Univ.-Prof. Dr. med. Dr. h.c. Dobromir Dobrev, MD, FESC, FHRS, FEHRA, FISHR, FIACS
Director of Institute of Pharmacology, Faculty of Medicine, University Duisburg-Essen, Germany

Education and Degrees

1985-1988	Medical studies, Medical University Pécs, Hungary
1988-1992	Medical studies, Dresden University of Technology, Dresden University of Technology
1994	MD (Dr. med., magna cum laude), Dresden University of Technology
1998	Board certified ("Facharzt)" in Pharmacology&Toxicology
2002	Facultas docendi ("Privatdozent") and Venia legendi in Pharmacology&Toxicology

Professional Career

1992-1994	"Arzt im Praktikum", Dept. of Clinical Pharmacology, Dresden University of Technology
1994-2008	Postdoctoral Fellow, Dept. of Pharmacology&Toxicology, Dresden University of Technology
2008-2010	Professor of Medicine (apl. Prof.), Dresden University of Technology, Dresden
2009-	Appointment as Adjunct Full Professor of Medicine, Montreal Heart Institute, University of Montreal, Montreal, Canada
01.07.2010	Appointment as Full Professor (W3) of Experimental Cardiology and Chair of Division of Experimental Cardiology, Medical Faculty Mannheim, University Heidelberg, Germany
01.10.2012	Appointment as Full Professor in Pharmacology and Toxicology (W3) and Director, Institute of Pharmacology, Faculty of Medicine, University Duisburg-Essen, Essen, Germany
01.08.2015	Appointment as Adjunct Full Professor of Medicine, Department of Integrative Physiology, Baylor College of Medicine, Houston, USA

Awards and Honours

1999	Poster Award, Annual Meeting of German Society for Experimental and Clinical Pharmacology and Therapy, Berlin
2000	Teaching Award, Gesellschaft von Freunden und Förderern der TU Dresden
2001	Carl Gustav Carus-Teaching Award, Medical Faculty Dresden
2001	Wilhelm P. Winterstein Research Award, German Heart Foundation
2003	Abstract Travel Award, AHA Scientific Sessions, Orlando, USA
2004	Carl Gustav Carus-Teaching Award, Medical Faculty Dresden
2005	Albert-Fraenkel-Award, German Cardiac Society
2010-2015	Work package leader, EU FP7-HEALTH-2010 Large-scale Integrating Project ("The European Network for Translational Research in Atrial Fibrillation"; http://www.eutraf.eu/)
2011-2013	Co-coordinator of Arrhythmia Research Program and Member of Research Coordinating Committee, German Centre for Cardiovascular Research ("Deutsches Zentrum für Herz-Kreislauf Forschung")
2012	Outstanding Achievement Award, European Cardiac Arrhythmia Society
2007-2013	Grantee Coordinator, Transatlantic Networks of Excellence in Cardiovascular Research Program of Fondation Leducq, 07CVD03 ("The European-North American Atrial Fibrillation Research Alliance"; http://www.transatlantic-af-alliance.org/)
2017	Elected Fellow of the International Academy of Cardiovascular Sciences
2018	Honorary Member of Romanian Society of Cardiology
2018	Elected Fellow of the International Society for Heart Research (FISHR)
2020	Elected Fellow of the European Society of Cardiology (FESC)
2021	Elected Fellow of the European Heart Rhythm Association (FEHRA)
2021	Best Teacher Award 2021, Medical Faculty of University Duisburg-Essen, Germany
2021	Conferred Honorary Doctorate (Dr. h.c.) by University of Medicine & Pharmacy "Carol Davila", Bucharest, Romania. Ceremony deferred due to Covid-19 pandemic to October 4, 2022.
2022	Elected Fellow of the Heart Rhythm Association (FHRS)

