

# Curriculum Vitae

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Tomasz J Guzik, MD PhD, FRSE, FESC

Application for the position of Councillor

## Personal Information:

**Place and Date of Birth:** Krakow, 08.03.1974

**Nationality:** Polish, British

## Current Position and Professional Address

Chair of Cardiovascular Medicine, University of Edinburgh, Edinburgh, UK

Queens Medical Research Institute; Institute of Neuroscience and Cardiovascular Research;  
47 Little France Crescent; Edinburgh; UK

Prof. of Medicine, Jagiellonian University, Collegium Medicum, Krakow, Poland

## Education and Postgraduate Training

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Jagiellonian University, Krakow, Poland	MD/PhD	1998/2001	Medicine / PhD Clin Immunol
University of Oxford, UK	MSc	2001	Molecular Medicine
Jagiellonian University, Krakow, PL	Habilitation	2004	Clinical Pharmacology
Emory University Sch. of Medicine, Atlanta	P/doc A/Prof	2005-2008	Vascular Biology
Specialist Exams: General Med / Sp Allergy	Specialist	2005/2010	Internal Medicine / Allergy

## European Society of Cardiology Activities

2010-2015 Nucleus Member; WG on Atherosclerosis and Vascular Biology; ESC

2018-2020 Chair; Research and Grants Committee, European Society of Cardiology

2020-2022 Chair; Publications Committee; European Society of Cardiology

2019–2022. Steering Committee of *ATLAS of Cardiovascular Disease*, Brussels

2022-2024 Chair; Research and EU Grants Committee, European Society of Cardiology

2024-2026 Chair; ESC Congress Programme Committee

Editor in Chief; Cardiovascular Research; Ex-officio Member of Council of Basic Cardiovascular Sciences

2022- nucleus member; Working Group on Coronary Pathophysiology and Microcirculation

Member of Council on Hypertension;

From 2020 – FESC

## Participation in Other International Scientific Committees

2019-2022 Chair; Awards Committee; International Society of Hypertension

2016-2022 Treasurer; British Atherosclerosis Society

2023- Chair; British Atherosclerosis Society

## Editorial Boards

**Editor-in-Chief:** *Cardiovascular Research*

Circulation Research (Editorial Board Member)



Hypertension (Editorial Board Member)  
European Heart Journal (Specialty Editor)  
EHJ Case Reports (EB member/specialty editor)

## Leadership and Management Experience

2008–2015	Chairman; Department of Medicine; Jagiellonian University; Collegium Medicum
2013–2022	Regius Chair of Physiology and Cardiovascular Pathobiology; University of Glasgow, UK
2011	Member, Organisation Committee; American Physiological Society Conference on Immune Mechanisms of Cardiovascular Disease
2013–	Distinguished Honorary Fellow, American College of Physicians
2018–2020	International Board of Trustees; Foundation for Polish Science; Trustee
2018–2024	President; International Board of Trustees; Foundation for Polish Science;
2018–2022	Steering Committee of <i>Cardioscape II</i> , Brussels
2020–	Co-Chair; Scientific Advisory Board; DZHK (German Centre for Cardiovascular Disease)
2015–	Fellow, Royal College of Physicians and Surgeons of Glasgow
2014–2022	Member, Advisory Committee for Polish Ministry of Science
2012–2016	President, Polish Internist Society (the largest medical society in Poland; ca. 4500 members)
2004–2009	Vice President; Polish Society for Atherosclerosis Research (member of IAS)
2009–2012	President, Polish Society for Atherosclerosis Research (member of IAS)
2009–2010	President, Forum for Prophylaxis of Cardiovascular Disease
2010–2016	Chairman, National Scientist Mobility Executive Committee, Ministry of Science and Higher Education, Poland
2012–2013	Chairman, Study Section NZ4 (human physiology and disease pathology) National Science Centre
2021–2023	Treasurer; British Atherosclerosis Society
2023–	President/Chair; British Atherosclerosis Society

## Fellowships and Honours

2015	Bernard and Joan Marshall Award in Research Excellence; BSCR, UK
2017	<u>Arthur Corcoran Award in Hypertension</u> ; American Heart Association, USA (second most important award in hypertension research worldwide)
2019	Jagiellonian Laur; Main Scientific Award of Jagiellonian University (est. 1364)
2020	J Sniadecki Award of Polish Academy of Sciences
2021, 2022, 2023, 2024	<b>Highly Cited Researcher Award</b> (0.1% top researchers), Clarivate
2024	R. Tigerstedt Lifetime Achievement Award; International Society of Hypertension,
2025	Fellow of the Polish Academy of Sciences (elected; FPAN)
2024	Fellow of the Royal Society of Edinburgh (FRSE)

