Curriculum Vitae

Michael Potente, MD

Current position:

Max Planck Research Group leader and Consultant Cardiologist

Address:

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Academic education

10/1996 – 12/2002	Studies of Medicine, Goethe-University Frankfurt, and University of Toronto, Toronto, ON, Canada
09/1998 – 04/2003	Experimental doctoral thesis (MD student), Goethe-University, Frankfurt

Scientific degrees

MD thesis:	Department of Cardiovascular Physiology (Prof. Dr. R. Busse), Goethe-University, Frankfurt, 04/2003 (summa cum laude)
Board Certification:	Internal Medicine (2011) and Cardiology (2011), Department of Internal Medicine III, Cardiology, Goethe-University, Frankfurt
Habilitation:	Department of Internal Medicine III, Cardiology, Goethe-University, Frankfurt, 06/2013

Professional career

01/2003 – 06/2004	Intern, Department of Internal Medicine III (Prof. Dr. A.M. Zeiher), Cardiology, Goethe-University, Frankfurt
05/2003 – 07/2007	Postdoctoral training, Institute for Cardiovasular Regeneration (Prof. Dr. S. Dimmeler), Centre for Molecular Medicine, Goethe-University, Frankfurt
07/2004 – 09/2011	Resident, Department of Internal Medicine III, Cardiology (Prof. Dr. A.M. Zeiher), Goethe-University, Frankfurt
10/2011 – 11/2012	Senior physician, Department of Internal Medicine III, Cardiology, Goethe-University, Frankfurt
12/2012 – present	Max Planck Research Group Leader, Max Planck Institute for Heart and Lung Research, Bad Nauheim
01/2013 – present	Consultant cardiologist, Department of Internal Medicine III, Cardiology, Goethe-University, Frankfurt

Awards & honors

2003	Young Investigator Award, Goethe-University, Faculty of Medicine
2004	Best Thesis Award, Goethe-University, Faculty of Medicine
2006	Award of the Dr. Walter and Luise Freundlich Foundation
2007	Melvin L. Marcus Young Investigator Award in Basic Cardiovascular Sciences finalist, American Heart Association
2009	Louis N. and Arnold M. Katz Basic Science Research Prize, American Heart Association
2009	Award of the Herbert and Hedwig Eckelmann Foundation
2011	Principle investigator, Excellence Cluster Cardiopulmonary System
2011	Principal Investigator, German Centre for Cardiovascular Research
2012	Adjunct Investigator, Cluster of Excellence Frankfurt Macromolecular Complexes
2012	Albert Fraenkel Prize of the German Cardiac Society
2012	Editorial board member Circulation Research
2012	Award of the Dr. Paul und Cilli Weill-Foundation
2012	European Research Council Starting Grant
2012	Award of the Theodor Stern Foundation
2014	EMBO Young Investigator
2016	Finalist for the Galenus-von-Pergamon-Prize 2016 (will be awarded in 10/2016)

Research funding

2004 – 2005	Goethe-University, Faculty of Medicine, Young Investigator Grant
2007 – 2009	Deutsche Forschungsgemeinschaft, Individual Research Grant
2010 – 2013	Deutsche Forschungsgemeinschaft, SFB834
2011 – 2015	German Centre for Cardiovascular Research
2012 – 2013	Cluster of Excellence Frankfurt Macromolecular Complexes
2012 – 2013	Leducq Transatlantic Network of Excellence (ARTEMIS)
2012 – 2017	Max Planck Society, Max Planck Research Group
2012 – 2017	European Research Council Starting Grant (ANGIOMET)
2012 – 2017	BELSPO, IAP Phase VII (ICePath)
2014 – 2016	LOEWE Research Cluster (Ub-Net)
2014 – 2017	Deutsche Forschungsgemeinschaft, SFB834
2015 – 2017	EMBO Young Investigator Programme

Citation metrics (ISI Web of Knowledge)

Publications: **27** – total citations: **3783** – average citations per item: **140.1** – h-index: **19**

