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(54) Title: NOVEL FUSION PARTNERS FOR THE PURPOSE OF CRYSTALLIZING G-PROTEIN COUPLED RECEPTORS

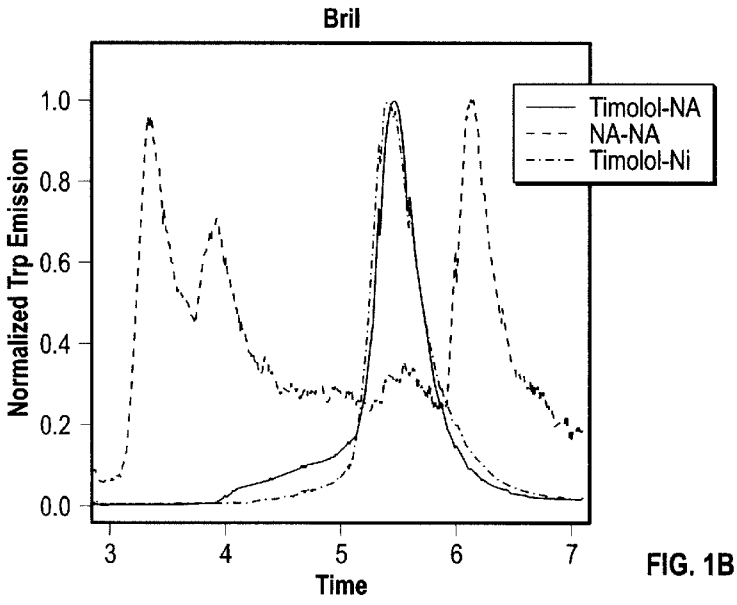


FIG. 1B

(57) Abstract: GPCR-fusion partner proteins comprising G protein coupled receptors (GPCRs) of GPCRs and fusion partners such as rubredoxin, cytochrome b562 RIL (Bril, bRIL, BRIL), T4 lysozyme C-terminal fragment (Cterm-T4L), flavodoxin, or xylanase either substituted for some or all of the third intracellular loop of the GPCR between the fifth and sixth helix of the GPCR are described or attached to an terminus or C terminus of the GPCR. GPCR-fusion partner proteins in crystalline form, optionally of a quality suitable for x-ray crystallographic structure determination of the GPCR, are described. Methods of using fusion partners in GPCR-fusion partner proteins to support crystallization of GPCR-fusion partner proteins for x-ray crystallographic structure determination of the GPCR, are described. Methods of identifying other suitable fusion partners through screening of protein data banks are also described.

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