

Curriculum Vitae

Personal Data

Title	Prof. Dr. med. Dr. rer. nat. habil
First name	Thomas
Name	Braun
Current position	Director, MPI Bad Nauheim (permanent) Professor of Medicine (C4), JLU Giessen (permanent)
Current institution(s)/site(s), country	Max Planck Institute for Heart and Lung Research - W.G. Kerckhoff Institute, Bad Nauheim, Germany and Justus Liebig University, Faculty of Medicine Giessen, Germany
Identifiers/ORCID	0000-0002-6165-4804

Qualifications and Career

Stages	Periods and Details
Degree programme	1980-1983 Studies of Medicine and Philosophy, Department of Philosophy, Department of Medicine, University of Göttingen, Germany
	1983-1987 Department of Philosophy, Department of Medicine, University of Hamburg, Germany
	1987 License to practice medicine
Doctorate	1987 MD, Supervisor: Prof. Dr. H.-W. Goedde Title: 'Molecular cloning of human mitochondrial aldehyde dehydrogenase, detection of a mitochondrial transport sequence.' Institute of Human Genetics, University of Hamburg, Germany. Summa cum laude
Stages of academic/ professional career	2024-2025 distinguished STEM Visiting Professor, Chinese University of Hong Kong, Hong Kong, SAR China
	since 2004 Full Professor, University of Giessen, Department of Medicine, Division of Internal Medicine and Director of the Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany
	2000 - 2004 Elected Dean for Research, Faculty of Medicine, University of Halle-Wittenberg
	1998-2000 Full Professor, University of Halle-Wittenberg, Faculty of Medicine, Director of the Institute of Physiological Chemistry
	1997-1998 Professor (C3), University of Würzburg, Medical Faculty, Institute of Medical Radiology and Cell Research
	1993 German Habilitation and PhD in Cellular Biochemistry

Activities in the Research System

Academic self-governance: Activities and professional positions:

- Co-Director CPI (Cluster of Excellence, Cardio-Pulmonary Institute)
- Chairman International Max Planck School for Cardiopulmonary Research
- Chairman Evaluation Board of the School of Biomedical Sciences, Chinese University of Hong Kong
- Chairman International Max Planck School for Molecular Organ Biology

- Chairman Minerva-Weizmann Committee of the Minerva-Weizmann Stiftung
- Vice Chairman, Boehringer Ingelheim Fonds for Basic Medical Research
- Member of the Grants and Chairs Committee, British Heart Foundation (BHF)
- Supervisory Board, International Clinical Research Centre (ICRC) Brno Czech Republic
- Supervisory Board, Muscle Dystrophy UK
- Member of the Scientific Advisory Board of the BHF Centre of Regenerative Medicine, United Kingdom.
- Member of the Scientific Advisory Board of the Interdisciplinary Centre for Molecular Medicine Cologne (CMMC).
- Member of the Scientific Advisory Board IIMCB, Warsaw, Poland
- Vice Chair - CRC 1213, Pulmonary Hypertension and Cor pulmonale
- Member of the Editorial Board: Circulation Research, Basic Research in Cardiology, Neuromuscular Disorders
- Reviewer for scientific journals: Cell, Developmental Cell, Cell Stem Cell, Cell Reports, Nature, Nature Genetics, Nature Communications, Development, Cell Death and Differentiation, Genes and Development, Circulation Research, Stem Cells, European Heart Journal, Cardiovascular Research, Basic Research in Cardiology, Experimental Cell Research, Journal of Cell Science, Stem Cell and Development, Developmental Biology (selection).
- Reviewer for national and international research funding agencies: German Research Foundation; Wallenberg Foundation, Sweden; British Heart Foundation; UK; Medical Research Council, UK; Agence nationale de la recherche, France; Caixa Foundation, Spain; Swiss National Science Foundation; Foundation for Research on Muscle Diseases, Switzerland; Austrian Research Promotion Agency, Netherlands Organisation for Scientific Research (NWO); National Science Foundation, USA (selection).

Academic outreach: Teaching and mentoring

- Mentoring experience includes guiding 6 habilitations, as well as supervising 57 postdoctoral fellows, 128 PhD students and 6 MD candidates. Member of in about 45 national and international Thesis Committees during the last 10 years (2015-2025). In addition, supervision of numerous bachelor's and master's theses. Several PhD students received awards for their theses.