Editorial activities

2012 – present Circulation Research

Solicited reviewer for journals

Nature, Science, Nature Medicine, Nature Reviews Molecular Cell Biology, Journal of Clinical Investigation, Developmental Cell, Circulation, Circulation Research, Blood, EMBO Journal, EMBO Molecular Medicine, Nature Protocols, Nature Communications, Cell Reports, Pharmacological Reviews, Journal of Cell Science, Development, Journal of the National Cancer Institute, European Heart Journal, Arteriosclerosis, Thrombosis, and Vascular Biology, Cardiovascular Research, Cancer Research, Scientific Reports, FASEB Journal, Basic Research in Cardiology, Vascular Pharmacology, PLoS ONE, European Journal of Cancer, Diabetes

Solicited reviewer for grants

European Reseach Council (ERC), European Molecular Biology Organisation (EMBO), Deutsche Forschungsgemeinschaft (DFG), The Netherlands Organisation for Scientific Research (NWO), The Dutch Cancer Society (KWF Kankerbestrijding), The National Fund for Scientific Research (FWO, Belgium), Deutsche Krebshilfe

Invited lectures at meetings, institutes and universities

2008	Keystone Symposia, Molecular Mechanisms of Angiogenesis in Development and Disease, Vancouver, BC, Canada
2008	London Research Institute (host: H. Gerhardt), Cancer Research UK, London, UK
2008	Vesalius Research Center (host P. Carmeliet), VIB and K.U. Leuven, Belgium
2009	IDIBELL Cancer Conferences on Sirtuins, Barcelona, Spain
2009	Sirtris Pharmaceuticals, Cambridge, MA, USA
2009	EPFL (host: J. Auwerx), Lausanne, Switzerland
2010	EMBL (host: N. Rosenthal), Monterotondo, Italy
2010	IAPVI-28 Spring Meeting, Signal Integration Mechanisms in Health and Disease, Gembloux, Belgium
2010	Max Planck Institute for Molecular Biomedicine (host: R. Adams), Münster, Germany
2010	6th International Kloster Seeon Meeting, Angiogenesis: Molecular Mechanisms and Functional Interactions, Kloster Seeon, Germany
2010	Sirtris Pharmaceuticals, Cambridge, MA, USA
2011	Barts Cancer Institute (host: K. Hodivala-Dilke), Barts and The London School of Medicine and Dentistry, London, UK
2011	University of Massachusetts, Medical School (host: N. Lawson), Worcester, MA, USA
2011	IDIBELL Cancer Conferences on Metastasis and Angiogenesis, Barcelona, Spain

2011	Gordon Research Conference, Angiogenesis, Newport, RI, USA
2011	Joint Meeting of the European Society of Microcirculation (ESM) and Society of Microcirculation and Vascular Biology, Munich, Germany
2011	Vesalius Research Center (host: P. Carmeliet), VIB and K.U. Leuven, Leuven, Belgium
2011	IFOM-IEO (host: E. Dejana), Milan, Italy
2012	International Vascular Biology Meeting, Wiesbaden, Germany
2012	Cell Symposia, Angiogenesis, Metabolic Regulation, and Cancer Biology, Leuven, Belgium
2012	Gordon Research Conference, Notch Signaling in Development, Regeneration and Disease, Lewiston, ME, USA
2012	7th International Kloster Seeon Meeting, Angiogenesis: Molecular Mechanisms and Functional Interactions, Kloster Seeon, Germany
2013	Hannover Medical School Symposium, Blood vessels in development and disease, Hannover, Germany
2013	11th Dutch-German Joint Meeting of the Molecular Cardiology Working Groups, Heidelberg, Germany
2013	SFB / TR23 Kickoff Meeting, Vascular Differentiation and Remodelling, University of Heidelberg, Germany
2013	Gordon Research Conference, Angiogenesis, Newport, RI, USA
2013	FASB meeting, HDACs, Sirtuins, and Reversible Acetylation in Signaling and Disease, Lucca, Italy
2013	SFB914, Trafficking of Immune Cells in Inflammation, Development and Disease, Ludwig-Maximilians-University, Munich, Germany
2013	Symposium, Cells, Genes and Molecules in Cardiac and Vascular Regeneration, Menaggio, Italy
2014	Keystone Symposia, Metabolism and Angiogenesis, Whistler, BC, Canada
2014	5eme Congres de la Societe Francaise d'Angiogenese, Chamonix, France
2014	International Vascular Biology Meeting, Kyoto, Japan
2014	8th International Kloster Seeon Meeting, Angiogenesis: Molecular Mechanisms and Functional Interactions, Kloster Seeon, Germany
2014	University Medical Center Utrecht (host: B. Burgering), Utrecht, Netherlands
2014	University of Lausanne (host: T. Petrova), Lausanne, Switzerland
2014	Max Delbrück Center for Molecular Medicine (host: H. Gerhardt), Berlin. Germany

