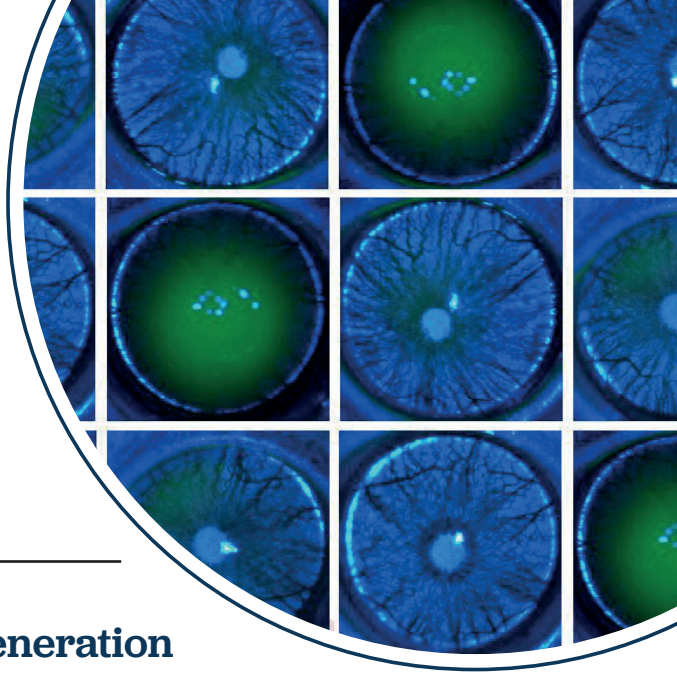
Naason Science

Ophthalmology Modelling Platform



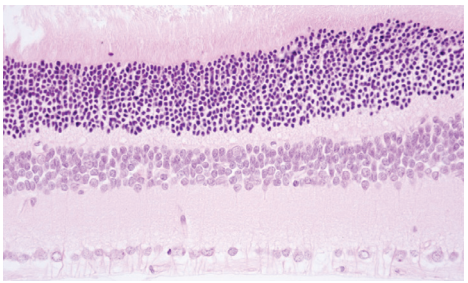
- **Models of Age-related Macular Degeneration (AMD)**
  - NaIO3 – induced dry AMD
  - Laser-induced CNV model of **wet AMD**
  - Two-stage laser-induced model of subretinal fibrosis
- **Mouse Model of Diabetic Retinopathy**
- **Rat Model of Dry Eye Disease by Excision of ELG**

Mouse Models of Age-related Macular Degeneration (AMD) and Subretinal Fibrosis

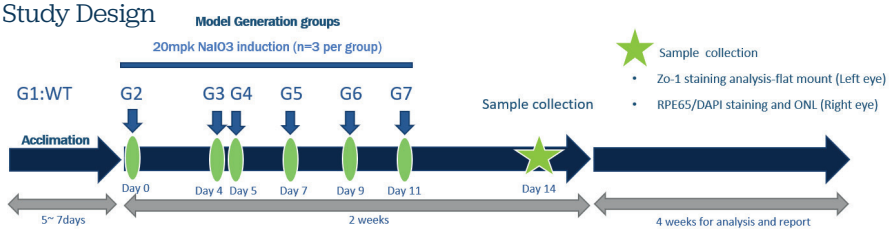
Age-related Macular Degeneration (AMD) is a medical condition which may result in blurred or loss of vision in the center of the visual field due to damage to the macula of the retina and is one of the leading causes of vision loss and blindness in people over 50 years of age in developed countries. There are two forms of AMD; dry and wet AMD.

NaIO3 – induced dry AMD

Naason Science is offering a Mouse Model of dry AMD induced by NaIO3 injection. This Model provides rapid phenotypic changes such as damage of tight junction integrity and thinning of retinal layers that can be assessed by immunohistochemical analyses.

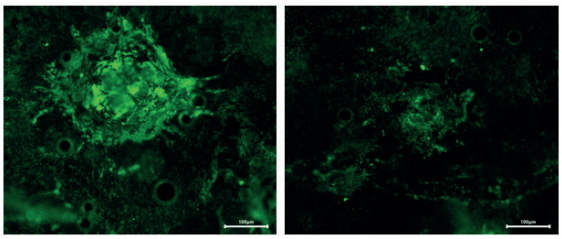


Study Design



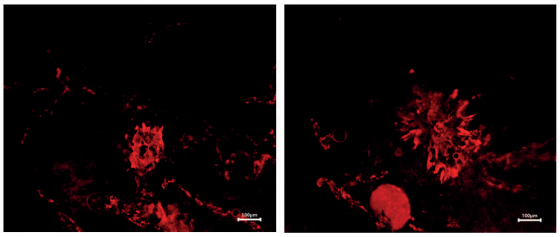
Laser-induced CNV model of wet AMD

Dry AMD can progress to wet AMD when abnormal blood vessels develop underneath the retina. Wet AMD can be induced by photocoagulation of the retina using the 532 nm laser. The choroidal neovascularization (CNV) formed by the laser can be measured in vivo using optical coherence tomography and fluorescein angiography. We also offer immunohistochemical analyses on flatmounts using markers for CNV and subretinal fibrosis, which often accompanies wet AMD.



