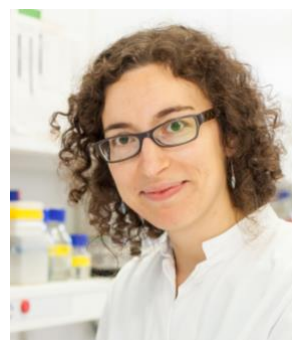


Gabrielle VIEYRES

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RESEARCH POSITIONS AND EDUCATION

- Since 2020** **Head of the junior research group “Cell biology of RNA viruses”**
Leibniz Institute of Virology, Hamburg, Germany.
- Spring 2014** **Visiting scientist**
University of Yale, New Haven, US. Boyer Center for Molecular Medicine (Dr. B. D. Lindenbach)
Spinning disc confocal microscopy on live cells
- 2011-2020** **Postdoctoral research**
Twincore, Hannover (Pr. Th. Pietschmann)
Host and viral factors in hepatitis C virus assembly
- 2006-2010** **International joint PhD**
Centre of Infection & Immunity, Lille, France (Dr. J. Dubuisson), and at the **MRC Virology**, Glasgow, UK (Dr. A.H. Patel).
Biochemical and Functional characterization of virion-associated hepatitis C virus envelope glycoproteins
Joint PhD degree from the Université Lille 2 (France) and Glasgow University (UK), obtained with “Félicitations du Jury” (*summa cum laude*)
- 2004-2006** **Bachelor and Master of Molecular and Cellular Biology, Oncology**
“Ecole Normale Supérieure de Lyon” (ENS Lyon), with the following research internships:
- **ENS Lyon**, France (Dr. E. Manet)
Interaction between Epstein-Barr virus protein EB2 and the cellular proteins p54nrb and PSF
 - **MRC Virology**, Glasgow, UK (Dr. A.H. Patel)
Role of hypervariable region 1 of hepatitis C virus in virus entry and neutralization
 - **ENS Lyon**, France (Dr. A. Fournillier, Dr. G. Inschauspé)
Specific immunogenicity of Core and ARFP from hepatitis C virus in mice
 - **Université de Bourgogne**, Dijon, France (Dr. B. Faivre)
Maternal antibody transfer in pigeons and adaptive effect.

