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
2011-2021	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**)
2023-2023	Heart Rhythm

Bibliography (Updated on 11. November. 2024)

Total Publications *PubMed*	450
Publications in the Last 5 Years *PubMed*	196
Total Impact Factor (incl. work in press)	**4426**
Average Impact Factor per Article	**10.7**
Average Impact Factor per Original Article	**12.7**
Total Citations *Scopus/GoogleScholar* (since 1996)	**46278 / 64304**
Citations 2021	5557 / 7984
Citations 2022	5605 / 8192
Citations 2023	5368 / 7641
h-Index *Scopus*	**88**
h-Index *GoogleScholar* (since 2019)	**100** (**70**)
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. (Editorial in ***Circulation***, 138; 2243-2246)
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***, 44(27): 2483-2494. (Editorial in ***Eur Heart J***, 44(27): 2495-2497)
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. (Editorial in ***Circ Res***, 132(9): 1104-1106)
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.
29. Tamargo J, Agewall S, Borghi C, Ceconi C, Cerbai E, Dan GA, Ferdinandy P, Grove EL, Rocca B, Magavern E, Sulzgruber P, Semb AG, Sossalla S, Niessner A, Kaski JC, **Dobrev D** (2024) New pharmacological agents and novel cardiovascular pharmacotherapy strategies in 2023. ***Eur Heart J Cardiovasc Pharmacother***, 10(3):219-244.

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)
2023-2027 NIH, R01HL164838-01A1 (*FKBP5 and cardiac arrhythmogenesis*, with Na Li, Houston, US
2024-2029 DFG, Research Training Group 2989 (*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.
2024-2026	Chair, Working Group on Cardiovascular Pharmacotherapy, European Society of Cardiology.

Invited presentations to international meetings

- Total > 220 invitations to speak at international meetings
- >10 Plenary/keynote/named lectures

Examples:

1. Plenary lecture: Calcium handling abnormalities in AF promotion. In Joint AHA/ESC Plenary Session "Altered Na and Ca handling in heart disease". **Scientific Sessions of the Heart American Heart Association** 2007, Orlando, USA.
2. Plenary lecture: Role of Ca^{2+}-handling in atrial fibrillation. In: Plenary Session "Newer developments in atrial fibrillation mechanisms". **4th Annual Meeting of European Cardiac Arrhythmia Society** (ECAS), 13-15 April 2008, Marseille, France.
3. Plenary lecture: Novel mechanistic insights into the progression of human atrial fibrillation. In: Plenary Session "Management of atrial fibrillation". **14th World Congress on Cardiac Disease**, Annual Scientific Sessions of International Academy of Cardiology, 26-29 July 2008, Toronto, Canada.
4. Plenary lecture: Calcium/Calmodulin Kinase, Dysfunctional Sarcoplasmic Reticulum, and Atrial Fibrillation. **15th World Congress on Heart Disease**, Annual Scientific Sessions of International Academy of Cardiology, 24-27 July 2010, Vancouver, Canada.
5. Plenary lecture: New Directions in Antiarrhythmic Drug Therapy for AF. In Special Plenary Session: "Atrial Fibrillation: 2012 and the Future". **Scientific Sessions of the Heart American Heart Association**, 4-7 November 2012, Los Angeles, USA.
6. Plenary lecture: Nucleoside Diphosphate Kinase C as a Regulator of G-protein Signaling in the Heart. In: "Novel Signaling Pathways in Heart Disease". **Gordon Research Conference "Cardiac Regulatory Mechanisms"**, 8-13 June 2014, New London, NH, USA.
7. Keynote lecture: Principle of 2016 ESC AF guideline. In: "Summary in the 2016 ESC guidelines for the management of atrial fibrillation: antithrombotic therapy, rhythm control, rate control". **10th Asia Pacific Heart Rhythm Society Scientific Session** and the **64th Annual Meeting of the Japanese Heart Rhythm Society**, 14-17 September 2017, Yokohama, Japan.

8. Keynote lecture: New druggable targets for arrhythmias. In: “Arrhythmia research summit: novel mechanisms beget new arrhythmia therapies”. **Scientific Sessions of the American Heart Association**, 16-18 November 2019, Philadelphia, USA.
9. Keynote lecture: Role of inflammatory signaling in AF. **LIRYC Scientific Meeting**, 13-14 January 2020, Bordeaux, France.
10. Carmeliet-Coraboeuf-Weidmann-Lecture. “Cellular and Molecular Electrophysiology of Atrial Fibrillation”. **47th Annual Meeting of European Cardiac Society Working Group on Cardiac Cellular Electrophysiology**, 12-14 June 2023, Copenhagen, Denmark.