



Exploring Visual Processes with Two-Photon Ophthalmoscopy

Fact Sheet

Project Information

TrackCycle.2P

Grant agreement ID: 852220

[Project website](#)

DOI

[10.3030/852220](https://doi.org/10.3030/852220)

EC signature date

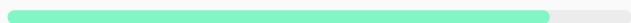
19 November 2019

Start date

1 February 2020

End date

31 January 2026



Funded under

EXCELLENT SCIENCE - European Research Council (ERC)

Total cost

€ 1 852 298,00

EU contribution

€ 1 852 298,00

Coordinated by

EBERHARD KARLS
UNIVERSITAET TUEBINGEN



Germany

Project description

Novel imaging technique for assessment of progressive retinal diseases

Non-invasive two-photon ophthalmoscopy has the potential to obtain information about retinal physiology and assist in the diagnosis of progressive outer retinal disease before vision is seriously impaired. This technique tracks the visual cycle via the transient fluorophore all-trans-retinol in rods and cones separately. The EU-funded TrackCycle.2P project aims to establish two-photon ophthalmoscopy as a method for visualisation of retina function in clinical applications. The goal is to develop an adaptive optics scanning laser ophthalmoscope optimised for safe two-photon imaging in the human eye and quantification of the visual cycle in response to stimulation. Successful development of this novel imaging technique will result in

better understanding of normal and abnormal visual cycle function and retinal biochemistry in health and disease.

Fields of science (EuroSciVoc)

[natural sciences](#) > [biological sciences](#) > **[biochemistry](#)**

[medical and health sciences](#) > [clinical medicine](#) > **[ophthalmology](#)**

[medical and health sciences](#) > [basic medicine](#) > **[physiology](#)**

[natural sciences](#) > [physical sciences](#) > [optics](#) > **[laser physics](#)**



Programme(s)

[H2020-EU.1.1. - EXCELLENT SCIENCE - European Research Council \(ERC\)](#)

MAIN PROGRAMME

Topic(s)

[ERC-2019-STG - ERC Starting Grant](#)

Call for proposal

[ERC-2019-STG](#)

[See other projects for this call](#)

Funding Scheme

[ERC-STG - Starting Grant](#)

Host institution



EBERHARD KARLS UNIVERSITAET TUEBINGEN

Net EU contribution

€ 1 852 298,00

Total cost

€ 1 852 298,00

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)



EBERHARD KARLS UNIVERSITAET TUEBINGEN

 **Germany**

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Last update: 17 February 2025

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European Union, 2025

