

European Society for Microcirculation (ESM)

<http://www.esmicro.eu/>

Working Group

Retinal Microvascular Research (REtina-SEARCH)



REtina-SEARCH

Newsletter (2020/1)

Jan 31st, 2020

Dear Members,

The ESM/EVBO Congress in Maastricht in 2019 has staged the successful start of our Working Group. In 2020, we will strive to disseminate Retinal Microvascular Research and its Clinical Application further and offer a platform for international collaborations. During the last 6 months we have seen a number of experts from various fields of research join our WG. For your orientation and to support exchange of ideas we have attached the current list of members to the newsletter. (*Please forgive us when your name, or that of your colleague, is not on the list; let us know ASAP via b.houben@maastrichtuniversity.nl*).

As tasks for the near future, the WG has identified the following research gaps and necessary strategies to foster retinal microvascular research:

- Retinal vessel research in systemic chronic diseases (cardiometabolic, neurovascular & inflammatory, ophthalmologic)
- New methodological developments in retinal ocular blood flow
- The contribution of A.I. and Deep Learning in retinal vessel analysis
- Retinal Vessel Analysis as a Vascular Biomarker for risk assessment
- Human RCTs & Epidemiological Studies
- Position Statements

It is our responsibility to also support clinical application of retinal vessel analysis using different methodological approaches:

- Dissemination of clinical application
 - Standardization of Operating Procedures
 - Clinical added value
- This year we plan to update and send you quarterly newsletters including recommendations of most recent publications in the field of retinal microvascular research. We invite you to send us your publications (link) or any recommendations to share with the WG members (Lukas.streese@unibas.ch).

A selection and recommendation for most recent publications: **1)** Montero et al., Effects of hemodialysis on blood volume, macro- and microvascular function. *Microvasc Res.* 2019 Nov 14;129:103958.; **2)** Streese et al., Physical activity may drive healthy microvascular ageing via downregulation of p66Shc. *Eur J Prev Cardiol.* 2020 Jan;27(2):168-176; **3)** Streese et al., Retinal endothelial function in cardiovascular risk patients: A randomized controlled exercise trial. *Scand J Med Sci Sports.* 2020 Feb;30(2):272-280.; **4)** Rensma et al., Microvascular Dysfunction Is Associated With Worse Cognitive Performance: The Maastricht Study. *Hypertension.* 2020 Jan;75(1):237-245.; **5)** Smith et al., Retinal vessel caliber and caliber responses in true normotensive black and white adults: The African-PREDICT study. *Microvasc Res.* 2020 Mar;128:103937; **6)** Appaji et al., Examination of retinal vascular trajectory in schizophrenia and bipolar disorder. *Psychiatry Clin Neurosci.* 2019 Dec;73:738-744.

- The WG Nucleus has organized the Symposium “Retinal microcirculation: a window to cardiovascular risk” at this year’s **Frontiers in Cardiovascular Biomedicine (FCVB)** Congress in Budapest. The Symposium will take place on Saturday 25th April between 14-15 30 CET (Room 2). The WG Nucleus will meet after the Symposium and any WG members who are at the Congress are more than welcome to join us! Congress Information: <https://www.escardio.org/Congresses-&Events/Frontiers-in-Cardiovascular-Biomedicine/Registration>
- The WG has also submitted a proposal for next year’s ESM Congress to be held in Aarhus (Denmark). Please mark your calendars!



For the year 2020 we envision to prepare and publish a “Commentary” on the use of retinal vessel analysis as an innovative microvascular biomarker for systemic chronic disease and the “Coming of” the WG “Retinal Microvascular Research”. More ideas, for example for future Position Statements, are very welcome and endorsement by the ESM will be considered.

Appearance on Twitter is being considered and we will let you know about the progress on the media front in the next newsletter.

We wish you a successful and collaborative year 2020.

Best wishes,

Henner Hanssen

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On behalf of the WG Nucleus

Chair: Prof. AJHM Houben
Chair-Elect: Prof. H. Hanssen
Secretary: PD Dr. C. Schmäderer
Nucleus members: Prof. MK Ikram, Prof. A. Flammer, Prof. D. Schmidl

Attachments

List of members

FCVB Symposium