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Short presentation

In the viral recombination area, I completed studies unravelling the mechanisms of recombination in HIV and their interplay with selective pressure on the viral population. In addition, I contributed significantly to developing systems for the study of HCV recombination, revealing this virus capability for high frequency recombination. I had a major role in developing microscopy and bioinformatics systems to image and track HIV viral particles in real-time, which also allowed my investigations in HCV packaging and subcellular interactions. I also participated in collaborative studies investigating drug resistance development and neutralization of HCV in cell culture systems. More recently, I contributed microscopy data and analyses to studies of the novel SARS-CoV-2 pathogen. I have recently initiated cell culture based studies of HBV biology, including replication, antiviral resistance, and viral clearance.

Employment

Associate Professor
Virology

København N.
1 Mar 2019 → nu

Research outputs

Differential activity of nucleotide analogs against tick-borne encephalitis and yellow fever viruses in human cell lines
Binderup, A., Galli, Andrea, Fossat, Nicolas Julien, Fernandez-Antunez, C., Mikkelsen, L. S., Rivera, Lizandro, Scheel, Troels Kasper Høyer, Fahnøe, Ulrik, Bukh, Jens & Ramirez, S., 2023, In: Virology. 585, p. 179-185 7 p.

Mechanisms and Consequences of Genetic Variation in Hepatitis C Virus (HCV)
Galli, Andrea & Bukh, Jens, 2023, *Viral Fitness and Evolution: Population Dynamics and Adaptive Mechanisms.* Springer, p. 237-264 28 p. (Current Topics in Microbiology and Immunology, Vol. 439).

High recombination rate of hepatitis C virus revealed by a green fluorescent protein reconstitution cell system
Galli, Andrea, Fahnøe, Ulrik & Bukh, Jens, 2022, In: Virus Evolution. 8, 1, veab106.

Versatile SARS-CoV-2 Reverse-Genetics Systems for the Study of Antiviral Resistance and Replication
Fahnøe, Ulrik, Pham, Long, Fernandez-Antunez, C., Costa, Rui, Rivera, Lizandro, Galli, Andrea, Feng, S., Mikkelsen, L. S., Gottwein, Judith Margarete, Scheel, Troels Kasper Høyer, Ramirez Almeida, Santseharay & Bukh, Jens, 2022, In: Viruses. 14, 2, 172.

Efficacy of ion-channel inhibitors amantadine, memantine and rimantadine for the treatment of SARS-CoV-2 in vitro
Zhou, Y., Gammeltoft, Karen Anbro, Galli, Andrea, Offersgaard, Anna Falden, Fahnøe, Ulrik, Ramirez Almeida, Santseharay, Bukh, Jens & Gottwein, Judith Margarete, 2021, In: Viruses. 13, 10, 2082.

Hepatitis C Virus Protease Inhibitors Show Differential Efficacy and Interactions with Remdesivir for Treatment of SARS-CoV-2 *in Vitro*
Gammeltoft, Karen Anbro, Zhou, Y., Duarte Hernandez, C. R., Galli, Andrea, Offersgaard, Anna Falden, Costa, Rui, Pham, Long, Fahnøe, Ulrik, Feng, S., Scheel, Troels Kasper Høyer, Ramirez Almeida, Santseharay, Bukh, Jens & Gottwein, Judith Margarete, 2021, In: Antimicrobial Agents and Chemotherapy. 65, 9, e02680-20.

Lipid Droplets Accumulation during Hepatitis C Virus Infection in Cell-Culture Varies among Genotype 1-3 Strains and Does Not Correlate with Virus Replication
Galli, Andrea, Ramirez Almeida, Santseharay & Bukh, Jens, 2021, In: Viruses. 13, 3, 389.

Overcoming culture restriction for SARS-CoV-2 in human cells facilitates the screening of compounds inhibiting viral replication
Ramirez Almeida, Santseharay, Fernandez-Antunez, C., Galli, Andrea, Underwood, Alexander Paul James, Pham, Long, Ryberg, Line Abildgaard, Feng, S., Pedersen, M. S., Mikkelsen, L. S., Belouzard, S., Dubuisson, J., Sølund, C., Weis, Nina, Gottwein, Judith Margarete, Fahnøe, Ulrik & Bukh, Jens, 2021, In: Antimicrobial Agents and Chemotherapy. 65, 7, 20 p., e00097-21.

Mutations Identified in the Hepatitis C Virus (HCV) Polymerase of Patients with Chronic HCV Treated with Ribavirin Cause Resistance and Affect Viral Replication Fidelity
Mejer, N., Fahnøe, Ulrik, Galli, Andrea, Ramirez Almeida, Santseharay, Weiland, O., Benfield, Thomas & Bukh, Jens, 2020, In: Antimicrobial Agents and Chemotherapy. 64, 12

Ribavirin inhibition of cell-culture infectious hepatitis C genotype 1-3 viruses is strain-dependent
Mejer, N., Galli, Andrea, Ramirez Almeida, Santseharay, Fahnøe, Ulrik, Benfield, Thomas & Bukh, Jens, 2020, In: Virology. 540, p. 132-140 9 p.

