## **Correlations Between Galectin and Clinically Relevant Biochemical Parameters Involved in the Diagnosis and Control of Heart Failure**

Alina LUPU (ŞURLEA)<sup>1</sup>, Constantin Andrei RUSALI<sup>2</sup>, Marius-Daniel RADU<sup>3</sup>, Mihaela BAŞA<sup>4</sup>, Mihaela Macrina SIN<sup>5</sup>, Natalia ROŞOIU<sup>6</sup>

<sup>1</sup>Phd Student of ISD – Doctoral School of Applied Science, "Ovidius" University of Constanta, Romania, email : <u>sl alina@yahoo.com</u>.

<sup>2</sup> Head of Cardiology Department, Emergency Clinical Hospital of Constanța, email: andrei1678@yahoo.com

<sup>3</sup> Associate Professor Faculty of Natural and Agricultural Sciences, "Ovidius" University of Constanta, Romania, email: <u>drd maryus@yahoo.com</u>

<sup>4</sup>Col. Phd. Principal Biologist, Head of Medical Analysis Laboratory ,"Alexandru Gafencu" Military Emergency Hospital of Constanta, Romania, email: <u>mihaela basa@yahoo.com</u>

<sup>5</sup> Resident Doctor, Cardiology Department, Emergency Clinical Hospital of Constanța email: sinmacrina@yahoo.com

<sup>6</sup> Prof. Emeritus, Faculty of Medicine, "Ovidius" University of Constanta, Romania, - PhD Thesis Supervisor – ISD/Full Member of the Academy of the Romanian Scientists, email: <u>natalia\_rosoiu@yahoo.com</u>.

**Abstract.** Galectins belongs to the Lectin family and fulfil various roles. Among them, Galectin-3 is involved in inflammatory processes associated with cardiovascular diseases. Biomarkers have become essential in the management of cardiovascular disease and their potential clinical applications continue to grow. Of great interest is the knowledge of Galectin-3 as a novel biomarker involved in cardiac fibrosis and remodeling, as well as its clinical application in heart failure.

Keywords: Galectin, Cardiovascular Diseases, Heart Failure.

DOI <u>10.56082/annalsarscibio.2023.2.73</u>

## Introduction

In relation to cardiovascular diseases and their association with metabolic dysfunctions, it is important to focus research on biological markers with clinical relevance involved in the diagnosis and control of cardiac diseases. Among these, heart failure is correlated with the epidemiological dimensions of major cardiovascular diseases. It is therefore necessary to develop an effective and optimal therapeutic approach to cardiovascular pathology and to identify biological markers that can provide additional values to standard methods of assessment and diagnosis. The correlation of several specific markers for inflammation, dysfunction or cardiac fibrosis and their association may thus