



arterioscope

CARDIAC INTELLIGENCE PLATFORM FOR CLINICAL RESEARCH AND WEARABLE HEALTH

AI-powered ECG and PPG intelligence for drug development, clinical research, and next-generation devices

arterioscope is a deep tech spin-off from Graz University of Technology who has developed an AI-powered Cardiac Intelligence Platform. We transform existing biosignals such as ECG and PPG into deeper, physiology-grounded insights into cardiac stress, recovery, treatment response, and patient heterogeneity.

Our current commercial focus is on two non-medical, non-regulated product lines: arterioscope.RUO for biotech and pharmaceutical drug development, and a Cardiac Intelligence Layer for wearable OEMs. Both solutions are designed to create value without requiring new hardware, protocol changes, or additional patient burden.

Our Solution

arterioscope.RUO – ECG intelligence for drug development

arterioscope.RUO is a web-based software platform helping biotech and pharmaceutical companies make their clinical trials (Phase I–III) more precise, faster, and more capital-efficient. Our platform analyzes standard 12-lead ECG data at cohort level - data that is already routinely collected in clinical trials but currently underused.

By extracting deeper electrophysiological and vascular information from existing ECG data we can offer:

- Detect early treatment signals within only 3-4 weeks instead of 24+ weeks (current standard)
- Map baseline heterogeneity in small and complex patient cohorts in phase I and II

- Identify responder and non-responder trajectories
- Reduce false-negative risk in phase I/II studies by 30-40%
Support phase II/III design optimization with sample size reductions up to 30%

The first version of arterioscope.RUO (MVP) is ready and arterioscope is currently working together with its first pilot customers from the US.

Cardiac Intelligence Layer for wearable OEMs

The same AI-engine transforms existing 1-lead ECG and PPG data from wearable devices (e.g. smartwatches) into a continuous, physiology-grounded model of cardiac stress, recovery and cardiovascular state – going far beyond existing metrics such as HRV.

For OEMs, our Cardiac Stress Index enables differentiated, clinically grounded heart-health premium features on existing hardware. Our technology supports stronger user engagement, retention, premium subscription value and long-term product differentiation.

arterioscope has signed NDAs with leading wearable companies and is currently negotiating first pilot integrations. This product line is also positioned as a non-medical product.

Mission

Our mission is to become the leading infrastructure layer for clinical research and next-generation wearable devices.

We believe that existing biosignals contain far more cardiovascular information than is currently used. By applying advanced Machine Learning to ECG and PPG data, arterioscope makes these hidden signals accessible, helping biotech and pharmaceutical companies develop better therapies, and enabling wearable OEMs to build the next generation of intelligent heart-health features.

Team:



Hermann Moser, Co-Founder & CEO / Vahid Badeli, Co-Founder & CTO /
Sascha Ranftl, Co-Founder & CSO

Social Media Channels

[LinkedIn](#)

[Instagram](#)

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