Academic events: Participation and coordination

- Organisation of Conferences | EMBO Conference on Myogenesis: The molecular and cellular mechanisms regulating skeletal muscle development and regeneration, Wiesbaden, 2011, The 3rd International Annual Conference of the GSCN 2015, Frankfurt/Main, Round table conference MPG-CAS, GSCN, MPI-CUHK, CRC1213 bi-annual meetings, etc.
- Numerous invited talks to conferences (Keystone, Gordon, EMBO) and various institutions (UPenn, Oxford, HKUST, U Minnesota, NIH, Karolinska, etc).

Scientific Results

1. Lin, S., Dieterich, C., Britto-Borges, T., Günther, S., Kreher, S., Eibach, Y., Kuenne, C., Schneider, A., and Braun, T. Rbpms2 prevents major cardiac defects in cardiomyocyte-specific Rbpms-deficient mice. **Dev Cell.** 2025;60:1-16. doi: 10.1016/j.devcel.2025.06.013. *Study describing the overlapping functions of the splicing factors RBPMS and RBPMS2 for proper sarcomere function and spindle formation in cardiomyocytes.*
2. Eibach Y, Kreher S, Poetsch MS, Kho AL, Gaertner U, Clemen CS, Schröder R, Guo K, Milting H, Meder B, Potente M, Richter M, Schneider A, Meiners S, Gautel M, Braun T. The deubiquitinase USP5 prevents accumulation of protein aggregates in cardiomyocytes. **Sci Adv.** 2025;11:eado3852. doi: 10.1126/sciadv.ado3852. *The study uncovers the critical role of USP5 for resolving protein aggregates in cardiomyocytes in humans and mice, thereby preventing dilative cardiomyopathy.*

3. Li X, Wu F, Günther S, Looso M, Kuenne C, Zhang T, Klatt S, Zukunft S, Fleming I, Poschet G, Wietelmann A, Atzberger A, Potente M, Yuan X, [Braun T](#). Inhibition of fatty acid oxidation stimulates KDM5-mediated H3K4me3 demethylation and enables heart regeneration in adult mice. **Nature**. 2023;662:619-626. doi: 10.1038/s41586-023-06585-5. *First study demonstrating that metabolic rewiring of cardiomyocytes promotes heart regeneration in adult mice by inducing chromatin changes.*
4. Wu F, Li X, Looso M, Liu H, Ding D, Günther S, Kuenne C, Liu S, Weissmann N, Böttger T, Atzberger A, Kolahian S, Renz H, Offermanns S, Gärtner U, Potente M, Zhou Y, Yuan X, [Braun T](#). Spurious transcription causing innate immune responses is prevented by 5hmC. **Nat Genet**. 2023;55:100-111. doi: 10.1038/s41588-022-01252-3. *First study demonstrating that TET3 and 5-hydroxymethyl cytosine prevent ectopic initiation of transcription by facilitating binding of SETD2 to Pol II, enabling increased H3K36 methylations. Shows that loss of Tet3 in airways smooth muscle cells causes an asthma-like condition in mice.*
5. Lörchner H, Esteve LC, Góes ME, Harzenetter R, Brachmann N, Gajawada P, Günther S, Doll N, Pöling J, [Braun T](#). Neutrophils for Revascularization Require Activation of CCR6 and CCL20 by TNF α . **Circ Res**. 2023;133:592-610. doi: 10.1161/CIRCRESAHA.123.323071. *The study identifies and characterizes a subpopulation of neutrophils, which is instrumental for revascularization of ischemic muscle tissue. Shows that angiogenic neutrophils are activated and recruited to sites of ischemic damage by TNF α -dependent activation of CCR6 and CCL20.*
6. Garcia-Gonzalez C, Dieterich C, Maroli G, Wiesnet M, Wietelmann A, Li X, Yuan X, Graumann J, Stellos K, Kubin T, Schneider A, [Braun T](#). ADAR1 prevents autoinflammatory processes in the heart mediated by IRF7. **Circ Res**. 2022;131:580-597, doi: 10.1161/CIRCRESAHA.122.320839. *Study proving that loss of RNA editing in cardiomyocytes leads to inflammatory cardiomyopathy by activation of IRF7 signaling.*
7. Wang L, Rice M, Swist S, Kubin T, Wu F, Wang S, Kraut S, Weissmann N, Böttger T, Wheeler M, Schneider A, [Braun T](#). Bmp9 and Bmp10 act directly on vascular smooth muscle cells for generation and maintenance of the contractile state. **Circulation**. 2021;143:1394-1410. doi.org/10.1161/CIRCULATIONAHA.120.047375. *First demonstration that BMP9 and BMP10 show properties of circulating hormones, directly acting on vascular smooth muscle cells to establish a contractile phenotype.*
8. Chen Y, Lüttmann F, Schoger E, Schöler H R, Zelarayán L C, Kim K-P, Haigh J J, Kim J, [Braun T](#) (2021). Reversible reprogramming of cardiomyocytes to a fetal state drives adult heart regeneration in mice. **Science**. 2021;373:1537-1540. doi: 10.1126/science.abg5159. *First study demonstrating that partial, temporally-restricted reprogramming of adult mouse cardiomyocytes rewinds the developmental program, enabling cardiomyocyte proliferation and heart regeneration.*
9. Qi H, Liu H, Pullamsetti SS, Gunther S, Kuenne C, Atzberger A, Sommer N, Hadzic S, Gunther A, Weissmann N, Zhou Y, Yuan X, [Braun T](#). Epigenetic regulation by Suv4-20h1 in cardiopulmonary progenitor cells is required to prevent pulmonary hypertension and COPD. **Circulation**. 2021;144:1042-1058. doi:10.1161/CIRCULATIONAHA.120.051680. *This groundbreaking study revealed a crucial role of the histone methyl transferase Suv4-20h1 in orchestrating heart-lung co-development by preventing hyperproliferation of smooth muscle cells/myofibroblasts and impaired alveolarization leading to emphysema and right ventricular dilatation.*
10. Valussi M, Besser J, Wystub-Lis K, Zukunft S, Richter M, Kubin T, Boettger T, [Braun T](#). Repression of Osmr and Fgfr1 by miR-1/133a prevents cardiomyocyte dedifferentiation and cell cycle entry in the adult heart. **Sci Adv**. 2021;7:eabi6648. doi: 10.1126/sciadv.abi6648. *First study demonstrating that the miR-1 and miR-133a microRNA gene clusters synergize to secure the differentiation state of adult cardiomyocytes by preventing activation of de-differentiation pathways.*

