

Jussi Hepojoki
Academy Research Fellow, Supervisor for doctoral programme
Department of Virology
Department of Virology
Helsinki One Health (HOH)
Viral Zoonosis Research Unit
Doctoral Programme in Microbiology and Biotechnology
Doctoral Programme in Biomedicine
Doctoral Programme in Clinical Veterinary Medicine



Postal address:

PL 21 (Haartmaninkatu 3)
00014
Finland

Postal address:

PL 21 (Haartmaninkatu 3)
E373
HELSINGIN YLIOPISTO
Finland

Postal address:

Finland

Email: jussi.hepojoki@helsinki.fi

Phone: +358294126608, 0294126608

Mobile: 0504482866, +358504482866

Publications

Neutralizing Antibody Titers in Hospitalized Patients with Acute Puumala Orthohantavirus Infection Do Not Associate with Disease Severity

Iheozor-Ejiofor, R., Vapalahti, K., Sironen, T., Levanov, L., Hepojoki, J., Lundkvist, Å., Mäkelä, S., Vaheri, A., Mustonen, J., Plyusnin, A., Strandin, T. M. & Vapalahti, O., May 2022, In: *Viruses (Basel)*. 14, 5, 15 p., 901.

Short '1.2x Genome' Infectious Clone Initiates Kolmiovirid Replication in *Boa constrictor* Cells

Szirovicza, L., Hetzel, U., Kipar, A. & Hepojoki, J., Jan 2022, In: *Viruses (Basel)*. 14, 1, 21 p., 107.

Intranasal inhibitor blocks omicron and other variants of SARS-CoV-2

Mäkelä, A. R., Ugurlu, H., Hannula, L. V., Salminen, P. S., Kant, R., Fagerlund, R., Haveri, A., Strandin, T., Kareinen, L., Hepojoki, J., Levanov, L., Pasternack, A., Naves, R., Ritvos, O., Osterlund, P., Sironen, T., Vapalahti, O., Kipar, A., Huiskonen, J. T., Rissanen, I. & 1 others, Saksela, K., 28 Dec 2021, (Submitted) In: *Research Square*.

2021 Taxonomic update of phylum Negarnaviricota (Riboviria: Orthornavirae), including the large orders Bunyvirales and Mononegavirales

Kuhn, J. H., Adkins, S., Agwanda, B. R., Al Kubrusli, R., Alkhovsky, S. V., Amarasinghe, G. K., Avsic-Zupanc, T., Ayllon, M. A., Bahl, J., Balkema-Buschmann, A., Ballinger, M. J., Basler, C. F., Bavari, S., Beer, M., Bejerman, N., Bennett, A. J., Bente, D. A., Bergeron, E., Bird, B. H., Blair, C. D. & 231 others, Blasdel, K. R., Blystad, D-R., Bojko, J., Borth, W. B., Bradfute, S., Breyta, R., Briese, T., Brown, P. A., Brown, J. K., Buchholz, U. J., Buchmeier, M. J., Bukreyev, A., Burt, F., Buettner, C., Calisher, C. H., Cao, M., Casas, I., Chandran, K., Charrel, R. N., Cheng, Q., Chiaki, Y., Chiapello, M., Choi, I-R., Ciuffo, M., Clegg, J. C. S., Crozier, I., Dal Bo, E., de la Torre, J. C., de Lamballerie, X., de Swart, R. L., Debat, H., Dheilly, N. M., Di Cicco, E., Di Paola, N., Di Serio, F., Dietzgen, R. G., Digiaro, M., Dolnik, O., Drebot, M. A., Drexler, J. F., Dundon, W. G., Duprex, W. P., Durrwald, R., Dye, J. M., Easton, A. J., Ebihara, H., Elbeaino, T., Ergunay, K., Ferguson, H. W., Fooks, A. R., Forgia, M., Formenty, P. B. H., Franova, J., Freitas-Astua, J., Fu, J., Fuerl, S., Gago-Zachert, S., Gao, G. F., Garcia, M. L., Garcia-Sastre, A., Garrison, A. R., Gaskin, T., Gonzalez, J-P. J., Griffiths, A., Goldberg, T. L., Groschup, M. H., Guenther, S., Hall, R. A., Hammond, J., Han, T., Hepojoki, J., Hewson, R., Hong, J., Hong, N., Hongo, S., Horie, M., Hu, J. S., Hu, T., Hughes, H. R., Huettner, F., Hyndman, T. H., Ilyas, M., Jalkanen, R., Jiang, D., Jonson, G. B., Junglen, S., Kadono, F., Kaukinen, K. H., Kawate, M., Klempa, B., Klingstrom, J., Kobinger, G., Koloniuk, I., Kondo, H., Koonin, E. V., Krupovic, M., Kubota, K., Kurath, G., Laenen, L., Lambert, A. J., Langevin, S. L., Lee, B., Lefkowitz, E. J., Leroy, E. M., Li, S., Li, L., Li, J., Liu, H., Lukashevich, I. S., Maes, P., de Souza, W. M., Marklewitz, M., Marshall, S. H., Marzano, S-Y. L., Massart, S., McCauley, J. W., Melzer, M., Mielke-Ehret, N., Miller, K. M., Ming, T. J., Mirazimi, A., Mordecai, G. J., Muehlbach, H-P., Muehlberger, E., Naidu, R., Natsuaki, T., Navarro, J. A., Netesov, S. V., Neumann, G., Nowotny, N., Nunes, M. R. T., Olmedo-Velarde, A., Palacios, G., Pallas, V., Palyi, B., Papa, A., Paraskevopoulou, S., Park, A. C., Parrish, C. R., Patterson, D. A., Pauvolid-Correa, A., Paweska, J. T., Payne, S., Peracchio, C., Perez, D. R., Postler, T. S., Qi, L., Radoshitzky, S. R., Resende, R. O., Reyes, C. A., Rima, B. K., Luna, G. R., Romanowski, V., Rota, P., Rubbenstroth, D., Rubino, L., Runstadler, J. A., Sabanadzovic, S., Sall, A. A., Salvato, M. S., Sang, R., Sasaya, T.,