2015	94th Annual Meeting of the German Physiological Society, Magdeburg, Germany
2015	EMBO Young Scientists Forum, Warsaw, Poland
2015	Joint Meeting of the European Society for Microcirculation European Vascular Biology Organisation, Pisa, Italy
2015	Gordon Research Conference, Angiogenesis, Newport, RI, USA
2015	FASEB meeting, HDACs, Sirtuins and Reversible Lysine Modifications, Timmendorfer Strand, Germany
2015	Joint Dutch-German Microcirculation Meeting “New Aspects on Microvascular Function: From Basic Research to Clinical Application”, Hannover, Germany
2015	VIB Conference “Metabolism in cancer and stromal cells”, Leuven, Belgium
2015	Symposium “Molecular and Cellular Regulators of Cardiovascular Homeostasis”, Menaggio, Italy
2015	2nd Heidelberg International Symposium On Diabetic Complications 2015, Heidelberg, Germany
2015	Ludwig Institute for Cancer Research (host: M. Gyrd Hansen), Oxford, UK
2015	17th Imperial College London Symposium “Vascular Endothelium: Role in Disease Pathogenesis and as a Therapeutic Target”, London, UK
2015	University College London (host: C. Ruhrberg), London, UK
2015	Instituto de Medicina Molecular (host: C.A. Franco), Lisbon, Portugal
2015	University Medical Center Utrecht (host: P. Coffer), Utrecht, Netherlands
2016	MPI Frontier Seminar, Max Planck Institute for Molecular Biomedicine, Münster, Germany
2016	Fundacion Centro Nacional de Investigaciones Cardiovasculares III, CNIC (host: R. Benedito), Madrid, Spain
2016	66th Annual Meeting off the British Mircrocirculation Society “Microvessels of the Heart”, Newcastle, UK
2016	Frankfurt Conference on Ubiquitin and Autophagy “Quality control in life processes”, Frankfurt, Germany
2016	Vasculata 2016, Uppsala, Sweden
2017	Gordon Research Conference, Vascular Cell Biology, Ventura, CA, USA
2017	British Association for Cancer Research Meeting “Tumour Microenvironment, basic science to novel therapies”, Nottingham, UK
2017	Keystone Symposia “Angiogenesis and Vascular Disease / Mitochondria, Metabolism, Heart, Santa Fe, NM, USA

