

OPRAVNÝ LÍSTEK

Jméno studenta: Michal Blaško

Téma bakalářské práce: Replikační strategie nově objevených gigantických virů améb

Seznam zkratk

ICTV	International Committee on Taxonomy of Viruses	Mezinárodní komise pro taxonomii virů
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Oprava citace str. 2

Původní znění	Oprava
(Iyer, Aravind, a Koonin 2001)	(Iyer <i>et al.</i> 2001)
(L. M. Iyer, Aravind, a Koonin 2001)	(Iyer <i>et al.</i> 2001)

Oprava citace str. 4

Původní znění	Oprava
(Colson, La Scola, a Raoult 2017).	(Colson <i>et al.</i> 2017).

Oprava citace str. 25

Původní znění	Oprava
(Forterre, Krupovic, a Prangishvili 2014).	(Forterre <i>et al.</i> 2014).
(Krupovic, Bamford, a Koonin 2014)	(Krupovic <i>et al.</i> 2014)

Seznam literatury – zařazení 3 chybějících citací

Abrahão, Jônatas S, Fábio P Dornas, Lorena CF Silva, Gabriel M Almeida, Paulo VM Boratto, Phillippe Colson, Bernard La Scola, a Erna G Kroon. 2014. „Acanthamoeba polyphaga mimivirus and other giant viruses: an open field to outstanding discoveries". *Virology Journal* 11 (červen): 120.

Abrahão, Jônatas, Lorena Silva, Ludmila Santos Silva, Jacques Yaacoub Bou Khalil, Rodrigo Rodrigues, Thalita Arantes, Felipe Assis, *et al.* 2018. „Tailed giant Tupanvirus possesses the most complete translational apparatus of the known virosphere". *Nature Communications* 9 (únor): 749.

Aherfi, Sarah, Julien Andreani, Emeline Baptiste, Amina Oumessoum, Fábio P. Dornas, Ana Claudia Dos S. P. Andrade, Eric Chabriere, *et al.* 2018. „A Large Open Pangenome and a Small Core Genome for Giant Pandoraviruses". *Frontiers in Microbiology* 9: 1486.

Andrade, Ana Cláudia Dos Santos Pereira, Rodrigo Araújo Lima Rodrigues, Grazielle Pereira Oliveira, Kétyllen Reis Andrade, Cláudio Antônio Bonjardim, Bernard La Scola, Erna Geessien Kroon, a Jônatas Santos Abrahão. 2017. „Filling Knowledge Gaps for Mimivirus Entry, Uncoating, and Morphogenesis". *Journal of Virology* 91 (22): e01335-17.

Andreani, Julien, Sarah Aherfi, Jacques Yaacoub Bou Khalil, Fabrizio Di Pinto, Idir Bitam, Didier Raoult, Philippe Colson, a Bernard La Scola. 2016. „Cedratvirus, a Double-Cork Structured Giant Virus, Is a Distant Relative of Pithoviruses". *Viruses* 8 (11): 300.

Arantes, Thalita Souza, Rodrigo Araújo Lima Rodrigues, Ludmila Karen dos Santos Silva, Grazielle Pereira Oliveira, Helton Luís de Souza, Jacques Y. B. Khalil, Danilo Bretas de Oliveira, *et al.* 2016. „The Large Marseillevirus Explores Different Entry Pathways by Forming Giant Infectious Vesicles". *Journal of Virology* 90 (11): 5246–55.

Arslan, Defne, Matthieu Legendre, Virginie Seltzer, Chantal Abergel, a Jean-Michel Claverie. 2011. „Distant Mimivirus relative with a larger genome highlights the fundamental features of Megaviridae". *Proceedings of the National Academy of Sciences of the United States of America* 108 (42): 17486–91.

Benamar, Samia, Dorine G. I. Reteno, Victor Bandaly, Noémie Labas, Didier Raoult, a Bernard La Scola. 2016. „Faustoviruses: Comparative Genomics of New Megavirales Family Members". *Frontiers in Microbiology* 7 (únor): 3.

