PERSONAL INFORMATION

First & last name	Antoine Adamantidis
Title	Professor
Date of birth	October 22th 1975 (Tourcoing, France)
Citizenship	Belgium (Work Permit C)
Language	French, English, Dutch (basic) & German (basic)
Website	www.tidis-lab.org
OrcID	0000-0003-2531-5175

- **BIOSKETCH**

Prof. Antoine Adamantidis is an Associate Professor in System Neurophysiology in the Dept of Neurology at the University of Bern, and the Director of the Zentrum Fur Experimentelle Neurologie (ZEN) at the Inselspital. He obtains his master and doctoral education at the Universities of Liege, Belgium, and trained as a postdoctoral fellow and a Research Associate at Stanford University School of Medicine, USA.

Prof. A. Adamantidis's research objectives aim at investigating the wiring, firing dynamics and plasticity of the neural circuits regulating sleep-wake states in normal and pathological states using *in vitro* and *in vivo* optogenetics - a technology that he and his colleagues pioneered at Stanford University - combined to in vivo imaging and electro-physiological methods in mice. His research program has been driven by questions such as *What define a sleep/wake circuit? What is the relevance of neural discharge rate in controlling sleep-wake states and sleep function? How pathophysiological symptoms of sleep disorders (narcolepsy, insomnia, etc.) relate to sleep-wake circuits dynamics?* His laboratory identified brain circuits controlling sleep-wake states, sleep oscillations (slow waves, theta) and synaptic plasticity underlying memory consolidation and behavioural optimization. His recent work identify a new mechanisms for cortical plasticity during in healthy brain or during stroke recovery.

Prof. Antoine Adamantidis received several awards including the Swiss Brain League Prize, the Pfizer Research Award, the R. Broughton Young Investigator Award (Canadian Sleep Society), 2 ERC grants (starting & consolidator), a Canadian Research Chair in Neural circuits and Optogenetics, a NIH Pathway to Independence (PI) Award-K99/R00 (USA), NARSAD (now Behavioural Brain Foundation) and Sleep Research Society Young Investigator Award (USA).

- **EDUCATION**

2006-2010 **Postdoctoral Fellow**, Dept of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, USA.
Topic: "Neural circuits of arousal, Optogenetics" Mentor: Professor Luis de Lecea, Ph.D.

2000-2005 **Ph.D. in Biomedical Sciences**
Faculty of Medicine, Dept of Biomedical Sciences, University of Liege, Belgium.
Topic: "Characterisation of Orphan GPCR" Supervisor: Prof. Th. Grisar

2000-2002 **Master in Biomedical Science (Cellular and Molecular Neurobiology)**
Faculty of Medicine, Dept of Biomedical Sciences, University of Liege, Belgium.

- **CURRENT POSITIONS**

2017 – present **Professor of System Neurophysiology** (*Extraordinarius, tenured*)
Dept of Neurology, Inselspital, University of Bern, Switzerland.

2014 – present **Director,** Zentrum Fur Experimentelle Neurologie (ZEN), Dept of Neurology, Inselspital, University of Bern, Switzerland.

2020-present **Senior Editor,** The *European Journal of Neuroscience* (FENS, EU), Wiley & Sons Ed., UK

2021-present **Deputy Editor-in-Chief** (Basic), *SLEEP* (SRS, USA), Oxford Ed., UK

- **PREVIOUS POSITIONS**

2014 – 2017 **Tenured-track Assistant Professor** (*Extraordinarius*)
Dept of Neurology, Inselspital, University of Bern, CH.

2010 – 2014 **Tenured-track Assistant Professor**
Dept of Psychiatry, McGill University & Douglas Mental Health University Research Institute, CA.

2008 – 2010 **Research Associate**
Dept of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, USA.

- **FELLOWSHIPS AND AWARDS**

2022 Swiss Brain Prize (Hirnligua), CH

2017 European Research Council - ERC *Consolidator* Grant

2017 Pfizer Research Prize, Switzerland.
2013 R. Broughton Young Investigator Award, Canadian Sleep Society, CA.
2011 Canadian Research Chair in "Sleep & Optogenetics", CA.
2010 Canadian Funds for Innovation, CA.
2010 European Research Council - ERC *Starting* Grant (declined to accept McGill position).
2009 NIH Pathway to Independence (PI) Award-K99/R00, USA.
2008 First Annual Sammy Kuo Prize, Stanford University, USA.
2008 NARSAD Young Investigator Award, USA.
2008 Sleep Research Society Young Investigator Award, USA.
2007-2010 FRS-FNRS Postdoctoral fellowship, Belgium.
2006-2007 D. Collen Research Foundation Fellow-BAEF, Belgium-USA.
2000-2007 Research Prizes (4), Leon Fredericq Foundation, Belgium.