List of publications

- Fisslthaler B, Popp R, Kiss L, **Potente M**, Harder DR, Fleming I, Busse R (1999). Cytochrome P450 2C is an EDHF synthase in coronary arteries. **Nature** 401: 493-7
- **Potente M**, Michaelis UR, Fisslthaler B, Busse R, Fleming I (2002). Cytochrome P450 2C9-induced endothelial cell proliferation involves induction of mitogen-activated protein (MAP) kinase phosphatase-1, inhibition of the c-Jun N-terminal kinase, and up-regulation of cyclin D1. **Journal of Biological Chemistry** 277: 15671-6
- **Potente M**, Fisslthaler B, Busse R, Fleming I (2003). 11,12-Epoxyeicosatrienoic acid-induced inhibition of FOXO factors promotes endothelial proliferation by down-regulating p27Kip1. **Journal of Biological Chemistry** 278: 29619-25
- **Potente M**, Urbich C, Sasaki K, Hofmann WK, Heeschen C, Aicher A, Kollipara R, DePinho RA, Zeiher AM, Dimmeler S (2005). Involvement of Foxo transcription factors in angiogenesis and postnatal neovascularization. **Journal of Clinical Investigation** 115: 2382-92
- Rossig L, Urbich C, Bruhl T, Dernbach E, Heeschen C, Chavakis E, Sasaki K, Aicher D, Diehl F, Seeger F, **Potente M**, Aicher A, Zanetta L, Dejana E, Zeiher AM, Dimmeler S (2005). Histone deacetylase activity is essential for the expression of HoxA9 and for endothelial commitment of progenitor cells. **Journal of Experimental Medicine** 201: 1825-35
- Urbich C, Knau A, Fichtlscherer S, Walter DH, Bruhl T, **Potente M**, Hofmann WK, de Vos S, Zeiher AM, Dimmeler S (2005). FOXO-dependent expression of the proapoptotic protein Bim: pivotal role for apoptosis signaling in endothelial progenitor cells. **FASEB Journal** 19: 974-6
- **Potente M**, Ghaeni L, Baldessari D, Mostoslavsky R, Rossig L, Dequiedt F, Haendeler J, Mione M, Dejana E, Alt FW, Zeiher AM, Dimmeler S (2007). SIRT1 controls endothelial angiogenic functions during vascular growth. **Genes & Development** 21: 2644-58
- Martin M[§], **Potente M**[§], Janssens V, Vertommen D, Twizere JC, Rider MH, Goris J, Dimmeler S, Kettmann R, Dequiedt F (2008). Protein phosphatase 2A controls the activity of histone deacetylase 7 during T cell apoptosis and angiogenesis. **Proceedings of the National Academy of Sciences of the United States of America** 105: 4727-32 [§]***Contributed equally***
- **Potente M**, Dimmeler S (2008). Emerging roles of SIRT1 in vascular endothelial homeostasis. **Cell Cycle** 7: 2117-22
- **Potente M**, Dimmeler S (2008). NO targets SIRT1: a novel signaling network in endothelial senescence. **Arteriosclerosis, Thrombosis, and Vascular Biology** 28: 1577-9
- Taddei A, Giampietro C, Conti A, Orsenigo F, Breviario F, Pirazzoli V, **Potente M**, Daly C, Dimmeler S, Dejana E (2008). Endothelial adherens junctions control

tight junctions by VE-cadherin-mediated upregulation of claudin-5. **Nature Cell Biology** 10: 923-34

