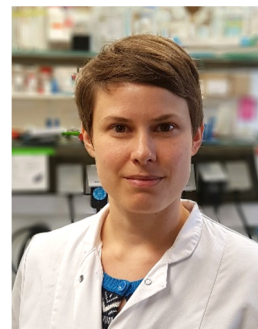


Dr. rer. nat

## Lena Allweiss

Human Biologist



### Affiliation

I. Department of Internal Medicine  
Viral Hepatitis Unit  
University Medical Center Hamburg-Eppendorf  
Martinistr. 52  
20246 Hamburg

### Scientific Career

Current position

**Postdoctoral fellow** in the lab of Prof. Dr. Dandri, Department of Internal Medicine, University Medical Centre Hamburg-Eppendorf, Germany

**Research focus:** Hepatitis B virus and cccDNA, Hepatitis Delta virus, innate immunity, human liver chimeric mice, antiviral drug testing

### Fellowships, invited lectures and research stays abroad

since 2021	Member of German Center for Infection Research ( <b>DZIF</b> ): Co-lead within the Hepatitis B cure project
since 2017	<b>International Coalition to Eliminate HBV (ICE-HBV)</b> : Coordinator of the cccDNA harmonization project within the Virology group and member of the protocol database group
06/2021	Invited lecture at the <b>ILC 2021</b>
01/2018	Visiting scientist in the research lab at <b>Gilead Sciences</b> , Foster City, USA
05/2017	Invited lecture at the <b>ANRS HBV Cure Workshop</b>
09/2016	<b>Travel grant from the Collaborative Research Centre 841</b> : Visiting scientist in the lab of Prof. Dr. Zoulim, Lyon, France.
10 – 11/2012	<b>EASL Sheila Sherlock short-term fellowship</b> : Visiting scientist in the lab of Prof. Dr. Pollicino, Messina, and Prof. Dr. Levrero, Rome, Italy.

### Academic Education

01/2010 – 09/2013	<b>Doctoral thesis/ PhD</b> in the lab of Prof. Dr. Dandri, Department of Internal Medicine, University Medical Centre Hamburg-Eppendorf, Germany: "Molecular mechanisms of chronic HBV infection: Investigation on factors influencing the cccDNA" Final grade: 1.0 (magna cum laude) <b>Member of the graduate school</b> "Inflammation and regeneration" of the Collaborative Research Centre 841 (SFB 481)
10/2002 – 03/2009	<b>Studies of Human Biology</b> at the department of medicine, Philipps-Universität, Marburg, Germany Degree: Diploma (final grade 1.0) Diploma thesis at the Institute for Molecular Biology and Tumor Research, Philipps-Universität Marburg (Prof. Dr. Suske): "Investigations on the expression and function of the transcription factor Sp2"

## Publication list

Allweiss L\*, Giersch K\*, Piroso A, Volz T, Muench RC, Beran RK, Urban S, Javanbakht H, Fletcher SP, Lütgehetmann M, Dandri M. **Therapeutic shutdown of HBV transcripts promotes reappearance of the SMC5/6 complex and silencing of the viral genome in vivo.** Gut. 2021 (\*shared first authorship)

Giersch K, Hermanussen L, Volz T, Kah J, Allweiss L, Casey J, Sureau C, Dandri M, Lütgehetmann M. **Murine hepatocytes do not support persistence of Hepatitis D virus mono-infection in vivo.** Liver Int. 2021

Matschke J, Lütgehetmann M, Hagel C, Sperhake JP, Schröder AS, Edler C, Mushumba H, Fitzek A, Allweiss L, Dandri M, Dottermusch M, Heinemann A, Pfefferle S, Schwabenland M, Sumner Magruder D, Bonn S, Prinz M, Gerloff C, Püschel K, Krasemann S, Aepfelbacher M, Glatzel M. **Neuropathology of patients with COVID-19 in Germany: a post-mortem case series.** Lancet Neurol. 2020

Tu T, Zehnder B, Qu B, Ni Y, Main N, Allweiss L, Dandri M, Shackel N, George J, Urban S. **A novel method to precisely quantify hepatitis B virus covalently closed circular (ccc)DNA formation and maintenance.** Antiviral Res. 2020

