

# WimRetina – Retina vessels

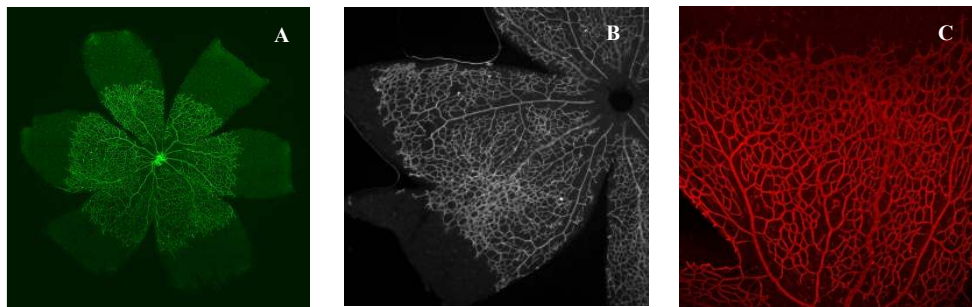


## Image Analysis for Retina Vessels

The retinal vascular system is an interesting model for the analysis of angiogenesis, blood vessel growth and development. The retina has a vascular structure that expands rapidly towards its peripheral area and contains all the cellular elements involved in the process of angiogenesis, so it is the perfect two dimensional growth region to study the cellular mechanisms that regulate angiogenesis. Besides, it is an essential model to target development and evolution of pathological angiogenesis that leads to blinding diseases, such as the diabetic retinopathy.

WimRetina – Retina vessels is designed to generate an objective and accurate quantification of the vascular system of the retina and the processes related in its evolution and growth, like the sprouting of new vessels, the vessel growth and proliferation and the remodeling of the vascular structure. It provides biological and biomedical researchers with reproducible and reliable measurements that are obtained through an accurate detection of the blood vessel network in the region of interest shown on the retina image (main visible petal or complete retina).

WimRetina – Retina vessels uses as input fluorescence microscopy images of retina vessels assays, where the retina is shown in a flower-like structure and the vascular network can be easily differentiated from the dark background as marked with the fluorescence staining in bright colors. Both images with the complete retina visible and images with just one petal can be analyzed by WimRetina – Retina vessels.



Retina vessel fluorescence images granted by the Centenary Institute of Cancer Medicine and Cell Biology. (A) Image of a whole retina, (B, C) two different kind of images of retina petals.

WimRetina – Retina vessels tool provides the following output data per image analyzed:

- Vessel density (%) and vessel covered area (both estimated in relation to the whole area of the retina).
- Number of vessel segments, branching points and loops.
- Mean segment length, total vessel network length and mean loop area.

Try WimRetina – Retina vessels tool for free at [mywim.wimasis.com](http://mywim.wimasis.com) and experience for yourself the objective quantification of angiogenesis in the retina.

WimRetina – Retina vessels is engineered with the adaptability needed to fit every assay characteristics. If your retina vessels images do not meet the requirements above, send us a quick note or reach us at:

[contact@wimasis.com](mailto:contact@wimasis.com) or +49 (0)89 452 44 66 50