LIST OF PUBLICATIONS

Peer-reviewed original research articles

1. PicPreview and PicSummary: Two Timesaving Plugins for the Fluorescence Microscopist. **Cells** (2021).
Vieyres G*. * Corresponding author
2. Initial HCV infection of adult hepatocytes triggers a temporally structured transcriptional program containing diverse pro- and anti-viral elements. **Journal of Virology** (2021).
Tegtmeyer B, **Vieyres G**, Todt D, Lauber C, Ginkel C, Engelmann M, Herrmann M, Pfaller CK, Vondran FWR, Broering R, Vafadarnejad E, Saliba A-E, Puff C, Baumgärtner W, Miskey C, Ivics Z, Steinmann E, Pietschmann T, Brown RJP.
3. Liver-expressed Cd302 and Cr1l limit hepatitis C virus cross-species transmission to mice. **Science Advances** (2020).
Brown RJP, Tegtmeyer B, Sheldon J, Khera T, Anggakusuma, Todt D, **Vieyres G**, Weller R, Joecks S, Zhang Y, Sake S, Bankwitz D, Welsch K, Ginkel C, Engelmann M, Gerold G, Steinmann E, Yuan Q, Ott M, Vondran FWR, Krey T, Ströh LJ, Miskey C, Ivics Z, Herder V, Baumgärtner W, Lauber C, Seifert M, Tarr AW, McClure CP, Randall G, Baktash Y, Ploss A, Thi VLD, Michailidis E, Saeed M, Verhoye L, Meuleman P, Goedecke N, Wirth D, Rice CM, Pietschmann T.
4. Controlled functional zonation of hepatocytes in vitro by engineering of Wnt signalling. **ACS Synthetic Biology** (2020).
Wahlicht T, **Vieyres G**, Bruns SA, Meumann N, Büning H, Hauser H, Schmitz I, Pietschmann T, Wirth D.
5. The ATGL lipase cooperates with ABHD5 to mobilize lipids for HCV assembly and lipoprotein production. **PLoS Pathogens** (2020).
Vieyres G*, Reichert I, Carpentier C, Vondran FW, Pietschmann T*. * Corresponding authors
6. C19orf66 is an interferon-induced inhibitor of HCV replication that restricts formation of the viral replication organelle. **Journal of Hepatology** (2020).
Kinast V, Plociennikowska A, Anggakusuma, Bracht T, Todt D, Brown RJ, Boldanova T, Zhang Y, Brueggemann Y, Friesland M, Engelmann M, **Vieyres G**, Broering R, Vondran FWR, Heim MH, Sitek B, Bartenschlager R, Pietschmann T, Steinmann E.
7. Identification of Keratin 23 as a Hepatitis C Virus-Induced Host Factor in the Human Liver. **Cells** (2019).
Kinast V, Leber SL, Brown RJP, **Vieyres G**, Behrendt P, Eßbach C, Strnad P, Vondran FWR, Cornberg M, Wex C, Pietschmann T, Haybaeck J, Todt D, Steinmann E.
8. The small compound inhibitor K22 displays broad antiviral activity against different members of the family Flaviviridae and offers potential as pan-viral inhibitor. **Antimicrobial Agents and Chemotherapy** (2018).
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.
9. cGAS-mediated innate immunity spreads intercellularly through HIV-1 Env-induced membrane fusion sites. **Cell Host Microbe** (2016).

- Xu S, Ducroux A, Ponnurangam A, **Vieyres G**, Franz S, Müsken M, Zillinger T, Malassa A, Ewald E, Hornung V, Barchet W, Häussler S, Pietschmann T, Goffinet C.
10. Hepaciviral NS3/4A proteases interfere with MAVS signalling of their cognate animal hosts and also with human MAVS: implications for zoonotic transmission. **Journal of Virology** (2016).
Anggakusuma, Brown RJ, Banda D, Todt D, **Vieyres G**, Steinmann E, Pietschmann T.
 11. ABHD5/CGI-58, the Chanarin-Dorfman syndrome protein, mobilises lipid stores for hepatitis C virus production. **PLoS Pathogens** (2016). Selected by the Editors-in-chief as the week featured research, for a press release and as image cover for the month issue.
Vieyres G, Welsch K, Gerold G, Gentzsch J, Kahl S, Vondran FW, Kaderali L, Pietschmann T.
 12. Ion channel function and cross-species determinants in viral assembly of nonprimate hepacivirus p7. **Journal of Virology** (2016).
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.
 13. Antiviral activity of different interferon (sub-) types against hepatitis E virus replication. **Antimicrobial Agents and Chemotherapy** (2016).
Todt D, Francois C, Anggakusuma, Behrendt P, Engelmann M, Knegendorf L, **Vieyres G**, Wedemeyer H, Hartmann R, Pietschmann T, Duverlie G, Steinmann E.
 14. Several human liver cell expressed apolipoproteins complement HCV virus production with varying efficacy conferring differential specific infectivity to released viruses. **PLoS One** (2015).
Hueging K, Weller R, Doepke M, **Vieyres G**, Todt D, Wölk B, Vondran FW, Geffers R, Lauber C, Kaderali L, Penin F, Pietschmann T.
 15. Transcriptome analysis reveals a classical interferon signature induced by IFN λ 4 in human primary cells. **Genes & Immunity** (2015).
Lauber C*, **Vieyres G***, Terczyńska-Dyla E, Anggakusuma, Dijkman R, Gad HH, Akhtar H, Geffers R, Vondran FW, Thiel V, Kaderali L, Pietschmann T, Hartmann R. * *Equal contribution*
 16. Role of the hypervariable region 1 (HVR1) for the interplay of hepatitis C virus with entry factors and lipoproteins. **Journal of Virology** (2014).
Bankwitz D, **Vieyres G**, Hueging K, Bitzegeio J, Doepke M, Chhatwal P, Haid S, Catanese MT, Zeisel MB, Nicosia A, Baumert TF, Kaderali L, Pietschmann T.
 17. Apolipoprotein E co-determines tissue-tropism of hepatitis C virus and it is crucial for viral cell-to-cell transmission by contributing to a post-envelopment step of assembly. **Journal of Virology** (2014).
Hueging K, Doepke M, **Vieyres G**, Bankwitz D, Frentzen A, Doerrbecker J, Gumz F, Haid S, Wölk B, Kaderali L, Pietschmann T.
 18. Interferon lambda 4 signals via the IFN λ receptor to regulate antiviral activity against HCV and coronaviruses. **The EMBO Journal** (2013).
Hamming OJ, Terczyńska-Dyla E, **Vieyres G**, Dijkman R, Jørgensen SE, Akhtar H, Siupka P, Pietschmann T, Thiel V, Hartmann R.
 19. Hepatitis C virus p7 is critical for capsid assembly and envelopment. **PLoS Pathogens** (2013).

