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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 February 2012 (02.02.2012)

PCT

(10) International Publication Number
WO 2012/016131 A1

(51) International Patent Classification:
A61K 47/48 (2006.01)

(21) International Application Number:
PCT/US2011/045873

(22) International Filing Date:
29 July 2011 (29.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/369,186 30 July 2010 (30.07.2010) US

(71) Applicants *(for all designated States except US)*: **BAXTER INTERNATIONAL INC.** [US/US]; One Baxter Parkway, Deerfield, IL 60015 (US). **BAXTER HEALTHCARE S.A.** [CH/CH]; Thurgauerstrasse 130, CH-8152 Glattpark (opfikon) (CH).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SIEKMANN, Juergen** [DE/AT]; Gerasdorfer Strasse 153/209, A-1210 Vienna (AT). **HAIDER, Stefan** [AT/AT]; Mozartstrasse 2, A-3385 Prinzersdorf (AT). **ROTTENSTEINER, Hanspeter** [AT/AT]; Haidgasse 10/17, A-1020 Vienna (AT). **IVENS, Andreas** [DE/CH]; Bergellerstrasse 32, CH-8049 Zurich (CH). **TURECEK, Peter** [AT/AT]; Weidling, Hauptstrasse 59g, A-3400 Klosterneuburg (AT). **ZOECHLING, Oliver** [AT/AT]; Panikengasse 12/1/4, A-1160 Vienna (AT).

(74) Agents: **WILLIAMS, Joseph, A.** et al.; Marshall, Gerstein & Borun LLP, 233 S. Wacker Drive, 6300 Willis Tower, Chicago, IL 60606-6357 (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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

— *with sequence listing part of description (Rule 5.2(a))*

WO 2012/016131 A1

(54) Title: NUCLEOPHILIC CATALYSTS FOR OXIME LINKAGE

(57) Abstract: The invention relates to materials and methods of conjugating a water soluble polymer to an oxidized carbohydrate moiety of a therapeutic protein comprising contacting the oxidized carbohydrate moiety with an activated water soluble polymer under conditions that allow conjugation. More specifically, the present invention relates to the aforementioned materials and methods wherein the water soluble polymer contains an active aminooxy group and wherein an oxime or hydrazone linkage is formed between the oxidized carbohydrate moiety and the active aminooxy group on the water soluble polymer, and wherein the conjugation is carried out in the presence of a nucleophilic catalyst.