Schulze, A. D., Schwemmler, M., Shi, M., Shi, X., Shi, Z., Shimamoto, Y., Shirako, Y., Siddell, S. G., Simmonds, P., Sironi, M., Smaghe, G., Smither, S., Song, J-W., Spann, K., Spengler, J. R., Stenglein, M. D., Stone, D. M., Sugano, J., Suttle, C. A., Tabata, A., Takada, A., Takeuchi, S., Tchouassi, D. P., Teffer, A., Tesh, R. B., Thornburg, N. J., Tomitaka, Y., Tomonaga, K., Tordo, N., Torto, B., Townner, J. S., Tsuda, S., Tu, C., Turina, M., Tzanetakis, I. E., Uchida, J., Usugi, T., Vaira, A. M., Vallino, M., van den Hoogen, B., Varsani, A., Vasilakis, N., Verbeek, M., von Bargen, S., Wada, J., Wahl, V., Walker, P. J., Wang, L-F., Wang, G., Wang, Y., Wang, Y., Waqas, M., Wei, T., Wen, S., Whitfield, A. E., Williams, J. V., Wolf, Y. I., Wu, J., Xu, L., Yanagisawa, H., Yang, C., Yang, Z., Zerbini, F. M., Zhai, L., Zhang, Y-Z., Zhang, S., Zhang, J., Zhang, Z. & Zhou, X., Dec 2021, In: Archives of Virology. 166, 12, p. 3513-3566 54 p.

A subpopulation of arenavirus nucleoprotein localizes to mitochondria

Baggio, F., Hetzel, U., Nufer, L., Kipar, A. & Hepojoki, J., 26 Oct 2021, In: Scientific Reports. 11, 1, 19 p., 21048.

Hantavirus infection-induced B cell activation elevates free light chains levels in circulation

Hepojoki, J., Cabrera, L. E., Hepojoki, S., Bellomo, C., Kareinen, L., Andersson, L. C., Vaheri, A., Mäkelä, S., Mustonen, J., Vapalahti, O., Martinez, V. & Strandin, T., Aug 2021, In: PLoS Pathogens. 17, 8, 21 p., 1009843.

COVID-19 mRNA vaccine induced antibody responses against three SARS-CoV-2 variants

Jalkanen, P., Kolehmainen, P., Häkkinen, H. K., Huttunen, M., Tähtinen, P. A., Lundberg, R., Maljanen, S., Reinholm, A., Taurainen, S., Pakkanen, S. H., Levonen, I., Nousiainen, A., Miller, T., Välimaa, H., Ivaska, L., Pasternack, A., Naves, R., Ritvos, O., Österlund, P., Kuivanen, S. & 7 others, Smura, T., Hepojoki, J., Vapalahti, O., Lempainen, J., Kakkola, L., Kantele, A. & Julkunen, I., 28 Jun 2021, In: Nature Communications. 12, 1, 11 p., 3991.

Kinetics of neutralizing antibodies of covid-19 patients tested using clinical d614g, b.1.1.7, and b.1.351 isolates in microneutralization assays

Virtanen, J., Uusitalo, R., Korhonen, E. M., Aaltonen, K., Smura, T., Kuivanen, S., Pakkanen, S. H., Mero, S., Patjas, A., Riekkinen, M., Kantele, A., Nurmi, V., Hedman, K., Hepojoki, J., Sironen, T., Huhtamo, E. & Vapalahti, O., Jun 2021, In: Viruses (Basel). 13, 6, 9 p., 996.

New-onset type 1 diabetes in Finnish children during the COVID-19 pandemic

Salmi, H., Heinonen, S., Hästbacka, J., Lääperi, M., Rautiainen, P., Miettinen, P. J., Vapalahti, O., Hepojoki, J. & Knip, M., 26 May 2021, (E-pub ahead of print) In: Archives of Disease in Childhood. 6 p.

A Generic, Scalable, and Rapid Time-Resolved Förster Resonance Energy Transfer-Based Assay for Antigen Detection—SARS-CoV-2 as a Proof of Concept

Rusanen, J., Kareinen, L., Szivovics, L., Ugurlu, H., Levanov, L., Jääskeläinen, A., Ahava, M. J., Kurkela, S., Saksela, K., Hedman, K., Vapalahti, O. & Hepojoki, J., 18 May 2021, In: mBio. 12, 3, 11 p., e00902-21.

Evaluation of three rapid lateral flow antigen detection tests for the diagnosis of SARS-CoV-2 infection

Jääskeläinen, A. E., Ahava, M. J., Jokela, P., Szivovics, L., Pohjala, S., Vapalahti, O., Lappalainen, M., Hepojoki, J. & Kurkela, S., Apr 2021, In: Journal of Clinical Virology. 137, 4 p., 104785.

Experimental Reptarenavirus Infection of Boa constrictor and Python regius

Hetzel, U., Korzyukov, Y., Keller, S., Szivovics, L., Pesch, T., Vapalahti, O., Kipar, A. & Hepojoki, J. M., Apr 2021, In: Journal of Virology. 95, 7, 18 p., e01968-20.

