

Errata k bakalářské práci

Téma bakalářské práce:

Vliv spánku a cirkadiánního systému na propustnost hematoencefalické bariéry
(Husáková Šárka)

Použitá literatura

Původní:

- *Abbott, N. Joan, Lars Rönnbäck, and Elisabeth Hansson. 2006. "Astrocyte-Endothelial Interactions at the Blood-Brain Barrier." *Nature Reviews Neuroscience*.
- Akashi, Makoto, Yoshiki Tsuchiya, Takao Yoshino, and Eisuke Nishida. 2002. "Control of Intracellular Dynamics of Mammalian Period Proteins by Casein Kinase I ϵ (CKI ϵ) and CKI δ in Cultured Cells." *Molecular and Cellular Biology* 22 (6).
- Artiushin, Gregory, Shirley L Zhang, Hervé Tricoire, and Amita Sehgal. 2018. "Endocytosis at the Drosophila Blood-Brain Barrier as a Function for Sleep." *ELife* 7 (November).
- Balsalobre, A. 2000. "Resetting of Circadian Time in Peripheral Tissues by Glucocorticoid Signaling." *Science* 289 (5488).
- *Banks, Siobhan, and David F. Dinges. 2007. "Behavioral and Physiological Consequences of Sleep Restriction." *Journal of Clinical Sleep Medicine*.
- *Bazzoni, Gianfranco, and Elisabetta Dejana. 2004. "Endothelial Cell-to-Cell Junctions: Molecular Organization and Role in Vascular Homeostasis." *Physiological Reviews*.
- Bejanin, Alexandre, Daniel R. Schonhaut, Renaud La Joie, Joel H. Kramer, Suzanne L. Baker, Natasha Sosa, Nagehan Ayakta, et al. 2017. "Tau Pathology and Neurodegeneration Contribute to Cognitive Impairment in Alzheimer's Disease." *Brain* 140 (12).
- Binder, L I, A Frankfurter, and L I Rebhun. 1985. "The Distribution of Tau in the Mammalian Central Nervous System." *The Journal of Cell Biology* 101 (4).
- Booth, Catherine L., Lukasz Pulaski, Michael M. Gottesman, and Ira Pastan. 2000. "Analysis of the Properties of the N-Terminal Nucleotide-Binding Domain of Human P-Glycoprotein." *Biochemistry* 39 (18).
- Brightman, M. W., and T. S. Reese. 1969. "Junctions between Intimately Apposed Cell Membranes in the Vertebrate Brain." *The Journal of Cell Biology* 40 (3).

- Brown, Steven A, Gottlieb Zumbrunn, Fabienne Fleury-Olela, Nicolas Preitner, and Ueli Schibler. 2002. "Rhythms of Mammalian Body Temperature Can Sustain Peripheral Circadian Clocks." *Current Biology* 12 (18).
- Bunger, Maureen K., Lisa D. Wilsbacher, Susan M. Moran, Cynthia Clendenin, Laurel A. Radcliffe, John B. Hogenesch, M. Celeste Simon, Joseph S. Takahashi, and Christopher A. Bradfield. 2000. "Mop3 Is an Essential Component of the Master Circadian Pacemaker in Mammals." *Cell* 103 (7).
- *Cavallera, G. M., and S. Giudici. 2008. "Morningness and Eveningness Personality: A Survey in Literature from 1995 up till 2006." *Personality and Individual Differences*.
- *Chokroverty, S. 2010. "Overview of Sleep & Sleep Disorders." *Indian Journal of Medical Research*.
- Chou, Thomas C., Alvhild A. Bjorkum, Stephanie E. Gaus, Jun Lu, Thomas E. Scammell, and Clifford B. Saper. 2002. "Afferents to the Ventrolateral Preoptic Nucleus." *Journal of Neuroscience* 22 (3).
- *Cipolla-Neto, José, and Fernanda Gaspar Do Amaral. 2018. "Melatonin as a Hormone: New Physiological and Clinical Insights." *Endocrine Reviews*.
- Coomer, B. L., and P. A. Stewart. 1985. "Morphometric Analysis of CNS Microvascular Endothelium." *Microvascular Research* 30 (1).
- Cordon-Cardo, C., J. P. O'Brien, D. Casals, L. Rittman-Grauer, J. L. Biedler, M. R. Melamed, and J. R. Bertino. 1989. "Multidrug-Resistance Gene (P-Glycoprotein) Is Expressed by Endothelial Cells at Blood-Brain Barrier Sites." *Proceedings of the National Academy of Sciences* 86 (2).
- Cornford, E. M., S. Hyman, and B. E. Swartz. 1994. "The Human Brain GLUT1 Glucose Transporter: Ultrastructural Localization to the Blood-Brain Barrier Endothelia." *Journal of Cerebral Blood Flow and Metabolism* 14 (1).
- *Cui, Ning, Min Hu, and Raouf A. Khalil. 2017. "Biochemical and Biological Attributes of Matrix Metalloproteinases." In .
- Damiola, F. 2000. "Restricted Feeding Uncouples Circadian Oscillators in Peripheral Tissues from the Central Pacemaker in the Suprachiasmatic Nucleus." *Genes & Development* 14 (23).
- *Daneman, Richard, and Alexandre Prat. 2015. "The Blood-Brain Barrier." *Cold Spring Harbor Perspectives in Biology* 7 (1).

