

Prof. Dr. Christine Beemelmanns

Chemical Biology of Microbe-Host Interactions · Head +49 3641 532-1525
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Curriculum vitae

Main Research Areas

- Isolation and determination of the structure of signal molecules and antimicrobial natural products
- Characterisation of interactions between microbes and eucaryotes
- Total synthesis of natural products and chemical derivatisation

Professional Career

since 01/2022	Professor of Biochemistry of Microbial Metabolism at the University of Leipzig
Since 12/2013	Junior group head at the Leibniz-Institute for Natural Product Research and Infection Biology - Hans-Knöll-Institute, Jena, chemical biology of microbe-host-interactions
2011-2013	Postdoc at the Harvard Medical School, Harvard University, supervisor: Prof. J. Clardy, BCMP, Department of Biomolecular Chemistry and Molecular Pharmacology
2010-2011	Postdoc at the Tokyo Institute of Technology, chemical faculty (Tokyo, Japan) supervisor: Prof. K. Suzuki
2010	Dr. rer. nat. in chemistry, summa cum laude, Freie Universität Berlin
2007-2010	PhD dissertation, organic chemistry instructed by Prof. H.-U. Reißig at the Freie Universität Berlin (Germany)
2006-2007	Research period at the RIKEN, chemistry, in the working group of Prof. M. Sodeoka (Japan)
2001-2006	Studies in chemistry, diploma at the RWTH Aachen (Germany)

Awards · Appointments · Scientific Activities

2021	Nachwuchswissenschaftler-Preise für Naturstoffforschung
2020	Dozentenpreis des Fonds der Chemischen Industrie
2020	Visiting Professor in Madison Wisconsin USA
2019-2024	ERC Starting GRant MORPHEUS
2014-2015	Postdoc fellowship from the Daimler and Benz Foundation and the Reinhard Frank Foundation
Since 2014	Membership VAAM, FEMS and IUMS
Since 2014	Membership Dechema
Since 2014	Membership National Research Foundation of Korea
2011-2013	Postdoc fellowship from the Leopoldina Nationale Akademie der Wissenschaften; Postdoc fellowship from the DFG rejected
2011	Ernst-Reuter-Award of the Freie Universität Berlin; Ernst-Reuter-Gesellschaft der Freunde, Förderer und Ehemaligen der Freien Universität Berlin (Berlin, Germany)
2010-2011	Postdoc fellowship from the DAAD
Since 2010	Member of the commission, Studienstiftung des

	deutschen Volkes
2007-2010	Networking fellowship for doctoral researchers at the Studienstiftung des deutschen Volkes
2007-2009	Doctoral fellowship funded by the Verband Chemischen Industrie (VCI)
2006	Springorum commemorative coin from the RWTH Aachen (Aachen, Germany)
2006	Procter and Gamble award, expert group chemistry at the RWTH Aachen
2006-2007	RIKEN fellowship from the Studienstiftung des deutschen Volkes
2004-2006	Studies in chemistry: fellowship from the Studienstiftung des deutschen Volkes
Since 2003	Member of the GDCH
2003	Chemical award from the faculty for mathematics, informatics, natural sciences, RWTH Aachen
2003	Schöneborn award from the Gesellschaft der Freunde und Förderer der RWTH Aachen e.V., RWTH Aachen (Aachen, Germany)

Publications

Bartholomäus ATH, Roman D, Al-Jammal WK, Vilotijević I, Christine Beemelmanns C (2023) Synthesis of aryl- and alkyl-containing 3-methylene-5-hydroxy esters via a barbier allylation reaction. *Eur J Org Chem* 26(18), e202300177.

Details



Bodawatta KH, Hu H, Schalk F, Daniel JM, Maiah G, Koane B, Iova B, Beemelmanns C, Poulsen M, Jønsson KA (2023) Multiple mutations in the Nav1.4 sodium channel of New Guinean toxic birds provide autoresistance to deadly batrachotoxin. *Mol Ecol* [Epub ahead of print]

Details



Fricke J, Schalk F, Kreuzenbeck NB, Seibel E, Hoffmann J, Dittmann G, Conlon BH, Guo H, Wilhelm de Beer Z, Vassão DG, Gleixner G, Poulsen M, Beemelmanns C (2023) Adaptations of *Pseudoxylaria* towards a comb-associated lifestyle in fungus-farming termite colonies. *ISME J* 17(5), 733-747.

Details



Kreuzenbeck NB, Dhiman S, Roman D, Burkhardt I, Conlon BH, Fricke J, Guo H, Blume J, Görls H, Poulsen M, Dickschat JS, Köllner TG, Arndt HD, Beemelmanns C (2023) Isolation, (bio)synthetic studies and evaluation of antimicrobial properties of drimenol-type sesquiterpenes of *Termitomyces* fungi. *Commun Chem* 6(1), 79.

Details



PAPER

Peng CC, Dormanns N, Regestein L, Beemelmanns C (2023) Isolation of sulfonosphingolipids from the rosette-inducing bacterium *Zobellia uliginosa* and evaluation of their rosette-inducing activity. *RSC Adv* 13(39), 27520-27524.

Details

PubMed
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PAPER

Seibel E, Um S, Dayras M, Bodawatta KH, de Kruijff M, Jønsson KA, Poulsen M, Kim KH, Beemelmanns C (2023) Genome mining for macrolactam-encoding gene clusters allowed for the network-guided isolation of β-amino acid-containing cyclic derivatives and heterologous production of ciromicin A. *Commun Chem* 6(1), 257.