A 10-Minute "Mix and Read" Antibody Assay for SARS-CoV-2

Rusanen, J., Kareinen, L., Levanov, L., Mero, S. M., Pakkanen, S. H., Kantele, A., Amanat, F., Krammer, F., Hedman, K., Vapalahti, O. & Hepojoki, J., Feb 2021, In: Viruses (Basel). 13, 2, 12 p., 143.

Molecular rationale for antibody-mediated targeting of the hantavirus fusion glycoprotein

Rissanen, I., Stass, R., Krumm, S. A., Seow, J., Hulswit, R. J. G., Paesen, G. C., Hepojoki, J., Vapalahti, O., Lundkvist, Å., Reynard, O., Volchkov, V., Doores, K. J., Huiskonen, J. T. & Bowden, T. A., 22 Dec 2020, In: eLife. 9, 23 p., 58242.

2020 taxonomic update for phylum Negarnaviricota (Riboviria: Orthornavirae), including the large orders Bunyavirales and Mononegavirales

Kuhn, J. H., Adkins, S., Alioto, D., Alkhovsky, S. V., Amarasinghe, G. K., Anthony, S. J., Avsic-Zupanc, T., Ayllon, M. A., Bahl, J., Balkema-Buschmann, A., Ballinger, M. J., Bartonicka, T., Basler, C., Bavari, S., Beer, M., Bente, D. A., Bergeron,

E., Bird, B. H., Blair, C., Blasdel, K. R. & 209 others, Bradfute, S. B., Breyta, R., Briese, T., Brown, P. A., Buchholz, U. J., Buchmeier, M. J., Bukreyev, A., Burt, F., Buzkan, N., Calisher, C. H., Cao, M., Casas, I., Chamberlain, J., Chandran, K., Charrel, R. N., Chen, B., Chiumenti, M., Choi, I-R., Clegg, J. C. S., Crozier, I., da Graca, J. V., Dal Bo, E., Davila, A. M. R., de la Torre, J. C., de Lamballerie, X., de Swart, R. L., Di Bello, P. L., Di Paola, N., Di Serio, F., Dietzgen, R. G., Digiaro, M., Dolja, V. V., Dolnik, O., Drebot, M. A., Drexler, J. F., Duerrwald, R., Dufkova, L., Dundon, W. G., Duprex, W. P., Dye, J. M., Easton, A. J., Ebihara, H., Elbeaino, T., Ergunay, K., Fernandes, J., Fooks, A. R., Formenty, P. B. H., Forth, L. F., Fouchier, R. A. M., Freitas-Astua, J., Gago-Zachert, S., Gao, G. F., Garcia, M. L., Garcia-Sastre, A., Garrison, A. R., Gbakima, A., Goldstein, T., Gonzalez, J-P. J., Griffiths, A., Groschup, M. H., Guenther, S., Guterres, A., Hall, R. A., Hammond, J., Hassan, M., Hepojoki, J., Hepojoki, S., Hetzel, U., Hewson, R., Hoffmann, B., Hongo, S., Hoepfer, D., Horie, M., Hughes, H. R., Hyndman, T. H., Jambai, A., Jardim, R., Jiang, D., Jin, Q., Jonson, G. B., Junglen, S., Karadag, S., Keller, K. E., Klempa, B., Klingstrom, J., Kobinger, G., Kondo, H., Koonin, E. V., Krupovic, M., Kurath, G., Kuzmin, I. V., Laenen, L., Lamb, R. A., Lambert, A. J., Langevin, S. L., Lee, B., Lemos, E. R. S., Leroy, E. M., Li, D., Li, J., Liang, M., Liu, W., Liu, Y., Lukashevich, I. S., Maes, P., Marciel de Souza, W., Marklewitz, M., Marshall, S. H., Martelli, G. P., Martin, R. R., Marzano, S-Y. L., Massart, S., McCauley, J. W., Mielke-Ehret, N., Minafra, A., Minutolo, M., Mirazimi, A., Muehlbach, H-P., Muhlberger, E., Naidu, R., Natsuaki, T., Navarro, B., Navarro, J. A., Netesov, S. V., Neumann, G., Nowotny, N., Nunes, M. R. T., Nylund, A., Okland, A. L., Oliveira, R. C., Palacios, G., Pallas, V., Palyi, B., Papa, A., Parrish, C. R., Pauvolid-Correa, A., Paweska, J. T., Payne, S., Perez, D. R., Pfaff, F., Radoshitzky, S. R., Rahman, A., Ramos-Gonzalez, P. L., Resende, R. O., Reyes, C. A., Rima, B. K., Romanowski, V., Robles Luna, G., Rota, P., Rubbenstroth, D., Runstadler, J. A., Ruzek, D., Sabanadzovic, S., Salat, J., Sall, A. A., Salvato, M. S., Sarpkaya, K., Sasaya, T., Schwemmler, M., Shabbir, M. Z., Shi, X., Shi, Z., Shirako, Y., Simmonds, P., Sirmarova, J., Sironi, M., Smither, S., Smura, T., Song, J-W., Spann, K. M., Spengler, J. R., Stenglein, M. D., Stone, D. M., Strakova, P., Takada, A., Tesh, R. B., Thornburg, N. J., Tomonaga, K., Tordo, N., Towner, J. S., Turina, M., Tzanetakis, I., Ulrich, R. G., Vaira, A. M., van den Hoogen, B., Varsani, A., Vasilakis, N., Verbeek, M., Wahl, V., Walker, P. J., Wang, H., Wang, J., Wang, X., Wang, L-F., Wei, T., Wells, H., Whitfield, A. E., Williams, J. V., Wolf, Y. I., Wu, Z., Yang, X., Yang, X., Yu, X., Yutin, N., Zerbini, F. M., Zhang, T., Zhang, Y-Z., Zhou, G. & Zhou, X., Dec 2020, In: Archives of Virology. 165, 12, p. 3023–3072 50 p.

