

CURRICULUM VITAE

Jun. Prof. Dr. rer. nat. Stephanie Pfänder

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PERSONAL DETAILS

First Name:	Stephanie
Last Name:	Pfänder
Date of birth:	05.07.1985
Place of birth:	Bückeberg, Germany
Children:	Son, born 03.09.2018

RESEARCH EXPERIENCE

Since 02/2020	Junior Professor , Department for Molecular and Medical Virology, Ruhr University Bochum, Bochum, Germany Department for Molecular and Medical Virology, Prof. Dr. Eike Steinmann
01/2016 – 01/2020	Research associate (Postdoc) , Institute of Virology and Immunology, Bern and Mittelhäusern, Switzerland Institute of Virology, Prof. Dr. Volker Thiel
02/2017 – 04/2017	Research stay , The Rockefeller University, New York, USA Laboratory of Virology and Infectious Disease, Prof. Dr. Charles M Rice
06/2015 – 01/2016	Research associate (Postdoc) , Twincore - Centre of Experimental and Clinical Infection Research, Hannover, Germany Institute of Experimental Virology, Prof. Dr. Thomas Pietschmann
04/2014 – 06/2014	Research stay , Karolinska Institute, Stockholm, Sweden Department of Laboratory Medicine, Prof. Dr. Matti Sällberg
11/2011 – 06/2015	PhD thesis , Institute of Experimental Virology, Twincore - Centre of Experimental and Clinical Infection Research, Hannover, Germany
04/2011 – 10/2011	Master thesis , Institute of Experimental Virology, Twincore - Centre of Experimental and Clinical Infection Research, Hannover, Germany Supervisor: Prof. Dr. Thomas Pietschmann and Dr. Eike Steinmann

04/2009 – 08/2009 **Bachelor thesis**, Institute of Experimental Infection Research,
Twincore - Centre of Experimental and Clinical Infection Research,
Hannover, Germany
Supervisor: Prof. Dr. Ulrich Kalinke

EDUCATION

11/2011 – 06/2015 **Doctoral studies**, Twincore - Centre of Experimental and Clinical
Infection Research, Hannover, Germany
Institute of Experimental Virology,
Prof. Dr. Thomas Pietschmann

- 10/2012 – 06/2015 PhD program “IRTG 1273 Strategies of human pathogens to establish
acute and chronic infections“, Hannover Medical School, Hannover,
Germany

10/2009 – 10/2011 **Studies of Biomedicine**, Hannover Medical School, Hannover,
Germany
Master of Science (M.Sc.)

10/2006 – 09/2009 **Studies of Biology of the Cell**, University of Osnabrück, Osnabrück,
Germany
Bachelor of Science (B.Sc.)

08/2001 – 06/2004 **General Qualification for University entrance**, Wilhelm-Busch-
Gymnasium, Stadthagen, Germany
General Qualification for University entrance

AWARDS AND HONORS

05/2019 **Gold Poster Award**, 7th European Congress of Virology, Rotterdam,
Netherlands

06/2016 **PhD Award 2016**, Deutsche Gesellschaft für Infektiologie, Würzburg,
Germany

05/2016 **PhD Award 2016**, Helmholtz Centre for Infection Research, Braunschweig,
Germany

04/2016 **DZIF-PhD Award 2016**, Gesellschaft für Virologie, Münster, Germany

01/2015 **Nutricia-Research Award**, Frankfurt, Germany
(Nutricia-Wissenschaftspreis zur Erforschung des Stillens und der
Muttermilch)

09/2014 **“Paper of the Month” award**, Helmholtz Centre for Infection Research,
Braunschweig, Germany

08/2013 Second prize poster session, Karolinska Institute Infection Retreat,
Djuronäset, Sweden

10/2011 **Postgraduate-Stipend**, Novartis Foundation for Therapeutic Research,
Hannover, Germany

11/2010 **Study award** in the master program Biomedicine, Hannover Medical School,
TUI Stiftung, Hannover, Germany