2023 Carmeliet-Coraboeuf-Weidman Lecture, Delived at the Annual Meeting of ESC Working Group on Cardiac Cellular Electrophysiology, 12-14 June 2023, Copenhagen, Denmark
2023 Best Teacher Award 2023, Medical Faculty of University Duisburg-Essen, Germany
2024 Listed #1/#11 (basic/basic+clinical) in worldwide expert ranking on Atrial Fibrillation and #1/#13 on Cardiac Arrhythmias (ExpertScape.com)
2024 Elected Member of Academia Europaea (MAE)
2024 Listed #7 in worldwide expert ranking on Atrial Fibrillation (ScholarGPS™ ID:43844462078996)
2024 Best Teacher Award 2024, Medical Faculty of University Duisburg-Essen, Germany
2024 Listed #520 in Germany and #9788 worldwide in the Ranking of Best Scientists in the field of Medicine 2023 (Research.com)
2024 Ranked worldwide the most active and most frequently cited author in the field of Atrial Fibrillation and Ion Channels (https://doi.org/10.1016/j.hrthm.2024.01.032)

Editorial Boards

2003- Naunyn Schmiedeberg's Archive of Pharmacology (2005-, *Associate Editor*)
2004-2019 Journal of Molecular and Cellular Cardiology
2007- Cardiovascular Research (*Guest Editor* of spotlight issues: 2011, 2015, and 2020)
2008-16 Circulation: Arrhythmia and Electrophysiology (founding member)
2009-2020 BioMed Research International (*Associate Editor*)
2009- Basic Research in Cardiology
2011- Europace
2014-2016 Circulation
2015- European Heart Journal - Cardiovascular Pharmacotherapy
2016-2019 International Journal of Cardiology (*Associate Editor*)
2017- International Journal of Cardiology Heart & Vasculature (**Editor-in-Chief**)
2017- Journal of Interventional Cardiac Electrophysiology
2018 Canadian Journal of Cardiology (*Guest Editor*)
2018 International Journal of Cardiology (*Guest Editor*)
2018 Pharmacological Research (*Guest Editor*)
2019- Reviews in Cardiovascular Medicine
2020- PACE
2020- International Journal of Cardiology (**Deputy Editor**)

Bibliography (Updated on 03.June.2024)

Total Publications *PubMed*	428
Publications in the Last 5 Years *PubMed*	174
Total Impact Factor (incl. work in press)	**4753.7**
Average Impact Factor per Article	**12.0**
Average Impact Factor per Original Article	**14.2**
Total Citations *Scopus/GoogleScholar*	**43792 / 60313**
Citations 2021	5537 / 7881
Citations 2022	5576 / 8058
Citations 2023	5325 / 7588
h-Index *Scopus/GoogleScholar*	**87 / 95**
m-Index = *h*-Index per Year since First Paper	**3.0**

Most Important Publications

1. **Dobrev D**, et al. & Ravens U (2001) Molecular basis of downregulation of G-protein-coupled inward rectifying K^+ current ($I_{K,ACh}$) in chronic human atrial fibrillation: Decrease in GIRK4 mRNA correlates with reduced $I_{K,ACh}$ and muscarinic receptor-mediated shortening of action potentials. ***Circulation***, 104: 2551-2557.