- **SUPERVISION OF GRADUATE STUDENTS & POSTDOCTORAL FELLOWS**

2014 – present **9 Postdocs, 7 PhDs** and **5 Master students**
Faculty of Medicine, Department of Neurology, Zentrum Für Experimentelle Neurologie (ZEN), University of Bern, CH.
2010 – 2014 **2 Postdocs, 2 PhDs** and **3 Master students**
Faculty of Medicine, Dept of Psychiatry, McGill University, CA

- **TEACHING ACTIVITIES**

2020-present Co-director and Teacher - Master in Sleep and Consciousness (www.unibe.asc.ch), University of Bern & University of Southern Switzerland.
2018 Course Director - FENS Cajal Advanced Courses on "Linking neural circuits to behavior", October 8-26 2018, IINS, Bordeaux, France.
2017-present Teacher - "Optogenetic dissection of sleep circuits and functions", University of Lausanne, Switzerland.
2017-present Teacher - "Sleep mechanisms and sleep disorders", University of Geneva, Switzerland.
2016 Teacher - "Optogenetic dissection of sleep circuits and functions", ESRS Teaching Day, Bologna, Italy.
2016 Teacher - "Optogenetic in experimental sleep research", Oxford Sleep Summer School, Oxford, UK.
2015, 2021 Teacher - "Optogenetic in sleep neurology", Master Class on Narcolepsy, Budapest, Hungary and Berlin, Germany.
2014-present Teacher - "Optogenetic in sleep research", BENESCO Lectures, Switzerland.
2014-present Teacher - "Sleep mechanisms and sleep disorders", Master in Biomedicine, University of Bern, Switzerland.
2014-present Teacher - "Optogenetic deconstruction of sleep-wake circuits", Alpine Sleep Summer School, University of Southern Switzerland, Lugano, Switzerland

- **ORGANISATION OF SCIENTIFIC MEETINGS**

2022 Symposium chair, ESRS, Athens, GR
2022 Symposium chair, Swiss Sleep Society (SSSC), Luzern, CH
2021 Organizer, The NeuroSleep Symposium, in the honor of Prof Barbara Jones, online, CA.
2018 Symposium Co-Chair, "Neuromodulation and brain states" SFN, San Diego, USA.
2015 Local Program Committee Member - Swiss Society for Sleep Research, Sleep Medicine and Chronobiology (SSSSC), Basel, CH.
2015 Program Committee Member - WorldSleep 2015 (2000 participants), Istanbul, TU.
2014-present Organizer - ZEN Symposium (1 day during the Bern Sleep-Wake-Epilepsy Days), Inselspital, University of Bern, CH.
2014-present Organizer - BENESCO Lectures and teaching series (weekly, ~ 30 participants), University of Bern, CH.

- **INSTITUTIONAL RESPONSIBILITIES**

2021-present Member of the Cajal Expert Committee, CAJAL Advanced Neuroscience Training Programme, Belgium.
2014-present Faculty of Medicine Committee Member, University of Bern, Switzerland.
2014-present Graduate School for Cellular and Biomedical Sciences Committee Member, University of Bern, Switzerland.
2014-present Research Board Member, Dept of Neurology, Inselspital University Hospital, Bern, Switzerland.

2014-present BENESCO Committee Member, University of Bern, Switzerland.
2010-2017 Faculty of Medicine Committee Member, McGill University, Canada.

- **REVIEWING ACTIVITIES**

2012 - 2018 Committee Member, Fonds de la Recherche Scientifique (FRS-FNRS), Belgium.
2010 – 2014 Review panel member, PhD and Postdoctoral fellowships Committee, Fac. of Medicine, McGill University, Canada.

- ***AD HOC* REVIEWER for** Science, Nature, Cell, PNAS, Nat Neurosci, Curr Bio, J. Neurosci., J Physiol, J Neurophysiol, Cerebral Cortex, SLEEP, Plos One, Biol. Psy., Front in Neur Circuit, EJN, EJP, Behav Brain Res, Neuroscience, eLife, The Int J Neuropsychopharm, ACS Chem Neurosci, Psych and Clin Neurosci.

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Regular member of the Swiss Society for Sleep Research, Sleep Medicine and Chronobiology (SSSSC), FENS, the American Professional Sleep Society-Sleep Research Society (APSS-SRS), the Society for Neurosciences (SFN). Past member of the Canadian Association for Neurosciences (CAN) and the Canadian Sleep Society (Board member).

- **MAJOR COLLABORATIONS (ongoing)**

Prof S. Brown, sleep & circadian, University of Zurich (CH); **Prof P. Franken**, sleep slow oscillations, University of Lausanne (CH); **Prof T. Fellin**, optics development for imaging, IIT, Genova (IT); **Prof T. Patriarchi**, development of new peptide sensors, University of Zurich (CH); **Prof B. Kornum,** hypocretins/orexins & sleep, University of Copenhagen, (DN).

