

Contribution ID: 245

Type: **Oral Presentation**

Optimal control of MANF to prevent apoptosis in Retinitis Pigmentosa

Wednesday, 11 July 2018 16:30 (30 minutes)

Protein misfolding is one of the major causes of apoptosis in Retinitis Pigmentosa, where apoptosis is programmed cell death. Mesencephalic-Astrocyte-derived-Neurotrophic Factor (MANF) is a protein that has been shown to correct protein misfolding, thus reducing the death of cells due to “cell suicide”. In this talk, we formulate an optimal control problem that incorporates MANF treatment to rescue photoreceptors in the eye. Numerical results are shown and discussed.

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Session Classification: Modelling of dynamic cellular and sub-cellular systems

Track Classification: Minisymposium: Modelling of dynamic cellular and sub-cellular systems