Details

PubMed

Bissell AU, Rautschek J, Hoefgen S, Raguž L, Mattern DJ, Saeed N, Janevska S, Jojić K, Huang Y, Kufs JE, Herboeck B, Guo H, Hillmann F, Beemelmanns C, Valiante V (2022) Biosynthesis of the sphingolipid inhibitors sphingofungins in filamentous fungi requires aminomalonate as a metabolic precursor. *ACS Chem Biol* 17(2), 386-394.

Details

Grosse M, Günther K, Jordan PM, Roman D, Werz O, Beemelmanns C (2022) Synthesis of functionalized δ-hydroxy-β-keto esters and evaluation of their anti-inflammatory properties. *ChemBioChem* 23(9), e202200073.

Details

Guo H, Daniel JM, Seibel E, Burkhardt I, Conlon BH, Görls H, Vassão DG, Dickschat JS, Poulsen M, Beemelmanns C (2022) Insights into the metabolomic capacity of podaxis and isolation of podaxisterols A-D, ergosterol derivatives carrying nitrosyl cyanide-derived modifications. *J Nat Prod* 85(9), 2159-2167.

Details

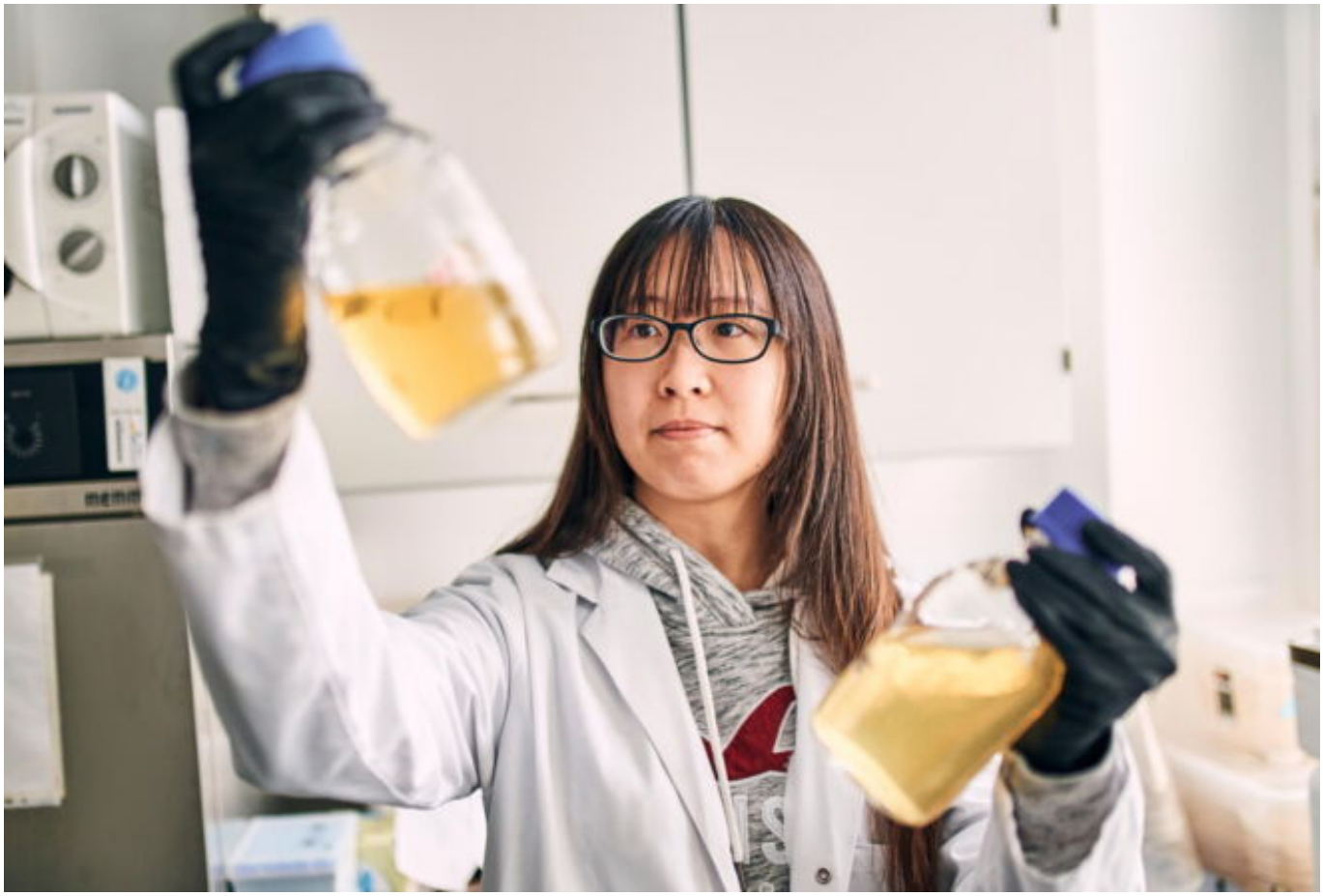
Guo H, Rischer M, Beemelmanns C (2022) Signalling molecules inducing metamorphosis in marine organisms. *Nat Prod Rep* 39(9), 1833-1855. (Review)

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