

Prof. Dr. Christian Bär

Research Group Leader

Hannover Medical School (MHH)
Institute of Molecular and Translational Therapeutic Strategies (IMTTS)
Carl-Neuberg-Straße 1
30625 Hannover
Phone: (+49)-511-532-2883
Fax: (+49)-511-532-5274
E-Mail: baer.christian@mh-hannover.de



Date of Birth: 03.11.1980

Academic Education and University Degrees

2021	Habilitation (<i>Venia legendi</i> , lecturer qualification) for the subject experimental and regenerative cardiology at Hannover Medical School, Hannover, Germany
2007 - 2011	Ph.D. in Genetics at University of Leicester, Leicester, UK
2001 - 2006	Diploma Degree in Biology (first class) at Martin-Luther-University, Halle/Saale, Germany

Postgraduate Professional Career

since 2015	Research Group Leader “The non-coding genome in cardiac ageing and regeneration”, IMTTS, MHH
2012 - 2015	Post-doctoral Researcher at the National Spanish Cancer Centre (CNIO), Madrid, Spain. Member of the Telomere and Telomerase group directed by Maria A. Blasco.
2012	Post-doctoral Researcher at the Institute of Microbiology, University of Kassel, Kassel, Germany

Coordinating Functions

2019 - 2023	Coordinator of the ERA-NET CVD JTC2018 Grant INNOVATION (BMBF)
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Current Funding

Since 2024	Individual DFG Grant (BA 5631/2-4)
Since 2022	Individual DFG Grant (No. 506207541)
2019 - 2027	SFB Transregio TRR267
2022 – 2025	COFONI Covid-19 Forschungsnetzwerk Niedersachsen (co-PI Prof. Thum)

Additional Information

Post-graduate education / examination

- Committee member of the Hannover Biomedical Research school (HBRS) PhD programme “Molecular Medicine”
- Examiner in the HBRS PhD programmes “Molecular Medicine” and “Regenerative Science”
- Member of the examining board for medical doctoral theses (Dr. med.) of MHH Senate Section I.

Editorial Board Member:

- Molecular Therapy Nucleic Acids
- Frontiers in Physiology

National and International Reviewer activities (examples):

- German Society of Research (DFG),
- EU Horizon 2020 (HADEA),
- German Society of Cardiology (DGK),
- Swiss National Science Foundation (FNSNF)
- AFM-Telethon (France)

Memberships in scientific societies:

- German Society of Cardiology (DGK)
 - Nucleus member of the Working group 13 Myocardial Function
 - Nucleus member of the Working group 31 Cardiovascular Regeneration
- European Society of Cardiology
 - Nucleus member of the Working Group on Myocardial Function
 - member of the Working Group on Cardiovascular Regenerative and Reparative Medicine
- Member of Heart Failure Association (HFA), ESC

Awards (selection):

- 2019 Professional Management Programme Stipend
- 2017 Conference Assistant Keystone Symposia on RNA-Based Approaches in Cardiovascular Disease
- 2013 Roche Postdoc Fellowship

Publications (10 selected out of 111)

1. Ye JL, Grieger K, Lu D, Brandenberger C, Juchem M, Jordan M, Oehlsen L, Zardo P, Werlein C, Hesse C, Sewald K, Tretbar S, Thum T, Chatterjee S, **Bär C**. Telomerase modRNA Offers a Novel RNA-Based Approach to Treat Human Pulmonary Fibrosis. ***Aging Cell***. 2025 Sep 20:e70240.
2. Costa A, Hunkler HJ, Chatterjee S, Cushman S, Hilbold E, Xiao K, Lu D, Leonardy J, Juchem M, Sansonetti M, Hoepfner J, Thum T, **Bär C**. A reporter system for live cell tracking of human cardiomyocyte proliferation. ***Cardiovasc Res***. 2024 Aug 23:cvae175.
3. Neufeldt D, Schmidt A, Mohr E, Lu D, Chatterjee S, Fuchs M, Xiao K, Pan W, Cushman S, Jahn C, Juchem M, Hunkler HJ, Cipriano G, Jürgens B, Schmidt K, Groß S, Jung M, Hoepfner J, Weber N, Foo R, Pich A, Zweigerdt R, Kraft T, Thum T, **Bär C**. Circular RNA circZFPM2 regulates cardiomyocyte hypertrophy and survival. ***Basic Res Cardiol***. 2024 Aug;119(4):613-632.
4. Chatterjee S, Leach-Mehrwald M, Huang CK, Xiao K, Fuchs M, Otto M, Lu D, Dang V, Winkler T, Dunbar CE, Thum T, **Bär C**. Telomerase is essential for cardiac differentiation and sustained metabolism of human cardiomyocytes. ***Cell Mol Life Sci***. 2024 Apr 24;81(1):196.
5. Wagner JUG, Tombor LS, Malacarne PF, Kettenhausen LM, Panthel J, Kujundzic H, Manickam N, Schmitz K, Cipca M, Stilz KA, Fischer A, Muhly-Reinholz M, Abplanalp WT, John D, Mohanta SK, Weber C, Habenicht AJR, Buchmann GK, Angendohr S, Amin E, Scherschel K, Klöcker N, Kelm M,