Puelles VG, Lütgehetmann M, Lindenmeyer MT, Sperhake JP, Wong MN, Allweiss L, Chilla S, Heinemann A, Wanner N, Liu S, Braun F, Lu S, Pfefferle S, Schröder AS, Edler C, Gross O, Glatzel M, Wichmann D, Wiech T, Kluge S, Püschel K, Aepfelbacher M, Huber TB. **Multiorgan and Renal Tropism of SARS-CoV-2.** N Engl J Med. 2020

Allweiss L, Strick-Marchand H. **In-vitro and in-vivo models for hepatitis B cure research.** Curr Opin HIV AIDS. 2020

Zhang Z, Trippler M, Real CI, Werner M, Luo X, Schefczyk S, Kemper T, Anastasiou OE, Ladiges Y, Treckmann J, Paul A, Baba HA, Allweiss L, Dandri M, Gerken G, Wedemeyer H, Schlaak JF, Lu M, Broering R. **Hepatitis B Virus Particles Activate Toll-Like Receptor 2 Signaling Initially Upon Infection of Primary Human Hepatocytes.** Hepatology. 2020

Yan Y, Allweiss L, Yang D, Kang J, Wang J, Qian X, Zhang T, Liu H, Wang L, Liu S, Sui J, Chen X, Dandri M, Zhao J, Lu F. **Down-regulation of cell membrane localized NTCP expression in proliferating hepatocytes prevents hepatitis B virus infection.** Emerg Microbes Infect. 2019

Wisskirchen K, Kah J, Malo A, Asen T, Volz T, Allweiss L, Wettengel JM, Lütgehetmann M, Urban S, Bauer T, Dandri M, Protzer U. **T cell receptor grafting allows virological control of Hepatitis B virus infection.** J Clin Invest. 2019

Giersch K, Bhadra OD, Volz T, Allweiss L, Riecken K, Fehse B, Lohse AW, Petersen J, Sureau C, Urban S, Dandri M, Lütgehetmann M. **Hepatitis delta virus persists during liver regeneration and is amplified through cell division both in vitro and in vivo.** Gut. 2019

Klumpp K, Shimada T, Allweiss L, Volz T, Lütgehetmann M, Hartman G, Flores OA, Lam AM, Dandri M. **Efficacy of NVR 3-778, Alone and In Combination With Pegylated Interferon, vs Entecavir In uPA/SCID Mice With Humanized Livers and HBV Infection.** Gastroenterology. 2018

Allweiss L, Volz T, Giersch K, Kah J, Raffa G, Petersen J, Lohse AW, Beninati C, Pollicino T, Urban S, Lütgehetmann M, Dandri M. **Proliferation of primary human hepatocytes and prevention of hepatitis B virus reinfection efficiently deplete nuclear cccDNA in vivo.** Gut. 2018

Kah J, Koh S, Volz T, Ceccarello E, [Allweiss L](#), Lütgehetmann M, Bertoletti A, Dandri M. **Lymphocytes transiently expressing virus-specific T cell receptors reduce hepatitis B virus infection.** J Clin Invest. 2017

[Allweiss L](#), Dandri M. **The Role of cccDNA in HBV Maintenance.** Viruses. 2017

Giersch K, Homs M, Volz T, Helbig M, [Allweiss L](#), Lohse AW, Petersen J, Buti M, Pollicino T, Sureau C, Dandri M, Lütgehetmann M. **Both interferon alpha and lambda can reduce all intrahepatic HDV infection markers in HBV/HDV infected humanized mice.** Sci Rep. 2017

[Allweiss L](#), Lütgehetmann M, Dandri M. **Immunofluorescent Staining for the Detection of the Hepatitis B Core Antigen in Frozen Liver Sections of Human Liver Chimeric Mice.** Methods Mol Biol. 2017

Giersch K, [Allweiss L](#), Volz T, Dandri M, Lütgehetmann M. **Serum HBV pgRNA as a clinical marker for cccDNA activity.** J Hepatol. 2017

[Allweiss L](#), Dandri M. **Experimental in vitro and in vivo models for the study of human hepatitis B virus infection.** J Hepatol. 2016

