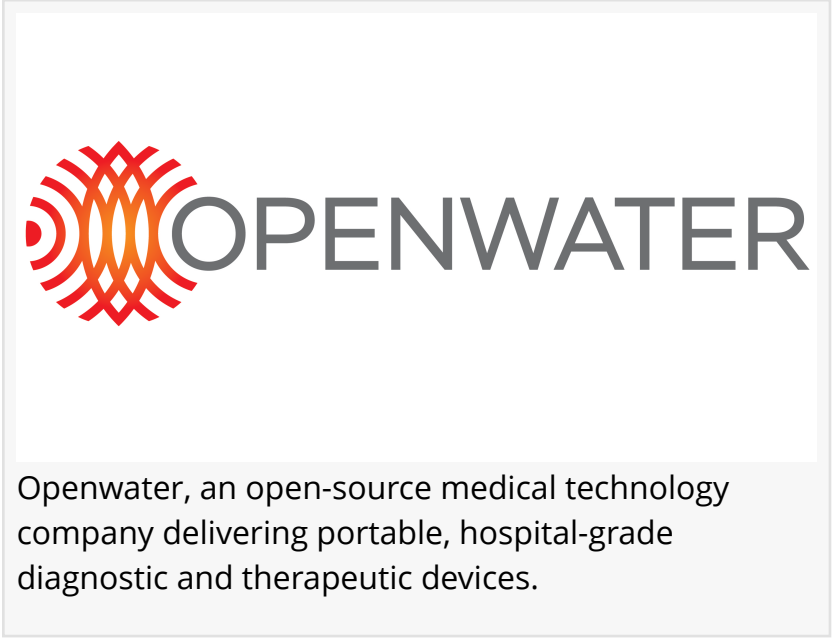
The University of Turin Adopts Openwater's Open-Motion Device to Study Muscle Blood Flow and Vascular Responses

Researchers will evaluate Openwater's wearable platform for studying muscle blood-flow dynamics and vascular responses to nervous system activity.



Openwater, an open-source medical technology company delivering portable, hospital-grade diagnostic and therapeutic devices.

SAN FRANCISCO, CA, UNITED STATES, September 29, 2026 / EINPresswire.com/ -- Openwater, an open-source medical technology company developing diagnostic and therapeutic technologies for research and future clinical use, today announces that the University of Turin, located in Turin, Italy, will use the company's Open-Motion device to advance cardiovascular and neurophysiological research. The university's Integrative Physiology Lab will use the wearable device to investigate how blood flow changes in human muscle in response to mechanical stimulation and under stressful conditions.

Led by Silvestro Roatta, Ph.D., associate professor of physiology and head of the university's Integrative Physiology Lab, the research will examine how the muscle vasculature responds to changes in internal and external pressures and to changes in neural drive. The team will study the rapid increase in blood flow that occurs when the muscle vasculature is exposed to mechanical stimuli, as produced by the muscle contraction itself or by external compression, as well as vasoconstriction, the narrowing of blood vessels triggered by the sympathetic nervous system activity during physical and mental challenges. By measuring these changes across different areas of the body simultaneously, the team aims to better understand how the nervous system regulates muscle circulation when the body adapts to different situations and investigate whether Open-Motion can directly measure muscle blood flow and complement other noninvasive measurements such as tissue oxygenation.

"Open-Motion offers the potential to measure muscle blood flow directly rather than inferring it from secondary signals like tissue oxygenation," said Professor Roatta. "It could give us another measurement to integrate with the techniques we already use, helping us better understand how circulation is controlled in different tissues."

> Professor Roatta and his team will help evaluate how Open-Motion may complement existing measurements and contribute to a more complete view of how blood-flow changes throughout the body."
>
> *Aaron Timm, CEO of Openwater*

Building on Professor Roatta's previous research on cerebral blood flow signals, the collaboration may also explore future noninvasive brain-computer interface (BCI) applications of Open-Motion. Potential areas of investigation include BCI communication paradigms based on hemodynamic signals associated with lateralized brain activity. This possibility would add to other communication pathways based on autonomic signals, such as voluntary pupil-size modulation, that do not depend on overt muscle movement.

Open-Motion is a lightweight, portable, noninvasive research platform that uses near-infrared light to measure subtle changes in blood flow and blood volume below the surface of bodily tissue. As light passes through the anatomy, high-resolution sensors capture how that light is altered by blood movement, providing insight into physiological changes deep beneath the surface in real time, without radiation or invasive procedures. This visibility enables earlier detection and more informed decision-making when traditional imaging is unavailable or impractical.

"Understanding blood flow regulation is fundamental to physiological research, yet investigators often need to combine information from multiple measurement techniques," said Aaron Timm, CEO of Openwater. "Professor Roatta and his team will help evaluate how Open-Motion may complement existing measurements and contribute to a more complete view of how blood-flow changes throughout the body."

The University of Turin joins Openwater's growing global network of research collaborators. Selected institutions using Openwater's technologies include the University of Pennsylvania, the University of Arizona, MIT Lincoln Laboratory, the University of Birmingham in the U.K., and the Hospital del Mar Research Institute in Barcelona.

To learn more about Openwater and its open-source devices, visit https://www.openwater.health/.

About Openwater
Openwater is an AI-driven medical technology company founded by Dr. Mary Lou Jepsen to make advanced care universally accessible. Backed by notable supporters including Khosla Ventures, Plum Alley, BOLD Capital Partners, Vitalik Buterin, Esther Dyson, and Peter Gabriel, Openwater uses open-source development and consumer electronics manufacturing to reduce the cost and speed the delivery of non-invasive medical devices. The company collaborates with leading research institutions worldwide to explore and advance these technologies, with the goal of improving access to care across borders and income levels.

Alaina Chiappone
AM Public Relations
achiappone@ampublicrelations.com
Visit us on social media:
LinkedIn
YouTube

This press release can be viewed online at: https://www.einpresswire.com/article/945896337

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.
© 1995-2026 Newsmatics Inc. All Right Reserved.