FUNDING

- 05/2017 – 08/2019 European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement no. 748627
- 11/2012 – 12/2014 Ph.D. Stipend; DFG International Research Training Group 1273, Hannover, Germany

TRAVEL GRANTS

- 05/2019 Travel award, 7th European Congress of Virology, Rotterdam, Netherlands
- 06/2015 Travel grant from Gilead Sciences, 5th International Symposium on Viral Hepatitis and Liver Disease (ISVHLD), Berlin, Germany
- 10/2013 Symposium Continuing Education Grant, 20th International Symposium on Hepatitis C Virus and Related Viruses, Melbourne, Australia
- 04/2012 Young Investigator Registration Bursary, 47th Annual meeting of the European Association for the Study of the Liver (EASL), Barcelona, Spain

TEACHING EXPERIENCE

- 03/2018 - ongoing Supervision PhD Thesis Annika Kratzel
- 10/2017 – 01/2019 Supervision Vet. Med. Dissertation Dagny Hirt
- 08/2019 Supervision of student course: Virology, Bern, Switzerland
- 08/2016 Supervision of student course: Virology, Bern, Switzerland
- 12/2014 Supervision of student course: Virology, Hannover, Germany
- 03/2013 - 08/2013 Supervision of Master student: Stephanie Walter, Hannover, Germany
- 10/2012 - 11/2012 Supervision of internship: Janine Brinkman, Hannover, Germany