Neuropilin-1 facilitates SARS-CoV-2 cell entry and infectivity

Cantuti-Castelvetri, L., Ojha, R., Pedro, L. D., Djannatian, M., Franz, J., Kuivanen, S., van der Meer, F., Kallio, K., Kaya, T., Anastasina, M., Smura, T., Levanov, L., Szivovicza, L., Tobi, A., Kallio-Kokko, H., Osterlund, P., Joensuu, M., Meunier, F. A., Butcher, S. J., Winkler, M. S. & 9 others, Mollenhauer, B., Helenius, A., Gokce, O., Teesalu, T., Hepojoki, J., Vapalahti, O., Stadelmann, C., Balistreri, G. & Simons, M., 13 Nov 2020, In: Science. 370, 6518, p. 856+ 40 p.

Serpentoviruses: More than Respiratory Pathogens

Dervas, E., Hepojoki, J., Smura, T., Prähäuser, B., Windbichler, K., Blümich, S., Ramis, A., Hetzel, U. & Kipar, A., Sep 2020, In: Journal of Virology. 94, 18, 18 p., ARTN e00649-20.

Systems-Level Immunomonitoring from Acute to Recovery Phase of Severe COVID-19

Rodriguez, L., Pekkarinen, P., Lakshmikanth, T., Tan, Z., Rosat Consiglio, C., Pou, C., Chen, Y., Habimana Mugabo, C., Nguyen, N. A., Nowlan, K., Strandin, T., Levanov, L., Mikes, J., Wang, J., Kantele, A., Hepojoki, J., Vapalahti, O., Heinonen, S., Kekäläinen, E. & Brodin, P., 25 Aug 2020, In: Cell Reports Medicine. 1, 5, 17 p., 100078.

A serological assay to detect SARS-CoV-2 seroconversion in humans

Amanat, F., Stadlbauer, D., Strohmeier, S., Nguyen, T. H. O., Chromikova, V., McMahon, M., Jiang, K., Arunkumar, G. A., Jurczyszak, D., Polanco, J., Bermudez-Gonzalez, M., Kleiner, G., Aydllo, T., Miorin, L., Fierer, D. S., Lugo, L. A., Kojic, E. M., Stoeber, J., Liu, S. T. H., Cunningham-Rundles, C. & 10 others, Felgner, P. L., Moran, T., Garcia-Sastre, A., Caplivski, D., Cheng, A. C., Kedzierska, K., Vapalahti, O., Hepojoki, J. M., Simon, V. & Krammer, F., Jul 2020, In: Nature Medicine. 26, 7, p. 1033+ 12 p.

Identification of Reptarenaviruses, Hartmanviruses, and a Novel Chuvirus in Captive Native Brazilian Boa Constrictors with Boid Inclusion Body Disease

BIBD Grp, Argent, F. F., Hepojoki, J., Smura, T., Szivovicza, L., Hammerschmitt, M. E., Driemeier, D., Kipar, A. & Hetzel, U., Jun 2020, In: Journal of Virology. 94, 11, 19 p., e00001-20.

Snake Deltavirus Utilizes Envelope Proteins of Different Viruses To Generate Infectious Particles

Szivovicza, L., Hetzel, U., Kipar, A., Martinez-Sobrido, L., Vapalahti, O. & Hepojoki, J., 28 Apr 2020, In: mBio. 11, 2, 19 p., e03250-19.

Differences in Tissue and Species Tropism of Reptarenavirus Species Studied by Vesicular Stomatitis Virus Pseudotypes

Korzyukov, Y., Iheozor-Ejiofor, R., Levanov, L., Smura, T., Hetzel, U., Szivovicza, L., de la Torre, J. C., Martinez-Sobrido, L., Kipar, A., Vapalahti, O. & Hepojoki, J., Apr 2020, In: Viruses (Basel). 12, 4, 16 p., 395.

Orthohantavirus Isolated in Reservoir Host Cells Displays Minimal Genetic Changes and Retains Wild-Type Infection Properties

Strandin, T., Smura, T., Ahola, P., Aaltonen, K., Sironen, T., Hepojoki, J., Eckerle, I., Ulrich, R. G., Vapalahti, O., Kipar, A. & Forbes, K. M., Apr 2020, In: *Viruses (Basel)*. 12, 4, 14 p., 457.

Serological and molecular findings during SARS-CoV-2 infection: the first case study in Finland, January to February 2020

Haveri, A., Smura, T., Kuivanen, S., Österlund, P., Hepojoki, J., Ikonen, N., Pitkäpaasi, M., Blomqvist, S., Rönkkö, E., Kantele, A., Strandin, T., Kallio-Kokko, H., Mannonen, L., Lappalainen, M., Broas, M., Jiang, M., Siira, L., Salminen, M., Puumalainen, T., Sane, J. & 3 others, Melin, M., Vapalahti, O. & Savolainen-Kopra, C., 19 Mar 2020, In: *Eurosurveillance*. 25, 11, p. 16-21 6 p., 2000266.

