



(51) International Patent Classification:

G01N 33/68 (2006.01) **A61K 38/17** (2006.01)
A61P 13/12 (2006.01) **C07K 14/47** (2006.01)
C12Q 1/25 (2006.01) **C12Q 1/68** (2006.01)

(21) International Application Number:

PCT/AU2011/001212

(22) International Filing Date:

20 September 2011 (20.09.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2010904249 21 September 2010 (21.09.2010) AU

(71) Applicants (for all designated States except US): **PROTEOMICS INTERNATIONAL PTY LTD** [AU/AU]; PO Box 3008, Broadway Nedlands, Crawley, Western Australia 6009 (AU). **THE UNIVERSITY OF WESTERN AUSTRALIA** [AU/AU]; 35 Stirling Highway, Crawley, Western Australia 6009 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **STOLL, Thomas** [DE/DE]; Arberstrasse 28b, 94575 Windorf (DE).

BRINGANS, Scott [NZ/AU]; 31 Welcome Meander, Harrisdale, Western Australia 6112 (AU). **WINFIELD, Kaye** [AU/AU]; 23 Halliday Street, Bayswater, Western Australia 6053 (AU). **CASEY, Tammy** [AU/AU]; 25 The Promenade, Mount Pleasant, Western Australia 6153 (AU). **DAVIS, Wendy** [AU/AU]; 65 Forrest Street, Cottesloe, Western Australia 6011 (AU). **PETERS, Kirsten** [AU/AU]; 68 Beauchamp Loop, Wellard, Western Australia 6170 (AU). **DAVIS, Timothy** [AU/AU]; 65 Forrest Street, Cottesloe, Western Australia 6011 (AU). **LIPSCOMBE, Richard** [AU/AU]; 51 Berkeley Crescent, Floreat, Western Australia 6014 (AU).

(74) Agent: **O'SULLIVANS**; PO Box 3294, Broadway Nedlands, Crawley, Western Australia 6009 (AU).

(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, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,

[Continued on next page]

(54) Title: BIOMARKERS ASSOCIATED WITH PRE-DIABETES, DIABETES AND DIABETES RELATED CONDITIONS

Figure 1

Study	Name	Accession number	State change	Fold difference	p value (Mann-Whitney)
FDS1	Peroxiredoxin-2	P32119	up	2.3	0.01
	Protein AMBP	P02760	up	1.3	0.01
	Apolipoprotein A-IV	P06727	up	2	0.05
FDS2	Complement C1q subcomponent subunit B	P02746	down	3	0.0016
	Apolipoprotein A-IV	P06727	up	1.5	0.08
	Apolipoprotein C-III	P02656	up	2.3	0.056
	Insulin-like growth factor-	P17936	down	1.7	0.07
	Protein AMBP	P02760	down	1.3	0.037
	Adiponectin	Q15848	down	2	0.04
	Complement factor H-related protein 2	P36980	down	1.7	0.03
	Haemoglobin subunit beta	P68871	up	3.5	0.05
BDS	CD5 antigen-like	O43866	down	2	0.06
	Apolipoprotein B-100	P04114	up	1.3	0.045

(57) Abstract: The invention provides biomarkers for pre-Diabetes, Diabetes and/or a Diabetes related conditions, and methods of their use, including the biomarkers in Tables 1 and 2 such as peroxiredoxin-2, complement C1q subcomponent subunit B, sulfhydryl oxidase 1 and apolipoprotein A-IV.



TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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).

(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,

Published:

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

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