2. Christ T, et al. & **Dobrev D** (2004) L-type Ca^{2+} current downregulation in chronic human atrial fibrillation is associated with increased activity of protein phosphatases. ***Circulation***, 110: 2651-2657.
3. **Dobrev D**, et al. & Ravens U (2005) The G-protein gated potassium current $I_{K,ACh}$ is constitutively active in patients with chronic atrial fibrillation. ***Circulation***, 112: 3697-3706.
4. El-Armouche A, et al. & **Dobrev D** (2006) Molecular determinants of altered Ca^{2+}-handling in human chronic atrial fibrillation. ***Circulation***, 114: 670-680.
5. Nattel S, Burstein B, **Dobrev D** (2008) Atrial remodelling and atrial fibrillation: mechanisms and implications. ***Circ Arrhythm Electrophysiol***, 1: 62-73.
6. Chelu MG, et al. & **Dobrev D***, Wehrens XHT* (2009) Calmodulin kinase II-mediated sarcoplasmic reticulum calcium leak promotes atrial fibrillation in mice. ***J Clin Invest***, 119: 1940-1951. *shared senior and correspondence authorship
7. **Dobrev D**, Nattel S (2010) New antiarrhythmic drugs for treatment of atrial fibrillation. ***The Lancet***, 375(9721): 1212-23.
8. **Dobrev D**, Carlsson L, Nattel S (2012) Novel molecular targets for atrial fibrillation therapy. ***Nat Rev Drug Discov***, 11(4): 275-91.
9. Voigt N, et al. & **Dobrev D** (2012) Enhanced sarcoplasmic reticulum Ca^{2+} leak and increased Na^{+}-Ca^{2+} exchanger function underlie delayed afterdepolarizations in patients with chronic atrial fibrillation. ***Circulation***, 125(17): 2059-70.
10. Voigt N, et al. & **Dobrev D** (2014) Cellular and molecular mechanisms of atrial arrhythmogenesis in patients with paroxysmal atrial fibrillation. ***Circulation***, 129(2): 145-56.
11. Heijman J, Voigt N, Nattel S, **Dobrev D** (2014) Cellular and Molecular Electrophysiology of Atrial Fibrillation Initiation, Maintenance and Progression. ***Circ Res***, 114(9): 1483-99.
12. Schmidt C, et al. & **Dobrev D**[*], Thomas D[*] (2015) Upregulation of $K_{2P}3.1$ K^{+} current causes action potential shortening in patients with chronic atrial fibrillation. ***Circulation***, 132(2): 82-92. *shared senior authorship
13. Nattel S, **Dobrev D** (2016) Electrophysiological and molecular mechanisms of paroxysmal atrial fibrillation. ***Nat Rev Cardiol***, 13(10): 575-90.
14. Abu-Taha IH, et al. & **Dobrev D**[#], Wieland T[#] (2017) Nucleoside Diphosphate Kinase-C Suppresses cAMP Formation in Human Heart Failure. ***Circulation***, 135(9): 881-897. [#]co-senior and co-correspondence authors.
15. Heijman J, Guichard JB, **Dobrev D**, Nattel S (2018) Translational challenges in atrial fibrillation. ***Circ Res***, 122(5): 752-773.
16. Yao C, Veleva T et al. & **Dobrev D**, Li N (2018) Enhanced NLRP3 Inflammasome Signaling Promotes Atrial Fibrillation. ***Circulation***, 138: 2227–2242.
17. Molina CE, et al. & **Dobrev D** (2018) Profibrotic, Electrical, and Calcium-Handling Remodeling of the Atria in Heart Failure Patients With and Without Atrial Fibrillation. ***Front Physiol***, 9: 1383.
18. **Dobrev D**, et al. & Nattel S (2019) Post-operative Atrial Fibrillation: Mechanisms, Manifestations and Management. ***Nat Rev Cardiol***, 16(7): 417-436.
19. Fender AC, et al. & **Dobrev D** (2020) Thrombin receptor PAR4 drives canonical NLRP3 inflammasome signaling in the heart. ***Basic Res Cardiol***, 115(2):10.
20. Nattel S, Heijman J, Zhou L, **Dobrev D** (2020) The Molecular Basis of Atrial Fibrillation Pathophysiology and Therapy: A Translational Perspective. ***Circ Res***, 127: 51–72.
21. Heijman J et al. & **Dobrev D** (2020) Atrial Myocyte NLRP3/CaMKII Nexus Forms a Substrate for Post-operative Atrial Fibrillation. ***Circ Res***, 127(8): 1036-1055.
22. Scott LJ, Fender AC, et al. & **Dobrev D**[#], Li N[#] (2021) NLRP3 Inflammasome Is a Key Driver of Obesity-Induced Atrial Arrhythmias. ***Cardiovasc Res***, 117(7): 1746-1759. [#]equal contribution and shared senior authorship.
23. **Dobrev D**, Heijman J, Hiram R, Li N, Nattel S (2022) Inflammatory signaling in atrial cardiomyocytes: a novel unifying principle in atrial fibrillation pathophysiology. ***Nat Rev Cardiol***, 20(3): 145-167.