Bertelli, Claire, Linda Mueller, Vincent Thomas, Trestan Pillonel, Nicolas Jacquier, a Gilbert Greub. 2017. „Cedratvirus Lausannensis - Digging into Pithoviridae Diversity". *Environmental Microbiology* 19 (10): 4022–34.

Boyer, Mickaël, Mohammed-Amine Madoui, Gregory Gimenez, Bernard La Scola, a Didier Raoult. 2010. „Phylogenetic and Phyletic Studies of Informational Genes in Genomes Highlight Existence of a 4th Domain of Life Including Giant Viruses". *PLoS ONE* 5 (12).

Boyer, Mickaël, Natalya Yutin, Isabelle Pagnier, Lina Barrassi, Ghislain Fournous, Leon Espinosa, Catherine Robert, *et al.* 2009. „Giant Marseillevirus highlights the role of amoebae as a melting pot in emergence of chimeric microorganisms". *Proceedings of the National Academy of Sciences of the United States of America* 106 (51): 21848–53.

Claverie, Jean-Michel, a Chantal Abergel. 2013. „Open Questions about Giant Viruses". *Advances in Virus Research* 85: 25–56.

Claverie, Jean-Michel, Hiroyuki Ogata, Stéphane Audic, Chantal Abergel, Karsten Suhre, a Pierre-Edouard Fournier. 2006. „Mimivirus and the Emerging Concept of ‚Giant‘ Virus". *Virus Research* 117 (1): 133–44.

Colson, Philippe, Xavier De Lamballerie, Natalya Yutin, Sassan Asgari, Yves Bigot, Dennis K. Bideshi, Xiao-Wen Cheng, *et al.* 2013. „‚Megavirales‘, a Proposed New Order for Eukaryotic Nucleocytoplasmic Large DNA Viruses". *Archives of Virology* 158 (12): 2517–21.

Colson, Philippe, Laura Fancello, Gregory Gimenez, Fabrice Armougom, Christelle Desnues, Ghislain Fournous, Niyaz Yoosuf, Matthieu Million, Bernard La Scola, a Didier Raoult. 2013. „Evidence of the Megavirome in Humans". *Journal of Clinical Virology* 57 (3): 191–200.

Colson, Philippe, Gregory Gimenez, Mickaël Boyer, Ghislain Fournous, a Didier Raoult. 2011. „The Giant Cafeteria Roenbergensis Virus That Infects a Widespread Marine Phagocytic Protist Is a New Member of the Fourth Domain of Life". *PLoS One* 6 (4): e18935.

Colson, Philippe, Bernard La Scola, a Didier Raoult. 2017. „Giant Viruses of Amoebae: A Journey Through Innovative Research and Paradigm Changes". *Annual Review of Virology* 4 (1): 61–85.

Colson, Philippe, Xavier de Lamballerie, Ghislain Fournous, a Didier Raoult. 2012. „Reclassification of Giant Viruses Composing a Fourth Domain of Life in the New Order Megavirales". *Intervirology* 55 (5): 321–32.