- Daneman, Richard, Lu Zhou, Amanuel A. Kebede, and Ben A. Barres. 2010. "Pericytes Are Required for Blood–Brain Barrier Integrity during Embryogenesis." *Nature* 468 (7323).
- *Desalvo, Michael K., Nasima Mayer, Fahima Mayer, and Roland J. Bainton. 2011. "Physiologic and Anatomic Characterization of the Brain Surface Glia Barrier of *Drosophila*." *GLIA* 59 (9).
- *Dijk, Derk Jan, and Christian Cajochen. 1997. "Melatonin and the Circadian Regulation of Sleep Initiation, Consolidation, Structure, and the Sleep EEG." *Journal of Biological Rhythms* 12 (6).
- *Dunlap, Jay C. 1999. "Molecular Bases for Circadian Clocks." *Cell*.
- *Dyrna, Felix, Sophie Hanske, Martin Krueger, and Ingo Bechmann. 2013. "The Blood-Brain Barrier." *Journal of Neuroimmune Pharmacology*.
- Edgar, D. M., W. C. Dement, and C. A. Fuller. 1993. "Effect of SCN Lesions on Sleep in Squirrel Monkeys: Evidence for Opponent Processes in Sleep-Wake Regulation." *Journal of Neuroscience* 13 (3).
- *Fu, Bingmei M. 2018. "Transport across the Blood-Brain Barrier." In *Advances in Experimental Medicine and Biology*. Vol. 1097.
- *Fuhr, Luise, Mónica Abreu, Patrick Pett, and Angela Relógio. 2015. "Circadian Systems Biology: When Time Matters." *Computational and Structural Biotechnology Journal*. 2015.
- Gomez-Gonzalez, Beatriz, Gabriela Hurtado-Alvarado, Enrique Esqueda-Leon, Rafael Santana- Miranda, Jose Rojas-Zamorano, and Javier Velazquez-Moctezuma. 2013. "REM Sleep Loss and Recovery Regulates Blood-Brain Barrier Function." *Current Neurovascular Research* 10 (3).
- Gordon, Grant R.J., Clare Howarth, and Brian A. Macvicar. 2011. "Bidirectional Control of Arteriole Diameter by Astrocytes." In *Experimental Physiology*. Vol. 96.
- Gu, Xiao, Xiuxiu Hao, Xiaoyu Shen, Hualin Wang, Yuyan Zhang, and Xiaoling Gao. 2019. "The Elimination of Brain-Targeted Nanomaterials." In *Brain Targeted Drug Delivery System*. Elsevier.
- Hattar, S., H. W. Liao, M. Takao, D. M. Berson, and K. W. Yau. 2002. "Melanopsin-Containing Retinal Ganglion Cells: Architecture, Projections, and Intrinsic Photosensitivity." *Science* 295 (5557).
- He, Junyun, Hung Hsuchou, Y. He, Abba J. Kastin, Yuping Wang, and Weihong Pan. 2014.

“Sleep Restriction Impairs Blood-Brain Barrier Function.” *Journal of Neuroscience* 34 (44).

Holth, Jerrah K., Sarah K. Fritschi, Chanung Wang, Nigel P. Pedersen, John R. Cirrito, Thomas E. Mahan, Mary Beth Finn, et al. 2019. “The Sleep-Wake Cycle Regulates Brain Interstitial Fluid Tau in Mice and CSF Tau in Humans.” *Science* 363 (6429).

Iloff, Jeffrey J., Minghuan Wang, Yonghong Liao, Benjamin A. Plogg, Weiguo Peng, Georg A. Gundersen, Helene Benveniste, et al. 2012. “A Paravascular Pathway Facilitates CSF Flow through the Brain Parenchyma and the Clearance of Interstitial Solutes, Including Amyloid β .” *Science Translational Medicine* 4 (147).

*Islam, Md. Mirazul, and Zahurin Mohamed. 2015. “Computational and Pharmacological Target of Neurovascular Unit for Drug Design and Delivery.” *BioMed Research International* 2015.

Kang, J.-E., M. M. Lim, R. J. Bateman, J. J. Lee, L. P. Smyth, J. R. Cirrito, N. Fujiki, S. Nishino, and D. M. Holtzman. 2009. “Amyloid- β Dynamics Are Regulated by Orexin and the Sleep-Wake Cycle.” *Science* 326 (5955).

*King, David P., and Joseph S. Takahashi. 2000. “Molecular Genetics of Circadian Rhythms in Mammals.” *Annual Review of Neuroscience*.

King, David P., Yaliang Zhao, Ashvin M. Sangoram, Lisa D. Wilsbacher, Minoru Tanaka, Marina P. Antoch, Thomas D.L. Steeves, et al. 1997. “Positional Cloning of the Mouse Circadian Clock Gene.” *Cell* 89 (4).

*Ko, Caroline H., and Joseph S. Takahashi. 2006. “Molecular Components of the Mammalian Circadian Clock.” *Human Molecular Genetics*.

Konopka, R. J., and S. Benzer. 1971. “Clock Mutants of *Drosophila Melanogaster*.” *Proceedings of the National Academy of Sciences of the United States of America* 68 (9).

Korenčič, Anja, Rok Košir, Grigory Bordyugov, Robert Lehmann, Damjana Rozman, and Hanspeter Herzog. 2014. “Timing of Circadian Genes in Mammalian Tissues.” *Scientific Reports* 4.

Kräuchi, Kurt, Christian Cajochen, Esther Werth, and Anna Wirz-Justice. 2000. “Functional Link between Distal Vasodilation and Sleep-Onset Latency?” *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* 278 (3).

Kripke, Daniel F, Katharine M Rex, Sonia Ancoli-Israel, Caroline M Nievergelt, Walt Klimecki, and John R Kelsoe. 2008. “Delayed Sleep Phase Cases and Controls.” *Journal of*

Circadian Rhythms 6 (0).

