

Retinal oximetry in health and disease

Citation for published version (APA):

Mohan, A. (2021). *Retinal oximetry in health and disease*. [Doctoral Thesis, Maastricht University]. Maastricht University. <https://doi.org/10.26481/dis.20210429am>

Document status and date:

Published: 01/01/2021

DOI:

[10.26481/dis.20210429am](https://doi.org/10.26481/dis.20210429am)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

Retinal Oximetry in Health and Disease

Ashwin Mohan

1. In Indian eyes, retinal vascular oxygen saturation increases with age, does not differ between sexes and is comparable to values in other ethnic groups. (Thesis)
2. The oxygen saturation across all major vessels of the eye follows a bimodal distribution, which allows objective and fully automated retinal oximetry. (Thesis)
3. Retinal vessel oxygen saturation increases in inherited retinal dystrophies, glaucoma, diabetic retinopathy, and retinal vein occlusion; it decreases in retinal arteriolar occlusion. (Thesis)
4. The arterio-venous saturation difference can be indicative of retinal metabolism and can be altered in diseases like tubercular retinal vasculitis. (Thesis)
5. There is an urge for a comprehensive mathematical model that takes optical artifacts like retinal nerve fibre layer thickness into account since they affect oxygen saturation estimates. (Thesis)
6. Optical coherence tomography macular indices can predict post-operative outcomes in vitreoretinal surgery.
7. Micropulse yellow laser treatment reduces subretinal fluid accumulation in chronic central serous retinopathy.
8. Retinal functional imaging can quantify retinal blood-flow velocity, oxygen saturation, metabolic demand and generate a non-invasive capillary perfusion map that provides details similar to a fluorescein angiography.
9. A combination of artificial intelligence and retinal imaging provide conditions for standalone automated screening tools that can help make diagnosis appropriate, accessible, and affordable.
10. "I can think. I can wait. I can fast." — Herman Hesse, Siddhartha
11. Everything happens according to a central law and nothing is wrong. When we completely understand why something happens, we feel it is right; incomplete understanding makes us think it is wrong.