- Colson, Philippe, Isabelle Pagnier, Niyaz Yoosuf, Ghislain Fournous, Bernard La Scola, a Didier Raoult. 2013. „Marseilleviridae”, a New Family of Giant Viruses Infecting Amoebae". *Archives of Virology* 158 (4): 915–20.
- Colson, Philippe, Natalya Yutin, Svetlana A. Shabalina, Catherine Robert, Ghislain Fournous, Bernard La Scola, Didier Raoult, a Eugene V. Koonin. 2011. „Viruses with More than 1,000 Genes: Mamavirus, a New Acanthamoeba Polyphaga Mimivirus Strain, and Reannotation of Mimivirus Genes". *Genome Biology and Evolution* 3: 737–42.
- Desnues, Christelle, a Didier Raoult. 2010. „Inside the Lifestyle of the Virophage". *Intervirology* 53 (5): 293–303.
- Desnues, Christelle, Bernard La Scola, Natalya Yutin, Ghislain Fournous, Catherine Robert, Saïd Azza, Priscilla Jardot, *et al.* 2012. „Provirophages and Transpovirons as the Diverse Mobilome of Giant Viruses". *Proceedings of the National Academy of Sciences of the United States of America* 109 (44): 18078–83.
- Elloay, E.a.g., R.a. Armstrong, R.a. Bird, S.l. Kelly, a S.n. Smith. 2004. „Analysis of Acanthamoeba Polyphaga Surface Carbohydrate Exposure by FITC–lectin Binding and Fluorescence Evaluation". *Journal of Applied Microbiology* 97 (6): 1319–25.
- Fischer, Matthias G. 2016. „Giant Viruses Come of Age". *Current Opinion in Microbiology* 31: 50–57.
- Forterre, Patrick, Mart Krupovic, a David Prangishvili. 2014. „Cellular Domains and Viral Lineages". *Trends in Microbiology* 22 (10): 554–58.
- Gaia, Morgan, Samia Benamar, Mondher Boughalmi, Isabelle Pagnier, Olivier Croce, Philippe Colson, Didier Raoult, a Bernard La Scola. 2014. „Zamilon, a Novel Virophage with Mimiviridae Host Specificity". *PloS One* 9 (4): e94923.
- Gaia, Morgan, Isabelle Pagnier, Angélique Campocasso, Ghislain Fournous, Didier Raoult, a Bernard La Scola. 2013. „Broad Spectrum of Mimiviridae Virophage Allows Its Isolation Using a Mimivirus Reporter". *PLOS ONE* 8 (4): e61912.
- Iyer, L. M., L. Aravind, a E. V. Koonin. 2001. „Common Origin of Four Diverse Families of Large Eukaryotic DNA Viruses". *Journal of Virology* 75 (23): 11720–34.
- Iyer, Lakshminarayan M., S. Balaji, Eugene V. Koonin, a L. Aravind. 2006. „Evolutionary genomics of nucleo-cytoplasmic large DNA viruses". *Virus Research, Comparative Genomics and Evolution of Complex Viruses*, 117 (1): 156–84.
- Kapitonov, Vladimir V., a Jerzy Jurka. 2006. „Self-Synthesizing DNA Transposons in Eukaryotes". *Proceedings of the National Academy of Sciences of the United States of America* 103 (12): 4540–45.
- Klose, Thomas, Yurii G. Kuznetsov, Chuan Xiao, Siyang Sun, Alexander McPherson, a Michael G. Rossmann. 2010. „The Three-Dimensional Structure of Mimivirus". *Intervirology* 53 (5): 268–73.
- Klose, Thomas, Dorine G. Reteno, Samia Benamar, Adam Hollerbach, Philippe Colson, Bernard La Scola, a Michael G. Rossmann. 2016. „Structure of Faustovirus, a Large DsDNA Virus". *Proceedings of the National Academy of Sciences of the United States of America* 113 (22): 6206–11.

Koonin, Eugene V., Mart Krupovic, a Natalya Yutin. 2015. „Evolution of Double-Stranded DNA Viruses of Eukaryotes: From Bacteriophages to Transposons to Giant Viruses". *Annals of the New York Academy of Sciences* 1341 (duben): 10–24.

Krupovic, Mart, Dennis H. Bamford, a Eugene V. Koonin. 2014. „Conservation of Major and Minor Jelly-Roll Capsid Proteins in Polinton (Maverick) Transposons Suggests That They Are Bona Fide Viruses". *Biology Direct* 9 (duben): 6.

Krupovic, Mart, a Eugene V. Koonin. 2015. „Polintons: A Hotbed of Eukaryotic Virus, Transposon and Plasmid Evolution". *Nature Reviews. Microbiology* 13 (2): 105–15.

