Biographical Sketch

	Name: Peter Lasch	**Position Title:** Head of division *Proteomics and Spectroscopy* (ZBS 6) at the *Centre for Biological Threats and Special Pathogens* (ZBS), Robert Koch-Institute (RKI), Berlin, Germany
	Degree: Dr.	→ Google Scholar → Researchgate

A — Education / Training

Institution and Location	Degree	Year(s)	Field of Study
High school (Abitur) in Halle/Saale (Germany)	Abitur	1983–1985	
Biomedical Faculty, Second Medical Institute, Moscow (Russia)		1987–1991	Medical Biophysics
Humboldt Universität Berlin, Charité, Medical Faculty	M.D.	1991–1994	Medicine
Robert Koch-Institute and Freie Universität Berlin	PhD	1994–1999	Medical Biophysics
City University New York, Hunter College	Postdoc	2000–2001	Biomedical Spectroscopy

B — Professional Employment

Nov 1994 – Dec 1999	<u>PhD thesis</u>: Robert Koch-Institute (RKI), *Image Segmentation of Human Tissue Thin Sections on the Basis of FT-IR Microspectroscopic Data*
Jan 2000 – Feb 2001	<u>Postdoctoral position</u>: Hunter College, City University New York, Department of Chemistry and Biochemistry (Prof. M. Diem)
Mar 2001 – May 2011	<u>Research scientist</u>: RKI Berlin, P25 "*Biomedical Spectroscopy*"
Jun 2011 – present	<u>Head of division</u>: RKI Berlin, ZBS 6 "*Proteomics and Spectroscopy*"

C — Professional Interests / Activities

→ Mass spectrometry and vibrational spectroscopy of pathogenic microorganisms
→ Infrared and Raman hyperspectral imaging of microorganisms, cells and tissues
→ Chemometrics and machine learning
→ Author of approx. 100 original research articles and book chapters, h-factor of 47 (Google Scholar)
→ Author the software packages "*CytoSpec* - Software for Hyperspectral Imaging" and "*MicrobeMS* - A Matlab Toolbox for Analysis of Microbial MALDI-TOF Mass Spectra" (for details see http://www.cytospec.com and https://wiki.microbe-ms.com).

D — Key Publications (see http://www.peter-lasch.de/Publist.pdf for the complete list of publications)

1. Lasch, P., Schneider, A., Blumenscheit, C., and Doellinger, J. **2020**. *Identification of Microorganisms by Liquid Chromatography-Mass Spectrometry (LC-MS(1)) and in Silico Peptide Mass Libraries*, Mol. Cell. Proteomics 19, 2125-2139.
2. Doellinger, J., Schneider, A., Hoeller, M., and Lasch, P. **2020**. *Sample Preparation by Easy Extraction and Digestion (SPEED) - A Universal, Rapid, and Detergent-free Protocol for Proteomics Based on Acid Extraction*, Mol. Cell. Proteomics 19, 209-222.
3. Lasch, P., and Noda, I. **2019**. *Two-Dimensional Correlation Spectroscopy (2D-COS) for Analysis of Spatially Resolved Vibrational Spectra*, Appl. Spectrosc. 73, 359-379.
4. Lasch, P., Stammler, M., Zhang, M., Baranska, M., Bosch, A., and Majzner, K. **2018.** *FT-IR Hyperspectral Imaging and Artificial Neural Network Analysis for Identification of Pathogenic Bacteria*, Anal. Chem. 90, 8896-8904.
5. Amenabar, I., Poly, S., Goikoetxea, M., Nuansing, W., Lasch, P., and Hillenbrand, R. **2017**. *Hyperspectral infrared nanoimaging of organic samples based on Fourier transform infrared nanospectroscopy*, Nat Commun 8, 14402.
6. P. Lasch, D. Naumann, **2015**. Infrared Spectroscopy in Microbiology. *Encyclopedia of Analytical Chemistry*, **2015**. John Wiley & Sons, Ltd