

## Prof. Dr. Pierre Stallforth – *Curriculum Vitae*

Leibniz Institute for Natural Product Research  
and Infection Biology, Hans Knöll Institute – HKI  
Beutenbergstr. 11A  
D-07745 Jena, Germany

Web: [stallforth-lab.de](http://stallforth-lab.de), [leibniz-hki.de](http://leibniz-hki.de)  
DOB: November 20<sup>th</sup>, 1982, Augsburg, DE  
Email: [pierre.stallforth@leibniz-hki.de](mailto:pierre.stallforth@leibniz-hki.de)

### Education, Research Experience, Positions

05/2022 – present	Deputy Director <b>Leibniz Institute for Natural Product Research and Infection Biology</b> (Hans Knöll Institute – HKI, Jena)
12/2021 – present	Full Professor (W3) of Bioorganic Chemistry and Paleobiotechnology at the <b>Friedrich Schiller University (FSU) Jena</b>
02/2020	Habilitation in Organic Chemistry, Faculty of Earth Sciences and Chemistry, <b>FSU Jena</b>
01/2020 – present	Head of the Department <b>Paleobiotechnology</b> funded by the Werner Siemens-Stiftung at the <b>Leibniz Institute for Natural Product Research and Infection Biology</b> (Hans Knöll Institute – HKI, Jena)
12/2019 – 10/2020	Temporary visiting professorship, Organic Chemistry, <b>University of Hamburg</b>
12/2013 – 12/2019	Independent Junior Group Leader, <b>Leibniz Institute for Natural Product Research and Infection Biology</b> , (Hans Knöll Institute – HKI, Jena) Dept. of Chemistry of Microbial Communication
02/2011 – 11/2013	Postdoc, <b>Harvard Medical School</b> , Dept. of Biological Chemistry and Molecular Pharmacology, Boston. Mentor: Prof. Jon Clardy
11/2006 – 11/2010	Graduate Studies (Dr. sc. ETH Zurich), <b>ETH Zurich</b> and <b>Max Planck Institute</b> , Colloids and Interfaces, Biomolecular Systems, Berlin Supervisor: Prof. Peter H. Seeberger (co-supervisor: Prof. Donald Hilvert) “ <i>Synthesis of Bacterial Carbohydrates and Glycolipids for Application in Novel Vaccine Strategies</i> ”
09/2005 – 07/2006	Master Thesis, <b>University of Oxford</b> , Supervisor: Prof. David E. Logan (1 <sup>st</sup> class)
10/2002 – 07/2006	MSc Studies Chemistry, St Edmund Hall, <b>University of Oxford</b> (1 <sup>st</sup> class, being placed 2 <sup>nd</sup> out of 150 students)

### Fellowships, Awards, and Third-Party Funding

03/2024	medac Research Award 2023
02/2022	Cozzarelli-Prize of the National Academy of Sciences, USA
09/2021	Finalist for the Paul Ehrlich/Ludwig Darmstaedter Young Researcher Award
08/2021	2021 International <i>Dictyostelium</i> Junior Faculty Award
12/2020	Award of the Dr.-Otto-Röhm-Gedächtnisstiftung
11/2020	Academy of Science Göttingen: Academy Prize Chemistry, 2020
01/2020	Funding by the Werner Siemens-Stiftung
10/2020	Funding by the DFG Excellence Cluster Balance of the Microverse
05/2019	Beutenberg-Campus Research Prize
02/2019	DECHEMA Research Award Natural Product Research
11/2018	medac Research Award
09/2018	Best Talk, Young Scientists Symposium Bioorganic Chemistry, Bochum 2018
07/2018	Max-Buchner-Stipend of the DECHEMA
06/2018	Boehringer Ingelheim Exploration Grant
03/2018	DFG Research Grant STA1431/3-1

08/2017	Best Talk Prize, International 2017 <i>Dictyostelium</i> Conference, Geneva
07/2017	DFG Research Grant STA1431/2-1
11/2016	medac Research Award
12/2015	Funding from the Fonds der Chemischen Industrie
12/2015	Funding from the Dr. Illing Foundation
02/2014	Fellowship of the Daimler and Benz Foundation
06/2012	Feodor Lynen-Postdoc Fellowship (A. v. Humboldt Foundation)
02/2011	Swiss National Fund Postdoc Fellowship
06/2007	PhD Fellowship, Studienstiftung (German Academic Merit Foundation)
06/2005	Gibbs Prize for excellence in the final examination
06/2005 – 07/2006	Fellowship of the Studienstiftung (German Academic Merit Foundation)
2003 and 2004	Turbutt Prize for excellence in practical organic chemistry
06/2003 – 07/2006	University of Oxford, Open Scholarship
06/2002	Prize for the best Abitur at Paul-Klee-Gymnasium, Gersthofen