- Krueger, P. M., and E. M. Friedman. 2009. "Sleep Duration in the United States: A Cross-Sectional Population-Based Study." *American Journal of Epidemiology* 169 (9).
- Kume, Kazuhiko, Mark J. Zylka, Sathyanarayanan Sriram, Lauren P. Shearman, David R. Weaver, Xiaowei Jin, Elizabeth S. Maywood, Michael H. Hastings, and Steven M. Reppert. 1999. "MCRY1 and MCRY2 Are Essential Components of the Negative Limb of the Circadian Clock Feedback Loop." *Cell* 98 (2).
- Lananna, Brian V., Collin J. Nadarajah, Mariko Izumo, Michelle R. Cedeño, David D. Xiong, Julie Dimitry, Chak Foon Tso, et al. 2018. "Cell-Autonomous Regulation of Astrocyte Activation by the Circadian Clock Protein BMAL1." *Cell Reports* 25 (1).
- Leak, Rehana K., J. Patrick Card, and Robert Y. Moore. 1999. "Suprachiasmatic Pacemaker Organization Analyzed by Viral Transynaptic Transport." *Brain Research* 819 (1–2).
- Leak, Rehana K., and Robert Y. Moore. 2001. "Topographic Organization of Suprachiasmatic Nucleus Projection Neurons." *Journal of Comparative Neurology* 433 (3).
- Lewy, A., T. Wehr, F. Goodwin, D. Newsome, and S. Markey. 1980. "Light Suppresses Melatonin Secretion in Humans." *Science* 210 (4475).
- Lin, Ling, Juliette Faraco, Robin Li, Hiroshi Kadotani, William Rogers, Xiaoyan Lin, Xiaohong Qiu, Pieter J. De Jong, Seiji Nishino, and Emmanuel Mignot. 1999. "The Sleep Disorder Canine Narcolepsy Is Caused by a Mutation in the Hypocretin (Orexin) Receptor 2 Gene." *Cell* 98 (3).
- *Löscher, Wolfgang, and Heidrun Potschka. 2005. "Blood-Brain Barrier Active Efflux Transporters: ATP-Binding Cassette Gene Family." *NeuroRx* 2 (1).
- Lucey, Brendan P., Terry J. Hicks, Jennifer S. McLeland, Cristina D. Toedebusch, Jill Boyd, Donald L. Elbert, Bruce W. Patterson, et al. 2018. "Effect of Sleep on Overnight Cerebrospinal Fluid Amyloid β Kinetics." *Annals of Neurology* 83 (1).
- Machida, Takashi, Fuyuko Takata, Junichi Matsumoto, Hisayo Takenoshita, Ikuya Kimura, Atsushi Yamauchi, Shinya Dohgu, and Yasufumi Kataoka. 2015. "Brain Pericytes Are the Most Thrombin-Sensitive Matrix Metalloproteinase-9-Releasing Cell Type Constituting the Blood–Brain Barrier in Vitro." *Neuroscience Letters* 599 (July).
- Mayer, Fahima, Nasima Mayer, Leslie Chinn, Robert L. Pinsonneault, Deanna Kroetz, and Roland J. Bainton. 2009. "Evolutionary Conservation of Vertebrate Blood-Brain Barrier Chemoprotective Mechanisms in *Drosophila*." *Journal of Neuroscience* 29 (11).

- *Mitic, Laura L., Christina M. Van Itallie, and James M. Anderson. 2000. "Molecular Physiology and Pathophysiology of Tight Junctions I. Tight Junction Structure and Function: Lessons from Mutant Animals and Proteins." *American Journal of Physiology - Gastrointestinal and Liver Physiology*.
- Moore, Robert Y. 1973. "Retinohypothalamic Projection in Mammals: A Comparative Study." *Brain Research* 49 (2).
- Murakami, Yuichi, Yuko Higashi, Naoya Matsunaga, Satoru Koyanagi, and Shigehiro Ohdo. 2008. "Circadian Clock-Controlled Intestinal Expression of the Multidrug-Resistance Gene Mdr1a in Mice." *Gastroenterology* 135 (5).
- Nakazato, Ryota, Kenji Kawabe, Daisuke Yamada, Shinsuke Ikeno, Michihiro Mieda, Shigeki Shimba, Eiichi Hinoi, Yukio Yoneda, and Takeshi Takarada. 2017. "Disruption of Bmal1 Impairs Blood-Brain Barrier Integrity via Pericyte Dysfunction." *Journal of Neuroscience* 37 (42).
- *Obermeier, Birgit, Richard Daneman, and Richard M. Ransohoff. 2013. "Development, Maintenance and Disruption of the Blood-Brain Barrier." *Nature Medicine*.
- Peppiatt, Claire M., Clare Howarth, Peter Mobbs, and David Attwell. 2006. "Bidirectional Control of CNS Capillary Diameter by Pericytes." *Nature* 443 (7112).
- Preitner, Nicolas, Francesca Damiola, Jozsef Zakany, Denis Duboule, Urs Albrecht, and Ueli Schibler. 2002. "The Orphan Nuclear Receptor REV-ERB α Controls Circadian Transcription within the Positive Limb of the Mammalian Circadian Oscillator University of Geneva University of Geneva." *Cell* 110 (2).
- Prolo, L. M. 2005. "Circadian Rhythm Generation and Entrainment in Astrocytes." *Journal of Neuroscience* 25 (2).
- Qin, Weiwei, Jing Li, Rongjia Zhu, Suhua Gao, Junfen Fan, Mingrong Xia, Robert Chunhua Zhao, and Jiewen Zhang. 2019. "Melatonin Protects Blood-Brain Barrier Integrity and Permeability by Inhibiting Matrix Metalloproteinase-9 via the NOTCH3/NF-KB Pathway." *Aging* 11 (23).
- Qosa, Hisham, Bilal S. Abuasal, Ignacio A. Romero, Babette Weksler, Pierre Oliver Couraud, Jeffrey N. Keller, and Amal Kaddoumi. 2014. "Differences in Amyloid- β Clearance across Mouse and Human Blood-Brain Barrier Models: Kinetic Analysis and Mechanistic Modeling." *Neuropharmacology* 79.
- Ralph, Martin R., Russell G. Foster, Fred C. Davis, and Michael Menaker. 1990. "Transplanted