Bochum, 08 May 2020

Stephanie Pfänder

PUBLICATION INDEX

Peer-reviewed

1. Thao TTN, Labroussaa F, Ebert N, V'kovski P, Stalder H, Portmann J, Kelly J, Steiner S, Holwerda M, Kratzel A, Gultom M, Schmied K, Laloli L, Hüsser L, Wider M, **Pfaender S**, Hirt D, Cippà V, Crespo-Pomar S, Schröder S, Muth D, Niemeyer D, Corman V, Müller MA, Drosten C, Dijkman R, Jores J, Thiel V. Rapid reconstruction of SARS-CoV-2 using a synthetic genomics platform. *Nature*. 2020 May 4. doi: 10.1038/s41586-020-2294-9. [Epub ahead of print]
2. Kratzel A, Todt D, V'kovski P, Steiner S, Gultom M, Thao TTN, Ebert N, Holwerda M, Steinmann J, Niemeyer D, Dijkman R, Kampf G, Drosten C, Steinmann E, Thiel V, **Pfaender S#**. Inactivation of Severe Acute Respiratory Syndrome Coronavirus 2 by WHO-Recommended Hand Rub Formulations and Alcohols. *Emerg Infect Dis*. 2020 Apr 13;26(7). doi: 10.3201/eid2607.200915. [Epub ahead of print]
3. V'kovski P, Gerber M, Kelly J, **Pfaender S**, Ebert N, Braga Lagache S, Simillion C, Portmann J, Stalder H, Gaschen V, Bruggmann R, Stoffel MH, Heller M, Dijkman R, Thiel V. Determination of host proteins composing the microenvironment of coronavirus replicase complexes by proximity-labeling. *Elife*. 2019 Jan 11;8. pii: e42037. doi: 10.7554/eLife.42037
4. García-Nicolás O, V'kovski P, Vielle NJ, Ebert N, Züst R, Portmann J, Stalder H, Gaschen V, Vieyres G, Stoffel M, Schweizer M, Summerfield A, Engler O, Pietschmann T, Todt D, Alves MP, Thiel V*, **Pfaender S***. The Small-Compound Inhibitor K22 Displays Broad Antiviral Activity against Different Members of the Family Flaviviridae and Offers Potential as a Panviral Inhibitor. *Antimicrob Agents Chemother*. 2018 Oct 24;62(11). pii: e01206-18. doi: 10.1128/AAC.01206-18. Print 2018 Nov.
5. Pfankuche VM, Hahn K, Bodewes R, Hansmann F, Habierski A, Haverkamp AK, **Pfaender S**, Walter S, Baechlein C, Postel A, Steinmann E, Becher P, Osterhaus A, Baumgärtner W, Puff C. Comparison of Different In Situ Hybridization Techniques for the Detection of Various RNA and DNA Viruses. *Viruses*. 2018 Jul 20;10(7). pii: E384. doi: 10.3390/v10070384.
6. **Pfaender S***, Helfritz F*, Siddharta A., Todt D., Behrendt P., Heyden J., Riebesehl N., Willmann W., Jsteinmannm J., Münch J., Ciesek S. and Steinmann E. Environmental Stability and Infectivity of Hepatitis C Virus (HCV) in Different Human Body Fluids. *Front. Microbiol.*, 27 March 2018 <https://doi.org/10.3389/fmicb.2018.00504>
7. Behrendt P, Perin P, Menzel N, Banda D, **Pfaender S**, Alves MP, Thiel V, Meulemann P, Colpitts CC, Schang LM, Vondran FWR, Anggakusuma, Manns MP, Steinmann E, Pietschmann T. Pentagalloylglucose, a highly bioavailable polyphenolic compound present in Cortex moutan, efficiently blocks hepatitis C virus entry. *Antiviral Res*. 2017 Nov;147:19-28. doi: 10.1016/j.antiviral.2017.09.006. Epub 2017 Sep 18
8. Reichert, C., Campe, A., Walter, S., **Pfaender, S.**, Welsch, K., Ruddat, I., Sieme, H., Feige, K., Steinmann, E., Cavalleri, J.-M.V. Frequent occurrence of nonprimate hepacivirus infections in Thoroughbred breeding horses - a crosssectional study for the occurrence of infections and potential risk factors, *Veterinary Microbiology* (2017), <http://dx.doi.org/10.1016/j.vetmic.2017.03.030>
9. **Pfaender S***, Walter S*, Grabski E, Todt D, Bruening J, Romero-Brey I, Gather T, Brown RJ, Hahn K, Puff C, Pfankuche VM, Hansmann F, Postel A, Becher P, Thiel V, Kalinke U, Wagner B, Bartenschlager R, Baumgärtner W, Feige K, Pietschmann T, Cavalleri JM, Steinmann E. Immune protection against reinfection with nonprimate hepacivirus. *Proc Natl Acad Sci U S A*. 2017 Mar 21;114(12):E2430-E2439. doi: 10.1073/pnas.1619380114. Epub 2017 Mar 8.
10. Siddharta A*, **Pfaender S***, Vielle NJ, Dijkman R, Friesland M, Becker B, Yang J, Engelmann M, Todt D, Windisch MP, Brill FH, Steinmann J, Steinmann J, Becker S, Alves MP, Pietschmann T, Eickmann M, Thiel V, Steinmann E. Virucidal activity of WHO-recommended

formulations against enveloped viruses including Zika, Ebola and emerging Coronaviruses. *J Infect Dis.* 2017 Mar 15;215(6):902-906. doi: 10.1093/infdis/jix046.

