22 November 2002

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61K 49/00, 41/00

A1

(11) International Publication Number: WO 99/53963

(43) International Publication Date: 28 October 1999 (28.10.99)

(21) International Application Number: PCT/GB99/01221

(22) International Filing Date: 22 April 1999 (22.04.99)

(30) Priority Data:
9808599.6 22 April 1998 (22.04.98) GB

(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application
US 60/084,880 (CIP)
Filed on 8 May 1998 (08.05.98)

(71) Applicant *(for GB only)*: MARSDEN, John, Christopher [GB/GB]; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).

(71) Applicant *(for all designated States except US)*: NYCOMED IMAGING AS [NO/NO]; Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: ERIKSEN, Morten [NO/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO). TOLLESHAUG, Helge [NO/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO). SKURTVEIT, Roald [NO/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4222 Torshov, N-0401 Oslo (NO). CUTHBERTSON, Alan [GB/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO). ØSTENSEN, Jonny [NO/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO). FRIGSTAD, Sigmund [NO/NO]; Frode Rinnans vie 68, N-7035 Trondheim (NO). RONGVED, Pål [NO/NO]; Nycomed Imaging as, Nycoveien 2, P.O. Box 4220 Torshov, N-0401 Oslo (NO).

(74) Agents: MARSDEN, John, Christopher et al.; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: IMPROVEMENTS IN OR RELATING TO CONTRAST AGENTS

(57) Abstract

Ultrasonic visualisation of a subject, particularly of perfusion in the myocardium and other tissues, is performed using novel gas-containing contrast agent preparations which promote controllable and temporary growth of the gas phase *in vivo* following administration and can therefore act as deposited perfusion tracers. The preparations comprise an injectable aqueous medium comprising dispersed gas and an injectable oil-in-water emulsion in which the oil phase comprises a diffusible component capable of diffusion *in vivo* into the dispersed gas to promote temporary growth thereof, such that material present at the surfaces of the dispersed gas phase and material present at the surfaces of the dispersed oil phase have affinity for each other, e.g. as a result of having opposite charges. In cardiac perfusion imaging the preparations may advantageoulsy be coadministered with vasodilator drugs such as adenosine in order to enhance the differences between return signal intensity from normal and hypoperfused myocardial tissue respectively.



162162



G00002