Kuznetsov, Yuri G., Thomas Klose, Michael Rossmann, a Alexander McPherson. 2013. „Morphogenesis of Mimivirus and Its Viral Factories: an Atomic Force Microscopy Study of Infected Cells". *Journal of Virology* 87 (20): 11200–213.

La Scola, Bernard, Stéphane Audic, Catherine Robert, Liang Jungang, Xavier de Lamballerie, Michel Drancourt, Richard Birtles, Jean-Michel Claverie, a Didier Raoult. 2003. „A Giant Virus in Amoebae". *Science (New York, N.Y.)* 299 (5615): 2033.

La Scola, Bernard, Christelle Desnues, Isabelle Pagnier, Catherine Robert, Lina Barrassi, Ghislain Fournous, Michèle Merchat, *et al.* 2008. „The Virophage as a Unique Parasite of the Giant Mimivirus". *Nature* 455 (7209): 100–104.

La Scola, Bernard, Thomas J. Marrie, Jean-Pierre Auffray, a Didier Raoult. 2005. „Mimivirus in Pneumonia Patients". *Emerging Infectious Diseases* 11 (3): 449–52.

Legendre, Matthieu, Defne Arslan, Chantal Abergel, a Jean-Michel Claverie. 2012. „Genomics of Megavirus and the elusive fourth domain of Life". *Communicative & Integrative Biology* 5 (1): 102–6.

Legendre, Matthieu, Julia Bartoli, Lyubov Shmakova, Sandra Jeudy, Karine Labadie, Annie Adrait, Magali Lescot, *et al.* 2014. „Thirty-thousand-year-old distant relative of giant icosahedral DNA viruses with a pandoravirus morphology". *Proceedings of the National Academy of Sciences of the United States of America* 111 (11): 4274–79.

Legendre, Matthieu, Elisabeth Fabre, Olivier Poirot, Sandra Jeudy, Audrey Lartigue, Jean-Marie Alempic, Laure Beucher, *et al.* 2018. „Diversity and Evolution of the Emerging Pandoraviridae Family". *Nature Communications* 9 (1): 2285.

Legendre, Matthieu, Audrey Lartigue, Lionel Bertaux, Sandra Jeudy, Julia Bartoli, Magali Lescot, Jean-Marie Alempic, *et al.* 2015. „In-Depth Study of Mollivirus Sibericum, a New 30,000-y-Old Giant Virus Infecting Acanthamoeba". *Proceedings of the National Academy of Sciences of the United States of America* 112 (38): E5327-5335.

Levasseur, Anthony, Julien Andreani, Jeremy Delerce, Jacques Bou Khalil, Catherine Robert, Bernard La Scola, a Didier Raoult. 2016. „Comparison of a Modern and Fossil Pithovirus Reveals Its Genetic Conservation and Evolution". *Genome Biology and Evolution* 8 (8): 2333–39.

Levasseur, Anthony, Meriem Bekliz, Eric Chabrière, Pierre Pontarotti, Bernard La Scola, a Didier Raoult. 2016. „MIMIVIRE Is a Defence System in Mimivirus That Confers Resistance to Virophage". *Nature* 531 (7593): 249–52.