- Gentzsch J, Brohm C, Steinmann E, Friesland M, Menzel N, **Vieyres G**, Perin PM, Frentzen A, Kaderali L, Pietschmann T.
20. Subcellular localization and function of an epitope-tagged p7 viroporin in hepatitis C virus-producing cells. **Journal of Virology** (2013).
Vieyres G*, Brohm C*, Friesland M, Gentzsch J, Wölk B, Roingeard P, Steinmann E, Pietschmann T. * *Equal contribution*
 21. Characterization of antibody-mediated neutralization directed against hypervariable region 1 of hepatitis C virus E2 glycoprotein. **Journal of General Virology** (2011).
Vieyres G, Dubuisson J, Patel AH.
 22. Characterization of the envelope glycoproteins associated with infectious hepatitis C virus. **Journal of Virology** (2010). *Featured in JVI spotlights*.
Vieyres G, Thomas X, Descamps V, Duverlie G, Patel AH, Dubuisson J.
 23. Envelope protein N-linked glycans on authentic hepatitis C virus are important for secretion, viral entry and protection against neutralization. **Journal of Virology** (2010).
Helle F, **Vieyres G**, Elkrief L, Popescu CI, Castelain S, Duverlie G, Dubuisson J.
 24. Rapid synchronization of hepatitis C virus infection by magnetic adsorption. **Journal of Virological Methods** (2009).
Vieyres G, Angus AG, Haberstroh A, Baumert TF, Dubuisson J, Patel AH.

Peer-reviewed review articles

1. Lipid Droplet Contact Sites in Health and Disease. **Trends in Cell Biology** (2021).
Herker E*, **Vieyres G***, Beller M*, Kraemer N*, Bohnert M*. * Corresponding authors
2. HCV Pit Stop at the Lipid Droplet: Refuel Lipids and Put on a Lipoprotein Coat before Exit. **Cells** (2019).
Vieyres G*, Pietschmann T*. * Corresponding authors
3. Incorporation of hepatitis C virus E1 and E2 glycoproteins: the keystones on a peculiar virion. **Viruses** (2014).
Vieyres G*, Dubuisson J, Pietschmann T. * Corresponding author
4. Entry and replication of recombinant hepatitis C viruses in cell culture. **Methods** (2013).
Vieyres G, Pietschmann T.
5. HCV requires a tight junction-associated protein for cell entry (review). **Future Virology** (2007).
Witteveldt J, **Vieyres G**, Patel AH.