11. **Pfaender S***, Vielle NJ*, Ebert N, Steinmann E, Alves MP, Thiel V. Inactivation of Zika virus in human breast milk by prolonged storage or pasteurization. *Virus Res.* 2017 Jan 15;228:58-60. doi: 10.1016/j.virusres.2016.11.025. Epub 2016 Nov 23.]
12. Siddharta A, **Pfaender S**, Malassa A, Doerrbecker J, Anggakusuma, Engelmann M, Nugraha B, Steinmann J, Todt D, Vondran FW, Mateu-Gelabert P, Goffinet C, Steinmann E. Inactivation of HCV and HIV by microwave: a novel approach for prevention of virus transmission among people who inject drugs. *Sci Rep.* 2016 Nov 18;6:36619. doi: 10.1038/srep36619.
13. Walter S, Rasche A, Moreira-Soto A, **Pfaender S**, Bletsa M, Corman VM, Aguilar-Setien A, García-Lacy F, Hans A, Todt D, Schuler G, Shnaiderman-Torban A, Steinman A, Roncoroni C, Veneziano V, Rusenova N, Sandev N, Rusenov A, Zapryanova D, García-Bocanegra I, Jores J, Carluccio A, Veronesi MC, Cavalleri JM, Drosten C, Lemey P, Steinmann E, Drexler JF. Differential infection patterns and recent evolutionary origins of equine hepaciviruses in donkeys. *J Virol.* 2016 Dec 16;91(1). pii: e01711-16. Print 2017 Jan 1.
14. Gather T, Walter S, **Pfaender S**, Todt D, Feige K, Steinmann E, Cavalleri JM. Acute and chronic infections with nonprimate hepacivirus in young horses. *Vet Res.* 2016 Sep 22;47(1):97.
15. Gather T, Walter S, Todt D, **Pfaender S**, Brown RJ, Postel A, Becher P, Moritz A, Hansmann F, Baumgaertner W, Feige K, Steinmann E, Cavalleri JM. Vertical transmission of hepatitis C virus-like nonprimate hepacivirus in horses. *J Gen Virol.* 2016 Oct;97(10):2540-2551. doi: 10.1099/jgv.0.000561. Epub 2016 Jul 26.
16. **Pfaender S***, Grabski E*, Detje CN, Riebesehl N, Lienenklaus S, Steinmann E, Kalinke U, Pietschmann T. Hepatitis C Virus Stimulates Murine CD8 α -Like Dendritic Cells to Produce Type I Interferon in a TRIF-Dependent Manner. *PLoS Pathog.* 2016 Jul 6;12(7):e1005736. doi: 10.1371/journal.ppat.1005736. eCollection 2016 Jul.
17. Walter S, Bollenbach A, Doerrbecker J, **Pfaender S**, Brown RJ, Vieyres G, Scott C, Foster R, Kumar A, Zitzmann N, Griffin S, Penin F, Pietschmann T, Steinmann E. Ion-channel function and cross-species determinants in viral assembly of nonprimate hepacivirus p7. *J Virol.* 2016 Apr 29;90(10):5075-5089. doi: 10.1128/JVI.00132-16. Print 2016 May 15.
18. Postel A, Cavalleri JM, **Pfaender S**, Walter S, Steinmann E, Fischer N, Feige K, Haas L and Becher P. Frequent presence of hepac and pegiviruses in commercial equine serum pools. *VETMIC* 2015 <http://dx.doi.org/10.1016/j.vetmic.2015.10.032>
19. Walker A, Skibbe K, Steinmann E, **Pfaender S**, Kuntzen T, Megger DA, Groten S, Sitek B, Lauer GM, Kim AY, Pietschmann T, Allen TM, Timm J. Distinct escape pathway by HCV genotype 1a from a dominant CD8⁺ T cell response by selection of altered epitope processing. *J Virol.* 2015 Oct 7. pii: JVI.01993-15.
20. Stöhr S, Costa R, Sandmann L, Westhaus S, **Pfaender S**, Anggakusuma, Dazert E, Meuleman P, Vondran FW, Manns MP, Steinmann E, von Hahn T, Ciesek S. Host cell mTORC1 is required for HCV RNA replication. *Gut.* 2016 Dec;65(12):2017-2028. doi: 10.1136/gutjnl-2014-308971. Epub 2015 Aug 14
21. **Pfaender S***, Walter S*, Todt D, Behrendt P, Doerrbecker J, Wölk B, Engelmann M, Gravemann U, Seltsam A, Steinmann J, Burbelo PD, Klawonn F, Feige K, Pietschmann T, Cavalleri JM, Steinmann E. Assessment of cross-species transmission of hepatitis C virus-related non-primate hepacivirus in a population of humans at high risk of exposure. *J Gen Virol.* 2015 Sep;96(9):2636-42. doi: 10.1099/vir.0.000208. Epub 2015 Jun 3.
22. Grabski E, Wappler I, **Pfaender S**, Steinmann E, Haid S, Dzionek A, Pietschmann T, Kalinke U. Efficient virus assembly, but not infectivity, determines the magnitude of hepatitis C virus induced interferon- α responses of plasmacytoid dendritic cells. *J Virol.* 2015 Mar 15;89(6):3200-8
23. **Pfaender S***, Cavalleri JM*, Walter S, Doerrbecker J, Campana B, Brown RJ, Burbelo PD, Postel A, Hahn K, Kusuma A, Riebesehl N, Baumgärtner W, Becher P, Heim MH, Pietschmann