### Organization of Scientific Meetings and Editorial Work

2023	Chair of the Organizing Committee for the conference <i>Advances in Chemical Biology</i> , Frankfurt am Main
2021	Section Editor at <i>microLife</i> (Oxford University Press)
2021	Chair of the Organizing Committee for the conference <i>Advances in Chemical Biology</i> , online
2019	Guest Editor at <i>ChemBioChem</i> (Special Collection Biosynthesis of Bacterial Natural Products and Small Molecules in Microbial Interactions)
2019	Chair of the Organizing Committee for the conference <i>Advances in Chemical Biology</i> , Frankfurt am Main
2019	Chair of the Session 'Molecules in Life – Molecules of Life' Science forum of the German Chemical Society (GDCh), Aachen
2016	Chair of the <i>Young Scientists Symposium Bioorganic Chemistry</i> ( <i>Nachwuchswissenschaftler-Symposium Bioorganische Chemie</i> ), Jena

### Commissions of Trust

2022 –	Member of the Executive Board of the Excellence Cluster Balance of the Microverse
2021 –	Vice Speaker of the Leibniz Research Alliance Bioactive Compounds and Biotechnology
2018 –	Sub-coordinator of the Research Area A, Excellence Cluster Balance of the Microverse
2018 –	Chair of the Common Division of Chemical Biology (Gemeinsame Fachgruppe Chemische Biologie der DECHEMA, GDCh, DPhG, GBM)
2010 –	Member of the Selection Committee, German Academic Merit Foundation (Studienstiftung des deutschen Volkes)

### Teaching Experience

04/2023 – present	Organic Chemistry for Biochemists (4 weekly lecture hours), Friedrich Schiller University Jena
10/2022 – present	Seminars (winter semester) Organic Chemistry 4 and OCF, FSU Jena

04/2020 – 10/2020	Lectures (summer semester) Natural Products (2 weekly lecture hours), University of Hamburg Lectures (summer semester) General Organic Chemistry (4 weekly lecture hours), Hamburg, University of Technology (TUHH) Seminar (summer semester) Organic Chemistry II, (2 weekly lecture hours), University of Hamburg
12/2019 – 04/2020	Lectures (winter semester) Advanced Organic Chemistry (2 weekly lecture hours), University of Hamburg
04/2018 – present	Lectures (summer semester): Synthesis Strategies (for master students in Chemical Biology, 2 weekly lecture hours), FSU Jena
11/2016 – 02/2018	Lectures (winter semester): Microbiology (for pharmacists, 2 weekly lecture hours) and Biochemistry (for pharmacists, 2 weekly lecture hours), FSU Jena
08/2016	Summer School (2 weeks, Studienstiftung) Antibiotics and Resistance
11/2015 – 12/2015	Lectures (winter semester): Analytical Chemistry (FSU Jena, Ringvorlesung 4 lectures)
09/2014 – 01/2018	Seminars (winter semester): Bioanalytical Chemistry (FSU Jena, 2 weekly lecture hours)
07/2013	Biosynthesis (5d summer school Braz. Soc. of Pharmacognosy, Macapá, Brazil)
09/2009 – 12/2009	Practical Organic Chemistry I (ETH Zurich)
02/2008 – 06/2008	Practical Organic Chemistry II (ETH Zurich)
09/2007 – 12/2007	Teaching Assistant: Biological Chemistry I (ETH Zurich)
02/2007 – 07/2007	Teaching Assistant: Organic Chemistry II (ETH Zurich)

### **Institutional Responsibilities**

2013 – present	Faculty member, Leibniz Institute for Natural Product Research and Infection Biology, Hans Knöll Institute – HKI
2014 – present	Associated member of the Faculty of Biological and Pharmaceutical Sciences, Friedrich Schiller University Jena
2014 – present	Faculty member, Jena School for Microbial Communication, Jena
2014 – present	Faculty member, International Leibniz Research School, Jena
2018 – present	Excellence Cluster: Balance of the Microverse Associate Member and Sub-Coordinator of Research Area A

