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High-precision robotic system targets ocular surgery

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This is the robotic system for eye surgery from Preceyes. Credit: Preceyes

Preceyes B.V., a spin-off of Eindhoven University of Technology, and Nightstar (UK) have entered into a collaboration for the development of a high-precision drug delivery technology in the eye. Nightstar will use

the Preceyes robotic device to further refine the delivery of gene therapy to the subretinal space for a range of inherited retinal diseases. In the course of the collaboration, Nightstar will purchase the PRECEYES Surgical System for use in human gene therapy trials.

In a separate collaboration, a team led by Prof Robert MacLaren at the University of Oxford (UK), will be initiating human clinical trials using the PRECEYES Surgical System. Preceyes and the University have agreed to conduct an investigator-led clinical study, assessing the clinical functionality and applicability of the device. The focus of the study will be on high-precision vitreoretinal surgery which will facilitate future targeted drug delivery.

Preceyes' high-precision robotic system targets ocular surgery, with vitreoretinal surgical procedures as the initial target market. The technology promises to improve the delivery of existing ocular surgery as well as enables the development of new treatments such as high-precision drug delivery, assisting eye surgeons in performing the most demanding surgical tasks.

David Fellows, CEO of Nightstar said, "Gene therapy has huge potential in retinal diseases and continuing to improve the precision and ease of delivery of the therapy are critical elements to success". Robert MacLaren, Professor of Ophthalmology at the University of Oxford commented, "Over the last century, devices that enhance surgical precision have given us the greatest breakthroughs in ophthalmology. We are delighted to have approval for a clinical trial in Oxford which will be the first to assess use of a robotic device for surgery inside the eye."

Gerrit Naus, CEO of Preceyes said, "The collaborations with Nightstar and the University of Oxford are a major recognition of the unique value of our technology and its applicability to new treatments for unmet needs. We are very pleased to work closely with Nightstar and the

University of Oxford to further mature the gene-therapy delivery and look forward to market adoption."

Provided by Eindhoven University of Technology