PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C12N 9/12, A61K 38/45, C07K 16/18, 16/40 — A1

(11) International Publication Number: **WO 00/70028**

(43) International Publication Date: 23 November 2000 (23.11.00)

(21) International Application Number: PCT/AU00/00457

(22) International Filing Date: 12 May 2000 (12.05.00)

(30) Priority Data:

PQ 0339	13 May 1999 (13.05.99)	AU
PQ 1504	8 July 1999 (08.07.99)	AU

(71) Applicant *(for all designated States except US)*: JOHNSON & JOHNSON RESEARCH PTY. LIMITED [AU/AU]; 1 Central Avenue, Australian Technology Park, Everleigh, NSW 1430 (AU).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: PITSON, Stuart, Maxwell [AU/AU]; 1B Threlfall Avenue, Norwood, South Australia 5067 (AU). WATTENBERG, Brian, Wolff [US/AU]; 137 Sheoak Road, Belair, South Australia 5052 (AU). XIA, Pu [CN/AU]; 97 Shakespeare Avenue, Magill, South Australia 5072 (AU). D'ANDREA, Richard, James [AU/AU]; 54 Allendale Grove, Stonyfell, South Australia 5066 (AU). GAMBLE, Jennifer, Ruth [AU/AU]; 8 Branch Road, Stirling, South Australia 5152 (AU). VADAS, Mathew, Alexander [AU/AU]; 8 Branch Road, Stirling, South Australia 5152 (AU).

(74) Agents: SLATTERY, John, Michael et al.; Davies Collison Cave, 1 Little Collins Street, Melbourne, Victoria 3000 (AU).

(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: SPHINGOSINE KINASE ENZYME

(57) **Abstract**

The present invention relates generally to novel protein molecules and to derivatives, analogues, chemical equivalents and mimetics thereof capable of modulating cellular activity and, in particular, modulating cellular activity via the modulation of signal transduction. More particularly, the present invention relates to human sphingosine kinase and to derivatives, analogues, chemical equivalents and mimetics thereof. The present invention also contemplates genetic sequences encoding said protein molecules and derivatives, analogues, chemical equivalents and mimetics thereof. The molecules of the present invention are useful in a range of therapeutic, prophylactic and diagnostic applications.