### **Supervision of Graduate Students and Postdoctoral Fellows**

2013 – present	10 Postdocs, 9 PhD, 8 Master students, 3 Bachelor students, ca. 30 interns
2011 – 2013	2 PhD students (rotation students, Harvard Medical School)
2006 – 2011	2 Master students, 1 Bachelor student (ETH Zurich)

### **PhD Commissions**

2013 –	Faculty of Earth Sciences and Chemistry/Faculty of Biological Sciences, FSU Jena
--------	----------------------------------------------------------------------------------

**Invited Talks and Conference Presentations**

Day.Month.Year

19.04.2024 SINOGFOS, Alexander von Humboldt Foundation, Shanghai, China  
17.04.2024 Institutional colloquium, Jiangnan University, Wuxi, China  
21.02.2024 Doctoral student's Day, Friedrich-Alexander-University Erlangen-Nürnberg  
16.02.2024 36<sup>th</sup> Irsee Natural Product Symposium  
04.12.2023 Nikolaus Symposium, Ludwig-Maximilian University Munich  
27.11.2023 Institutional colloquium, University Freiburg  
05.11.2023 International conference on Metabolic and Protein Engineering for Biosynthesis, Dalian, China  
  
16.10.2023 Inaugural lecture, Jena  
06.10.2023 Chemistry Seminars, University of Vienna  
21.09.2023 VAAM Workshop Natural Products, Saarbrücken  
11.09.2023 VAAM conference, Göttingen  
28.08.2023 16<sup>th</sup> German Peptide Symposium, Jena  
13.06.2023 Biochemistry Seminars, University of Leipzig  
08.06.2023 NUVISAN ICB GmbH, Berlin  
29.05.2023 Hebrew University, Jerusalem, Israel Chemistry Seminar  
28.05.2023 Tel Aviv University, Israel, Chemistry Seminar  
23.05.2023 Synmicro Meeting Marburg  
12.05.2023 Microbiology Seminar, University of Zurich  
02.05.2023 German–Japanese Biosynthesis Meeting, Kyoto  
07.02.2023 Awake Africa Online Conference  
02.12.2022 Seminars in Ecology and Evolution, University of Copenhagen  
15.11.2022 Young Researchers' Symposium, Friedrich Loeffler Institute Riems  
18.10.2022 Chemistry Seminars, University of Hannover  
05.10.2022 Chemistry Seminars, University of Edinburgh  
22.09.2022 Bacterial Lipopeptides Workshop, Liège  
05.08.2022 4<sup>th</sup> Symposium „Chemistry at the Interface of Biology and Medicine” Patras, Greece  
  
08.08.2022 International *Dictyostelium* Meeting 2022  
01.07.2022 Münster, GDCh Biochemistry 2022  
14.06.2022 Helsingør, Microbial Secondary Metabolites in Microbiomes 2022  
10.06.2022 University of Saskatoon, PFSaM Meeting  
20.05.2022 FU Berlin, Lise-Meitner-Colloquium  
14.01.2022 Zhejiang University, Hangzhou, China (online)  
16.11.2021 EPFL Lausanne (online)  
28.09.2021 Max-Planck-Institute of Chemical Ecology (hybrid)  
27.09.2021 Wirkstofftage (online)  
17.09.2021 Paul-Ehrlich-Ludwig-Darmstaedter Young Investigator Prize Symposium  
16.07.2021 Academy of Sciences, Göttingen (online)  
04.12.2020 Indiana University–Bloomington, USA (online)  
27.10.2020 Duke University, USA (online)  
30.09.2020 Megasyn Conference, Bad Nauheim  
02.09.2020 Microverse Conference, Jena (online)  
14.05.2020 Heinrich Pette Institute, Hamburg, cancelled due to COVID-19  
30.04.2020 School of basic Medical Sciences at Hangzhou, China, cancelled due to COVID-19