24. Saljic A, Grandi E, **Dobrev D** (2022) TGF-β1-induced endothelial-mesenchymal transition: a potential contributor to fibrotic remodeling in atrial fibrillation? ***J Clin Invest***, 132(13): e161070.
25. Grammatika Pavlidou N, et al. & **Dobrev D**, Molina CE (2023) Phosphodiesterase 8 governs cAMP/PKA-dependent reduction of L-type calcium current in human atrial fibrillation: a novel arrhythmogenic mechanism. ***Eur Heart J***. 2023 Feb 22:ehad086. doi: 10.1093/eurheartj/ehad086. Epub ahead of print. PMID: 36810794.
26. Heijman J, et al. & **Dobrev D** (2023) Enhanced Ca^{2+}-Dependent SK-Channel Gating and Membrane Trafficking in Human Atrial Fibrillation. ***Circ Res***, 132(9): e116-e133.
27. Saljic A, Heijman J, **Dobrev D** (2023) Recent Advances in Antiarrhythmic Drug Therapy. ***Drugs***, 83(13): 1147-1160.
28. Vinciguerra M, **Dobrev D**, Nattel S (2024) Atrial fibrillation: pathophysiology, genetic and epigenetic mechanisms. ***Lancet Reg Health Eur***, 37: 100785.

Funding History as Principal/Co-Principal Investigator (selection): **Total amount: approx. 10 Mio. €**

2002-2014 DFG, DO 769/1-3 (*Mechanisms of Constitutive $I_{K,ACh}$ Channels in AF*)
2007-2013 Fondation Leducq, Transatlantic Networks of Excellence in Cardiovascular Research Program, 07CVD03 (*European-North American AF Research Alliance*) (Grantee Coordinator)
2010-2015 European Union, FP7-HEALTH-2010, large-scale integrating project, Proposal No: 261057 (*The European Network for Translational Research in AF, EUTRAF*) (Work Package Leader)
2016-2022 NIH, R01 HL131517 (*Perturbed Sodium and Calcium Fluxes in AF*, with Eleonora Grandi, Davis, USA)
2017-2022 DFG, DO 769/4-1 (*Molecular Basis and Proarrhythmic Role of SK Channels in AF)*
2017-2022 NIH, R01 HL136389 (*The Role of Inflammasome in the Pathogenesis of AF*, with Na Li, Houston, USA)
2019-2023 NIH, R01 HL089598 (*Ryanodine Receptor Regulation in postoperative AF*, with Xander Wehrens, Houston, USA)
2021-2026 European Union, H2020 SC1-BHC-06-2020, large-scale integrating project, Proposal No. 965286 (*Machine Learning and Artificial Intelligence for Early Detection of Stroke and Atrial Fibrillation, MAESTRIA*)
2021-2025 NIH, 2R01HL131517-06A1 (*Quantifying the Role of Cardiomyocyte Ultrastructure in Atrial Health and Disease*, with Eleonora Grandi, Davis, USA)
2021-2026 NIH, 2R01HL136389-05 (*The Role of Gasdermin-D/Interleukin-1 Nexus in Atrial Arrhythmogenesis*, with Na Li, Houston, USA)
2022-2026 NIH, R01HL163277 (*Cardiac Fibroblast Inflammasome and Atrial Myopathy*, with Na Li, Houston, USA)
2023-2027 NIH, R01HL160992 (*Role of Nucleoside-Diphosphate Kinase Signaling in Atrial Fibrillation*, with Xander Wehrens, Houston, USA)
2023-2028 NIH, R01HL165704 (*Resolution of Inflammation and Atrial Fibrillation*, with Samuel Dudley, Minneapolis, USA)
2024-2029 DFG Research Training Group 2989, Project No. 517043330 (*Targeting Cellular Interfaces in Reperfused Myocardial Infarction*)

Major Committees and Professional Services (Selection)

2007- Member of Scientific Advisory Board, International Academy of Cardiology.
2007-2010 Chair, Working Group on Cellular Electrophysiology, German Society of Cardiology.
2007-2011 Member of Program Committee, German Society of Cardiology.
2007-2008 Member of Program Committee, European Cardiac Arrhythmia Society.
2009- Member of Scientific Committee, Paul-David Chair in Cardiovascular Electrophysiology, Montreal Heart Institute, University of Montreal, Canada.
2010 Member of Scientific Programs Committee, CARDIOSTIM 2010, 17th World Congress in Cardiac Electrophysiology and Cardiac Techniques, 16-19 June, Nice, France.

