



(51) International Patent Classification:

C07K 17/02 (2006.01) A61K 38/12 (2006.01)
A61P 35/00 (2006.01) A61K 38/00 (2006.01)
A61K 47/69 (2017.01) A61K 9/127 (2006.01)
A61K 38/16 (2006.01) A61K 9/00 (2006.01)

(21) International Application Number:

PCT/AU2022/050023

(22) International Filing Date:

19 January 2022 (19.01.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2021900114 19 January 2021 (19.01.2021) AU

(71) Applicant: **THE COUNCIL OF THE QUEENSLAND
INSTITUTE OF MEDICAL RESEARCH** [AU/AU];
300 Herston Road, Herston, Queensland 4006 (AU).

(72) Inventor: **RAO, Sudha**; 300 Herston Road, Herston,
Queensland 4006 (AU).

(74) Agent: **CLARKE, Andrew**; James & Wells, GPO 1920,
Brisbane, Queensland 4001 (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, BN, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,
SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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,
KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: NOVEL BICYCLIC PEPTIDES

A

Novel Bicyclic Sequence optimization

Myp-LTFEFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)
Myp-LTFAGFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)
Myp-ACLTFEFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)

↓

Optimized Bicyclic Sequence DL-1: Myp-LTFEFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)
Optimized Bicyclic Sequence DL-2: Myp-ACLTFEFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)
Optimized Bicyclic Sequence DL-3: Myp-ACLTFEFLRGRKGMMDVKKK (Cys bridge with 1,3,5-(TribromoMethyl)benzene)

B

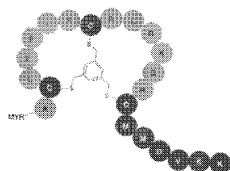


FIGURE 1

(57) Abstract: Disclosed are polypeptides which are covalently bound to molecular scaffolds such that two or more peptide loops are subtended between attachment points to the scaffold. More particularly, the invention provides peptide mimetics of PD-L1. Also disclosed are multimeric binding complexes of polypeptides which are covalently bound to molecular scaffolds such that two or more peptide loops are subtended between attachment points to the scaffold that are mimetics of PD-L1. Also disclosed are methods of using said peptides in treating a disease or disorder mediated by PD-L1 nuclear localisation.