24.04.2020 SINOFGOS, Alexander von Humboldt Foundation, Suzhou, China, cancelled due to COVID-19

08.04.2020 University of Marburg (Chemistry Department), cancelled due to COVID-19

02.04.2020 Japanese-Germany Symposium on Natural Products, Shizuoka, cancelled due to COVID-19

17.03.2020 EPFL (Chemistry Department), cancelled due to COVID-19

07.11.2019 Jacobs University, Bremen

17.10.2019 Technical University Munich (Chemistry Department)

14.10.2019 Technical University Munich, (Medicinal Microbiology Department)

24.09.2019 2019 Bioorganic Symposium, Bochum

04.09.2019 Swiss Society for Microbiology Meeting, Zurich

29.07.2019 University of York (Biology Department)

29.07.2019 University of York (Chemistry Department)

14.06.2019 University of Konstanz

13.05.2019 Karlsruhe Institute of Technology

15.04.2019 University of Braunschweig

19.03.2019 Chemiedozententagung, Koblenz

19.03.2019 VAAM Conference, Mainz

20.02.2019 2019 Naturstoff-Tage Irsee

10.01.2019 University of Cologne

13.12.2018 Biomolecular Systems Day, MPI Colloids and Interfaces, Potsdam-Golm

06.11.2018 Chemistry Colloquium, University of Hamburg

19.09.2018 2018 Bioorganic Symposium, Bochum

04.09.2018 Harvard Medical School, Boston MA, USA

14.08.2018 *Dictyostelium* Conference, Egmond aan Zee, NL

26.07.2018 University of Tübingen

17.07.2018 Freie Universität Berlin

28.05.2018 Max Planck Institute for Terrestrial Microbiology, Marburg

24.04.2018 Leibniz Research Alliance, Bioactive Compounds and Biotechnology, Halle

05.04.2018 MPI for Chemical Ecology, Jena

27.03.2018 University of Utrecht, NL

19.03.2018 MiCom, Jena

05.03.2018 Chemiedozententagung, Jena

31.01.2018 Advances in Chemical Biology, Frankfurt

11.01.2018 MPI for Chemical Ecology, Jena

21.09.2017 2017 Bioorganic Symposium, Berlin

22.08.2017 *Dictyostelium* Conference, Geneva, CH

13.06.2017 Bioorganic Gordon Research Conference, Andover NH, USA

04.05.2017 New England Biolabs, Ipswich MA, USA

10.04.2017 Leibniz Research Alliance, Bioactive Compounds and Biotechnology, Freising

22.03.2017 MiCom, Jena

16.03.2017 Symposium Biosynthetic Strategies, Jena

14.03.2017 Chemiedozententagung, Marburg

02.03.2017 University of Geneva, CH

08.12.2016 University of Düsseldorf

12.11.2016 Peter Seeberger Symposium, Berlin

10.10.2016 Small Molecules and Microbes, Konstanz

04.08.2016 Summer Academy, Studienstiftung, Neubeuern

14.03.2016	VAAM Conference, Jena
15.01.2016	University of Mainz
2015	2015 Bioorganic Symposium, Hamburg
2015	Harvard Medical School, Boston MA, USA
2014	Daimler and Benz Foundation, Ladenburg
2014	Leibniz Research Alliance, Bioactive Compounds and Biotechnology, Berlin
2012	Hans Knöll Institute, Jena