Hepatitis C Virus–Escape Studies for Human Monoclonal Antibody AR4A Reveal Isolate-Specific Resistance and a High Barrier to Resistance
Velázquez-moctezuma, R., Galli, Andrea, Law, M., Bukh, Jens & Prentø, Jannick, 2019, In: The Journal of Infectious Diseases. 219, 1, p. 68-79

Hepatitis C virus escape studies of human antibody AR3a reveal a high barrier to resistance and novel insights on viral antibody evasion mechanisms
Velázquez-Moctezuma, R., Galli, Andrea, Law, M., Bukh, Jens & Prentø, Jannick, 2019, In: Journal of Virology. 93, 4, 27 p., e0190918.

Hypervariable region 1 and N-linked glycans of hepatitis C regulate virion neutralization by modulating envelope conformations
Prentø, Jannick, Velázquez-Moctezuma, R., Augestad, E. H., Galli, Andrea, Wang, R., Law, M., Alter, H. & Bukh, Jens, 2019, In: Proceedings of the National Academy of Sciences of the United States of America. 116, 20, p. 10039-10047 9 p.

Antiviral Effect of Ribavirin against HCV Associated with Increased Frequency of G-to-A and C-to-U Transitions in Infectious Cell Culture Model
Galli, Andrea, Mens, H., Gottwein, Judith Margarete, Gerstoft, Jan & Bukh, Jens, 2018, In: Scientific Reports. 8, 1, 13 p., 4619.

Ribavirin-induced mutagenesis across the complete open reading frame of hepatitis C virus genotypes 1a and 3a
Mejer, N., Fahnøe, Ulrik, Galli, Andrea, Ramirez Almeida, Santseharay, Benfield, Thomas & Bukh, Jens, 2018, In: Journal of General Virology. 99, 8, p. 1066-1077 12 p., 001095.

Interactions between HIV-1 Gag and viral RNA genome enhance virion assembly
Dilley, K. A., Nikolaitchik, O. A., Galli, Andrea, Burdick, R. C., Levine, L., Li, K., Rein, A., Pathak, V. K. & Hu, W. S., 1 Aug 2017, In: Journal of Virology. 91, 16, e02319-16.

Cytoplasmic HIV-1 RNA is mainly transported by diffusion in the presence or absence of Gag protein
Chen, J., Grunwald, D., Sardo, L., Galli, Andrea, Plisov, S., Nikolaitchik, O. A., Chen, D., Lockett, S., Larson, D. R., Pathak, V. K. & Hu, W. S., 17 Nov 2014, In: Proceedings of the National Academy of Sciences of the United States of America. 111, 48, p. E5205-E5213

Determining the frequency and mechanisms of HIV-1 and HIV-2 RNA copackaging by single-virion analysis
Dilley, K. A., Ni, N., Nikolaitchik, O. A., Chen, J., Galli, Andrea & Hu, W. S., Oct 2011, In: Journal of Virology. 85, 20, p. 10499-10508 10 p.

Mechanisms and factors that influence high frequency retroviral recombination
Delviks-Frankenberry, K., Galli, Andrea, Nikolaitchik, O., Mens, H., Pathak, V. K. & Hu, W. S., Sep 2011, In: Viruses. 3, 9, p. 1650-1680 31 p.

Mechanisms of human immunodeficiency virus type 2 RNA Packaging: Efficient trans packaging and selection of RNA copackaging partners
Ni, N., Nikolaitchik, O. A., Dilley, K. A., Chen, J., Galli, Andrea, Fu, W., Prasad, V. V. S. P., Ptak, R. G., Pathak, V. K. & Hu, W. S., Aug 2011, In: Journal of Virology. 85, 15, p. 7603-7612 10 p.

Multiple barriers to recombination between divergent HIV-1 variants revealed by a dual-marker recombination assay
Nikolaitchik, O. A., Galli, Andrea, Moore, M. D., Pathak, V. K. & Hu, W. S., 8 Apr 2011, In: Journal of Molecular Biology. 407, 4, p. 521-531 11 p.

Patterns of human immunodeficiency virus type 1 recombination ex vivo provide evidence for coadaptation of distant sites, resulting in purifying selection for intersubtype recombinants during replication
Galli, Andrea, Kearney, M., Nikolaitchik, O. A., Yu, S., Chin, M. P. S., Maldarelli, F., Coffin, J. M., Pathak, V. K. & Hu, W. S., Aug 2010, In: Journal of Virology. 84, 15, p. 7651-7661 11 p.

Delineation of the preferences and requirements of the human immunodeficiency virus type 1 dimerization initiation signal by using an in vivo cell-based selection approach
Hussein, I. T. M., Ni, N., Galli, Andrea, Chen, J., Moore, M. D. & Hu, W. S., Jul 2010, In: Journal of Virology. 84, 13, p. 6866-6875 10 p.

Recombination analysis and structure prediction show correlation between breakpoint clusters and RNA hairpins in the pol gene of human immunodeficiency virus type 1 unique recombinant forms
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Evidence of differential selection of HIV-1 variants carrying drug-resistant mutations in seroconverters
Corvasce, S., Violin, M., Romano, L., Razzolini, F., Vicenti, I., Galli, Andrea, Duca, P., Caramma, I., Balotta, C. & Zazzi, M. , 2006, In: Antiviral Therapy. 11, 3, p. 329-334 6 p.