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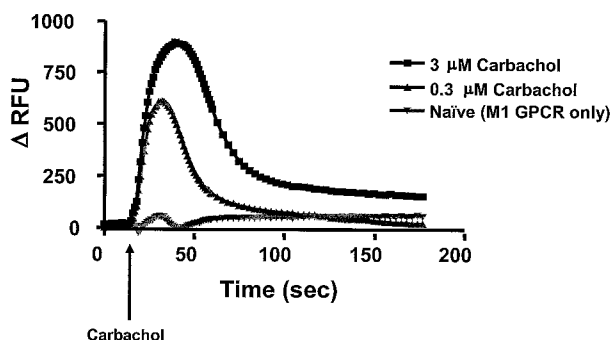
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(54) Title: HIGH THROUGHPUT SCREENING ASSAY FOR THE TRPM5 ION CHANNEL

Generation of the TRPM5 FLIPR Response in Transfected CHO Cells

Carbachol $\Rightarrow$ M1 GPCR $\Rightarrow$ $\uparrow$ [Ca²⁺] $\Rightarrow$ TRPM5 $\Rightarrow$ $\uparrow$ [Na⁺] $\Rightarrow$ Membrane
Potential
Dye



(57) Abstract: There exists a need in the art for high throughput screening assays that can identify compounds that specifically modulate the activity of fast-acting ion channels, such as TRPM5. Current methods suffer from a lack of sensitivity, low throughput, and are labor intensive. The claimed methods provide fluorescent assays with an optical readout that gives rapid readout of the results, has a high signal to noise background ratio, are easy to use, can be modified for automation and miniaturization, and provide verification that a compound specifically modulates TRPM5.

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**Declaration under Rule 4.17:**

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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