# **Best Nordic Paper Awards**

Submit your manuscript to be considered for the Best Nordic Paper Awards 2024 (NOK 125,000). More information on these and other awards can be found on our web page, <u>oftalmolog.com/awards/</u>.

## Evaluation criteria

1) Interest of the subject to our readers

### 2) Quality of language, pictures, illustrations, and figures

Points (1) and (2) have equal weight. Articles will be evaluated by an independent panel of judges, chosen by the Editor-in-Chief. The average sum score from the committee is used to rank the articles.

## Evaluation committee

# 2023



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We are grateful to our committee for their diligence in evaluating the outstanding work of their peers.

\*For one of the eligible articles, Karl Engelsberg had co-authored work with one of the authors so recused himself from evaluating that submission. Thus, the scores from the other evaluators were averaged to rank the article.



2023

2023

## First Prize

Award of NOK 80,000 What happens when circadian rhythms go wrong,

and why we should care

#### **KEY POINTS**

The eye, particularly the retina, plays a crucial role in the circadian system, serving as a conduit for light signals to synchronize the body's internal clock.
Circadian rhythms influence many aspects of vision and eye health, such as visual acuity, contrast sensitivity, and adaptation to darkness.
Disruptions in circadian rhythms have been linked to some of the eye conditions that pose the biggest global threats to vision.

• Recognizing this relationship can lead to advancements in treatment delivery, precision medicine, and disease mechanism understanding, ultimately improving patient outcomes in our modern, light-driven world.



AWARDS

The full article can be found at www.oftalmolog.com/articles/



Hanagh Winter Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast



Eleni Beli Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast

### Authors' inspiration

Our article stemmed from our research in the Beli lab on the intricacies of circadian rhythm disruptions in diabetic retinopathy. Recently, we recorded round-the-clock electroretinograms in diabetic mice to measure changes in the retinal circadian rhythm. We found that not only were the rhythms different in diabetes, but we saw new and unexpected changes in the diabetic response at night, when most labs aren't likely to take their measurements. This spurred us to consider the timing of measurements for assessing vision in experimental models and patients. The retina is particularly intriguing, as the eye is not only so dynamic between night and day, but also, that it is crucial for the wider body timing that we now appreciate is pivotal to health. And exactly how the eye disease mechanisms manifest during the night remain a mystery.

### SILVER

2023

### Second Prize Award of NOK 30,000

Fake it 'til You Make it: Does Generative Artificial Intelligence Have a Place in Ophthalmology?

#### **KEY POINTS**

- Generative artificial intelligence (AI) is a powerful technique that enables generation of realistic images in response to an input.
- Generative AI models can be trained to:
  - improve quality and remove artifacts from images
  - forecast response to treatment
  - infer appearance of different imaging modalities from a single image
    transfer large datasets safely.
- The potential and pitfalls of generative models are not yet fully explored.



The full article can be found at www.oftalmolog.com/articles/





Ivan Potapenko, MD, PhD Dept. of Ophthalmology, Rigshospitalet, Copenhagen, Denmark



Morten la Cour, Prof., dr. med., Dept. of Ophthalmology, Rigshospitalet, Copenhagen, Denmark

#### Authors' inspiration

It is a great honor to receive this award. The wide adoption of ChatGPT inspired us to investigate whether other types of generative AI could be useful in ophthalmology. This article describes the surprising variety and potential of the algorithms we found.



2023

2023

### **Third Prize** Award of NOK 15,000

Top-notch research: Antibody blockade of Notch ligand Jagged1 attenuates choroidal neovascularization

#### **KEY POINTS**

• We demonstrated the advantage of targeting the Notch ligand Jagged1 using an experimental laser-induced mouse CNV model to mimic neovascular age-related macular degeneration (nAMD). Anti-Jagged1 reduced inflammation, vascular growth, and CNV lesion size.

 We propose an alternative strategy to treat nAMD by specifically blocking Jagged1, either alone or in combination with anti-VEGF.





Torleif Tollefsrud Gjølberg Department of Immunology, Department of Pathology, Oslo University Hospital Rikshospitalet



Oslo University Hospital Rikshospitalet

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#### Authors' inspiration

The main motivation for initiating this research project was the high numbers of non-responders and suboptimal responders among nAMD patients to anti-VEGF treatment. Today, it is still a highly relevant issue.



The full article can be found at www.oftalmolog.com/articles/

# **Congratulations to** the winners of the **Best Nordic Paper** Awards!

We are very grateful to our generous sponsor, Théa, for their donation and support in making these awards possible.



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