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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 September 2003 (04.09.2003)

PCT

(10) International Publication Number
WO 03/072144 A1

(51) International Patent Classification[7]: A61K 51/04

(21) International Application Number: PCT/US03/03128

(22) International Filing Date: 26 February 2003 (26.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/359,862 27 February 2002 (27.02.2002) US

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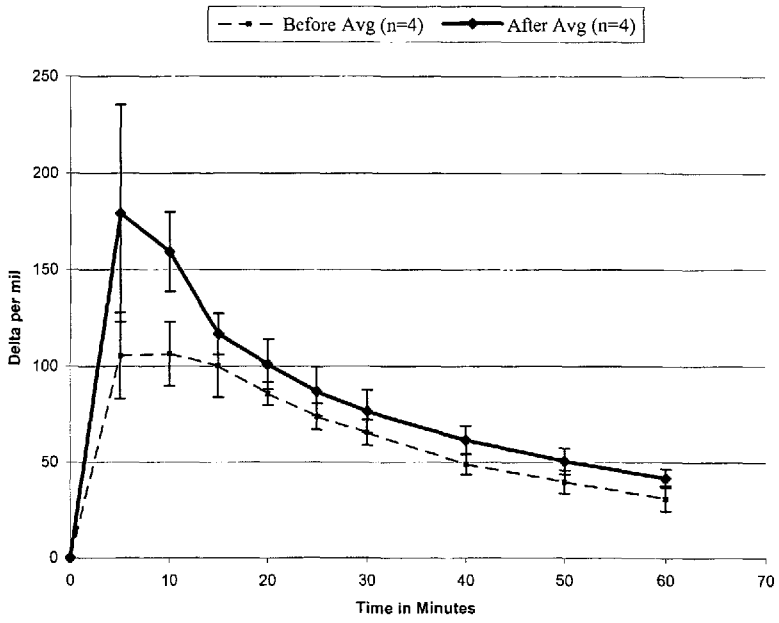
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, 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, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 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 receipt of amendments*

*[Continued on next page]*

(54) Title: USE OF 13C LABELLED SUBSTANCE FOR MEASURING LUNG FUNCTION




(57) Abstract: The present invention relates to an assay for evaluating alveolar exchange of oxygen. A $^{13}C$-labeled substrate, such as $^{13}C$-sodium bicarbonate is administered to a subject by *oral or iv* intake, and exhaled $^{13}CO_2$ is measured. The $^{13}CO_2$ in expired breath can be collected at various time points following administration of the substrate and measured in $\Delta$ per mil with a mass analyzer or photometer, such as an IR spectrometer. This process can be used as a diagnostic test for the indication of, treatment and/or evaluation of the severity of respiratory tract diseases or infections.

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