2010-2011	Member of Program Committee, European Heart Rhythm Association (EHRA), Europace 2011, Madrid, Spain.
2010-2011	Member of Organizing Committee, “Up-date on Arrhythmias: 25 Years of Radiofrequency Ablation”. Rosengarten Conference Center Mannheim, September 15–17, 2011, Mannheim, Germany.
2011-2013	Scientific Representative/Principal Investigator of Medical Faculty Mannheim in the German (National) Centre for Cardiovascular Research.
2011-2013	Co-Coordinator of “Arrhythmia” Research Programme of the German (National) Centre for Cardiovascular Research.
2012-2013	Member of Program Committee of the Annual Meeting of the ESC Working Group on Cardiac Cellular Electrophysiology, 23-24.06.2013, Athens, Greece.
2014-	Member of Ethics Committee, Medical Faculty of University Duisburg-Essen, Essen, Germany.
2014-2016	Member of Programme Committee of ESC Frontiers in CardioVascular Biology Meeting 2016, Florence, Italy.
2013-2014	Reviewer, 2014 ESC/EACTS Guidelines on myocardial revascularization: the Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS).
2014-2015	Reviewer, 2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: The Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC) Endorsed by: Association for European Paediatric and Congenital Cardiology (AEPC).
2015-2016	Member of Congress Programme Committee, European Society of Cardiology, Annual Meeting Rome 2016.
2015-2016	Reviewer, ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS: The Task Force for the management of atrial fibrillation of the ESC. Developed with the special contribution of EHRA of the ESC. Endorsed by the European Stroke Organisation (ESO).
2015-2016	Member of Writing Committee, Position Paper on *Atrial Cardiomyopathies: Definition, Characterization and Clinical Implication*, a joint initiative of EHRA, HRS, APHRS and SOLAEGE.
2016-	Council Member, European Section of International Academy of Cardiovascular Sciences.
2017-	Member of Programme Committee of EHRA Annual Meeting 2018, Barcelona, Spain.
2016-2018	Chair, Working Group on Cardiac Cellular Electrophysiology, European Society of Cardiology.
2017-2020	Board Member of European Heart Rhythm Association.
2018-2021	Member of Executive Council, International Academy of Cardiovascular Sciences.
2018	Chairman, Annual Meeting of the ESC Working Group on Cardiac Cellular Electrophysiology, Essen, Germany.
2018-2019	Program Committee Chairman, Annual Meeting of European Cardiac Arrhythmia Society 2019, June 16-18, Marseille, France.
2018-2020	Past-Chair, Working Group on Cardiac Cellular Electrophysiology, European Society of Cardiology.
2018-2020	Member of Council on Basic Cardiovascular Science, European Society of Cardiology.
2019-2020	Member of Programme Committee, FCVB 2020, Budapest, Hungary (postponed to 2021).
2019-2023	Member of Nominating Committee, German Society of Cardiology.
2020	Member of Nominating Committee, Working Group on Cardiac Cellular Electrophysiology, European Society of Cardiology.
2020-2024	Nucleus Member, Working Group on Cardiovascular Pharmacotherapy, European Society of Cardiology.
2020-2022	Member of Scientific Program Committee for ISHR World Congress in Berlin, June 12-15, 2022.

2021-	Member of Scientific Advisory Board of LYRIC – Electrophysiology and Heart Modelling Institute – University of Bordeaux, France
2022-	Member of Grant Committee, Danish Cardiovascular Academy
2022-2024	Chair-Elect, Working Group on Cardiovascular Pharmacotherapy, European Society of Cardiology.
2024	Member of Nominating Committee, Working Group on Cardiovascular Pharmacotherapy, European Society of Cardiology.
2022-2024	Member of Education Committee, European Society of Cardiology
2022-2024	Member of HFA Scientific Committee on Atrial Disorders
2022-2024	Member of Council on Basic Cardiovascular Science, European Society of Cardiology.