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(71) Applicant *(for all designated States except US)*: **COMMONWEALTH SCIENTIFIC INDUSTRIAL RESEARCH ORGANISATION** [AU/AU]; Limestone Avenue, Campbell, Australian Capital Territory 2612 (AU).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **TROWELL, Stephen, Charles** [GB/AU]; 3 Farrelly Close, Oxley, Australian Capital Territory 2903 (AU). **HORNE, Irene, Mary** [AU/AU]; 81 Rossi Street, Yass, New South Wales 2582 (AU). **DACRES, Helen** [GB/AU]; 10 Tarraleah Crescent, Lyons, Australian Capital Territory 2606 (AU). **LEITCH, Virginia** [AU/AU]; 5 Moulden Court, Belconnen, Australian Capital Territory 2617 (AU).

(74) Agent: **FB RICE & CO**; Level 23, 200 Queen Street, Melbourne, Victoria 3000 (AU).

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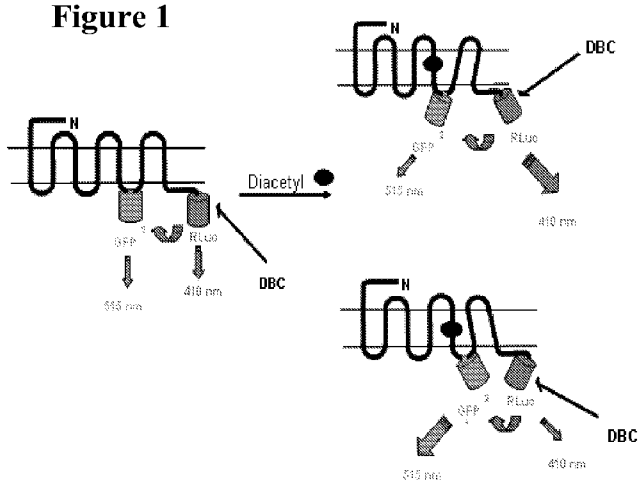
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**(54) Title**: MEASURING G PROTEIN COUPLED RECEPTOR ACTIVATION

**Figure 1**




**(57) Abstract**: The present invention relates to methods and polypeptides for detecting a compound in a sample. In particular, the present invention relates to the use of a cell- free composition comprising at least one G protein coupled receptor embedded in a lipid bilayer which when expressed in a cell the N-terminus of the G protein coupled receptor, or subunits thereof, is outside the cell and the C-terminus is inside the cell, and which is capable of binding the compound. Optionally, the composition also comprises at least one accessory molecule that directly or indirectly binds an intracellular loop and/or the C-terminus of the G protein coupled receptor. The G protein coupled receptor, and/or accessory molecule when present, in combination comprise a bioluminescent protein and an acceptor molecule, which enables bioluminescent resonance energy transfer (BRET) to be used to detect the compound binding the receptor.