### Publications (<sup>†</sup>equal contributions, \*corresponding author)

53. S. Zhang, K. Schlabach, V. H. Pérez Carillo, A. Ibrahim, A. Komor, R. Mukherji, S. Chowdhury, L. Reimer, C. Hertweck, U. A. Hellmich, **P. Stallforth\*** *in revision*
52. S. Pflanze, R. Mukherji, A. Ibrahim, M. Günther, S. Götze, S. Chowdhury, L. Reimer, L. Regestein, **P. Stallforth\*** “Nonribosomal peptides protect *Pseudomonas nunensis* 4A2e from amoebal and nematodal predation” *Chem. Sci.* **2023**, Advance Article, doi: 10.1039/D3SC03335J
51. P. S. Seibold, S. Lawrinowitz, I. Raztsou, M. Gressler, H.-D. Arndt, **P. Stallforth**, D. Hoffmeister “Bifurcate evolution of quinone synthetases in basidiomycetes” *Fungal Biol. Biotechnol.* **2023**, 10, 14, doi: 10.1186/s40694-023-00162-1
50. M. Klapper<sup>†</sup>, A. Hübner<sup>†</sup>, A. Ibrahim<sup>†</sup>, I. Wasmuth, Maxime Borry, V. G. Haensch, S. Zhang, W. K. Al-Jammal, H. Suma, J. A. Fellows Yates, J. Frangenberg, I. M. Velsko, S. Chowdhury, R. Herbst, E. V. Bratovanov, H.-M. Dahse, T. Horch, C. Hertweck, M. R. González Morales, L. G. Straus, I. Vilotijevic, C. Warinner\*, **P. Stallforth\*** “Natural products from reconstructed bacterial genomes of the Middle and Upper Paleolithic” *Science* **2023**, 380, 619, doi: 10.1126/science.adf5300
49. S. Götze, R. Vij, K. Burow, N. Thome, L. Urvat, N. Schlosser, S. Pflanze, R. Müller, V. G. Hänsch, K. Schlabach, L. Fazlikhani, G. Walther, H.-M. Dahse, L. Regestein, S. Brunke, B. Hube, C. Hertweck, P. Franken, **P. Stallforth\*** “Ecological Niche-Inspired Genome Mining Leads to the Discovery of Crop-Protecting Nonribosomal Lipopeptides Featuring a Transient Amino Acid Building Block” *J. Am. Chem. Soc.* **2023**, 145, 2342, doi: 10.1021/jacs.2c11107
48. **P. Stallforth\***, C. Hertweck, M. Mittag, A. A. Brakhage, U. Hellmich\* “Functional Modulation of Chemical Mediators in Microbial Communities” *Trends Biochem. Sci.* **2023**, 48, 1, doi: 10.1016/j.tibs.2022.07.006
47. N. Declas, J. R. J. Maynard, L. Menin, N. Gasilovac, S. Götze, J. L. Sprague, **P. Stallforth**, S. Matile, J. Waser\* “Tyrosine Bioconjugation with Hypervalent Iodine” *Chem. Sci.* **2022**, 13, 12808, doi: 10.1039/D2SC04558C
46. M. Günther<sup>†</sup>, C. Reimer<sup>†</sup>, R. Herbst<sup>†</sup>, J. E. Kufs, J. Rautschek, N. Ueberschaar, S. Zhang, G. Peschel, L. Reimer, L. Regestein, V. Valiante, F. Hillmann\*, **P. Stallforth\*** “Yellow polyketide pigment suppresses premature hatching in social amoeba” *Proc. Natl. Acad. Sci. U. S. A.* **2022**, 119, e2116122119, doi: 10.1073/pnas.2116122119
45. J. E. Kufs, C. Reimer, **P. Stallforth**, F. Hillmann, L. Regestein\* “The potential of amoeba-based processes for natural product syntheses” *Curr. Opin. Biotechnol.* **2022**, 77, 102766, doi: 10.1016/j.copbio.2022.102766
44. Y. Bando, Y. Hou, L. Seyfarth, J. Probst, S. Götze, M. Bogacz, U. A. Hellmich, P. Stallforth, M. Mittag, H.-D. Arndt\* “Total Synthesis and Structure Correction of the Cyclic Lipodepsipeptide Orfamide A” *Chem. Eur. J.* **2022**, 28, e202104417, doi: 10.1002/chem.202104417
43. V. Nasufović, F. Küllmer, J. Bößneck, H.-M. Dahse, H. Görls, P. Bellstedt, **P. Stallforth**, H.-D. Arndt\* “Total synthesis and bioactivity mapping of geodiamolide H” *Chem. Eur. J.* **2021**, doi: 10.1002/chem.202100989
42. M. Baunach\*, S. Chowdhury, **P. Stallforth**, E. Dittmann\* “The landscape of recombination events that create nonribosomal peptide diversity” *Mol. Biol. Evol.* **2021**, 38, 2116–2130, doi: 10.1093/molbev/msab015