- Suprachiasmatic Nucleus Determines Circadian Period." *Science* 247 (4945).
- Rath, Martin F., Kristian Rohde, and Morten Møller. 2012. "Circadian Oscillations of Molecular Clock Components in the Cerebellar Cortex of the Rat." *Chronobiology International* 29 (10).
- *Reid, Kathryn J. 2019. "Assessment of Circadian Rhythms." *Neurologic Clinics*.
- *Reppert, Steven M., and David R. Weaver. 2002. "Coordination of Circadian Timing in Mammals." *Nature* 418 (6901).
- Risau, Werner, and Hartwig Wolburg. 1990. "Development of the Blood-Brain Barrier." *Trends in Neurosciences* 13 (5).
- Rosenwasser, Alan M., and Fred W. Turek. 2015. "Neurobiology of Circadian Rhythm Regulation." *Sleep Medicine Clinics*.
- Sato, Trey K., Satchidananda Panda, Loren J. Miraglia, Teresa M. Reyes, Radu D. Rudic, Peter McNamara, Kinnery A. Naik, Garret A. Fitzgerald, Steve A. Kay, and John B. Hogenesch. 2004. "A Functional Genomics Strategy Reveals Rora as a Component of the Mammalian Circadian Clock." *Neuron* 43 (4).
- Shibata, Shigenobu, and Robert Y. Moore. 1993. "Neuropeptide Y and Optic Chiasm Stimulation of Affect Suprachiasmatic Nucleus Circadian Function in Vitro." *Brain Research* 615 (1).
- Simard, Marie, Gregory Arcuino, Takahiro Takano, Qing Song Liu, and Maiken Nedergaard. 2003. "Signaling at the Gliovascular Interface." *Journal of Neuroscience* 23 (27).
- *Smith, Quentin R. 2000. "Transport of Glutamate and Other Amino Acids at the Blood-Brain Barrier." In *Journal of Nutrition*. Vol. 130.
- Spéder, Pauline, and Andrea H. Brand. 2014. "Gap Junction Proteins in the Blood-Brain Barrier Control Nutrient-Dependent Reactivation of Drosophila Neural Stem Cells." *Developmental Cell* 30 (3).
- Stephan, F. K., and I. Zucker. 1972. "Circadian Rhythms in Drinking Behavior and Locomotor Activity of Rats Are Eliminated by Hypothalamic Lesions." *Proceedings of the National Academy of Sciences* 69 (6).
- Storch, Kai-Florian, Ovidiu Lipan, Igor Leykin, N. Viswanathan, Fred C. Davis, Wing H. Wong, and Charles J. Weitz. 2002. "Extensive and Divergent Circadian Gene Expression in Liver and Heart." *Nature* 417 (6884).
- *Stratmann, Markus, and Ueli Schibler. 2006. "Properties, Entrainment, and Physiological

- Functions of Mammalian Peripheral Oscillators." *Journal of Biological Rhythms*.
- Suburo, A. M., and A. Pellegrino de Iraldi. 1969. "An Ultrastructural Study of the Rat's Suprachiasmatic Nucleus." *Journal of Anatomy* 105 (Pt 3).
- *Takahashi, Joseph S. 2004. "Finding New Clock Components: Past and Future." *Journal of Biological Rhythms*.
- *Vitaterna, Martha Hotz, Joseph S. Takahashi, and Fred W. Turek. 2001. "Overview of Circadian Rhythms." *Alcohol Research and Health* 25 (2).
- *Wolburg, Hartwig, and Andrea Lippoldt. 2002. "Tight Junctions of the Blood-Brain Barrier: Development, Composition and Regulation." *Vascular Pharmacology* 38 (6).
- Xie, Lulu, Hongyi Kang, Qiwu Xu, Michael J. Chen, Yonghong Liao, Meenakshisundaram Thiyagarajan, John O'Donnell, et al. 2013. "Sleep Drives Metabolite Clearance from the Adult Brain." *Science* 342 (6156).
- Yamazaki, Shin, Rika Numano, Michikazu Abe, Akiko Hida, Ri Ichi Takahashi, Masatsugu Ueda, Gene D. Block, Yoshiyuki Sakaki, Michael Menaker, and Hajime Tei. 2000. "Resetting Central and Peripheral Circadian Oscillators in Transgenic Rats." *Science* 288 (5466).
- Yoo, S.-H., S. Yamazaki, P. L. Lowrey, K. Shimomura, C. H. Ko, E. D. Buhr, S. M. Siepk, et al. 2004. "PERIOD2::LUCIFERASE Real-Time Reporting of Circadian Dynamics Reveals Persistent Circadian Oscillations in Mouse Peripheral Tissues." *Proceedings of the National Academy of Sciences* 101 (15).
- Zhang, Shirley L., Nicholas F. Lahens, Zhifeng Yue, Denice M. Arnold, Peter P. Pakstis, Jessica E. Schwarz, and Amita Sehgal. 2021. "A Circadian Clock Regulates Efflux by the Blood-Brain Barrier in Mice and Human Cells." *Nature Communications* 12 (1).
- Zhang, Shirley L., Zhifeng Yue, Denice M. Arnold, Gregory Artiushin, and Amita Sehgal. 2018. "A Circadian Clock in the Blood-Brain Barrier Regulates Xenobiotic Efflux." *Cell* 173 (1).

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Oprava:

- *Abbott, N. Joan, Lars Rönnbäck, and Elisabeth Hansson. 2006. "Astrocyte-Endothelial Interactions at the Blood-Brain Barrier." *Nature Reviews Neuroscience* 7 (1), 41-53.
- Akashi, Makoto, Yoshiki Tsuchiya, Takao Yoshino, and Eisuke Nishida. 2002. "Control of Intracellular Dynamics of Mammalian Period Proteins by Casein Kinase I ϵ (CKI ϵ) and CKI δ in Cultured Cells." *Molecular and Cellular Biology* 22 (6), 1693-1703.
- Artiushin, Gregory, Shirley L Zhang, Hervé Tricoire, and Amita Sehgal. 2018. "Endocytosis at the Drosophila Blood-Brain Barrier as a Function for Sleep." *ELife* 7 e43326.
- Balsalobre, A. 2000. "Resetting of Circadian Time in Peripheral Tissues by Glucocorticoid Signaling." *Science* 289 (5488), 2344-2347.
- *Banks, Siobhan, and David F. Dinges. 2007. "Behavioral and Physiological Consequences of Sleep Restriction." *Journal of Clinical Sleep Medicine* 3 (5), 519-528.
- *Bazzoni, Gianfranco, and Elisabetta Dejana. 2004. "Endothelial Cell-to-Cell Junctions: Molecular Organization and Role in Vascular Homeostasis." *Physiological Reviews* 84 (3), 869-901.
- Bejanin, Alexandre, Daniel R. Schonhaut, Renaud La Joie, Joel H. Kramer, Suzanne L. Baker, Natasha Sosa, Nagehan Ayakta, Averill Cantwell, Mustafa Janabi, Mariella Lauriola, James P. O'Neil, Maria L. Gorno-Tempini, Zachary A. Miller, Howard J. Rosen, Bruce L. Miller, William J. Jagust, Gil D. Rabinovici. 2017. "Tau Pathology and Neurodegeneration Contribute to Cognitive Impairment in Alzheimer's Disease." *Brain* 140 (12), 3286-3300.
- Binder, L I, A Frankfurter, and L I Rebhun. 1985. "The Distribution of Tau in the Mammalian Central Nervous System." *The Journal of Cell Biology* 101 (4), 1371-1378.
- Booth, Catherine L., Lukasz Pulaski, Michael M. Gottesman, and Ira Pastan. 2000. "Analysis of the Properties of the N-Terminal Nucleotide-Binding Domain of Human P-Glycoprotein." *Biochemistry* 39 (18), 5518-5526.
- Brightman, M. W., and T. S. Reese. 1969. "Junctions between Intimately Apposed Cell Membranes in the Vertebrate Brain." *The Journal of Cell Biology* 40 (3), 648-677.
- Brown, Steven A, Gottlieb Zumbrunn, Fabienne Fleury-Olela, Nicolas Preitner, and Ueli Schibler. 2002. "Rhythms of Mammalian Body Temperature Can Sustain Peripheral Circadian Clocks." *Current Biology* 12 (18), 1574-1583.
- Bunger, Maureen K., Lisa D. Wilsbacher, Susan M. Moran, Cynthia Clendenin, Laurel A.

- Radcliffe, John B. Hogenesch, M. Celeste Simon, Joseph S. Takahashi, and Christopher A. Bradfield. 2000. "Mop3 Is an Essential Component of the Master Circadian Pacemaker in Mammals." *Cell* 103 (7), 1009-1017.
- *Cavallera, G. M., and S. Giudici. 2008. "Morningness and Eveningness Personality: A Survey in Literature from 1995 up till 2006." *Personality and Individual Differences* 44 (1), 3-21.
- *Chokroverty, S. 2010. "Overview of Sleep & Sleep Disorders." *Indian Journal of Medical Research* 131, 126-140.
- Chou, Thomas C., Alvild A. Bjorkum, Stephanie E. Gaus, Jun Lu, Thomas E. Scammell, and Clifford B. Saper. 2002. "Afferents to the Ventrolateral Preoptic Nucleus." *Journal of Neuroscience* 22 (3), 977-990.
- *Cipolla-Neto, José, and Fernanda Gaspar Do Amaral. 2018. "Melatonin as a Hormone: New Physiological and Clinical Insights." *Endocrine Reviews* 39 (6), 990-1028.
- Coomer, B. L., and P. A. Stewart. 1985. "Morphometric Analysis of CNS Microvascular Endothelium." *Microvascular Research* 30 (1), 99-115.
- Cordon-Cardo, C., J. P. O'Brien, D. Casals, L. Rittman-Grauer, J. L. Biedler, M. R. Melamed, and J. R. Bertino. 1989. "Multidrug-Resistance Gene (P-Glycoprotein) Is Expressed by Endothelial Cells at Blood-Brain Barrier Sites." *Proceedings of the National Academy of Sciences* 86 (2), 695-698.
- Cornford, E. M., S. Hyman, and B. E. Swartz. 1994. "The Human Brain GLUT1 Glucose Transporter: Ultrastructural Localization to the Blood-Brain Barrier Endothelia." *Journal of Cerebral Blood Flow and Metabolism* 14 (1), 106-112.
- *Cui, Ning, Min Hu, and Raouf A. Khalil. 2017. "Biochemical and Biological Attributes of Matrix Metalloproteinases." *Progress in Molecular Biology and Translational Science* 147, 1-73.
- Damiola, F. 2000. "Restricted Feeding Uncouples Circadian Oscillators in Peripheral Tissues from the Central Pacemaker in the Suprachiasmatic Nucleus." *Genes & Development* 14 (23), 2950-2961.
- *Daneman, Richard, and Alexandre Prat. 2015. "The Blood-Brain Barrier." *Cold Spring Harbor Perspectives in Biology* 7 (1), a020412.
- Daneman, Richard, Lu Zhou, Amanuel A. Kebede, and Ben A. Barres. 2010. "Pericytes Are Required for Blood-Brain Barrier Integrity during Embryogenesis." *Nature* 468 (7323), 562-566.