LFRET, a novel rapid assay for anti-tissue transglutaminase antibody detection

Rusanen, J., Toivonen, A., Hepojoki, J., Hepojoki, S., Arikoski, P., Heikkinen, M., Vaarala, O., Ilonen, J. & Hedman, K., 29 Nov 2019, In: *PLoS One*. 14, 11, 12 p., e0225851.

Antibody response in snakes with boid inclusion body disease

Windbichler, K., Michalopoulou, E., Palamides, P., Pesch, T., Jelinek, C., Vapalahti, O., Kipar, A., Hetzel, U. & Hepojoki, J., 9 Sep 2019, In: *PLoS One*. 14, 9, 28 p., e0221863.

Urine and Free Immunoglobulin Light Chains as Analytes for Serodiagnosis of Hantavirus Infection

Hepojoki, S., Kareinen, L., Strandin, T., Vaheri, A., Holthöfer, H., Mustonen, J., Mäkelä, S., Hedman, K., Vapalahti, O. & Hepojoki, J., Sep 2019, In: *Viruses (Basel)*. 11, 9, 14 p., 809.

ICTV Virus Taxonomy Profile: Arenaviridae

ICTV Report Consortium, Radoshitzky, S. R., Buchmeier, M. J., Charrel, R. N., Hepojoki, J. & de la Torre, J. C., Aug 2019, In: *Journal of General Virology*. 100, 8, p. 1200-1201 2 p.

Immunoassay for serodiagnosis of Zika virus infection based on time-resolved Förster resonance energy transfer

Kareinen, L., Hepojoki, S., Huhtamo, E., Korhonen, E. M., Schmidt-Chanasit, J., Hedman, K., Hepojoki, J. & Vapalahti, O., 23 Jul 2019, In: *PLoS One*. 14, 7, p. e0219474 13 p., 0219474.

Detection of novel tick-borne pathogen, Alongshan virus, in Ixodes ricinus ticks, south-eastern Finland, 2019

Kuivanen, S., Levanov, L., Kareinen, L., Sironen, T., Jääskeläinen, A. J., Plyusnin, I., Zakhm, F., Emmerich, P., Schmidt-Chanasit, J., Hepojoki, J., Smura, T. & Vapalahti, O., 4 Jul 2019, In: *Eurosurveillance*. 24, 27, p. 9-16 8 p., 1900394.

Taxonomy of the order Bunyvirales: update 2019

Abudurexiti, A., Adkins, S., Alioto, D., Alkhovsky, S. V., Avsic-Zupanc, T., Ballinger, M. J., Bente, D. A., Beer, M., Bergeron, E., Blair, C. D., Briese, T., Buchmeier, M. J., Burt, F. J., Calisher, C. H., Chang, C., Charrel, R. N., Choi, I. R., Clegg, J. C. S., de la Torre, J. C., de Lamballerie, X. & 83 others, Deng, F., Di Serio, F., Digiaro, M., Drebot, M. A., Duan, X., Ebihara, H., Elbeaino, T., Ergunay, K., Fulhorst, C. F., Garrison, A. R., Gao, G. F., Gonzalez, J-P. J., Groschup, M. H., Guenther, S., Haenni, A-L., Hall, R. A., Hepojoki, J., Hewson, R., Hu, Z., Hughes, H. R., Jonson, M. G., Junglen, S., Klempa, B., Klingstrom, J., Kou, C., Laenen, L., Lambert, A. J., Langevin, S. A., Liu, D., Lukashevich, I. S., Luo, T., Lu, C., Maes, P., de Souza, W. M., Marklewitz, M., Martelli, G. P., Matsuno, K., Mielke-Ehret, N., Minutolo, M., Mirazimi, A., Moming, A., Muehlbach, H-P., Naidu, R., Navarro, B., Teixeira Nunes, M. R., Palacios, G., Papa, A., Pauvolid-Correa, A., Paweska, J. T., Qiao, J., Radoshitzky, S. R., Resende, R. O., Romanowski, V., Sall, A. A., Salvato, M. S., Sasaya, T., Shen, S., Shi, X., Shirako, Y., Simmonds, P., Sironi, M., Song, J-W., Spengler, J. R., Stenglein, M. D., Su, Z., Sun, S., Tang, S., Turina, M., Wang, B., Wang, C., Wang, H., Wang, J., Wei, T., Whitfield, A. E., Zerbini, F. M., Zhang, J., Zhang, L., Zhang, Y., Zhang, Y-Z., Zhang, Y., Zhou, X., Zhu, L. & Kuhn, J. H., Jul 2019, In: *Archives of Virology*. 164, 7, p. 1949-1965 17 p.

Identification of a Novel Deltavirus in Boa Constrictors

Hetzel, U., Szivovics, L., Smura, T., Prahauer, B., Vapalahti, O., Kipar, A. & Hepojoki, J., 2019, In: *mBio*. 10, 2, 8 p., ARTN e00014-19.

Characterization of Haartman Institute snake virus-1 (HISV-1) and HISV-like viruses-The representatives of genus Hartmanivirus, family Arenaviridae

Hepojoki, J., Hepojoki, S., Smura, T., Szivovics, L., Dervas, E., Prahauer, B., Nufer, L., Schraner, E. M., Vapalahti, O., Kipar, A. & Hetzel, U., Nov 2018, In: PLoS Pathogens. 14, 11, 29 p., 1007415.

Galectin-3-binding protein: A multitask glycoprotein with innate immunity functions in viral and bacterial infections

Loimaranta, V., Hepojoki, J., Laaksoaho, O. & Pulliainen, A. T., Oct 2018, In: Journal of Leukocyte Biology. 104, 4, p. 777-786 10 p.