41. S. Zhang<sup>+</sup>, R. Mukherji<sup>+</sup>, S. Chowdhury, L. Reimer, **P. Stallforth**\* “Lipopeptide-mediated Bacterial Interaction Enables Cooperative Predator Defense” *Proc. Natl. Acad. Sci. U. S. A.* **2021**, *118*, e2013759118, doi: 10.1073/pnas.2013759118
40. M. R. Seyedsayamdost\*, **P. Stallforth**\* “Special Issue in Honor of Professor Jon Clardy”, *J. Nat. Prod.* **2020**, *83*, 565–568, doi: 10.1021/acs.jnatprod.0c00199
39. P. Stallforth\* “Cellular microbiology interview-Dr. Pierre Stallforth” *Cell. Microbiol.* **2020**, *22*, e13188, doi: 10.1111/cmi.13188
38. S. Götze, **P. Stallforth**\* “Structure Elucidation of Bacterial Nonribosomal Lipopeptides” *Org. Biomol. Chem.* **2020**, *18*, 1710–1727, doi: 10.1039/C9OB02539A
37. S. Götze, **P. Stallforth**\* “Structure, Properties, and Biological Functions of Nonribosomal Lipopeptides from Pseudomonads” *Nat. Prod. Rep.* **2020**, *37*, 29–54, doi: 10.1039/C9NP00022D
36. R. Mukherji<sup>+</sup>, S. Zhang<sup>+</sup>, S. Chowdhury, **P. Stallforth**\* “Chimeric LuxR Transcription Factors Rewire Natural Product Regulation” *Angew. Chem. Int. Ed.* **2020**, *59*, 6192–6195, doi: 10.1002/ange.01914449
35. M. Klapper, K. Schlabach, A. Paschold, S. Zhang, S. Chowdhury, K.-D. Menzel, M. A. Rosenbaum, **P. Stallforth**\* “Biosynthesis of *Pseudomonas*-Derived Butenolides” *Angew. Chem. Int. Ed.* **2020**, *59*, 5607–5610, doi: 10.1002/anie.201914154
34. R. Herbst, M. Günther, **P. Stallforth**\* “Chemical Ecology of *Dictyostelium discoideum*” *Comprehensive Natural Products III*, Elsevier, **2020**, doi: 10.1016/B978-0-12-409547-2.14719-5
33. S. Götze, J. Arp, G. Lackner, S. Zhang, H. Kries, M. Klapper, M. García-Altres, K. Willing, M. Günther, **P. Stallforth**\* “Structure Elucidation of the Syringafactin Lipopeptides Provides Insight in the Evolution of Nonribosomal Peptide Synthetases” *Chem. Sci.* **2019**, *10*, 10979–10990, doi: 10.1039/C9SC03633D
32. D. Fischer, G. Gessner, T. Pacheco Fill, R. Barnett, K. Tron, K. Dornblut, F. Kloss, **P. Stallforth**, B. Hube, S. H. Heinemann, C. Hertweck, K. Scherlach,\* S. Brunke\* “Disruption of membrane integrity by the bacteria-derived antifungal jagaricin” *Antimicrob. Agents Chemother.* **2019**, *63*, e00707, doi: 10.1128/AAC.00707-19
31. M. Klapper, A. Paschold, S. Zhang, C. Weigel, H.-M. Dahse, S. Götze, S. Pace, S. König, Z. Rao, L. Reimer, O. Werz, **P. Stallforth**\* “Bioactivity and Mode of Action of Bacterial Tetramic Acids” *ACS Chem. Biol.* **2019**, *14*, 1693–1697, doi: 10.1021/acscchembio.9b00388
30. A. Oberheide, S. Pflanze, **P. Stallforth**, H.-D. Arndt\* “Solid Phase-Based Total Synthesis and Stereochemical Assignment of the Cryptic Natural Product Aurantizolicin” *Org. Lett.* **2019**, *21*, 729–732, doi: 10.1021/acs.orglett.8b03940
29. F. Broecker, S. Götze, J. Hudon, D. C. K. Rathwell, C. L. Pereira, **P. Stallforth**, A. Chakkumkalag, P. H. Seeberger\* “Synthesis, Liposomal Formulation, and Immunological Evaluation of a Minimalistic Carbohydrate- $\alpha$ -GalCer Vaccine Candidate” *J. Med. Chem.* **2018**, *61*, 4918–4927, doi: 10.1021/acs.jmedchem.8b00312
28. D. Heinrich, R. Barnett, L. Tweedy, R. Insall, **P. Stallforth**, T. Winckler\* “The chemoattractant glorin is inactivated by ester cleavage during multicellular development of the social amoeba *Polysphondylium pallidum*” *ACS Chem. Biol.* **2018**, *13*, 1506–1513, doi: 10.1021/acscchembio.8b00046
27. J. Arp<sup>+</sup>, S. Götze<sup>+</sup>, R. Mukherji, D. J. Mattern, M. García-Altres, M. Klapper, D. A. Brock, A. A. Brakhage, J. E. Strassmann, D. C. Queller, B. Bardl, K. Willing, G. Peschel, **P. Stallforth**\*, “Synergistic activity of co-secreted natural products from amoebae-associated bacteria” *Proc. Natl. Acad. Sci. U. S. A.* **2018**, *115*, 3758–3763, doi: 10.1073/pnas.17217901
26. M. Klapper, D. Braga, G. Lackner, R. Herbst, **P. Stallforth**\* “Bacterial Alkaloid Biosynthesis: Structural Diversity via a Minimalistic Nonribosomal Peptide Synthetase” *Cell Chem. Biol.* **2018**, *25*, 659–665, doi: 10.1016/j.chembiol.2018.02.013
25. M. Klapper, J. Arp, M. Günther, **P. Stallforth**\* “The Role of Bacterial Natural Products in Predator Defense” *Synlett*, **2018**, *29*, 537–541, doi: 10.1055/s-0037-1609226