- Lwoff, A. 1957. „The Concept of Virus". *Journal of General Microbiology* 17 (2): 239–53.
- Makarova, Kira S., Nick V. Grishin, Svetlana A. Shabalina, Yuri I. Wolf, a Eugene V. Koonin. 2006. „A Putative RNA-Interference-Based Immune System in Prokaryotes: Computational Analysis of the Predicted Enzymatic Machinery, Functional Analogies with Eukaryotic RNAi, and Hypothetical Mechanisms of Action". *Biology Direct* 1 (březen): 7.
- Moreira, David, a Purificación López-García. 2009. „Ten Reasons to Exclude Viruses from the Tree of Life". *Nature Reviews. Microbiology* 7 (4): 306–11.
- Mutsafi, Yael, Eyal Shimoni, Amir Shimon, a Abraham Minsky. 2013. „Membrane Assembly during the Infection Cycle of the Giant Mimivirus". *PLoS Pathogens* 9 (5): e1003367.
- Philippe, Nadège, Matthieu Legendre, Gabriel Doutre, Yohann Couté, Olivier Poirot, Magali Lescot, Defne Arslan, *et al.* 2013. „Pandoraviruses: Amoeba Viruses with Genomes Up to 2.5 Mb Reaching That of Parasitic Eukaryotes". *Science* 341 (6143): 281–86.
- Popgeorgiev, Nikolay, Mickaël Boyer, Laura Fancello, Sonia Monteil, Catherine Robert, Romain Rivet, Claude Napez, *et al.* 2013. „Marseillevirus-Like Virus Recovered From Blood Donated by Asymptomatic Humans". *The Journal of Infectious Diseases* 208 (7): 1042–50.
- Popgeorgiev, Nikolay, Philippe Colson, Isabelle Thuret, Jacques Chiarioni, Pierre Gallian, Didier Raoult, a Christelle Desnues. 2013. „Marseillevirus Prevalence in Multitransfused Patients Suggests Blood Transmission". *Journal of Clinical Virology* 58 (4): 722–25.
- Raoult, Didier, Stéphane Audic, Catherine Robert, Chantal Abergel, Patricia Renesto, Hiroyuki Ogata, Bernard La Scola, Marie Suzan, a Jean-Michel Claverie. 2004. „The 1.2-Megabase Genome Sequence of Mimivirus". *Science (New York, N.Y.)* 306 (5700): 1344–50.
- Raoult, Didier. 2005. „The Journey from Rickettsia to Mimivirus". *ASM News* 2005 (6) 71:278–284.
- Raoult, Didier, a Patrick Forterre. 2008. „Redefining Viruses: Lessons from Mimivirus". *Nature Reviews. Microbiology* 6 (4): 315–19.
- Reteno, Dorine Gaëlle, Samia Benamar, Jacques Bou Khalil, Julien Andreani, Nicholas Armstrong, Thomas Klose, Michael Rossmann, Philippe Colson, Didier Raoult, a Bernard La Scola. 2015. „Faustovirus, an Asfarvirus-Related New Lineage of Giant Viruses Infecting Amoebae". *Journal of Virology* 89 (13): 6585–94.
- Rodrigues, Rodrigo Araújo Lima, Ludmila Karen dos Santos Silva, Fábio Pio Dornas, Danilo Bretas de Oliveira, Thais Furtado Ferreira Magalhães, Daniel Assis Santos, Adriana Oliveira Costa, *et al.* 2015. „Mimivirus Fibrils Are Important for Viral Attachment to the Microbial World by a Diverse Glycoside Interaction Repertoire". *Journal of Virology* 89 (23): 11812–19.
- Rodríguez-Zaragoza, Salvador. 1994. „Ecology of Free-Living Amoebae". *Critical Reviews in Microbiology* 20 (3): 225–41.
- Saadi, Hanene, Isabelle Pagnier, Philippe Colson, Jouda Kanoun Cherif, Majed Beji, Mondher Boughalmi, Saïd Azza, *et al.* 2013. „First Isolation of Mimivirus in a Patient with Pneumonia". *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America* 57 (4): e127-134.