Bierwolf J, Volz T, Lütgehetmann M, [Allweiss L](#), Riecken K, Warlich M, Fehse B, Kalff JC, Dandri M, Pollok JM. **Primary Human Hepatocytes Repopulate Livers of Mice After In Vitro Culturing and Lentiviral-Mediated Gene Transfer.** Tissue Eng Part A. 2016

[Allweiss L](#), Gass S, Giersch K, Groth A, Kah J, Volz T, Rapp G, Schöbel A, Lohse AW, Polywka S, Pischke S, Herker E, Dandri M, Lütgehetmann M. **Human liver chimeric mice as a new model of chronic hepatitis E virus infection and preclinical drug evaluation.** J Hepatol. 2016

Giersch K, [Allweiss L](#), Volz T, Helbig M, Bierwolf J, Lohse AW, Pollok JM, Petersen J, Dandri M, Lütgehetmann M. **Hepatitis Delta co-infection in humanized mice leads to pronounced induction of innate immune responses in comparison to HBV mono-infection.** J Hepatol. 2015

Oehler N, Volz T, Bhadra OD, Kah J, [Allweiss L](#), Giersch K, Bierwolf J, Riecken K, Pollok JM, Lohse AW, Fehse B, Petersen J, Urban S, Lütgehetmann M, Heeren J, Dandri M. **Binding of hepatitis B virus to its cellular receptor alters the expression profile of genes of bile acid metabolism.** Hepatology. 2014

[Allweiss L](#), Volz T, Lütgehetmann M, Giersch K, Bornscheuer T, Lohse AW, Petersen J, Ma H, Klumpp K, Fletcher SP, Dandri M. **Immune cell responses are not required to induce substantial hepatitis B virus antigen decline during pegylated interferon-alpha administration.** J Hepatol. 2014

Giersch K, Helbig M, Volz T, [Allweiss L](#), Mancke LV, Lohse AW, Polywka S, Pollok JM, Petersen J, Taylor J, Dandri M, Lütgehetmann M. **Persistent hepatitis D virus mono-infection in humanized mice is efficiently converted by hepatitis B virus to a productive co-infection.** J Hepatol. 2014

Volz T\*, [Allweiss L](#)\*, Ben MBarek M, Warlich M, Lohse AW, Pollok JM, Alexandrov A, Urban S, Petersen J, Lütgehetmann M, Dandri M. **The entry inhibitor Myrcludex-B efficiently blocks intrahepatic virus spreading in humanized mice previously infected with hepatitis B virus.** J Hepatol. 2013 (\*shared first authorship)

Volz T, Lütgehetmann M, [Allweiss L](#), Warlich M, Bierwolf J, Pollok JM, Petersen J, Matthes E, Dandri M. **Strong antiviral activity of the new I-hydroxycytidine derivative, I-Hyd4FC, in HBV-infected human chimeric uPA/SCID mice.** Antivir Ther. 2012

Belloni L, Allweiss L, Guerrieri F, Pediconi N, Volz T, Pollicino T, Petersen J, Raimondo G, Dandri M, Levrero M. **IFN- $\alpha$  inhibits HBV transcription and replication in cell culture and in humanized mice by targeting the epigenetic regulation of the nuclear cccDNA minichromosome.** J Clin Invest. 2012

Lütgehetmann M, Mancke LV, Volz T, Helbig M, Allweiss L, Bornscheuer T, Pollok JM, Lohse AW, Petersen J, Urban S, Dandri M. **Humanized chimeric uPA mouse model for the study of hepatitis B and D virus interactions and preclinical drug evaluation.** Hepatology. 2011

Lütgehetmann M, Bornscheuer T, Volz T, Allweiss L, Bockmann JH, Pollok JM, Lohse AW, Petersen J, Dandri M. **Hepatitis B virus limits response of human hepatocytes to interferon- $\alpha$  in chimeric mice.** Gastroenterology. 2011

Baur F, Nau K, Sadic D, Allweiss L, Elsässer HP, Gillemans N, de Wit T, Krüger I, Vollmer M, Philipsen S, Suske G. **Specificity protein 2 (Sp2) is essential for mouse development and autonomous proliferation of mouse embryonic fibroblasts.** PLoS One. 2010