Taxonomy of the family Arenaviridae and the order Bunyavirales: update 2018

Maes, P., Alkhovsky, S. V., Bao, Y., Beer, M., Birkhead, M., Brieese, T., Buchmeier, M. J., Calisher, C. H., Charrel, R. N., Choi, I. R., Clegg, C. S., de la Torre, J. C., Delwart, E., DeRisi, J. L., Di Bello, P. L., Di Serio, F., Digiaro, M., Dolja, V. V., Drosten, C., Druciarek, T. Z. & 79 others, Du, J., Ebihara, H., Elbeaino, T., Gergerich, R. C., Gillis, A. N., Gonzalez, J-P. J., Haenni, A-L., Hepojoki, J., Hetzel, U., Thien Ho, Ni Hong, Jain, R. K., van Vuren, P. J., Jin, Q., Jonson, M. G., Junglen, S., Keller, K. E., Kemp, A., Kipar, A., Kondov, N. O., Koonin, E. V., Kormelink, R., Korzyukov, Y., Krupovic, M., Lambert, A. J., Laney, A. G., LeBreton, M., Lukashevich, I. S., Marklewitz, M., Markotter, W., Martelli, G. P., Martin, R. R., Mielke-Ehret, N., Muehlbach, H-P., Navarro, B., Ng, T. F. F., Teixeira Nunes, M. R., Palacios, G., Paweska, J. T., Peters, C. J., Plyusnin, A., Radoshitzky, S. R., Romanowski, V., Salmenperä, P., Salvato, M. S., Sanfacon, H., Sasaya, T., Schmaljohn, C., Schneider, B. S., Shirako, Y., Siddell, S., Sironen, T. A., Stenglein, M. D., Storm, N., Sudini, H., Tesh, R. B., Tzanetakis, I. E., Uppala, M., Vapalahti, O., Vasilakis, N., Walker, P. J., Wang, G., Wang, L., Wang, Y., Wei, T., Wiley, M. R., Wolf, Y. I., Wolfe, N. D., Wu, Z., Xu, W., Yang, L., Yang, Z., Yeh, S-D., Zhang, Y-Z., Zheng, Y., Zhou, X., Zhu, C., Zirkel, F. & Kuhn, J. H., Aug 2018, In: Archives of Virology. 163, 8, p. 2295-2310 16 p.

Nidovirus-Associated Proliferative Pneumonia in the Green Tree Python (*Morelia viridis*)

Dervas, E., Hepojoki, J., Laimbacher, A., Romero-Palomo, F., Jelinek, C., Keller, S., Smura, T., Hepojoki, S., Kipar, A. & Hetzel, U., Nov 2017, In: Journal of Virology. 91, 21, 21 p., UNSP e00718-17.

Structural Transitions of the Conserved and Metastable Hantaviral Glycoprotein Envelope

Rissanen, I., Stass, R., Zeltina, A., Li, S., Hepojoki, J., Harlos, K., Gilbert, R. J. C., Huiskonen, J. T. & Bowden, T. A., Nov 2017, In: Journal of Virology. 91, 21, 11 p., UNSP e00378-17.

Co-infecting Reptarenaviruses Can Be Vertically Transmitted in Boa Constrictor

Keller, S., Hetzel, U., Sironen, T., Korzyukov, Y., Vapalahti, O., Kipar, A. & Hepojoki, J., Jan 2017, In: PLoS Pathogens. 13, 1, 21 p., 1006179.

Large-Scale Screening of Preferred Interactions of Human Src Homology-3 (SH3) Domains Using Native Target Proteins as Affinity Ligands

Kazlauskas, A., Schmotz, C., Kesti, T., Hepojoki, J., Kleino, I., Kaneko, T., Li, S. S. C. & Saksela, K., Oct 2016, In: Molecular & Cellular Proteomics. 15, 10, p. 3270-3281 12 p.

Mapping of human B-cell epitopes of Sindbis virus

Adouchief, S., Smura, T., Vapalahti, O. & Hepojoki, J., Sep 2016, In: Journal of General Virology. 97, 9, p. 2243-2254 12 p.

Generation of Anti-Boa Immunoglobulin Antibodies for Serodiagnostic Applications, and Their Use to Detect Anti-Reptarenavirus Antibodies in Boa Constrictor

Korzyukov, Y., Hetzel, U., Kipar, A., Vapalahti, O. & Hepojoki, J., 29 Jun 2016, In: PLoS One. 11, 6, 15 p., 0158417.

Interferons Induce STAT1-Dependent Expression of Tissue Plasminogen Activator, a Pathogenicity Factor in Puumala Hantavirus Disease

Strandin, T., Hepojoki, J., Laine, O., Makela, S., Klingstrom, J., Lundkvist, A., Julkunen, I., Mustonen, J. & Vaheri, A., 15 May 2016, In: Journal of Infectious Diseases. 213, 10, p. 1632-1641 10 p.

A Molecular-Level Account of the Antigenic Hantaviral Surface

Li, S., Rissanen, I., Zeltina, A., Hepojoki, J., Raghwani, J., Harlos, K., Pybus, O. G., Huiskonen, J. T. & Bowden, T. A., 3 May 2016, In: Cell Reports. 15, 5, p. 959-967 9 p.

Vaccinia virus-free rescue of fluorescent replication-defective vesicular stomatitis virus and pseudotyping with Puumala virus glycoproteins for use in neutralization tests

Iheozor-Ejiofor, R. P., Levanov, L., Hepojoki, J., Strandin, T., Lundkvist, A., Plyusnin, A. & Vapalahti, O., May 2016, In: Journal of General Virology. 97, p. 1052-1059 8 p.