- *Desalvo, Michael K., Nasima Mayer, Fahima Mayer, and Roland J. Bainton. 2011. "Physiologic and Anatomic Characterization of the Brain Surface Glia Barrier of *Drosophila*." *GLIA* 59 (9), 1322-1340.
- *Dijk, Derk Jan, and Christian Cajochen. 1997. "Melatonin and the Circadian Regulation of Sleep Initiation, Consolidation, Structure, and the Sleep EEG." *Journal of Biological Rhythms* 12 (6), 627-635.
- *Dunlap, Jay C. 1999. "Molecular Bases for Circadian Clocks." *Cell* 96 (2), 271-290.
- *Dyrna, Felix, Sophie Hanske, Martin Krueger, and Ingo Bechmann. 2013. "The Blood-Brain Barrier." *Journal of Neuroimmune Pharmacology* 8 (4), 763-773.
- Edgar, D. M., W. C. Dement, and C. A. Fuller. 1993. "Effect of SCN Lesions on Sleep in Squirrel Monkeys: Evidence for Opponent Processes in Sleep-Wake Regulation." *Journal of Neuroscience* 13 (3) 1065-1079.
- *Fu, Bingmei M. 2018. "Transport across the Blood-Brain Barrier." *Advances in Experimental Medicine and Biology* 1097, 235-259.
- *Fuhr, Luise, Mónica Abreu, Patrick Pett, and Angela Relógio. 2015. "Circadian Systems Biology: When Time Matters." *Computational and Structural Biotechnology Journal* 13, 417-426.
- Gomez-Gonzalez, Beatriz, Gabriela Hurtado-Alvarado, Enrique Esqueda-Leon, Rafael Santana- Miranda, Jose Rojas-Zamorano, and Javier Velazquez-Moctezuma. 2013. "REM Sleep Loss and Recovery Regulates Blood-Brain Barrier Function." *Current Neurovascular Research* 10 (3), 197-207.
- Gordon, Grant R.J., Clare Howarth, and Brian A. Macvicar. 2011. "Bidirectional Control of Arteriole Diameter by Astrocytes." *Experimental Physiology* 96 (4), 393-399.
- Gu, Xiao, Xiuxiu Hao, Xiaoyu Shen, Hualin Wang, Yuyan Zhang, and Xiaoling Gao. 2019. "The Elimination of Brain-Targeted Nanomaterials." *Brain Targeted Drug Delivery System* 439-454.
- Hattar, S., H. W. Liao, M. Takao, D. M. Berson, and K. W. Yau. 2002. "Melanopsin-Containing Retinal Ganglion Cells: Architecture, Projections, and Intrinsic Photosensitivity." *Science* 295 (5557), 1065-1070.
- He, Junyun, Hung Hsuchou, Y. He, Abba J. Kastin, Yuping Wang, and Weihong Pan. 2014. "Sleep Restriction Impairs Blood-Brain Barrier Function." *Journal of Neuroscience* 34 (44), 14697-14706.

- Holth, Jerrah K., Sarah K. Fritschi, Chanung Wang, Nigel P. Pedersen, John R. Cirrito, Thomas E. Mahan, Mary Beth Finn, Melissa Manis, Joel C. Geerling, Patrick M. Fuller, Brendan P. Lucey, David M. Holtzman. 2019. "The Sleep-Wake Cycle Regulates Brain Interstitial Fluid Tau in Mice and CSF Tau in Humans." *Science* 363 (6429), 880-884.
- Iliff, Jeffrey J., Minghuan Wang, Yonghong Liao, Benjamin A. Plogg, Weiguo Peng, Georg A. Gundersen, Helene Benveniste, G. Edward Vates, Rashid Deane, Steven A. Goldman, Erlend A. Nagelhus, Maiken Nedergaard. 2012. "A Paravascular Pathway Facilitates CSF Flow through the Brain Parenchyma and the Clearance of Interstitial Solutes, Including Amyloid β ." *Science Translational Medicine* 4 (147), 147ra111.
- *Islam, Md. Mirazul, and Zahurin Mohamed. 2015. "Computational and Pharmacological Target of Neurovascular Unit for Drug Design and Delivery." *BioMed Research International* 731292.
- Kang, J.-E., M. M. Lim, R. J. Bateman, J. J. Lee, L. P. Smyth, J. R. Cirrito, N. Fujiki, S. Nishino, and D. M. Holtzman. 2009. "Amyloid- β Dynamics Are Regulated by Orexin and the Sleep-Wake Cycle." *Science* 326 (5955), 1005-1007.
- *King, David P., and Joseph S. Takahashi. 2000. "Molecular Genetics of Circadian Rhythms in Mammals." *Annual Review of Neuroscience* 23, 713-742.
- King, David P., Yaliang Zhao, Ashvin M. Sangoram, Lisa D. Wilsbacher, Minoru Tanaka, Marina P. Antoch, Thomas D.L. Steeves, Vitaterna M. H., Kornhauser J.M, Lowrey P. L., Turek F. W., Takahashi J. S. 1997. "Positional Cloning of the Mouse Circadian Clock Gene." *Cell* 89 (4), 641-653.
- *Ko, Caroline H., and Joseph S. Takahashi. 2006. "Molecular Components of the Mammalian Circadian Clock." *Human Molecular Genetics* 15 (2), 271-277.
- Konopka, R. J., and S. Benzer. 1971. "Clock Mutants of *Drosophila Melanogaster*." *Proceedings of the National Academy of Sciences of the United States of America* 68 (9), 2112-2116.
- Korenčič, Anja, Rok Košir, Grigory Bordyugov, Robert Lehmann, Damjana Rozman, and Hanspeter Herzog. 2014. "Timing of Circadian Genes in Mammalian Tissues." *Scientific Reports* 4 (1), 5782.
- Kräuchi, Kurt, Christian Cajochen, Esther Werth, and Anna Wirz-Justice. 2000. "Functional Link between Distal Vasodilation and Sleep-Onset Latency?" *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* 278 (3), 741-748.

