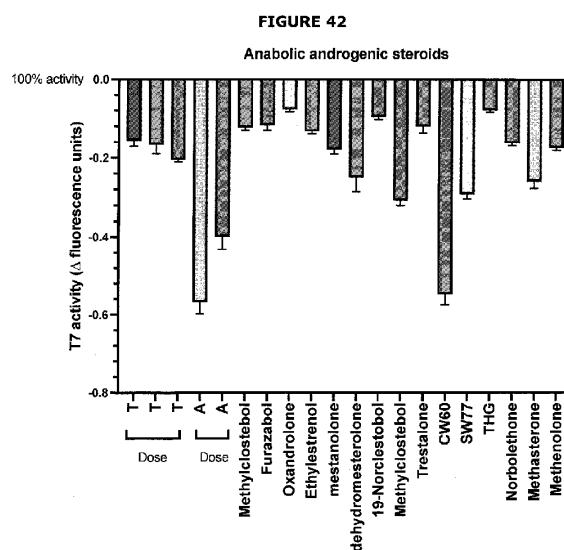




- (51) **International Patent Classification:**
C12Q 1/6897 (2018.01) *G01N 33/74* (2006.01)
- (21) **International Application Number:**
PCT/NZ2021/050201
- (22) **International Filing Date:**
12 November 2021 (12.11.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/112,924 12 November 2020 (12.11.2020) US
- (71) **Applicant: INSITUGEN LIMITED** [NZ/NZ]; 87 St David Street, North Dunedin, 9016 Dunedin (NZ).
- (72) **Inventor: HEATHER, Alison Kay**; 9013 Dunedin (NZ).
- (74) **Agent: CATALYST INTELLECTUAL PROPERTY**; Level 5, 45 Johnston Street, 6011 Wellington (NZ).

- (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).

(54) **Title:** NOVEL STEROID HORMONE LIGAND ASSAYS

(57) **Abstract:** The present invention is concerned with the detection of ligands which bind to and activate steroid hormone receptors. Specifically, the present invention provides test kits and assay methods for the selective identification of steroid hormone receptor ligands from a test sample. Importantly, the test kits and assay methods described herein are cell-free, and do not require expensive-to-manufacture nuclear extracts for their performance. Instead, the test kits and assay methods described herein employ single polypeptide polymerases, such as T7 RNA polymerase, linked to a reporter construct. Activity of the enzyme is inhibited, rather than activated, by ligand-bound steroid hormone receptor complexes which only form in the presence of a target ligand. Accordingly, a measured change in a physical property of the reporter construct (e.g. fluorescence output) may be used to determine the presence of a target ligand in a sample under investigation.

[Continued on next page]



Published:

- *with international search report (Art. 21(3))*
- *with sequence listing part of description (Rule 5.2(a))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*