Arenavirus Coinfections Are Common in Snakes with Boid Inclusion Body Disease

Hepojoki, J., Salmenpera, P., Sironen, T., Hetzel, U., Korzyukov, Y., Kipar, A. & Vapalahti, O., Aug 2015, In: Journal of Virology. 89, 16, p. 8657-8660 4 p.

Competitive Homogeneous Immunoassay for Rapid Serodiagnosis of Hantavirus Disease

Hepojoki, S., Rusanen, J., Hepojoki, J., Nurmi, V., Vaheri, A., Lundkvist, A., Hedman, K. & Vapalahti, O., Jul 2015, In: Journal of Clinical Microbiology. 53, 7, p. 2292-2297 6 p.

Serological survey of Seewis virus antibodies in patients suspected for hantavirus infection in Finland; a cross-reaction between Puumala virus antiserum with Seewis virus N protein?

Ling, J., Vaheri, A., Hepojoki, S., Levanov, L., Jaaskelainen, A., Henttonen, H., Vapalahti, O., Sironen, T. & Hepojoki, J., Jul 2015, In: Journal of General Virology. 96, p. 1664-1675 12 p.

Preferred SH3 Domain Partners of ADAM Metalloproteases Include Shared and ADAM-Specific SH3 Interactions

Kleino, I., Jarviluoma, A., Hepojoki, J., Huovila, A. P. & Saksela, K., 31 Mar 2015, In: PLoS One. 10, 3, 19 p., 0121301.

Rapid Homogeneous Immunoassay Based on Time-Resolved Forster Resonance Energy Transfer for Serodiagnosis of Acute Hantavirus Infection

Hepojoki, S., Hepojoki, J., Hedman, K., Vapalahti, O. & Vaheri, A., Feb 2015, In: Journal of Clinical Microbiology. 53, 2, p. 636-640 5 p.

Replication of Boid Inclusion Body Disease-Associated Arenaviruses Is Temperature Sensitive in both Boid and Mammalian Cells

Hepojoki, J., Kipar, A., Korzyukov, Y., Bell-Sakyi, L., Vapalahti, O. & Hetzel, U., Jan 2015, In: Journal of Virology. 89, 2, p. 1119-1128 10 p.

The fundamental role of endothelial cells in hantavirus pathogenesis

Hepojoki, J., Vaheri, A. & Strandin, T., 22 Dec 2014, In: Frontiers in Microbiology. 5, 7 p., 727.

Acute hantavirus infection induces galectin-3-binding protein

Hepojoki, J., Strandin, T., Hetzel, U., Sironen, T., Klingstrom, J., Sane, J., Mäkelä, S., Mustonen, J., Meri, S., Lundkvist, Å., Vapalahti, O., Lankinen, H. & Vaheri, A., Nov 2014, In: Journal of General Virology. 95, 11, p. 2356-2364 9 p.

A Protein L -Based Immunodiagnostic Approach Utilizing Time-Resolved Forster Resonance Energy Transfer

Hepojoki, S., Nurmi, V., Vaheri, A., Hedman, K., Vapalahti, O. & Hepojoki, J., 2 Sep 2014, In: PLoS One. 9, 9, 8 p., 106432.

Identification of linear human B-cell epitopes of tick-borne encephalitis virus

Kuivanen, S., Hepojoki, J., Vene, S., Vaheri, A. & Vapalahti, O., 19 Jun 2014, In: Virology Journal. 11, 9 p., 115.

Reply to "Updated Phylogenetic Analysis of Arenaviruses Detected in Boid Snakes"

Hetzel, U., Sironen, T., Laurinmaki, P., Liljeroos, L., Patjas, A., Henttonen, H., Vaheri, A., Artelt, A., Kipar, A., Butcher, S. J., Vapalahti, O. & Hepojoki, J., Jan 2014, In: Journal of Virology. 88, 2, p. 1401-1401 1 p.

Analysis of Potato virus Y Coat Protein Epitopes Recognized by Three Commercial Monoclonal Antibodies

Tian, Y-P., Hepojoki, J., Ranki, H., Lankinen, H. & Valkonen, J. P. T., 2014, In: PLoS One. 9, 12, 20 p., 0115766.

Isolation, Identification, and Characterization of Novel Arenaviruses, the Etiological Agents of Boid Inclusion Body Disease
Hetzl, U., Sironen, T., Laurinmäki, P., Liljeroos, L., Patjas, A., Henttonen, H., Vaheiri, A., Artelt, A., Kipar, A., Butcher, S. J., Vapalahti, O. & Hepojoki, J., Oct 2013, In: Journal of Virology. 87, 20, p. 10918-10935 18 p.

Uncovering the mysteries of hantavirus infections

Vaheiri, A., Strandin, T., Hepojoki, J., Sironen, T., Henttonen, H., Makela, S. & Mustonen, J., Aug 2013, In: Nature Reviews, Microbiology. 11, 8, p. 539-550 12 p.

Time-Resolved FRET -Based Approach for Antibody Detection - A New Serodiagnostic Concept

Saraheimo, S., Hepojoki, J., Nurmi, V., Lahtinen, A., Hemmila, I., Vaheiri, A., Vapalahti, O. & Hedman, K., 7 May 2013, In: PLoS One. 8, 5, p. Article Number: e62739 11 p.

Cytoplasmic tails of bunyavirus Gn glycoproteins-Could they act as matrix protein surrogates?

Strandin, T., Hepojoki, J. & Vaheiri, A., 15 Mar 2013, In: Virology. 437, 2, p. 73-80 8 p.