Book chapter

1. Tracking hepatitis C virus interactions with the hepatic lipid metabolism – A hitchhiker’s guide to solve remaining translational research challenges in hepatitis C. **Chapter 66 of The Liver –**

Biology and Pathobiology, 6th edition. Edited by Irwin Arias, Harvey Alter, James Boyer, David Cohen, Snorri Torgeirsson, David Shafritz, and Allan Wolkoff (2020).

Vieyres G, Pietschmann T.

SELECTED ORAL PRESENTATIONS IN SCIENTIFIC MEETINGS

The activator-effector pair ABHD5 –ATGL draws triglycerides from the lipid droplets for HCV production.

French-speaking Virology Conference, Lyon, France (2019).

Lipid droplet biogenesis regulates HCV RNA replication.

French-speaking Virology Conference, Lyon, France (2019).

The activator-effector pair ABHD5 –ATGL draws triglycerides from the lipid droplets for HCV production.

25th International Symposium on HCV and Related Viruses, Dublin, Ireland (2018).

ABHD5/CGI-58, the causative protein for the Chananin-Dorfman syndrome, consumes lipid droplets to support assembly and release of the hepatitis C lipo-viro-particle.

Viruses Meeting - At the Forefront of Virus - Host Interactions, Basel, Switzerland (2016).

α/β hydrolase domain-containing protein 5 (ABHD5/CGI-58), the causative protein for Chananin-Dorfman syndrome, supports hepatitis C virus production.

25th Annual Meeting of the Society for Virology, Bochum, Germany (2015).

α/β hydrolase domain-containing protein 5 (ABHD5/CGI-58), the causative protein for Chananin-Dorfman syndrome, supports hepatitis C virus production.

Meeting of the French Agency for Research on AIDS and Viral Hepatitis (ANRS), Paris, France (2014).

Characterization of envelope glycoproteins associated with Hepatitis C Virus.

American Society for Virology 29th annual meeting, Bozeman, USA (2010).

Heterogeneity of envelope glycoproteins associated with Hepatitis C Virus.

French-speaking Virology Conference, Paris, France (2010).

Characterization of envelope glycoproteins associated with Hepatitis C Virus.

Meeting of the French Agency for Research on AIDS and Viral Hepatitis (ANRS), Paris, France (2010).

REVIEWING

Ad hoc reviewer for Virus Research and Virology (since 2018), Cellular Microbiology (since 2019) Cellular and Molecular Gastroenterology and Hepatology and Journal of Virology (since 2020).

GRANTS, AWARDS AND SCHOLARSHIPS

2019 **Research grant of the German Research Foundation (DFG).** DFG project nb. 417852234: „The relevance of lipid droplet biogenesis to the hepatitis C virus replication organelle” (212 350 Euros)

2018 **Viruses travel award** for the participation to a virology conference

2016 **GlaxoSmithKline foundation travel award** for the participation in the FASEB conference “Lipid Droplets Dynamic Organelles in Metabolism and Beyond”, Snowmass, CO, USA

- FASEB privately funded travel award** (supported by the March of Dimes Foundation) for the participation in the FASEB conference "Lipid Droplets Dynamic Organelles in Metabolism and Beyond", Snowmass, CO, USA
- Boehringer Ingelheim Fonds travel grant** for the participation in the EMBL course "Advanced Fluorescence Imaging Techniques", EMBL, Heidelberg, Germany
- 2014** **EMBO Short-term fellowship award** (ASTF 246-2014). *Trafficking and function of ABHD5 during hepatitis C virus assembly in live infected cells*. Boyer Center for Molecular Medicine, University of Yale, New Haven, USA
- 2010** **Travel award for the American Society for Virology** 29th annual meeting
- 2008** **Blériot scholarship** from the "Conseil Régional Nord-Pas de Calais", promoting international mobility
- 2007-2010** **PhD Fellowship** from the French "Ministère de l'Éducation Nationale, de la Recherche et des Technologies"