## Honorary Memberships

2013	Honorary Fellow of American College of Physicians
2024	Honorary Member of Hungarian Society of Cardiology

## Top 10 Most Relevant Publications

1. Guzik TJ, Mussa S., (...) Pillai R., Channon KM.: Mechanisms of increased vascular superoxide generation in human diabetes mellitus. Importance of NAD(P)H oxidase and eNOS. **Circulation**, 2002, 105 (14): 1656-62. **Cited: 931 times (ISI WoS):** *The first explanation of the mechanisms of oxidative stress in human vessels in type II diabetes mellitus - key role of NADPH oxidase*
2. Guzik TJ, Hoch NE, (...) Weyand C, Harrison DG: Role of the T-Cell in the Genesis of Angiotensin II-Induced Hypertension and Vascular Dysfunction, **J Exp Med**, 2007, 204: 2444-60. **Cited: 1575 times (ISI WoS)** *Discovery of the role of T cells in hypertension – first description of the cause-effect relationship using advanced molecular biology and immunology approaches.*
3. Mohanta S, Peng L., Li Y., Yin C, Lu S, Sun T, Carnevale L, Perrotta M, Ma Z, Förstera B, Stanic K, Zhang C, Zhang X, (...) D'Agostino G, Guzik TJ., Olofsson PS, Weber C., Lembo G, Carnevale D. Habenicht AJR: Neuroimmune cardiovascular interfaces form atherosclerosis brain circuits. **Nature**, 2022, 605(7908):152-159. **Cited: 129 times (ISI WoS);** *Discovery of artery-brain circuits controlling immune responses in atherosclerosis*
4. Guzik TJ, Nosalski R, Maffia P, Drummond GR: Immune and inflammatory mechanisms in hypertension. **Nat Rev Cardiol.**, 2024, 21(6):396-416; DOI: 10.1038/s41569-023-00964-1. *State of the art of immune mechanisms of hypertension and new hypothesis of immune activation.*
5. Vinh A, Chen W, (...) David G. Harrison, Guzik TJ: Inhibition and Genetic Ablation of the B7/CD28 T cell Costimulation Axis Prevents Experimental Hypertension. **Circulation**, 2010; 122(24):2529-37. **Cited: 295 times (ISI WoS):** *Proof of concept for immunomodulation in hypertension.*
6. Siedlinski M, Jozefczuk E, Xu X, Teumer A, Evangelou E, Schnabel RB, Welsh P, Maffia P, Erdmann J, Tomaszewski M, Caulfield MJ, Sattar N, Holmes MV, Guzik TJ.: White Blood Cells and Blood Pressure: A Mendelian Randomization Study. **Circulation**. 2020, Apr 21;141(16):1307-1317. **Cited: 189 times (ISI WoS)** *Use of genetic tools to demonstrate relationships between lymphocytes and blood pressure in humans using UK Biobank population*
7. Nosalski R, Siedlinski M, (...) Graham D, Baker AH, Guzik TJ.: T Cell-Derived miRNA-214 Mediates Perivascular Fibrosis in Hypertension. **Circ Res**. 2020 Feb 17. doi: 10.1161/CIRCRESAHA.119.315428. **Cited: 85 times (ISI WoS)** *Identification of a new mechanism of perivascular fibrosis in hypertension that is T cell-dependent and pharmacologically targetable.*
8. Siedlinski M, Carnevale L, (...) Holmes MV, Guzik TJ: Integrative genetic analyses identify brain structures related to cognitive impairment arising from elevated blood pressure. **Eur Heart J.**, 2023, 44(23):2114-2125. **Cited: 139 times (ISI WoS; 1 year)** *First description of centres in the brain that can mediate cognitive impairment caused by hypertension; Altmetric>1100*
9. Czesnikiewicz-Guzik M, Osmenda G, (...) D'Aiuto F, Guzik TJ.: Causal association between periodontitis and hypertension: evidence from Mendelian randomization and a randomized controlled trial of non-surgical periodontal therapy. **Eur Heart J**. 2019, 40(42):3459-3470. **Cited: 307 times (ISI WoS)** *First evidence of causal relationship between periodontitis and HTN*
10. Guzik TJ, Tomaszewski M.: Aldosterone Synthase Inhibition for Hypertension. **N Engl J Med**. 2025 Aug 30. Doi 10.1056/NEJMe2511533.

## Major Research Interest

My research in cardiovascular biology and hypertension spans nearly three decades and integrates molecular, physiological, and biochemical approaches to define mechanisms of vascular dysfunction and blood pressure regulation. Key contributions include seminal work on reactive oxygen species, inflammation and adaptive immunity in hypertension, and more recent elucidation of neuro-immune links between hypertension, atherosclerosis, and cognitive impairment. As a clinician-scientist, I pursue translational discovery research directly relevant to human disease, combining animal models, cell systems, human vascular and cardiac tissues, and large-scale genetic and epidemiological studies. Early work with Keith Channon at Oxford first demonstrated that NADPH oxidase activity in human vessels impairs endothelial function in diabetes and hypertension and helped characterise human NADPH oxidases. Later, I established a critical role for T cells in hypertension, a focus that continues in my current work on regulation of cardiovascular inflammation. I have published over 400 original papers in leading journals, including Nature, NEJM, and The Lancet, with 70 papers cited over 100 times. My research is funded by the British Heart Foundation and the European Commission and now focuses on inflammatory and neuro-immune regulators of vascular disease, their biomarkers, and therapeutic targeting.