- Kripke, Daniel F, Katharine M Rex, Sonia Ancoli-Israel, Caroline M Nievergelt, Walt Klimecki, and John R Kelsoe. 2008. "Delayed Sleep Phase Cases and Controls." *Journal of Circadian Rhythms* 6 (0).
- Krueger, P. M., and E. M. Friedman. 2009. "Sleep Duration in the United States: A Cross-Sectional Population-Based Study." *American Journal of Epidemiology* 169 (9), 1052-1063.
- Kume, Kazuhiko, Mark J. Zylka, Sathyanarayanan Sriram, Lauren P. Shearman, David R. Weaver, Xiaowei Jin, Elizabeth S. Maywood, Michael H. Hastings, and Steven M. Reppert. 1999. "MCRY1 and MCRY2 Are Essential Components of the Negative Limb of the Circadian Clock Feedback Loop." *Cell* 98 (2) 193-205.
- Lananna, Brian V., Collin J. Nadarajah, Mariko Izumo, Michelle R. Cedeño, David D. Xiong, Julie Dimitry, Chak Foon Tso, Celia A. McKee, Percy Griffin, Patrick W. Sheehan, Jeffery A. Haspel, Ben A. Barres, Shane A. Liddelow, Joseph S. Takahashi, Ilia N. Karatsoreos, Erik S. Musiek. 2018. "Cell-Autonomous Regulation of Astrocyte Activation by the Circadian Clock Protein BMAL1." *Cell Reports* 25 (1), 1-9.
- Leak, Rehana K., J. Patrick Card, and Robert Y. Moore. 1999. "Suprachiasmatic Pacemaker Organization Analyzed by Viral Transynaptic Transport." *Brain Research* 819 (1–2), 23-32.
- Leak, Rehana K., and Robert Y. Moore. 2001. "Topographic Organization of Suprachiasmatic Nucleus Projection Neurons." *Journal of Comparative Neurology* 433 (3), 312-334.
- Lewy, A., T. Wehr, F. Goodwin, D. Newsome, and S. Markey. 1980. "Light Suppresses Melatonin Secretion in Humans." *Science* 210 (4475), 1267-1269.
- Lin, Ling, Juliette Faraco, Robin Li, Hiroshi Kadotani, William Rogers, Xiaoyan Lin, Xiaohong Qiu, Pieter J. De Jong, Seiji Nishino, and Emmanuel Mignot. 1999. "The Sleep Disorder Canine Narcolepsy Is Caused by a Mutation in the Hypocretin (Orexin) Receptor 2 Gene." *Cell* 98 (3), 365-376.
- *Löscher, Wolfgang, and Heidrun Potschka. 2005. "Blood-Brain Barrier Active Efflux Transporters: ATP-Binding Cassette Gene Family." *NeuroRx* 2 (1), 86-98.
- Lucey, Brendan P., Terry J. Hicks, Jennifer S. McLeland, Cristina D. Toedebusch, Jill Boyd, Donald L. Elbert, Bruce W. Patterson, Jack Baty, John C. Morris, Vitaliy Ovod, Kwasi G. Mawuenyega, Randall J. Bateman. 2018. "Effect of Sleep on Overnight Cerebrospinal Fluid Amyloid β Kinetics." *Annals of Neurology* 83 (1), 197-204.

- Machida, Takashi, Fuyuko Takata, Junichi Matsumoto, Hisayo Takenoshita, Ikuya Kimura, Atsushi Yamauchi, Shinya Dohgu, and Yasufumi Kataoka. 2015. "Brain Pericytes Are the Most Thrombin-Sensitive Matrix Metalloproteinase-9-Releasing Cell Type Constituting the Blood–Brain Barrier in Vitro." *Neuroscience Letters* 599, 109-114.
- Mayer, Fahima, Nasima Mayer, Leslie Chinn, Robert L. Pinsonneault, Deanna Kroetz, and Roland J. Bainton. 2009. "Evolutionary Conservation of Vertebrate Blood-Brain Barrier Chemoprotective Mechanisms in *Drosophila*." *Journal of Neuroscience* 29 (11), 3538-3550.
- *Mitic, Laura L., Christina M. Van Itallie, and James M. Anderson. 2000. "Molecular Physiology and Pathophysiology of Tight Junctions I. Tight Junction Structure and Function: Lessons from Mutant Animals and Proteins." *American Journal of Physiology - Gastrointestinal and Liver Physiology* 279 (2), 250-254.
- Moore, Robert Y. 1973. "Retinohypothalamic Projection in Mammals: A Comparative Study." *Brain Research* 49 (2), 403-409.
- Murakami, Yuichi, Yuko Higashi, Naoya Matsunaga, Satoru Koyanagi, and Shigehiro Ohdo. 2008. "Circadian Clock-Controlled Intestinal Expression of the Multidrug-Resistance Gene *Mdr1a* in Mice." *Gastroenterology* 135 (5), 1636-1644.
- Nakazato, Ryota, Kenji Kawabe, Daisuke Yamada, Shinsuke Ikeno, Michihiro Mieda, Shigeki Shimba, Eiichi Hinoi, Yukio Yoneda, and Takeshi Takarada. 2017. "Disruption of *Bmal1* Impairs Blood-Brain Barrier Integrity via Pericyte Dysfunction." *Journal of Neuroscience* 37 (42), 10052-10062.
- *Obermeier, Birgit, Richard Daneman, and Richard M. Ransohoff. 2013. "Development, Maintenance and Disruption of the Blood-Brain Barrier." *Nature Medicine* 19 (12), 1584-1596.
- Peppiatt, Claire M., Clare Howarth, Peter Mobbs, and David Attwell. 2006. "Bidirectional Control of CNS Capillary Diameter by Pericytes." *Nature* 443 (7112), 700-704.
- Preitner, Nicolas, Francesca Damiola, Jozsef Zakany, Denis Duboule, Urs Albrecht, and Ueli Schibler. 2002. "The Orphan Nuclear Receptor REV-ERB α Controls Circadian Transcription within the Positive Limb of the Mammalian Circadian Oscillator University of Geneva University of Geneva." *Cell* 110 (2), 251-260.
- Prolo, L. M. 2005. "Circadian Rhythm Generation and Entrainment in Astrocytes." *Journal of Neuroscience* 25 (2), 404-408.