Two-stage laser-induced Model of Subretinal Fibrosis

In this Model, the 532 nm laser is applied in two stages in the same lesion to produce a more severe phenotype of AMD and to induce subretinal fibrosis. Fibrosis is quantified by immunohistochemical staining after flatmounting. In this Model, the area of fibrosis increases 30 days after the second laser burn, providing a platform to test therapeutic efficacy of compounds.



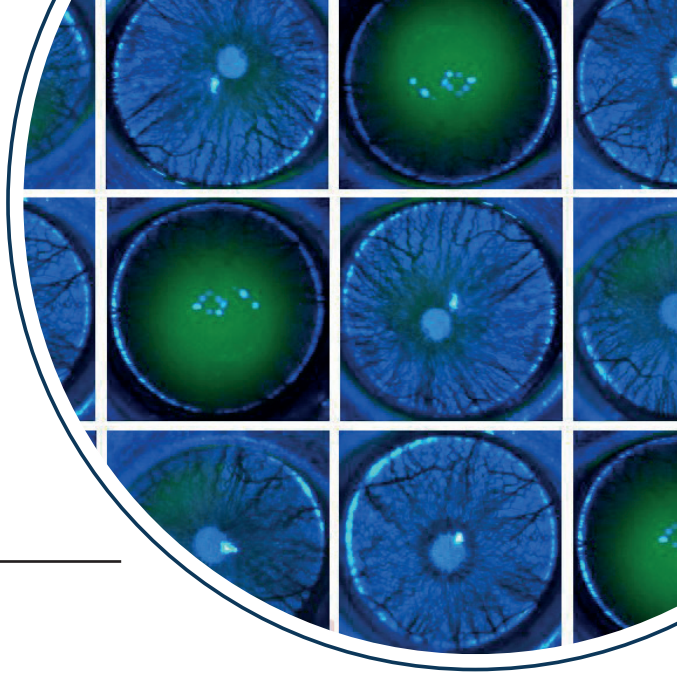
NAASON SCIENCE

KBIO New Drug Development Center #506, Saengmyung-Ro 123, Osong, South Korea
www.naasonscience.com • info@naasonscience.com

150+ Years of Cumulative CRO and Preclinical Drug Development Experience located in two world class cutting-edge centers of Osong Bio-medical Science Complex in Osong and DGMIF in Daegu, South Korea.

Naason Science

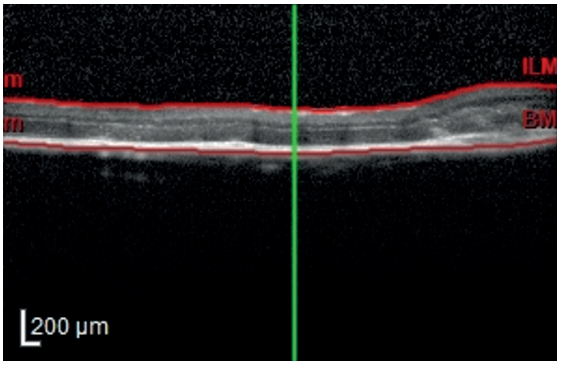
Ophthalmology Modelling Platform



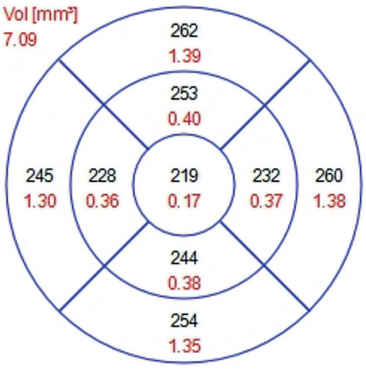
- **Models of Age-related Macular Degeneration (AMD)**
  - NaIO3 – induced dry AMD
  - Laser-induced CNV model of **wet AMD**
  - Two-stage laser-induced model of subretinal fibrosis
- **Mouse Model of Diabetic Retinopathy**
- **Rat Model of Dry Eye Disease by Excision of ELG**

Mouse Model of Diabetic Retinopathy

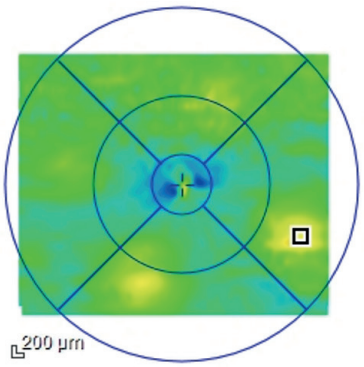
Diabetic Retinopathy can occur as a vascular complication of diabetes that can eventually lead to blindness. We offer a Mouse Model of Diabetic etinopathy induced by streptozotocin injection.



Retina Thickness



Average Thickness (µm)



Retina Thickness (µm)

Rat Model of Dry Eye Disease by Surgical Excision of ELG

Naason Science is offering a rat model of dry eye disease by surgical excision of the extraorbital lachrymal gland (ELG). Therapeutic efficacy of test compounds on progression of dry eye disease can be evaluated by measuring tear volume using the Phenol Red Thread test, and observation of the cornea under blue light after fluorescein staining.

NAASON SCIENCE

KBIO New Drug Development Center #506, Saengmyung-Ro 123, Osong, South Korea
www.naasonscience.com • info@naasonscience.com

150+ Years of Cumulative CRO and Preclinical Drug Development Experience located in two world class cutting-edge centers of Osong Bio-medical Science Complex in Osong and DGMIF in Daegu, South Korea.