24. R. Barnett, **P. Stallforth\***, “Natural Products from Social Amoebae” *Chem. Eur. J.* **2018**, *24*, 4202, doi: 10.1002/chem.201703694
23. S. Götze, R. Herbst-Irmer, M. Klapper, H. Görls, K. R. A. Schneider, R. Barnett, T. Burks, U. Neu, **P. Stallforth\*** “Structure, Biosynthesis, and Biological Activity of the Cyclic Lipopeptide Anikasin” *ACS Chem. Biol.* **2017**, *12*, 2498–2502, doi: 10.1021/acscchembio.7b00589
22. R. Gallegos-Monterrosa, S. Kankel, S. Götze, R. Barnett, **P. Stallforth\***, A. T. Kovács\* “*Lysinibacillus fusiformis* M5 induces increased complexity in *Bacillus subtilis* 168 colony biofilms via hypoxanthine” *J. Bact.* **2017**, 199:e00204–17, doi: 10.1128/jb.00204-17
21. J. Arp, **P. Stallforth\*** “Rationalizing the Right Ratios” *Cell Chem. Biol.* **2017**, *24*, 539, doi: 10.1016/j.chembiol.2017.05.007
20. R. Barnett, D. Raszkowski, T. Winckler, **P. Stallforth\*** “Versatile Synthesis of the Signaling Peptide Glorin” *Beilstein J. Org. Chem.* **2017**, *13*, 247–250, doi: 10.3762/bjoc.13.27
19. M. Klapper, S. Götze, R. Barnett, K. Willing, **P. Stallforth\*** “Bacterial Alkaloids Prevent Amoebal Predation” *Angew. Chem. Int. Ed. Engl.* **2016**, *55*, 8944–8947, doi: 10.1002/anie.201603312
18. A. Adibekian\*, **P. Stallforth\*** “Cutting Edge Chemical Biology: Report from the 2016 International Symposium on Chemical Biology, January 13–15, Geneva, Switzerland” *ACS Chem. Biol.* **2016**, *11*, 816–820, doi: 10.1021/acscchembio.6b00267
17. S. Götze, **P. Stallforth\***, “Chemical Communication in Microbial Communities” *GIT Lab. J.* **2015**, *11–12*, 16
16. J. Braesel, S. Götze, F. Shah, D. Heine, J. Tauber, C. Hertweck, A. Tunlid, **P. Stallforth**, D. Hoffmeister\* “Three Redundant Synthetases Secure Redox-Active Pigments Production in the Basidiomycete *Paxillus involutus*” *Chem. Biol.* **2015**, *22*, 1325–1334, doi: 10.1016/j.chembiol.2015.08.016
15. S. Matthies, **P. Stallforth**, P. H. Seeberger\* “Total Synthesis of Legionaminic Acid as Basis for Serological Studies” *J. Am. Chem. Soc.* **2015**, *137*, 2848–2851, doi: 10.1021/jacs.5b00455
14. M. Cavallari<sup>+</sup>, **P. Stallforth**<sup>+</sup>, A. Kalinichenko<sup>+</sup>, D. Rathwell, T. M. A. Gronewold, A. Adibekian, L. Mori, R. Landmann, P. H. Seeberger\*, G. DeLibero\* “A semisynthetic carbohydrate-lipid vaccine that protects against *S. pneumoniae* in mice” *Nat. Chem. Biol.* **2014**, *10*, 950–956, doi: 10.1038/nchembio.1650
13. **P. Stallforth**, J. Clardy\* “Atlas for Drug Discovery” *Proc. Natl. Acad. Sci. U. S. A.* **2014**, *111*, 3655–3656, doi: 10.1073/pnas.140051611
12. **P. Stallforth**, D. A. Brock, A. M. Cantley, X. Tian, D. C. Queller, J. E. Strassmann, J. Clardy\* “A bacterial symbiont is converted from an inedible producer of beneficial molecules into food by a single mutation in the *gacA* gene” *Proc. Natl. Acad. Sci. U. S. A.* **2013**, *110*, 14528–14533, doi: 10.1073/pnas.1308199110 (Highlighted in PNAS, *Nat. Rev. Microbiol.*, *BioTechniques*, and *other*)
11. **P. Stallforth**, J. Clardy\* “X-ray crystallography: one size fits most” *Nature* **2013**, *495*, 456–457, doi: 10.1038/495456a
10. **P. Stallforth**<sup>+</sup>, S. Matthies<sup>+</sup>, A. Adibekian, D. G. Gillingham, D. Hilvert, P. H. Seeberger\* “*De novo* chemoenzymatic synthesis of sialic acid” *Chem. Commun.* **2012**, *48*, 11987–11989, doi: 10.1039/C2CC37305J
9. **P. Stallforth**, J. Clardy\* “Protein Evolution: When Two Become Three” *Curr. Biol.* **2012**, *22*, R685, doi: 10.1016/j.cub.2012.07.055
8. A. Adibekian, **P. Stallforth**, M.-L. Hecht, D. B. Werz, P. Gagneux, P. H. Seeberger\* “Comparative bioinformatics analysis of the mammalian and bacterial glycomes” *Chem. Sci.* **2011**, *2*, 337–344, doi: 10.1039/C0SC00322K
7. T. Ohara, A. Adibekian, D. Esposito, **P. Stallforth** and P. H. Seeberger\* “Towards the synthesis of a *Yersinia pestis* cell wall polysaccharide: enantioselective synthesis of an L-glycero-D-mannoheptose building blocks” *Chem. Commun.* **2010**, *46*, 4106–4108, doi: 10.1039/C000784F