- Qin, Weiwei, Jing Li, Rongjia Zhu, Suhua Gao, Junfen Fan, Mingrong Xia, Robert Chunhua Zhao, and Jiewen Zhang. 2019. "Melatonin Protects Blood-Brain Barrier Integrity and Permeability by Inhibiting Matrix Metalloproteinase-9 via the NOTCH3/NF-KB Pathway." *Aging* 11 (23), 11391-11415.
- Qosa, Hisham, Bilal S. Abuasal, Ignacio A. Romero, Babette Weksler, Pierre Oliver Couraud, Jeffrey N. Keller, and Amal Kaddoumi. 2014. "Differences in Amyloid- β Clearance across Mouse and Human Blood-Brain Barrier Models: Kinetic Analysis and Mechanistic Modeling." *Neuropharmacology* 79, 668-678.
- Ralph, Martin R., Russell G. Foster, Fred C. Davis, and Michael Menaker. 1990. "Transplanted Suprachiasmatic Nucleus Determines Circadian Period." *Science* 247 (4945), 975-978.
- Rath, Martin F., Kristian Rohde, and Morten Møller. 2012. "Circadian Oscillations of Molecular Clock Components in the Cerebellar Cortex of the Rat." *Chronobiology International* 29 (10), 1289-1299.
- *Reid, Kathryn J. 2019. "Assessment of Circadian Rhythms." *Neurologic Clinics* 37 (3), 505-526.
- *Reppert, Steven M., and David R. Weaver. 2002. "Coordination of Circadian Timing in Mammals." *Nature* 418 (6901), 935-941.
- Risau, Werner, and Hartwig Wolburg. 1990. "Development of the Blood-Brain Barrier." *Trends in Neurosciences* 13 (5), 174-178.
- Rosenwasser, Alan M., and Fred W. Turek. 2015. "Neurobiology of Circadian Rhythm Regulation." *Sleep Medicine Clinics* 10 (4), 403-412.
- Sato, Trey K., Satchidananda Panda, Loren J. Miraglia, Teresa M. Reyes, Radu D. Rudic, Peter McNamara, Kinnery A. Naik, Garret A. Fitzgerald, Steve A. Kay, and John B. Hogenesch. 2004. "A Functional Genomics Strategy Reveals Rora as a Component of the Mammalian Circadian Clock." *Neuron* 43 (4), 527-537.
- Shibata, Shigenobu, and Robert Y. Moore. 1993. "Neuropeptide Y and Optic Chiasm Stimulation of Affect Suprachiasmatic Nucleus Circadian Function in Vitro." *Brain Research* 615 (1), 95-100.
- Simard, Marie, Gregory Arcuino, Takahiro Takano, Qing Song Liu, and Maiken Nedergaard. 2003. "Signaling at the Gliovascular Interface." *Journal of Neuroscience* 23 (27), 9254-9262.
- *Smith, Quentin R. 2000. "Transport of Glutamate and Other Amino Acids at the Blood-Brain

- Barrier." *Journal of Nutrition* 130 (4), 1016-1022.
- Spéder, Pauline, and Andrea H. Brand. 2014. "Gap Junction Proteins in the Blood-Brain Barrier Control Nutrient-Dependent Reactivation of *Drosophila* Neural Stem Cells." *Developmental Cell* 30 (3), 309-321.
- Stephan, F. K., and I. Zucker. 1972. "Circadian Rhythms in Drinking Behavior and Locomotor Activity of Rats Are Eliminated by Hypothalamic Lesions." *Proceedings of the National Academy of Sciences* 69 (6), 1583-1586.
- Storch, Kai-Florian, Ovidiu Lipan, Igor Leykin, N. Viswanathan, Fred C. Davis, Wing H. Wong, and Charles J. Weitz. 2002. "Extensive and Divergent Circadian Gene Expression in Liver and Heart." *Nature* 417 (6884), 78-83.
- *Stratmann, Markus, and Ueli Schibler. 2006. "Properties, Entrainment, and Physiological Functions of Mammalian Peripheral Oscillators." *Journal of Biological Rhythms* 21 (6), 494-506.
- Suburo, A. M., and A. Pellegrino de Iraldi. 1969. "An Ultrastructural Study of the Rat's Suprachiasmatic Nucleus." *Journal of Anatomy* 105 (3), 439-446.
- *Takahashi, Joseph S. 2004. "Finding New Clock Components: Past and Future." *Journal of Biological Rhythms* 19 (5), 339-347.
- *Vitataerna, Martha Hotz, Joseph S. Takahashi, and Fred W. Turek. 2001. "Overview of Circadian Rhythms." *Alcohol Research and Health* 25 (2), 85-93.
- *Wolburg, Hartwig, and Andrea Lippoldt. 2002. "Tight Junctions of the Blood-Brain Barrier: Development, Composition and Regulation." *Vascular Pharmacology* 38 (6), 323-337.
- Xie, Lulu, Hongyi Kang, Qiwu Xu, Michael J. Chen, Yonghong Liao, Meenakshisundaram Thiyagarajan, John O'Donnell, Daniel J. Christensen, Charles Nicholson, Jeffrey J. Iloff, Takahiro Takano, Rashid Deane, Maiken Nedergaard. 2013. "Sleep Drives Metabolite Clearance from the Adult Brain." *Science* 342 (6156), 373-377.
- Yamazaki, Shin, Rika Numano, Michikazu Abe, Akiko Hida, Ri Ichi Takahashi, Masatsugu Ueda, Gene D. Block, Yoshiyuki Sakaki, Michael Menaker, and Hajime Tei. 2000. "Resetting Central and Peripheral Circadian Oscillators in Transgenic Rats." *Science* 288 (5466), 682-685.
- Yoo, S.-H., S. Yamazaki, P. L. Lowrey, K. Shimomura, C. H. Ko, E. D. Buhr, S. M. Siepk, Hee-Kyung Hong, Won Jun Oh, Ook Joon Yoo, Michael Menaker, Joseph S. Takahashi. 2004. "PERIOD2::LUCIFERASE Real-Time Reporting of Circadian Dynamics Reveals Persistent

Circadian Oscillations in Mouse Peripheral Tissues.” *Proceedings of the National Academy of Sciences* 101 (15), 5339-5346.

Zhang, Shirley L., Nicholas F. Lahens, Zhifeng Yue, Denice M. Arnold, Peter P. Pakstis, Jessica E. Schwarz, and Amita Sehgal. 2021. “A Circadian Clock Regulates Efflux by the Blood-Brain Barrier in Mice and Human Cells.” *Nature Communications* 12 (1), 617.

Zhang, Shirley L., Zhifeng Yue, Denice M. Arnold, Gregory Artiushin, and Amita Sehgal. 2018. “A Circadian Clock in the Blood-Brain Barrier Regulates Xenobiotic Efflux.” *Cell* 173 (1), 130-139.

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