

# Ionică Loredana Nicoleta, MD, PhD

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## PROFESSIONAL PROFILE

Specialist in cardiology and academic researcher, with expertise in cardiovascular oxidative stress and the cardioprotective mechanisms of antidiabetic therapy. Doctor of Medicine, with experience in translational research integrating experimental models and studies on human cardiovascular tissue. Lead author and co-author in ISI-indexed publications. Clinical activity focused on heart failure, echocardiography, and noninvasive cardiovascular imaging.

## CURRENT POSITIONS

**2025–present | Specialist cardiologist** – OMS 620/2025

**2023 – present | Assistant professor** (indefinite period) – Department of Medical Semiology I, Dept. V Internal Medicine I, Victor Babeş, University of Medicine and Pharmacy, Timișoara

## PROFESSIONAL AND ACADEMIC EXPERIENCE

**November 2022 – July 2025 | Cardiology resident**, Institute of Cardiovascular Diseases, Timișoara

**November 2021 – October 2022 | Cardiology resident (training mobility)**, Centre Hospitalier de Béziers, Centre Hospitalier Universitaire Rangueil, Toulouse, France

**January 2019 – November 2021 | Cardiology resident**, Institute of Cardiovascular Diseases, Timișoara

**October 2018 – September 2024 | Doctoral student in Medicine**, Doctoral School of Medicine and Pharmacy, Victor Babeş University of Medicine and Pharmacy, Timișoara

**October 2018 – June 2020 | Associate University Assistant** – Physiopathology Department III Functional Sciences, Victor Babeş University of Medicine and Pharmacy, Timișoara

**September 2016 – June 2018 | VADA Volunteer** (Certificate no. 63/20.06.2018) – Teaching and scientific research, Victor Babeş University of Medicine and Pharmacy, Timișoara

## EDUCATION

**2025 | PhD in Medicine** – OMS 3220/04.02.2025- Title of doctoral thesis: *Contributions to the elucidation of the cardiovascular protective effects of anti-diabetic medication: focus on monoamine oxidase*, Victor Babeş University of Medicine and Pharmacy, Timișoara

**2012-2018 | Doctor of Medicine** – Faculty of Medicine, Victor Babeş University of Medicine and Pharmacy, Timișoara

**2008-2012 | Baccalaureate Diploma** – "Gib Mihăescu" National College, Drăgășani (Romania)

## **PROFESSIONAL TRAINING AND CERTIFICATIONS**

**May 2025 – June 2025 | Theoretical and practical training program for obtaining the transoesophageal echocardiography certificate** (Series A no. 018556), Carol Davila University of Medicine and Pharmacy, Bucharest

**June 2024 | European Examination in Core Cardiology (EECC)**  
European certification in clinical cardiology

**April 2024 | European Resuscitation Council ILS (Immediate Life Support) Certificate**  
Sibiu

**November 2023 – June 2024 | Course in echocardiography and non-invasive cardiovascular imaging**, Université de Bordeaux, France

**November 2022 – June 2023 | Course in echocardiography and non-invasive cardiovascular imaging**, Université de Bordeaux, France

**September 2020 | Online course – First Aid**  
EMTraining, Oradea

**February 2020 | Course on invasive and noninvasive mechanical ventilation**  
EMTraining, Arad

## **SCIENTIFIC AWARDS AND DISTINCTIONS**

**October 2024 | Roberto Bolli Young Investigator Award**  
10th Meeting of the European Section of the International Academy of Cardiovascular Sciences  
Bratislava, Slovakia

Award granted for the oral presentation of the paper: **Cardiac Monoamine Oxidase Is a Target of SGLT2i in Overweight Non-Diabetic Patients with Chronic Heart Failure**

## **TEACHING ACTIVITY – LECTURER**

**1 March 2025 | Lecturer – CardioCoag, Session IV: Anticoagulation in special conditions**  
Event organized in collaboration with the Romanian Society of Thrombosis and Haemostasis

**14 November 2025 | Lecturer – Course: Imaging in guiding the non-pharmacological treatment of heart failure**, Romanian Society of Cardiology (SRC) – Working Group on Cardiac Imaging and Heart Failure

**25 March 2022 | Lecturer – Course: Cardiology—a look beyond clinical practice guidelines**  
Romanian Society of Cardiology (SRC) – Working Group on Experimental Cardiology

## **TEACHING ACTIVITY – LECTURER POSTGRADUATE COURSES**

**14 March 2025 – 29 March 2025 | Postgraduate course – Current developments in the pathophysiology, screening, diagnosis, and treatment of acute and chronic conditions**  
Victor Babeş University of Medicine and Pharmacy, Timișoara

**06.02.2024 – 12.02.2024 | Postgraduate course – Latest developments in the pathophysiology, laboratory diagnosis, and treatment of cardio-metabolic diseases**  
Victor Babeş University of Medicine and Pharmacy, Timișoara

**18.03.2021–27.03.2021 | Postgraduate course—Latest developments in pathophysiology, diagnostic markers, and cardiovascular risk in diabetes mellitus and chronic kidney disease**  
Victor Babeş University of Medicine and Pharmacy, Timișoara

## **LIST OF SCIENTIFIC PUBLICATIONS**

### **I. Articles published in ISI-rated journals (Web of Science)**

**Ionică L.N.**, Buriman D.G., Lința A.V., Șoșdean R., Lascu A., Streian C.G., Feier H.B., Petrescu L., Mozoș I.M., Sturza A., Muntean D.M.  
Empagliflozin and Dapagliflozin Decreased Atrial Monoamine Oxidase Expression and Alleviated Oxidative Stress in Overweight Non-Diabetic Cardiac Patients. *Molecular and Cellular Biochemistry*. 23 July 2024.

