

PhysioMap Ltd.

Company name: PhysioMap Ltd.

Website: www.physiomapep.com

CEO name: Shuki Porath

Category: Medical Devices

Session: Engineering the Beating System: Biology Meets Technology

Talk title: Mapping the Unmapped: Patient-Specific AF Diagnostics to Guide Precision Therapy

Executive Summary / Investment Rationale

PhysioMap is developing the first integrated platform to automate patient-specific mapping of atrial fibrillation (AF) initiation sites during sinus rhythm, shifting the field from empiric one-size-fits-all ablation toward precision, physiology-guided therapy. AF is the most common cardiac arrhythmia, affecting over 60 million people worldwide, with ablation failure rates of 30-50% at one year - unchanged despite 25 years of innovation. The technology has been clinically validated in patients across all AF types. PhysioMap has secured strategic investment from a global cardiology leader and is backed by world-class scientific founders.

Core Technology

PhysioMap is built on a peer-reviewed scientific discovery: AF initiation arises from localized, patient-specific regions of steep repolarization gradients - identifiable during normal sinus rhythm using a proprietary programmed stimulation protocol and signal-analysis algorithms. On average, only 1-2 such sites exist per patient, representing less than 3% of the atrial surface. Identifying and ablating only these sites - rather than applying extensive empirical lesion sets - enables more targeted treatment with less tissue damage and stronger long-term outcomes.

Product Profile / Pipeline

PhysioMap is commercializing a fully integrated hardware-software-disposable system: a proprietary software workstation, a purpose-built catheter, and an internal cardioversion generator. The platform is designed to dramatically shorten procedure time - targeting a 20-minute total mapping workflow - and to reduce operator dependency for broad clinical deployment beyond specialist centers. The addressable market spans hundreds of thousands of AF ablation procedures performed globally each year, in a rapidly growing segment with high and persistent unmet need.

Business Strategy

PhysioMap will enter through high-unmet-need redo and persistent AF procedures, generating revenue from capital equipment placement and recurring dedicated disposables. Long-term, the company aims to become the physiological decision layer for AF ablation - complementing energy platforms such as pulsed field ablation and expanding into broader patient-specific treatment workflows across the full spectrum of cardiac arrhythmia care.

What's Next

PhysioMap is currently in the research and development phase, advancing the science from a validated manual protocol toward a fully integrated, automated clinical platform. Active work spans system engineering, algorithm development, and clinical study design across all three product components.

