

## Axel Radlach Pries

Geburtsdatum	20. Februar 1954, Köln, Deutschland
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Titel, Position	Professor für Physiologie und Dekan/Vorstandsmitglied der Charité

### Ausbildung, Funktionen

1979	Medizinisches Staatsexamen, Universität zu Köln
2/1980	Promotion (Dr. med., summa cum laude)
1980	Wissenschaftlicher Assistent, Universität zu Köln
1985	Hochschul-Assistent (C1), Institut für Physiologie, Freie Universität Berlin (FU)
7/1990	Habilitation für Physiologie, FU
1991	Ober-Assistent (C2), Institut für Physiologie, FU
1995	apl. Professor, Institut für Physiologie, FU
1997-1998	Oberarzt, Anästhesie, Deutsches Herzzentrum Berlin (DHZB)
12/1998	Professor (C3), Institut für Physiologie, FU
1984-2014	University of Arizona, Tucson, Consultant für NIH Projekte, Tim Secomb

### Leitungsfunktionen

2001-2015	Direktor, Institut für Physiologie, Charité – Universitätsmedizin Berlin
2003-2015	Mitglied des Fakultätsrates, Charité – Universitätsmedizin Berlin
2008-2015	Stellvertretender Zentrumsleiter, Centrum 02 (Vorklinik) Charité-Berlin
2009-2013	Stellvertretender Zentrumsleiter, Center for Cardiovascular Research, CCR
2014	Vorsitzender, 'Studienausschuss Modellstudiengang Medizin'
ab 01.2015	Dekan und Vorstandsmitglied, Charité – Universitätsmedizin Berlin
ab 07.2018	Vorstandsvorsitzender (interim), Berliner Institut für Gesundheitsforschung

### Preise und Ehrungen

1980	Promotionspreis "Hochhausstiftung", Universität zu Köln
1986	Abbott Microcirculation Award, European Society for Microcirculation
1995	Lafon Hemorheology-Microcirculation Award, International Society for Clinical Haemorheology
2000	Fellow, European Society of Cardiology
2008	Visiting Fellowship, Isaac Newton Institute for Mathematical Sciences, Cambridge/UK
2008	Preis der Asian Union for Microcirculation
2011	Malpighi Award, European Society for Microcirculation
2015	William Harvey Basic Science Lecture and Silver Medal, European Society of Cardiology (ESC)
2015	Kitanomaru Award, 10 <sup>th</sup> World Conf. for Microcirculation, Kyoto, Japan
2018	Poiseuille Gold Medal, International Society of Biorheology

## Editorial boards: Mitgliedschaften

Cardiovascular Research (*associate editor 2012-2018*)

Journal of Vascular Research; Microcirculation; Pflügers Archive European Journal of Physiology; Biorheology; PLoS Computational Biology; The Keio Journal of Medicine, Journal of Cardiovascular Medicine; Frontiers in Vascular Physiology, Frontiers in Computational Physiology and Medicine; Bulletin of the Portuguese Society of Hemorheology and Microcirculation

## Leitungsfunktionen in wissenschaftlichen Gesellschaften

### **European Society of Cardiology (ESC)**

Congress Programme Committee

Coordinator for Basic Science 2005-2010; 2012-2014

Council on Basic Cardiovascular Science (CBCS)

Nucleus ab 2004

Chair 2010-2012

Frontiers of Cardiovascular Biology (FCVB), Chairperson 2010

Working Group on Coronary Pathophysiology and Microcirculation

Nucleus 1994-2002; 2007-2012; 2014-2018

Chair 1998-2000

CardioScape

Scientific Committee 2012-2014

Chair ab 2015

European affairs committee 2014-2016

Advocacy committee ab 2016

### **Alliance for Biomedical Research in Europe**

Member of the Board of Directors ab 2017

President 2018-2019

### **International Union of Physiological Societies (IUPS)**

Commission on Microcirculation and Capillary Transport

Physiome and Bioengineering Committee 2004 -2010

### **European Society for Microcirculation (ESM)**

Strategy committee 1995-1998; 2011-2015

General Secretary 1998-2011

### **International Liaison Committee for Microcirculation (ILCM)**

Member 2000-2006, ab 2015

Chair 2006-2015

### **Gesellschaft für Mikrozirkulation**

Vorstand 1990-1994; 2011-2015

Schriftführer 1996-2011

## Organisation

Konferenzen (Präsident und Organisation) 6

Symposien (Organisation) 45

Mitglied in ‚conference scientific program committees‘ 38

## Wissenschaftliche Schwerpunkte

Mikrozirkulation, Organperfusion, Endotheliale Funktion, Endotheliale Oberfläche, vaskuläres Remodeling, Angiogenese, Tumor Mikrozirkulation, Blut-Rheologie