Editorials and Reviews

1. Ianni A, Vaquero A, Braun T. Fibroblastic niches in action: CCL19⁺ reticular cells drive anti-tumor immunity in lung cancer. **Signal Transduct Target Ther**. 2025;10:96. doi: 10.1038/s41392-025-02185-z.
2. Yuan X, Braun T. Toward drug-induced heart regeneration. **Nat Cardiovasc Res**. 2024;3: 260–261. doi:10.1038/s44161-024-00446-8
3. Yekelchyk, M., Li, X., Guenther, S., Braun, T. (2024). Single-Nucleus ATAC-seq for Mapping Chromatin Accessibility in Individual Cells of Murine Hearts. In: Gužvić, M. (eds) Single Cell Analysis. Methods in Molecular Biology, vol 2752. Humana, New York, NY. doi: 10.1007/978-1-0716-3621-3_16.
4. Ding D, Braun T. A Tedious Journey: Cardiomyocyte Proliferation Requires More Than S-Phase Entry and Loss of Polyploidization. **Circulation**. 2023;147:154-157. doi.org/10.1151/CIRCULATIONAHA.122.062784
5. Yuan X, Braun T. Amending the injured heart by in vivo reprogramming. **Curr Opin Genet Dev**. 2023;82:102098. doi:10.1016/j.gde.2023.102098
6. Zeiher A, Braun T. Mosaic loss of Y chromosome during aging. **Science**. 2022;377:266-267. doi:10.1126/science.add0839
7. Yekelchyk M, Braun T (2021). Mono- and Multi-nucleated Cardiomyocytes Do Not Constitute Transcriptionally Distinct Entities. **J. Clin. Cardiology** 2021;2:11-14.
8. Maroli G, Braun T. The long and winding road of cardiomyocyte maturation. **Cardiovasc Res**. 2021;117:712-726. doi:10.1093/cvr/cvaa159

Academic Distinctions

1989 EMBO Fellowship | 2001 Elected Member of the National Academy of Sciences, Leopoldina | 2004 Scientific Member Max Planck Society | 2013 Elected Member Academia Europea | 2024-2025 distinguished STEM Visiting Professor, Chinese University of Hong Kong | 2025-2026 Visiting Professor, Hong Kong University of Science and Technology