

Curriculum Vitae

Elena Osto, MD, PhD, FESC

Application for the position of Nominating Committee members representing ESC Associations, Councils and Working Groups

Personal Information: woman, physician scientist

Place and Date of Birth: Padova, Italy . Date of birth: 29.06.1977

Nationality: Swiss and Italian



Current Position and Professional Address

Full Professor and Head of the Division of Physiology and Pathophysiology at the Otto Loewi Research Center for Vascular Biology, Immunology and Inflammation. Medical university of Graz, Graz, Austria.

Education and Postgraduate Training

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| 01.02.2021-2023 | Assistant Professor at the Institute of Clinical Chemistry, University of Zurich, Zurich, Switzerland |
| 2019-2021. | Certificate of Advance Studies (CAS) in Higher Education. For University-level instructors 2 Years (15 course days, 14 ECTS Credits). University of Zurich. |
| 31.05.2018. | Venia legendi: Faculty of Medicine of the University of Zurich. "The role of endothelial function in the pathophysiology of cardiovascular disease: a translational journey from molecular mechanisms to clinical experience". |
| 2006. | Board Certification in Cardiology, Department of Cardiac, Thoracic and Vascular Sciences, University Hospital of Padova, Padova, Italy. |
| 2010. | PhD in Cardiovascular Sciences at Cardiology Clinic, Department of Cardiac, Thoracic and Vascular Sciences, University of Padova, Italy. |

European Society of Cardiology Activities

- **Fellow of the ESC** since 2015;
- **Chairperson 2024-26 and since 2018 Nucleus Member** of the Working Group: Atherosclerosis and Vascular Biology (WG-AVB). <https://www.escardio.org/Working-groups/Working-Group-on-Atherosclerosis-and-Vascular-biology/About>
- **Communication Coordinator WG-AVB 2018-2020,**
- **Secretary 2020-2022,**
- **Chairperson-Elect 2022-24**
- **Nucleus Member** of the **Secondary Prevention and Rehabilitation Section** of the European Association of Preventive Cardiology (EAPC) 2020-22 and 2024-2026.
- **Member** of the Working Groups: Aorta and Peripheral Vascular Diseases since 2012;
- **Member** of the Council on Basic Cardiovascular Science since 2019;

She is co-author of multiple ESC Consensus Documents and Position Papers, participate in CBCS activities in grant peer-review, Abstract review committee for ESC annual congresses, EAPC annual congresses and congresses Frontiers in CardioVascular Biomedicine.

Participation in Other International Scientific Committees

Executive Committee of the European Society of Microcirculation since 2019

Member European Atherosclerosis Society (EAS) since 2016.

Board member Austrian Society of Physiology 2023-present.

Past-President 2022-24 and Board Member Section Cardiovascular Biology

Life Sciences Switzerland, **Vice President 2020-2022 Member** of the European Foundation for the Study of Diabetes

Member of the International Society of Cardiovascular Pharmacotherapy

Member Swiss Society of Cardiology since 2015;

Board Member of the Working group on Lipids and Atherosclerosis (Swiss Atherosclerosis Association, AGLA) 2017-2023;

Editorial Boards

Board reviewer of European Heart Journal.

Associate Editor European Journal Preventive Cardiology

Editorial Board Member

Pharmacology

Frontiers in Cardiovascular Medicine; Frontiers in Endocrinology - Cardiovascular Endocrinology

Leadership and Management Experience

Since 2023, I am Director of the Division of Physiology and Pathophysiology which has about 30 employees divided into academic staff, i.e. scientists and senior lecturers, and the technical staff. I have successfully attended a Leadership Programme- Capacity Building Workshops organized by Swiss national Science Foundation (SNSF) over 5 years as part of the training offered to young group leaders and assistant professors founded by the SNSF. I am also the chair of the research Unit Sex and gender mechanisms in pathophysiology which has partnership across disciplines and departments at the Medical University of Graz and is involved in create shared research projects, and collaborative grant proposals that can impact clinical practice and research policy. I serve regularly in search committee for the recruitment of professors in medical physiology and pathophysiology or cardiology in several Universities in Europe.

Fellowships and Honours

2014–2015. University of Zurich, Postdoctoral research grant (“Forschungskredit” FK-14-038), Zurich, Switzerland.

Honorary Memberships

none

Top 10 Most Relevant Publications

1. **Osto E**, Matter CM, Kouroedov A, Malinski T, Bachschmid M, Camici GG, Kilic U, Stallmach T, Boren J, Illiceto S, Lüscher TF, Cosentino F. c-Jun N-terminal kinase 2 deficiency protects against hypercholesterolemia-induced endothelial dysfunction and oxidative stress. *Circulation*. 2008; 118: 2073-80.