- T, Feige K, Steinmann E. Clinical course of infection and viral tissue tropism of hepatitis C virus-like non-primate hepaciviruses. *Hepatology*. 2015 Feb;61(2):448-59
24. **Pfaender S**, Brinkmann J, Todt D, Riebesehl N, Steinmann J, Steinmann J, Pietschmann T, Steinmann E. Mechanisms of Methods for Hepatitis C Virus Inactivation. *Appl Environ Microbiol*. 2015 Mar 1;81(5):1616-21
25. Anggakusuma, Colpitts CC, Schang LM, Rachmawati H, Frentzen A, **Pfaender S**, Behrendt P, Brown RJ, Bankwitz D, Steinmann J, Ott M, Meuleman P, Rice CM, Ploss A, Pietschmann T, Steinmann E. Turmeric curcumin inhibits entry of all hepatitis C virus genotypes into human liver cells. *Gut*. 2014 Jul 63(7):1137-49
26. **Pfaender S**, Heyden J, Friesland M, Ciesek S, Ejaz A, Steinmann J, Steinmann J, Malarski A, Stoiber H, Tsiavaliaris G, Bader W, Jahreis G, Pietschmann T, Steinmann E. Inactivation of hepatitis C virus infectivity by human breast milk. *J Infect Dis*. 2013 Dec 15; 208(12):1943-52
27. Doerrbecker J, Meuleman P, Kang J, Riebesehl N, Wilhelm C, Friesland M, **Pfaender S**, Steinmann J, Pietschmann T, Steinmann E. Thermostability of seven hepatitis C virus genotypes in vitro and in vivo. *J Viral Hepat*. 2013 Jul;20(7):478-85
28. von Hahn T, Schiene-Fischer C, Van ND, **Pfaender S**, Karavul B, Steinmann E, Potthoff A, Strassburg C, Hamdi N, Abdelaziz AI, Sarrazin C, Müller T, Berg T, Trépo E, Wedemeyer H, Manns MP, Pietschmann T, Ciesek S. Hepatocytes that express variants of cyclophilin A are resistant to HCV infection and replication. *Gastroenterology*. 2012 Aug;143(2):439-47

Reviews

1. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. Kampf G, Todt D, **Pfaender S**, Steinmann E. *J Hosp Infect*. 2020 Mar;104(3):246-251. doi: 10.1016/j.jhin.2020.01.022. Epub 2020 Feb 6. Review.
2. Alves MP[#], Vielle NJ, Thiel V[#], **Pfaender S**[#], Research Models and Tools for the Identification of Antivirals and Therapeutics against Zika Virus Infection. *Viruses*. 2018 Oct 30;10(11). pii: E593. doi: 10.3390/v10110593. Review.
3. **Pfaender S**, von Hahn T, Steinmann J, Ciesek S, Steinmann E. Prevention strategies for blood-borne viruses-in the Era of vaccines, direct acting antivirals and antiretroviral therapy. *Rev Med Virol*. 2016 Sep;26(5):330-9. doi: 10.1002/rmv.1890. Review.
4. **Pfaender S**, Brown RJ., Pietschmann T., Steinmann E. Natural Reservoirs for Homologs of Hepatitis C Virus. *Emerging Microbes & Infections* (2014) **3**, e21

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