

# Dr. rer. Nat. Paul Hammer

CEO & Founder,  
BIOMES NGS GmbH



As founder and CEO, Paul Hammer is the visionary behind BIOMES. He received his PhD in systems biology and bioinformatics from the Faculty of Natural Sciences at the University of Potsdam in 2012.

Dr Hammer's great passion is the study of genomic and microbial mechanisms and their impact on life. For this, he has developed a method that combines high-throughput DNA technologies with machine learning algorithms from large data sets.

After his interdisciplinary academic training and positions as scientific director of various projects at renowned institutions such as the Max Planck Institute for Molecular Genetics in Berlin, he began his entrepreneurial career as a founder in 2010. At that time, the now 39-year-old was involved in the founding of the ibiomics group as Chief Business Officer and Research Director for Genomic Diagnostics. In 2016, he founded the biotechnology company Halotek, and a year later BIOMES NGS GmbH. The biotechnology company from Wildau currently has 67 employees. BIOMES analyses the DNA of the microbes that live in the human intestine on the basis of the so-called Next Generation Sequencing method. The results are personal microbiota profiles, on the basis of which customers receive individual recommendations for improving their quality of life.

Paul Hammer's mission is to integrate the technology transfer of innovative and precise medical applications into the healthcare market and to make the new technologies accessible to as many people as possible. The goal: to improve the health and well-being of every single person.

# Topics of Interest

- ✓ Microbiome and prevention: How a detailed knowledge of our bacteria can revolutionise the current healthcare system.
- ✓ Next Generation Sequencing - cutting-edge biotechnology to study bacterial DNA.
- ✓ Genome sequencing - what else will be possible with the technology in the future?
- ✓ Entrepreneurship and spin-offs from a university environment - How do university teams succeed in founding their own company?
- ✓ (No) Unicorns from Germany? What German founders need to be able to play in the world league

## Speaking and Panel References

- NOAH Conference 2019 Berlin
- Innovation Food Camp 2019 Hamburg
- Podcast „Gesünder mit praktischer Medizin“ with Dr Harald Schmidt
- E-Health Pioneers Podcast
- Podcast Überdosis Digital
- Forever Young - Der Gesundheitspodcast
- Nutrition Tech Entrepreneur and Digital Strategist Podcast
- XpoMet 2019 Berlin
- Capital Congress Medicine and Health 2018 Berlin
- Entrepreneurship and Communication 2018 Wildau
- International Biotech Innovation Days 2018 Senftenberg
- Future Medicine Tagesspiegel 2018 Berlin
- DIGITAL 2018 Köln
- BioBilanz 2018 Berlin

## Professional career

### 2017

Founder and CEO of BIOMES NGS GmbH

### 2016

Cofounder of Halotek UG

### 2010 - 2014

Chief Business Officer and Research Director for Genomic Diagnostics in the ibiomics group

### 2013

Senior scientist as post-doc at the University of Applied Science Wildau in the research group Diagnostic Bioinformatics

### 2012

PhD in "Bioinformatics / Systems Biology" at the University of Potsdam

### 2004 - 2012

Scientific employee at the Max Planck Institute for Molecular Genetics Berlin, Neurochemistry Research Group headed by Dr Diego Walther

## Guest article



Perspective: Detecting corona mutations at an early stage (Tagesspiegel Background, January 2021)



Overall strategy for genome sequencing (transcript, March 2021)

## Awards & Achievements



1st place Jerusalem Competition at StartUpNight 2018 in Berlin



1st place at the #8 Berlin Pitchmarathon 2019

## Publications

- A roadmap for the generation of benchmarking resources for antimicrobial resistance detection using next generation sequencing.  
Petrillo M, Fabbri M, Querci M, Van den Eede G, Alm E, Aytan-Aktug D, Capella-Gutierrez S, Carrillo C, Cestaro A, Chan KG, Coque T, Endrullat C, Gut I, Hammer P, Kay GL, Madec JY, Mather AE, McHardy AC, Naas T, Paracchini V, Peter S, Pightling A, Raffael B, Rossen J, Ruppé E, Schlaberg R, Vanneste K, Weber LM, Westh H, Angers-Loustau A; 2021, F1000Research, doi: 10.12688/f1000research.39214.1
- The challenges of designing a benchmark strategy for bioinformatics pipelines in the identification of antimicrobial resistance determinants using next generation sequencing technologies.  
Angers-Loustau A, Petrillo M, Bengtsson-Palme J, Berendonk T, Blais B, Chan KG, Coque TM, Hammer P, Heß S, Kagkli DM, Krumbiegel C, Lanza VF, Madec JY, Naas T, O'Grady J, Paracchini V, Rossen JWA, Ruppé E, Vamathevan J, Venturi V, Van den Eede G; 2018, F1000Research, doi: 10.12688/f1000research.14509.2
- Diet Type, Antibiotic Intake and Gut Microbiota: A Lesson from a Large Cross-Sectional Study.  
Philipp Franke, Carsten Krumbiegel, Benjamin Girke, Paul Hammer, Marcus Frohme, Tewodros Debebe; 2019, Archive of the International Society of Microbiota
- DER DARMKOMPASS – Alles, was man über den unterschätzten Darm wissen muss.  
Paul Hammer; 2020, Verlag FORUM VIA SANITAS, ISBN: 978-3-200-06876-6
- mRNA-seq with agnostic splice site discovery for nervous system transcriptomics tested in chronic pain.  
Hammer, P., Banck, M.S., Amberg, R., Wang, C., Petznick, G., Luo, S., Khrebtukova, I., Schroth, G.P., Beyerlein, P., and Beutler, A.S. (2010).. Genome Research, 20, 847–860.
- Alternative splicing and extensive RNA editing of human TPH2 transcripts.  
Grohmann, M., Hammer, P., Walther, M., Paulmann, N., Büttner, A., Eisenmenger, W., Baghai, T.C., Schüle, C., Rupprecht, R., Bader, M., et al. (2010).. PLoS ONE, 5, e8956.
- On the mutual information between interaction perplexity and function of proteins  
Tscherneck, S., Strunk, S., Schmidt, C., Hammer, P., Amberg, R., Chong Wang, Gillert, R., Krause, A., Petznick, G., and Beyerlein, P. (2009), IEEE GENESIS, pp. 1–4.
- Allosteric interaction of rapid delayed rectifier protein and its role in cardiac repolarization.  
Wang, C., Beyerlein, P., Hammer, P., Krause, A., Nugent, C., and Dubitzky, W. (2008). IEEE Computers in Cardiology, pp. 589–592.

## Contact

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