2. Paneni F, **Osto E***, Costantino S, Mateescu B, Briand S, Coppolino G, Perna E, Mocharla P, Akhmedov A, Kubant R, Rohrer L, Malinski T, Camici GG, Matter CM, Mechta-Grigoriou F, Volpe M, Lüscher TF, Cosentino F. Deletion of the AP-1 Transcription Factor Jun D Induces Oxidative Stress and Accelerates Age-Related Endothelial Dysfunction. *Circulation*. 2013;127:1229-40.
3. **Osto E**, Fallo F, Pelizzo MR, Maddalozzo A, Sorgato N, Corbetti F, Montisci R, Famoso G, Bellu R, Lüscher TF, Iliceto S, Tona F. Coronary microvascular dysfunction induced by primary hyperparathyroidism is restored after parathyroidectomy. *Circulation*. 2012; 126: 1031-9.
4. **Osto E**, Doytcheva P, Corteville C, Bueter M, Dörig C, Stivala S, Buhmann H, Colin S, Rohrer L, Hasballa R, Tailleux A, Wolfrum C, Tona F, Manz J, Vetter D, Spliethoff K, Vanhoutte PM, Landmesser U, Pattou F, Staels B, Matter CM, Lutz TA, Lüscher TF. Rapid and body weight-independent improvement of endothelial and HDL function after Roux-en-Y gastric bypass: role of glucagon-like peptide-1. *Circulation*. 2015; 131: 871-81.
5. Piaserico S, **Osto E***, Famoso G, Zanetti I, Gregori D, Poretto A, Iliceto S, Peserico A, Tona F. Treatment with Tumor Necrosis Factor Inhibitors Restores Coronary Microvascular Dysfunction in Young Patients with Psoriasis and Low Cardiovascular Risk Profile. *Atherosclerosis* 2016;251:25-30.
6. Doytcheva P, Bächler T, Tarasco E, Marzolla V, Engeli M, Pellegrini G, Stivala S, Rohrer L, Tona F, Camici GG, Vanhoutte PM, Matter CM, Lutz TA, Lüscher TF, **Osto E**. Inhibition of JNK2 improves obesity-induced endothelial dysfunction after Roux-en-Y gastric bypass surgery. *J Am Heart Assoc*. 2017;6(11). pii: e006441. doi: 10.1161/JAHA.117.006441.JAHA.
7. Jomard A, Liberale L, Doytcheva P, Reiner MF, Müller D, Visentin M, Bueter M, Lüscher TF, Vettor R, Lutz TA, Camici GG, **Osto E**. Effects of acute administration of trimethylamine N-oxide on endothelial function: a translational study. *Sci Rep*. 2022 May 23;12(1):8664. doi: 10.1038/s41598-022-12720-5.
8. Piaserico S, **Osto E***, Famoso G, Montisci R, De Michieli L, Zanetti I, Iliceto S, Tona F.
9. Long-term prognostic value of coronary flow reserve in psoriasis patients. *Atherosclerosis*. 2019 Aug 23;289:57-63. doi: 10.1016/j.atherosclerosis.2019.08.009. PMID: 31476732
10. Burrello J, Gonzalez Melo M, Taheri A, Airale L, Burrello A, Kraljević M, Tarik D, Dietrich E, Köstler T, Zingg U, Lutz TA, Barile L, **Osto E**. Extracellular vesicle signature predicts cardio-metabolic improvements in obese patients after bariatric surgery. *Eur J Prev Cardiol*. 2025:zwaf561. doi: 10.1093/eurjpc/zwaf561.

Major Research Interest

My main area of research is cardiovascular biology. I am particularly specialized in endothelial metabolism and function in immuno-inflammatory and metabolic disarrangements like obesity, diabetes and aging. Further, I study the vascular interaction of lipoprotein and of HDL.

My goal is to understand the molecular mechanisms underlying the communication between the cardiovascular system, the gut-liver and the adipose tissue in the pathophysiology of diabetes type 2 and obesity. In this context, a special interest is on the role of hormones like glucagon-like peptide-1 and bile acids, and their contributions in maintaining cardiovascular health.

In addition, my interest focuses on the pathophysiology and sex differences of coronary microvascular dysfunction arising in the context of immune-metabolic disorders (for examples obesity or endocrinology disease like primary hyperparathyroidism, psoriasis and the cardiac allograft vasculopathy). During my clinical training and activity, I contributed to the development and validation of the coronary flow reserve examination by transthoracic echocardiography as a non-invasive cardiac imaging technique to investigate coronary microvascular function.

As of today, my own research team is composed of:

4 post-doctoral fellows, 2 PhD students, 1 Technician, 1 Biomedical assistant.

Graz, 03.12.2025