Hantavirus structure - molecular interactions behind the scene

Hepojoki, J., Strandin, T., Lankinen, H. & Vaheiri, A., 2012, In: Journal of General Virology. 93, p. 1631-1644 14 p.

Glycoprotein Interactions in the Assembly of Hantaviruses

Hepojoki, J., 27 Nov 2011, Helsinki: Helsingin yliopisto. 86 p.

Inactivation of hantaviruses by N-ethylmaleimide preserves virion integrity

Strandin, T., Hepojoki, J., Wang, H., Vaheiri, A. & Lankinen, H., 2011, In: Journal of General Virology. 92, 5, p. 1189-1198 10 p.

The cytoplasmic tail of hantavirus Gn glycoprotein interacts with RNA

Strandin, T., Hepojoki, J., Wang, H., Vaheiri, A. & Lankinen, H., 2011, In: Virology. 418, 1, p. 12-20 9 p.

Cytoplasmic tails of hantavirus glycoproteins interact with the nucleocapsid protein

Hepojoki, J., Strandin, T., Wang, H., Vapalahti, O., Vaheiri, A. & Lankinen, H., 2010, In: Journal of General Virology. 91, 9, p. 2341-2350 10 p.

Electron Cryotomography of Tula Hantavirus Suggests a Unique Assembly Paradigm for Enveloped Viruses

Huiskonen, J. T., Hepojoki, J., Laurinmaki, P., Vaheiri, A., Lankinen, H., Butcher, S. J. & Gruenewald, K., 2010, In: Journal of Virology. 84, 10, p. 4889-4897 9 p.

Interactions and Oligomerization of Hantavirus Glycoproteins

Hepojoki, J., Strandin, T., Vaheiri, A. & Lankinen, H., 2010, In: Journal of Virology. 84, p. 227-242 16 p.

Degradation and aggresome formation of the Gn tail of the apathogenic Tula hantavirus

Wang, H., Strandin, T., Hepojoki, J., Lankinen, H. & Vaheiri, A., 2009, In: Journal of General Virology. 90, 12, p. 2995-3001 7 p.

Hantaviruses and TNF-alpha act synergistically to induce ERK1/2 inactivation in Vero E6 cells

Strandin, T., Hepojoki, J., Wang, H., Vaheiri, A. & Lankinen, H., 2008, In: Virology Journal. 5, 110, 9 s

Improvement of binding of Puumala virus neutralization site resembling peptide with a second-generation phage library

Heiskanen, T., Li, X-D., Hepojoki, J., Gustafsson, E., Lundkvist, Å., Vaheiri, A. & Lankinen, H., Jun 2003, In: Protein Engineering. 16, 6, p. 443-450 8 p.

Activities

8th European Meeting on Viral Zoonoses, St. Raphael, France

Jussi Hepojoki (Speaker)
22 Oct 2017 → 25 Oct 2017

Annual Finnish Virology Days, 2017, Jyväskylä, Finland

Jussi Hepojoki (Speaker)
14 Mar 2017 → 15 Mar 2017

Virus-cell interactions 2015, Seili, Finland

Jussi Hepojoki (Speaker)
17 Aug 2015 → 19 Aug 2015

Vetsuisse Faculty, University of Zürich

Jussi Hepojoki (Visiting researcher)
9 Nov 2014 → 5 Dec 2014

Virus-cell interactions 2014, Seili, Finland

Jussi Hepojoki (Speaker)
18 Aug 2014 → 20 Aug 2014

Saskia Keller

Jussi Hepojoki (Host)
23 Jun 2014 → 13 Aug 2014

7th European Meeting on Viral Zoonoses, St:Raphael, France

Jussi Hepojoki (Speaker)
24 May 2014 → 27 May 2014

University of Oxford

Jussi Hepojoki (Visiting researcher)
9 Feb 2014 → 10 Feb 2014

Annual Finnish Virology Days, 2014, Helsinki, Finland

Jussi Hepojoki (Speaker: Presenter)
2014

IX International conference on HFRS, HPS & hantaviruses, 2013, Beijing, China

Jussi Hepojoki (Speaker: Presenter)
2013

6th European Meeting on Viral Zoonoses, 2011, St. Raphaël, France

Jussi Hepojoki (Speaker: Presenter)
2011

Annual Finnish Virology Days, 2011, Jyväskylä, Finland

Jussi Hepojoki (Speaker: Presenter)
2011

The 10th Finnish Peptide Symposium, 2011, Tahkovouri, Finland

Jussi Hepojoki (Speaker: Presenter)
2011

Annual Finnish Virology Days, 2010, Turku, Finland

Jussi Hepojoki (Speaker: Presenter)
2010

5th European Meeting on Viral Zoonoses, 2009, St. Raphaël, France

Jussi Hepojoki (Speaker: Presenter)
2009

Max Planck Institute of Biochemistry

Jussi Hepojoki (Visiting researcher)
2009

Annual Finnish Virology Days / ESCV, Clinical Virology Annual Meeting, 2008, Saariselkä, Finland

Jussi Hepojoki (Speaker: Presenter)
2008

Annual Finnish Virology Days, 2006, Tampere, Finland

Jussi Hepojoki (Speaker: Presenter)
2006

GBF (Gesellschaft für Biotechnologische Forschung)

Jussi Hepojoki (Visiting researcher)
10 Jul 2005 → 22 Jul 2005

Nordic Viral Zoonoses Meeting, 2005, Öland, Sweden

Jussi Hepojoki (Speaker: Presenter)
2005

Projects