- Scheid, P. 2016. „A Strange Endocytobiont Revealed as Largest Virus". *Current Opinion in Microbiology* 31 (červen): 58–62.
- Silva, Ludmila Karen Dos Santos, Ana Cláudia Dos Santos, Pereira Andrade, Fábio Pio Dornas, Rodrigo Araújo Lima Rodrigues, Thalita Arantes, Erna Geessien Kroon, Cláudio Antônio Bonjardim, a Jônatas Santos Abrahão. 2018. „Cedratvirus Getuliensis Replication Cycle: An in-Depth Morphological Analysis". *Scientific Reports* 8 (1): 4000.
- Sun, Siyang, Bernard La Scola, Valorie D. Bowman, Christopher M. Ryan, Julian P. Whitelegge, Didier Raoult, a Michael G. Rossmann. 2010. „Structural Studies of the Sputnik Virophage". *Journal of Virology* 84 (2): 894–97.
- Suzan-Monti, Marie, Bernard La Scola, Lina Barrassi, Leon Espinosa, a Didier Raoult. 2007. „Ultrastructural Characterization of the Giant Volcano-like Virus Factory of *Acanthamoeba Polyphaga* Mimivirus". *PLoS One* 2 (3): e328.
- Weisman, Robert A., a Edward D. Korn. 1967. „Phagocytosis of Latex Beads by *Acanthamoeba*. I. Biochemical Properties*". *Biochemistry* 6 (2): 485–97.
- Williams, Tom A., T. Martin Embley, a Eva Heinz. 2011. „Informational Gene Phylogenies Do Not Support a Fourth Domain of Life for Nucleocytoplasmic Large DNA Viruses". *PLoS One* 6 (6): e21080.
- Woese, C. R., O. Kandler, a M. L. Wheelis. 1990. „Towards a Natural System of Organisms: Proposal for the Domains Archaea, Bacteria, and Eucarya." *Proceedings of the National Academy of Sciences* 87 (12): 4576–79.
- Xiang, Xiaoyu, Lanming Chen, Xiaoxing Huang, Yuanmin Luo, Qunxin She, a Li Huang. 2005. „*Sulfolobus Tengchongensis* Spindle-Shaped Virus STSV1: Virus-Host Interactions and Genomic Features". *Journal of Virology* 79 (14): 8677–86.
- Xiao, Chuan, Paul R. Chipman, Anthony J. Battisti, Valorie D. Bowman, Patricia Renesto, Didier Raoult, a Michael G. Rossmann. 2005. „Cryo-electron Microscopy of the Giant Mimivirus". *Journal of Molecular Biology* 353 (3): 493–96.
- Xiao, Chuan, Yurii G. Kuznetsov, Siyang Sun, Susan L. Hafenstein, Victor A. Kostyuchenko, Paul R. Chipman, Marie Suzan-Monti, Didier Raoult, Alexander McPherson, a Michael G. Rossmann. 2009. „Structural Studies of the Giant Mimivirus". *PLOS Biology* 7 (4): e1000092.
- Yoosuf, Niyaz, Natalya Yutin, Philippe Colson, Svetlana Shabalina, Isabelle Pagnier, Catherine Robert, Said Azza, *et al.* 2012. „Related Giant Viruses in Distant Locations and Different Habitats: *Acanthamoeba polyphaga* moumouvirus Represents a Third Lineage of the Mimiviridae That Is Close to the Megavirus Lineage". *Genome biology and evolution* 4 (12) 1324–1330.
- Yutin, Natalya, Philippe Colson, Didier Raoult, a Eugene V Koonin. 2013. „Mimiviridae: clusters of orthologous genes, reconstruction of gene repertoire evolution and proposed expansion of the giant virus family". *Virology Journal* 10 (duben): 106.
- Yutin, Natalya, a Eugene V Koonin. 2013. „Pandoraviruses are highly derived phycodnaviruses". *Biology Direct* 8 (říjen): 25.

Zauberman, Nathan, Yael Mutsafi, Daniel Ben Halevy, Eyal Shimoni, Eugenia Klein, Chuan Xiao, Siyang Sun, a Abraham Minsky. 2008. „Distinct DNA Exit and Packaging Portals in the Virus *Acanthamoeba Polyphaga* Mimivirus". *PLOS Biology* 6 (5): e114.

Zhang, Xinzheng, Siyang Sun, Ye Xiang, Jimson Wong, Thomas Klose, Didier Raoult, a Michael G. Rossmann. 2012. „Structure of Sputnik, a Virophage, at 3.5-Å Resolution". *Proceedings of the National Academy of Sciences of the United States of America* 109 (45): 18431–36.