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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 June 2011 (23.06.2011)

PCT

(10) International Publication Number
WO 2011/073235 A1

(51) International Patent Classification:
C07K 1/22 (2006.01) *C12N 9/64* (2006.01)

(21) International Application Number:
PCT/EP2010/069713

(22) International Filing Date:
15 December 2010 (15.12.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09015707.4 18 December 2009 (18.12.2009) EP

(71) Applicant *(for all designated States except US)*: **CSL LTD.** [—/AU]; 45 Poplar Road, Parkville, Victoria 3052 (AU).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CHARLTON, Adam** [AU/AU]; 49 Canora Street, Blackburn South, Victoria 3130 (AU). **NAPOLI, Mark** [AU/AU]; 20 Vernon Court, Hoppers Crossing, Victoria 3029 (AU). **SMRDELJ, Paul** [AU/AU]; 2 Barlby Court, Greenvale, Victoria 3059 (AU). **STOWERS, Anthony** [AU/AU]; 2 Martin Street, Preston, Victoria 3072 (AU). **PIRZAS, Vicky** [AU/AU]; 13 Gay Street, Blackburn North, Victoria 3130 (AU). **SCHRÖDER, Magnus** [DE/AU]; 25A Elmhurst Road, Blackburn, Victoria 3130 (AU).

(74) Agents: **HAUSER, Hans-Peter** et al.; Emil-von-Behring-Straße 76, 35041 Marburg (DE).

(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))*

WO 2011/073235 A1

(54) **Title**: METHOD OF PURIFYING POLYPEPTIDES

(57) **Abstract**: The present invention relates to improved processes for purifying polypeptides of interest by increasing the amount of a polypeptide of interest bound to an ion- exchange matrix relative to the amount of one or more impurities bound to the ion-exchange matrix. This effect is achieved by adding a chemical compound in the process which by also binding to the ion-exchange matrix due to a change that is opposite to the change of the ion-exchangematrix,reduces the binding of impurities more than the binding of the polypeptide of interest.