). **OKADA, Kyoko** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP). **NAKAMURA, Ayako** [JP/JP]; 2399-1, Nogi, Nogi-machi, Shimotsuga-gun, Kyorin Discovery Research Laboratories, Tochigi, 329-0114 (JP).

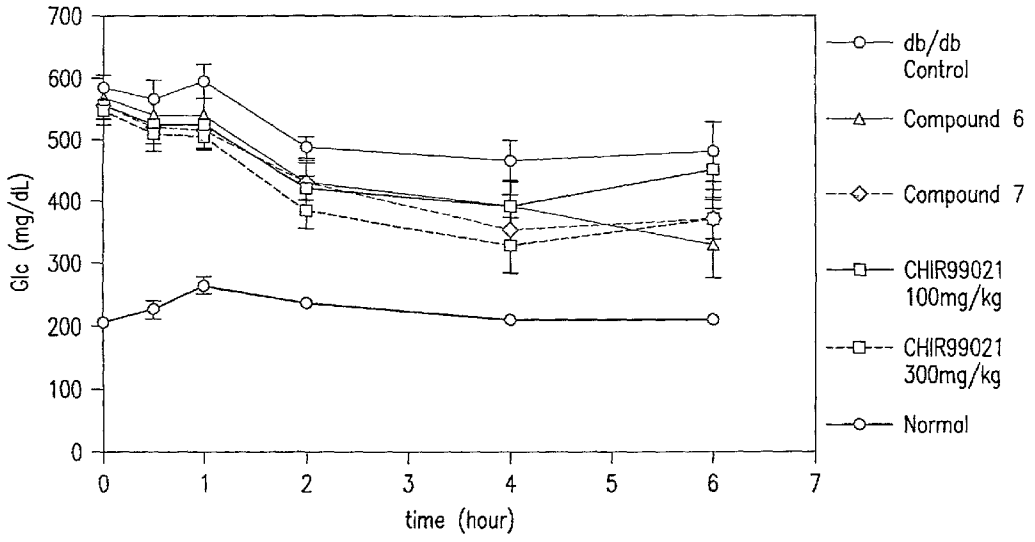
(74) Agents: **ABRAMS, Samuel, B.** et al.; Jones Day, 222 East 41st Street, New York, NY 10017-6702 (US).

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[Continued on next page]

(54) Title: AMINOQUINOLONES AS GSK-3 INHIBITORS



(57) Abstract: Provided herein are aminoquinolones and pharmaceutically acceptable derivatives thereof. In certain embodiments, provided herein are compounds, compositions and methods for treating, preventing or ameliorating GSK-3 mediated diseases.

WO 2007/106537 A3

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/006480

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07D215/38 C07D215/56 C07D401/12 C07D401/14 C07D498/06
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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)
C07D A61K

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

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 486 488 A (PHOSPHOSITES GMBH [DE]) 15 December 2004 (2004-12-15) compound 7 in Table 1 page 1, paragraph 1-6; claim 1; tables 1-7	1-70
A	WO 02/092571 A (ASTRAZENECA AB [SE]; LARSSON JOAKIM [SE]; SJOE PETER [SE]) 21 November 2002 (2002-11-21) page 10, lines 15-29; claim 1	1-70
A	WO 2005/007111 A (SQUIBB BRISTOL MYERS CO [US]; SHER PHILIP M [US]; SUN CHONG-QING [US];) 27 January 2005 (2005-01-27) page 1, lines 11-16 page 49, paragraph 2; claim 1; examples 1-12	1-70

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[X] Further documents are listed in the continuation of Box C.

[X] 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

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"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

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"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	Date of mailing of the international search report
26 September 2007	16/10/2007

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Guspanová, Jana

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/09758 A (WOCKHARDT LTD [IN]; SOUZA NOEL J DE [IN]; PATEL MAHESH V [IN]; GUPTE S) 7 February 2002 (2002-02-07) compounds in the rows 14 and 15 in Table 4 on page 97claim 1; tables 1-4	1,3,5-7, 9-12, 14-24, 27,28, 33-35, 37,39, 43,49, 52,56, 63,64
X	EP 0 945 435 A1 (WAKUNAGA PHARMA CO LTD [JP]) 29 September 1999 (1999-09-29) claim 1; example 40	1-3, 9-12, 14-18, 22,24, 27,63,64
X	EP 0 390 215 A2 (WAKUNAGA SEIYAKU KK [JP]) 3 October 1990 (1990-10-03) compound 48 in Table 8 on page 31claim 1	1,5-7, 9-12, 14-19, 22,24, 27,35, 39,63,64
X	SINGH R ET AL: "Synthesis and antibacterial activity of 7-hydrazinoquinolones" EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, EDITIONS SCIENTIFIQUE ELSEVIER, PARIS, FR, vol. 33, no. 9, September 1998 (1998-09), pages 697-703, XP004140824 ISSN: 0223-5234 compound 4 and 6i on page 698	1,5-7, 9-12, 14-19, 23,24, 27,35, 39,43, 44,63,64
X	DATABASE WPI Week 2004 Derwent Publications Ltd., London, GB; AN 2004-500463 XP002452679 & CN 1 491 944 A (INST MEDICINE BIOLOGICAL TECHNOLOGY CHIN) 28 April 2004 (2004-04-28) formulas on pages 6 and 7 abstract	1,2,5-7, 9-12,14, 15,18, 20,21, 37,63,64
P,X	EP 1 650 192 A1 (ASTELLAS PHARMA INC [JP]) 26 April 2006 (2006-04-26) compounds 85, 87, 100, 201 and 206	1,9-12, 14,15, 18, 22-24, 27,56, 63,64

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/006480

Box 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. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 65-68 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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 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:

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 an additional fee, this Authority did not invite payment of any additional fee.

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.:

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2007/006480

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