- Bonauer A, Carmona G, Iwasaki M, Mione M, Koyanagi M, Fischer A, Burchfield J, Fox H, Doebele C, Ohtani K, Chavakis E, **Potente M**, Tjwa M, Urbich C, Zeiher AM, Dimmeler S (2009). MicroRNA-92a controls angiogenesis and functional recovery of ischemic tissues in mice. **Science** 324: 1710-3
- Phng LK, **Potente M**, Leslie JD, Babbage J, Nyqvist D, Lobov I, Ondr JK, Rao S, Lang RA, Thurston G, Gerhardt H (2009). Nrarp coordinates endothelial Notch and Wnt signaling to control vessel density in angiogenesis. **Developmental Cell** 16: 70-82
- Urbich C, Rossig L, Kaluza D, **Potente M**, Boeckel JN, Knau A, Diehl F, Geng JG, Hofmann WK, Zeiher AM, Dimmeler S (2009). HDAC5 is a repressor of angiogenesis and determines the angiogenic gene expression pattern of endothelial cells. **Blood** 113: 5669-79
- Guarani V, **Potente M** (2010). SIRT1 - a metabolic sensor that controls blood vessel growth. **Current Opinion in Pharmacology** 10: 139-45
- **Potente M** (2010). An energy-sensor network takes center stage during endothelial aging. **Circulation Research** 106: 1316-8
- Guarani V, Deflorian G, Franco CA, Kruger M, Phng LK, Bentley K, Toussaint L, Dequiedt F, Mostoslavsky R, Schmidt MH, Zimmermann B, Brandes RP, Mione M, Westphal CH, Braun T, Zeiher AM, Gerhardt H, Dimmeler S, **Potente M** (2011). Acetylation-dependent regulation of endothelial Notch signalling by the SIRT1 deacetylase. **Nature** 473: 234-8
- **Potente M**, Gerhardt H, Carmeliet P (2011). Basic and therapeutic aspects of angiogenesis. **Cell** 146: 873-87
- Oellerich MF, **Potente M** (2012) FOXOs and sirtuins in vascular growth, maintenance, and aging. **Circulation Research** 110: 1238-51
- Boon RA, Iekushi K, Lechner S, Seeger T, Fischer A, Heydt S, Kaluza D, Treguer K, Carmona G, Bonauer A, Horrevoets AJ, Didier N, Girmatsion Z, Biliczki P, Ehrlich JR, Katus HA, Muller OJ, **Potente M**, Zeiher AM, Hermeking H et al. (2013). MicroRNA-34a regulates cardiac ageing and function. **Nature** 495: 107-10
- Graupera M, **Potente M** (2013). Regulation of angiogenesis by PI3K signaling networks. **Experimental Cell Research** 319: 1348-55
- Martin M, Geudens I, Bruyr J, **Potente M**, Bleuart A, Lebrun M, Simonis N, Deroanne C, Twizere JC, Soubeyran P, Peixoto P, Mottet D, Janssens V, Hofmann WK, Claes F, Carmeliet P, Kettmann R, Gerhardt H, Dequiedt F (2013). PP2A regulatory subunit Balpha controls endothelial contractility and vessel lumen integrity via regulation of HDAC7. **EMBO Journal** 32: 2491-503
- Michaelis UR, Chavakis E, Kruse C, Jungblut B, Kaluza D, Wandzioch K, Manavski Y, Heide H, Santoni MJ, **Potente M**, Eble JA, Borg JP, Brandes RP

(2013). The polarity protein Scrib is essential for directed endothelial cell migration. **Circulation Research** 112: 924-34

- Doddaballapur A, Michalik KM, Manavski Y, Lucas T, Houtkooper RH, You X, Chen W, Zeiher AM, **Potente M**, Dimmeler S, Boon RA (2015). Laminar shear stress inhibits endothelial cell metabolism via KLF2-mediated repression of PFKFB3. **Arteriosclerosis, Thrombosis, and Vascular Biology** 35: 137-45
- Domigan CK, Warren CM, Antanesian V, Happel K, Ziyad S, Lee S, Krall A, Duan L, Torres-Collado AX, Castellani LW, Elashoff D, Christofk HR, van der Bliek AM, **Potente M**, Iruela-Arispe ML (2015). Autocrine VEGF maintains endothelial survival through regulation of metabolism and autophagy. **Journal of Cell Science** 128: 2236-48
- Serra H, Chivite I, Angulo-Urarte A, Soler A, Sutherland JD, Arruabarrena-Aristorena A, Ragab A, Lim R, Malumbres M, Fruttiger M, **Potente M**, Serrano M, Fabra A, Vinals F, Casanovas O, Pandolfi PP, Bigas A, Carracedo A, Gerhardt H, Graupera M (2015). PTEN mediates Notch-dependent stalk cell arrest in angiogenesis. **Nature Communications** 6: 7935
- Wilhelm K, Happel K, Eelen G, Schoors S, Oellerich MF, Lim R, Zimmermann B, Aspalter IM, Franco CA, Boettger T, Braun T, Fruttiger M, Rajewsky K, Keller C, Bruning JC, Gerhardt H, Carmeliet P, **Potente M** (2016). FOXO1 couples metabolic activity and growth state in the vascular endothelium. **Nature** 529: 216-20
- **Potente M**, Carmeliet P. The link between angiogenesis and endothelial metabolism. **Annual Review of Physiology**