## Kooperationen (ausgewählt)

Mark Dewhirst, Duke University, Durham, USA; David Boas, Harvard University, Cambridge, USA; Klaus Ley, LIAI, San Diego, USA; Tim Secomb, University of Arizona, Tucson, USA; Saul Yedgar, Hebrew University, Jerusalem, Israel; Valentin Djonov, Universität Bern, Schweiz; Ferdi le Noble: KIT Karlsruhe, Deutschland.

## Ausgewählte Publikationen (H-Index: 52, Citations > 10000)

*CardioScape: mapping the cardiovascular funding landscape in Europe.* Pries AR, et al. **European Heart Journal** 2018; 39(25):2423-2430.

*Coronary microcirculatory pathophysiology: can we afford it to remain a black box?* Pries AR and Reglin B. **European Heart Journal** 2017; 38(7):478-488.

*Coronary vascular regulation, remodelling, and collateralization: mechanisms and clinical implications on behalf of the working group on coronary pathophysiology and microcirculation.* Pries AR, et al. **European Heart Journal** 2015; 36(45): 3134-3146.

*Making microvascular networks work: angiogenesis, remodeling, and pruning.* Pries AR and Secomb TW. **Physiology (Bethesda)** 2014; 29(6): 446-455.

*Metabolic control of microvascular networks: oxygen sensing and beyond.* Reglin B and Pries AR. **J Vasc Res** 2014; 51(5): 376-392.

*Presentation, management, and outcomes of ischaemic heart disease in women.* Vaccarino V, Badimon L, Corti R, de Wit C, Dorobantu M, Manfrini O, Koller A, Pries A, Cenko E, Bugiardini R. **Nature Rev Cardiol** 2013; 10(9): 508-518.

*Angiogenesis: an adaptive dynamic biological patterning problem.* Secomb TW, Alberding JP, Hsu R, Dewhirst MW, Pries AR. **PLoS Comput Biol** 2013; 9(3): e1002983.

*Excessive erythrocytosis compromises the blood-endothelium interface in erythropoietin-overexpressing mice.* Richter V, Savery MD, Gassmann M, Baum O, Damiano ER, Pries AR. **J Physiol** 2011; 589(21): 5181-5192.

*Pulsatile shear and Gja5 modulate arterial identity and remodeling events during flow-driven arteriogenesis.* Buschmann I\*, Pries A\*, Styp-Rekowska B et al (\*these authors contributed equally). **Development** 2010; 137(13): 2187-2196.

*The shunt problem: control of functional shunting in normal and tumour vasculature.* Pries AR, Hopfner M, Le Noble F, Dewhirst MW, Secomb TW. **Nature Rev Cancer** 2010; 10(8): 587-593.

*Origins of heterogeneity in tissue perfusion and metabolism.* Pries AR and Secomb TW. **Cardiovasc Res** 2009; 81(2): 328-335.

*Blood flow in microvascular networks.* Pries AR and Secomb TW. In: **Handbook of Physiology: Microcirculation**, edited by Tuma RF, Durán WN and Ley K., Elsevier, 2008, Chap 1, 3-36.

*Remodeling of blood vessels: responses of diameter and wall thickness to hemodynamic and metabolic stimuli.* Pries AR, Reglin B, Secomb TW. **Hypertension** 2005; 46(4): 726-731.

*The endothelial surface layer.* Pries AR, Secomb TW, Gaehtgens P. **Pflugers Arch** 2000; 440(5): 653-666.

*Design principles of vascular beds.* Pries AR, Secomb TW, Gaehtgens P. **Circ Res** 1995; 77(5): 1017-1023.

*Resistance to blood flow in microvessels in vivo.* Pries AR, Secomb TW, Gessner T, Sperandio MB, Gross JF, Gaehtgens P. **Circ Res** 1994; 75(5): 904-915.