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## Prolonged inhibition of semaphoring-3A pathway via biodegradable implant towards a better therapy for visual sensory impairments

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**Background:** Semaphorin-3A is a leading factor in the apoptotic death program of the neural cells in CNS. It is right to suppose that inhibition of Sema3A expression in the right time window will reduce the death of a great population of neural cells following assault.

**Purpose:** The aim is to develop low molecular weight inhibitor of Sema3A and produce function blocking Sema3A human antibodies and manufacture a biodegradable polymeric implant for controlled release of Sema3A inhibitor.

**Material & Methods:** We used laboratory rats and rabbits and created acute and chronic assault to the optic nerve. Following the assault we injected the substances mentioned above in the injured eye.

**Results:** We present the methods of creating the low MW inhibitors of Sema3A and the Sema3A antibodies. The creation of the implants is shown. We present here the positive inhibitory activity of these substances *in vitro* and *in vivo* experiments.

### Biography

Arieh S Solomon initiated research in studying the degeneration and regeneration process of the optic nerve, following assaults. He conceived a new type of intra ocular implant to treat glaucoma (the blinding disease creating high IOP and killing the optic nerve). He conceived a new type and method of escalating glaucoma damage in people. All were awarded patents in US, Europe, and other countries. Dr. Solomon has 100 publications in various international journals.

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