

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 May 2009 (07.05.2009)

PCT

(10) International Publication Number
WO 2009/059021 A3

(51) International Patent Classification:

C12Q 1/70 (2006.01)

(21) International Application Number:

PCT/US2008/081816

(22) International Filing Date: 30 October 2008 (30.10.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/983,854 30 October 2007 (30.10.2007) US
61/043,020 7 April 2008 (07.04.2008) US

(71) Applicant (for all designated States except US): **INTERMUNE, INC.** [US/US]; 3280 Bayshore Boulevard, Brisbane, CA 94005 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HONG, Jin** [US/US]; 72 San Benito Road, Brisbane, CA 94005 (US). **SEIWERT, Scott** [US/US]; 828 Rockaway Beach Avenue, Pacifica, CA 94044 (US). **LIM, Sharlene** [US/US]; 2201 Bridgepointe Parkway, Suite 207, San Mateo, CA 94404 (US). **QIN, Xiaoli** [US/US]; 465 Starboard Drive, Redwood City, CA 94065 (US).

(74) Agent: **WU, Nan**; Cooley Godward Kronish LLP, 777 6th Street, N.W., Suite 1100, Washington, DC 20001 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (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

(88) Date of publication of the international search report:

6 August 2009

(54) Title: HCV GENOTYPING AND PHENOTYPING

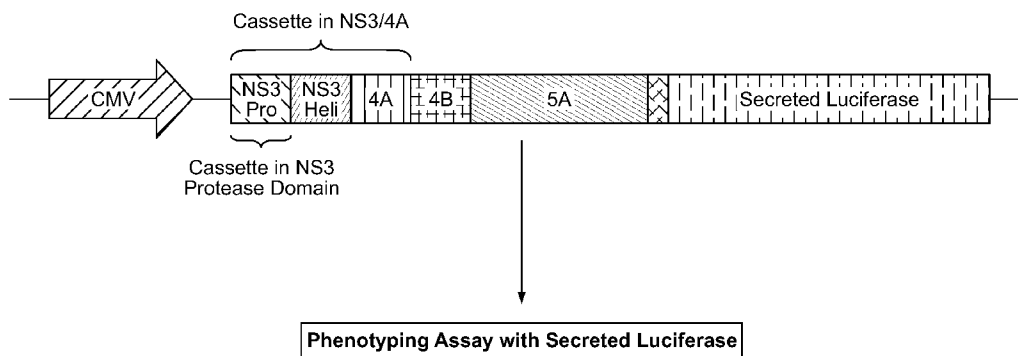


FIG. 2

(57) Abstract: The present invention includes methods of genotyping and phenotyping HCV. In one embodiment, the methods of the invention can be used to determine whether a HCV isolate is resistant to an antiviral drug. The invention also includes primers for amplifying a HCV NS3 region and kits.