6. R. Pragani, **P. Stallforth**, P. H. Seeberger\* “*De Novo* Synthesis of a 2-Acetamido-4-amino-2,4,6-trideoxy-D-galactose (AAT) Building Block for the Preparation of a *Bacteroides fragilis* A1 Polysaccharide Fragment” *Org. Lett.* **2010**, *12*, 1624–1627, doi: 10.1021/ol1003912
5. D. G. Gillingham<sup>+</sup>, **P. Stallforth**<sup>+</sup>, A. Adibekian, P. H. Seeberger\*, D. Hilvert\* “Chemoenzymatic synthesis of differentially protected 3-deoxysugars” *Nature Chem.* **2010**, *2*, 102–105, doi: 10.1038/nchem.504
4. **P. Stallforth**, B. Lepenies, A. Adibekian, P. H. Seeberger\* “Carbohydrates – A Frontier in Medicinal Chemistry” *J. Med. Chem.* **2009**, *52*, 5561–5577, doi: 10.1021/jm900819p
3. M.-L. Hecht, **P. Stallforth**, D. Varón-Silva, A. Adibekian, P. H. Seeberger\* “Recent Advances in Carbohydrate-based Vaccines” *Curr. Opin. Chem. Biol.* **2009**, *13*, 354–359, doi: 10.1016/j.cbpa.2009.05.127
2. A. Adibekian, M. S. M. Timmer, **P. Stallforth**, J. van Rijn, P. H. Seeberger\* “Stereocontrolled synthesis of fully functionalized D-glucosamine monosaccharides via a domino nitro Michael/Henry reaction” *Chem. Commun.* **2008**, *30*, 3549–3551, doi: 10.1039/b805159c
1. **P. Stallforth**, A. Adibekian, P. H. Seeberger\* “De novo Synthesis of a D-Galacturonic Acid Thioglycoside as Key to the Total Synthesis of a Glycosphingolipid from *Sphingomonas yanoikuyae*” *Org. Lett.* **2008**, *10*, 1573–1576, doi: 10.1021/ol800227b

## Patents

1. P. H. Seeberger, **P. Stallforth**, G. DeLiberio, M. Cavallari, “Carbohydrate-Glycolipid Conjugate Vaccines” WO 2013/178236 A1