



# \*\*BIOTOOL-CHF: AISC – APS Italian Association of Heart Failure Patients and Cardiovascular Prevention Joins European Project\*\*

## \*\*Introduction:\*\*

A groundbreaking initiative in heart failure treatment is underway with the launch of the European project "BIOmarker based diagnostic TOOLkit to personalize pharmacological approaches in congestive heart failure." Spearheaded by the European Commission, this project, commencing on January 29th in Bologna, aims to revolutionize heart failure management over its five-year duration, supported by a global budget exceeding 9.6 million euros.

# \*\*Background:\*\*

Cardiovascular diseases, including heart failure, demand significant attention due to their widespread impact on public health. In Italy alone, heart failure affects over 1 million individuals, constituting 1.5% of the population. Across Europe, cardiovascular diseases contribute to over 4.3 million deaths annually, representing 48% of all mortality cases. The prevalence of heart failure is expected to rise, with projections estimating its impact on 2.3% of the Italian population within the next decade. This condition leads to approximately 190,000 hospitalizations yearly in Italy, imposing substantial economic burdens, with managing a heart failure patient costing over 11,800 euros annually per individual.

# \*\*Project Objectives:\*\*

The core objective of the project is to enhance heart failure management through personalized pharmacological interventions. By leveraging innovative diagnostic biomarkers, the project aims to tailor drug approaches to individual patients, optimizing therapy and reducing hospitalization frequency and duration. This personalized approach is facilitated by the development of a diagnostic device utilizing point-of-care testing systems, enabling efficient administration of diuretics and congestion management.

\*\*Methodology and Outcomes:\*\*





Led by IRCCS Azienda Ospedaliero-Universitaria Di Bologna, the project encompasses several phases, including biomarker validation, AI-driven prognostic score development, and the creation of a decision-making tool for diuretic management. Through these efforts, a gold standard for personalized heart failure treatment will be established, integrating clinical data and biomarker indications. The project aims to identify a novel approach to heart failure management, offering more efficient and personalized strategies through innovative digital tools.

#### \*\*Role of AISC APS:\*\*

The Italian Association of Heart Failure Patients and Cardiovascular Prevention (AISC APS) plays a pivotal role in the project. Engaged in data validation, protocol drafting, and guideline development, AISC APS ensures the inclusion of patient perspectives throughout the project lifecycle. Professor Salvatore Di Somma, AISC Scientific Director, emphasizes the association's crucial role in patient recruitment and dissemination of accurate information, underscoring the importance of aligning scientific advancements with patient needs.

## \*\*Conclusion:\*\*

The BIOTOOL-CHF project represents a significant leap forward in heart failure treatment, promising personalized care and improved outcomes for patients. By integrating innovative diagnostic tools, AI algorithms, and patient-centered approaches, this initiative aims to reshape the landscape of heart failure management, offering hope for a brighter future for those affected by this condition.

# \*\*Partners Involved:\*\*

٠	Univerzitetni Klinicni Center Ljubljana	Slovenia
٠	Institut de Investigacio en Ciencies de la Salut Germans Trias i Pujol	Spain
٠	Fundacion para la Investigacion del Hospital Clinico de la Comunitat Valenciana	
	Fundacion Incliva	Spain
٠	Katholieke Universiteit Leuven	Belgium
٠	Region Hovedstaden	Denmark
+	Alma Mater Studiorum - Università di Bologna	Italy
+	Onaseio Kardiocheirourgiko Kentro	Greece
+	Institut National de la Sante et de la Recherche Medicale	France
+	Predict4Health	France





+	ECRIN European Clinical Research Infrastructure Network	France
•	Istituto Superiore di Sanità	Italy
•	Warrant Hub S.p.A	Italy
+	Universitatsklinikum SchleswigHolstein	Germany
+	Universitaet zu Luebeck	Germany
+	Associazione Italiana Scompensati Cardiaci Associazione di Promozione Sociale	Italy
+	I.M.A. Industria Macchine Automatiche S.p.A	Italy
٠	Erasmus Universiteit Rotterdam	Netherlands
٠	Fondazione per il Tuo Cuore Onlus	Italy
+	Fachhochschule Nordwestschweiz	Switzerland
+	Academisch Ziekenhuis Groningen	Netherlands
+	Università degli Studi di Brescia	Italy
+	Region Stockholm	Sweden
+	Assistance Publique Hopitaux de Paris	France
+	Ethniko Kai Kapodistriako Panepistimio Athinon	Greece

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