**Ionică L.N.**, Lința A.V., Bătrîn A.D., Hâncu I.M., Lolescu B.M., Dănilă M.D., Petrescu L., Mozoș I.M., Sturza A., Muntean D.M.  
The Off-Target Cardioprotective Mechanisms of Sodium-Glucose Cotransporter 2 Inhibitors: An Overview. *International Journal of Molecular Sciences*. 2024; 25(14):7711.

Merce A.P., **Ionică L.N.**, Bîna A.M., Popescu S., Lighezan R., Petrescu L., Borza C., Sturza A., Muntean D.M., Crețu O.M.  
Monoamine oxidase is a source of cardiac oxidative stress in obese rats: the beneficial role of metformin. *Molecular and Cellular Biochemistry*. 2023;478(1):59–67.

Lascu A., **Ionică L.N.**, Merce A.P., Dănilă M.D., Petrescu L., Sturza A., Muntean D.M., Streian C.G.  
Metformin Acutely Mitigates Oxidative Stress in Human Atrial Tissue: A Pilot Study in Overweight Non-Diabetic Cardiac Patients. *Life*. 2022;12(12):205 8.

Lascu A., **Ionică L.N.**, Buriman D.G., Merce A.P., Deaconu L., Borza C., Crețu O.M., Sturza A., Muntean D.M., Feier H.B.  
Metformin and empagliflozin modulate monoamine oxidase-related oxidative stress and improve vascular function in human mammary arteries. *Molecular and Cellular Biochemistry*. 2022;477(12).

Lascu A., Șoșdean R., **Ionică L.N.**, Pescariu A.P., Petrescu L., Ionac A., Luca C.T., Sturza A., Feier H.B.

Monoamine Oxidase (MAO) Is Expressed at the Level of Mitral Valve with Severe Regurgitation in Hypertrophic Obstructive Cardiomyopathy: A Case Report. *Medicina*. 2022;58(12):1844.

Ionica L., Gaita L., Bina A.M., Sosdean R., Lighezan R., Sima A., Malita D., Crețu O., Burlacu O., Muntean D.M., Sturza A.

Metformin Alleviates Monoamine Oxidase-Related Vascular Oxidative Stress and Endothelial Dysfunction in Rats with Diet-Induced Obesity. *Molecular and Cellular Biochemistry*. 2021;476(11):4019–4029.

## II. Articles indexed in international databases (BDI)

Sosdean R., **Ionică L.N.**, Merce A.P., Muntean D.M., Sturza A.

Metabolic Memory in Diabetes—Mechanistic Insights and the Impact of Cardiovascular Medication. *Romanian Journal of Cardiology*. 2021;31(3):511–516.

**Ionică L.N.**, Șoșdean R., Pescariu A.S., Mornoș C., Muntean D.M., Ionac A., Sturza A., Luca C.T., Feier H.

Assessment of Valvular Oxidative Stress in a Young Patient with Primary Mitral Regurgitation. *Timisoara Medical Journal*. 2021; (2).

## III. Chapters in books published by international publishers

Șoșdean R., Giuchici S., **Ionică L.N.**, Furdui-Lința A.V., Sturza A., Muntean D.M., Lighezan D.F., Bolli R.

Cardiac Dysfunction and Heart Failure Caused by Cancer Therapy-Induced Cardiotoxicity. In: *Cardiovascular Toxicity: Incidence, Pathogenesis, and Treatment Strategies*. Springer Nature Switzerland, 2025, pp. 23–49.

Sturza A., Furdui-Lința A.V., Buriman D., **Ionică L.N.**, Lighezan R., Muntean D.M.

Micronutrient Deficiencies, Oxidative Stress, and Inflammation in Cardiometabolic Pathologies: Three Is a Crowd.

In: *Functional Biochemistry of Micronutrients*. Springer Nature Switzerland, 2026, pp. 209–244.

Muntean D.M., Lința A.V., **Ionică L.N.**, Dănilă M.D., Lighezan D.F., Sturza A.

Vascular Toxicity of Endocrine Disruptors: A Thinly Veiled Threat.

In: *Environmental Factors in the Pathogenesis of Cardiovascular Diseases*. Springer Nature Switzerland, 2024, pp. 209–232.

## CLINICAL SKILLS

- Clinical management of acute and chronic heart failure
- Cardiovascular risk stratification and prognostic assessment
- Transthoracic echocardiography (TTE) and cardiac structural and functional assessment
- Noninvasive cardiovascular imaging
- Standard ECG interpretation, Holter ECG, and ambulatory blood pressure monitoring (ABPM)
- Post-interventional cardiovascular monitoring and follow-up

## **LANGUAGE SKILLS**

- Romanian – native language
- English – level C1 (academic and scientific use)
- French – level B2 (upper intermediate; clinical professional experience in France)

## **RESEARCH INTERESTS**

- Molecular mechanisms of oxidative stress in cardiovascular pathology
- The role of monoamine oxidase in endothelial dysfunction and cardiovascular remodeling
- Cardioprotective mechanisms of SGLT2 inhibitors in metabolic and non-diabetic contexts
- Translational cardiovascular research integrating experimental models and human tissue studies