



Next generation mechanistic models of retinal interneurons

Fact Sheet

Project Information

NextMechMod

Grant agreement ID: 101039115

DOI

[10.3030/101039115](https://doi.org/10.3030/101039115)

EC signature date

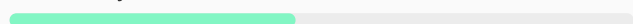
7 September 2022

Start date

1 January 2023

End date

31 December 2027



Funded under

European Research Council (ERC)

Total cost

€ 1 499 860,00

EU contribution

€ 1 499 860,00

Investment in EU policy priorities

Digital agenda	☐	Clean air	☐
Artificial Intelligence	☐	Climate action	☐
Biodiversity	☐		

Coordinated by

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UNIVERSITAET TUEBINGEN
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Project description

A closer look at amacrine cells in natural visual computations

One of the most challenging issues in visual neuroscience is the enormous diversity of amacrine cells (ACs), a class of inhibitory interneurons in the vertebrate retina.

Despite their significance, ACs remain one of the least understood classes of neurons in the retina. To better understand their role in neural computations, various models of neurons have been developed at different levels of realism. The EU funded NextMechMod project will leverage advancements in machine learning to create a new generation of hybrid mechanistic models. These will be based on the integration of different levels of realism in modeling. The project will also create a toolset to systematically examine the role of retinal ACs during natural visual computations.

Fields of science (EuroSciVoc)

[natural sciences](#) > [chemical sciences](#) > [inorganic chemistry](#) > **[alkaline earth metals](#)**



Keywords

[simulation-based inference](#)

[amacrine cells](#)

[multimodal data](#)

[mechanistic models](#)

[patch-seq](#)

[two-photon imaging](#)

[single cell transcriptomics](#)

[interneuron](#)

Programme(s)

[HORIZON.1.1 - European Research Council \(ERC\)](#)

MAIN PROGRAMME

Topic(s)

[ERC-2021-STG - ERC STARTING GRANTS](#)

Call for proposal

[ERC-2021-STG](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-ERC - HORIZON ERC Grants](#)

Host institution



EBERHARD KARLS UNIVERSITAET TUEBINGEN

Net EU contribution

€ 1 499 860,00

Total cost

€ 1 499 860,00

Address

GESCHWISTER-SCHOLL-PLATZ

72074 Tuebingen

Germany

Region

Baden-Württemberg > Tübingen > Tübingen, Landkreis

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Beneficiaries (1)



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Germany

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Last update: 10 March 2023

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European Union, 2025