Schüttler D, Clauss S, Günther S, Boettger T, Braun T, **Bär C**, Pham MD, Krishnan J, Hille S, Müller OJ, Bozoglu T, Kupatt C, Nardini E, Osmanagic-Myers S, Meyer C, Zeiher AM, Brandes RP, Luxán G, Dimmeler S. *Science*. 2023 Aug 25;381(6660):897-906.

6. Lu D, Chatterjee S, Xiao K, Riedel I, Huang CK, Costa A, Cushman S, Neufeldt D, Rode L, Schmidt A, Juchem M, Leonardy J, Büchler G, Blume J, Gern OL, Kalinke U, Wen Tan WL, Foo R, Vink A, van Laake LW, van der Meer P, **Bär C***, Thum T*. A circular RNA derived from the insulin receptor locus protects against doxorubicin-induced cardiotoxicity. *Eur Heart J*. 2022 7;43(42):4496-4511. *co-senior authors
7. Viereck J, Bührke A, Foinquinos A, Chatterjee S, Kleeberger JA, Xiao K, Janssen-Peters H, Batkai S, Ramanujam D, Kraft T, Cebotari S, Gueler F, Beyer AM, Schmitz J, Bräsen JH, Schmitto JD, Gyöngyösi M, Löser A, Hirt MN, Eschenhagen T, Engelhardt S, **Bär C***, Thum T*. Targeting muscle-enriched long non-coding RNA H19 reverses pathological cardiac hypertrophy. *Eur Heart J* 2020;41:3462–3474. *co-senior authors
8. Beermann J, Kirste D, Iwanov K, Kleemiß F, Kumarswamy R, Schimmel K, Thum T*, **Bär C*** (2017) A large shRNA library approach identifies lncRNA Ntep as an essential regulator of cell proliferation. *Cell Death Differ*. 2017 Nov 3;25(2):307–318.. *co-senior authors
9. **Bär C**, Povedano JM, Serrano R, Benitez-Buelga C, Popkes M, Formentini I, Bobadilla M, Bosch F, Blasco MA, (2016). Telomerase gene therapy rescues telomere length, bone marrow aplasia and survival in mice with aplastic anemia. *Blood* doi: 10.1182/blood-2015-08-667485.
10. **Bär, C**, Bernardes de Jesus B, Serrano R, Tejera A, Ayuso E, Jimenez V, Formentini I, Bobadilla M, Mizrahi J, de Martino A, Gomez G, Pisano D, Mulero F, Wollert KC, Bosch F, Blasco MA, (2014) Telomerase expression confers cardioprotection in the adult mouse heart after acute myocardial infarction. *Nature Commun*. 5:5863 doi: 10.1038/ncomms6863.

Patents

- WO2016020345; EP3485914; US20170232075 “Telomerase reverse transcriptase-based therapies”
- WO2016020346; EP3177313; US20170191045 “Telomerase reverse transcriptase-based therapies for treatment of conditions associated with myocardial infarction”
- WO2021165544; EP3868875 „Viral vector particle based on AAV2 for gene therapy“
- WO2021074288 „Non-coding RNA protecting against Heart Failure“
- Three additional patent applications have been filed claiming the therapeutic utility of non-coding RNAs in cardiovascular disease.