05/09/02
20020570008

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 October 2002 (10.10.2002)

PCT

(10) International Publication Number
WO 02/078720 A3

(51) International Patent Classification[7]: A61K 35/00, 38/43, C12P 1/00, 39/00, G01N 33/567, 33/569

(21) International Application Number: PCT/US02/00217

(22) International Filing Date: 4 January 2002 (04.01.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/260,022 5 January 2001 (05.01.2001) US

(71) Applicants: **KEMIN INDUSTRIES, INC.** [US/US]; 2100 Maury Street, P.O. Box 70, Des Moines, IA 50301 (US). **PLETHODON, Research, L.L.C.** [US/US]; 1590 Double Springs Road, Demorest, GA 30535 (US).

(72) Inventors: **AUSTIN, Richard, M., Jr.**; 1590 Double Spring Road, Demorest, GA 30535 (US). **VAN HEMEL, Johan**; 44, St-Theresiastraat, B-2600 Antwerpen (BE). **SAS, Benedikt**; Sint-Kwintensberg, 555 9000 Ghent (BE). **VANDERKERCKHOVE, Jan**; 5 Eikstraat, B-3271 Scherpenheuvel-Zichem (BE).

(74) Agents: **HERINK, Kent, A.** et al.; Davis, Brown, Koehn, Shors, & Roberts, P.C., The Financial Center, Suite 2500, 666 Walnut Street, Des Moines, IA 50309-3993 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, 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, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

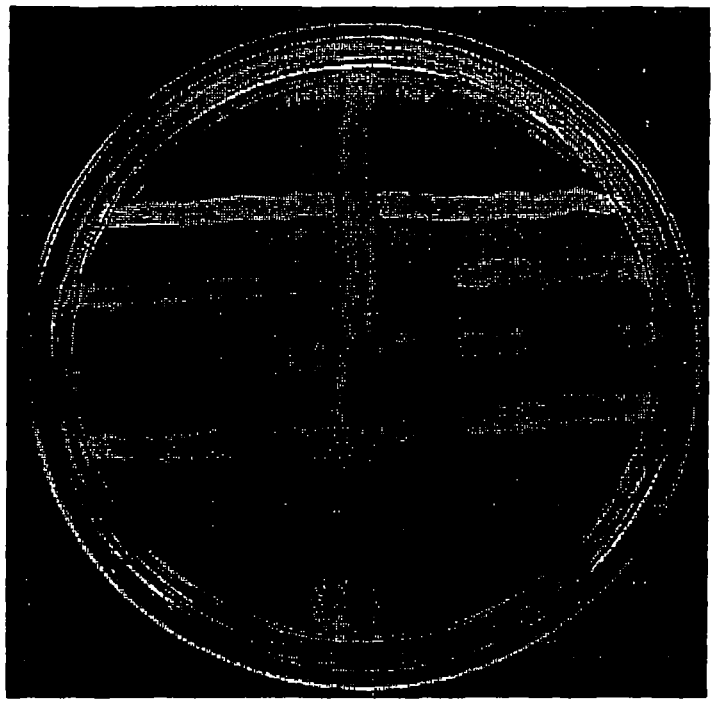
(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
5 December 2002

[Continued on next page]

(54) Title: ANTIBIOTICS FROM BACTERIA ISOLATED FROM AMPHIBIAN SKIN



(57) Abstract: This invention discloses extracts including a biologically active compound or combination of compounds derived from microorganisms isolated from mucous-producing organisms that respire at least partially through their skin. Rod-shaped bacteria isolated from the skin of salamanders and frogs are found to produce compound(s) that have antiviral, antitumor, antibacterial and antifungal properties. These compounds have an inhibitory effect on opportunistic human pathogens, including *Candida* sp., *Microsporum* sp., *Staphylococcus* sp., *Pseudomonas* sp., *Escherichia* sp.,and *Enterococcus* sp., as well as on HIV strains and tumor cell lines.

WO 02/078720 A3

162162

ACTION

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.