- **INTERNATIONAL STANDING**

Invited Speaker at International Symposia/Conferences (*last 5 years*)

The Juselius Symposium, Helsinki, FI, 2022
Orexin Science Summit, Idorsia conference, Roma, Italy, 2021
Chines Sleep Research Society, online, 2021
Canadian Sleep Society (Keynote), 2021
Neuromatch 3.0, online, 2020
Winter Conference on Brain Research, Aspen Snowmass, USA, 2019
World Life Science Conference, *Frontiers in Sleep Studies*, Beijing, China, 2018.
Gordon Research Conference "Inhibition in the CNS", Les Diablerets, Switzerland, 2017.
Neuromodulation NM2, EPFL, Lausanne, Switzerland, 2017.
Japanese Neuroscience Society, Chiba, Japan, 2017.
European Academy of Neurology, Amsterdam, The Netherlands, 2017.
1st World Sleep Federation conference, Prague, Czech Republic, 2017.
Swiss Society for Sleep Research, Sleep Medicine and Chronobiology, 2017 (Keynote).
12th Meeting of the German Neuroscience Society, 2017.
5th WPI-IIIS Symposium, Tokyo, Japan, 2016.

Selected invited Seminars (*last 5 years*)

University of Geneva, Switzerland, 2022
Universite Paul Sabatier, CRCA, Toulouse, 2022
Max Planck Institute, Tubingen, Germany, 2019.
Italian Institute of Technology, Genova, Italy, 2019.
European Institute for theoretical Neuroscience (EITN), Paris, France, 2018.
Weizmann Institute, Israel, 2018.
University of Liege, 2018.
University of Groningen, The Netherlands, 2018.
University of Warwick, Coventry, UK, 2017.
Edimburgh, Roslin, Institute, UK, 2017.
IIIS Lecture, Tsukuba University, Tsukuba, Japan, 2016.
IPMC, Nice Sophia-Antopolis, France 2016.
Aix Marseille University, France 2016.
INMED, Marseille, France, 2016.
LNC, EPFL, Switzerland, 2016.
Pasteur Institute, Paris, France, 2016.

- **PUBLICATION LIST**

Full publications list: *http://www.ncbi.nlm.nih.gov/pubmed/?term=adamantidis+a*
h-Index: **43** (~ 11500 citations, average: ~ 1300 citations/year – *google scholar source*)

RESEARCH ARTICLES

Aime M, Calcini N, Borsa M, Campelo T, Rusterholz T, Sattin A, Fellin T & Adamantidis A. Paradoxical somato-dendritic decoupling supports cortical plasticity during REM sleep. **Science** (*In press*)

The evolutionarily conserved miRNA-137 targets the neuropeptide hypocretin/orexin and modulates the wake to sleep ratio. Holm A, Possovre ML, Bandarabadi M, Moseholm K, Justinussen JL, Bozic I, Lemcke R, Arribat Y, Amati F, Silahtaroglu A, Juventin M, Adamantidis A, Tafti M, Kornum BR. **PNAS** (*In Press*)

Gazea M, Furdan S, Sere P, Oesch L, Molnár B, Di Giovanni G, Fenno LE, Ramakrishnan C, Mattis J, Deisseroth K, Dymecki SM, Adamantidis AR*, Lőrincz ML*. Reciprocal Lateral Hypothalamic and Raphe GABAergic Projections Promote Wakefulness. **J Neurosci.** (2021) 41(22):4840-4849.

Facchin L, Schöne C, Mensen A, Bandarabadi M, Pilotto F, Saxena S, Libourel PA, Bassetti CLA, Adamantidis AR. Slow Waves Promote Sleep-Dependent Plasticity and Functional Recovery after Stroke. **J Neurosci.** (2020) 40(45):8637-8651.

Bandarabadi M, Herrera CG, Gent TC, Bassetti C, Schindler K, Adamantidis AR. A role for spindles in the onset of rapid eye movement sleep. **Nat Commun** (2020)11(1):5247.

Collins B, Pierre-Ferrer S, Muheim C, Lukacsovich D, Cai Y, Spinnler A, Herrera CG, Wen S, Winterer J, Belle MDC, Piggins HD, Hastings M, Loudon A, Yan J, Földy C, Adamantidis A, Brown SA. Circadian VIPergic Neurons of the Suprachiasmatic Nuclei Sculpt the Sleep-Wake Cycle. **Neuron** (2020) 108(3):486-499.e5.

Battagello DS, Lorenzon AR, Diniz GB, Motta-Teixeira LC, Klein MO, Ferreira JGP, Arias CM, Adamantidis A, Sita LV, Cipolla-Neto J, Bevilacqua EMAF, Sawchenko PE, Bittencourt JC. The Rat Mammary Gland as a Novel Site of Expression of Melanin-Concentrating Hormone Receptor 1 mRNA and Its Protein Immunoreactivity. **Front Endocrinol** (Lausanne) (2020) 11:463.

Oesch LT, Gazea M, Gent TC, Bandarabadi M, Gutierrez Herrera C, Adamantidis AR. REM sleep stabilizes hypothalamic representation of feeding behavior. **PNAS** (2020) 117(32):19590-19598.

Hubbard J, Gent TC, Hoekstra MMB, Emmenegger Y, Mongrain V, Landolt HP, Adamantidis AR, Franken P. Rapid fast-delta decay following prolonged wakefulness marks a phase of wake-inertia in NREM sleep. **Nat Commun.** (2020) 11(1):3130.

Diniz GB, Battagello DS, Klein MO, Bono BSM, Ferreira JGP, Motta-Teixeira LC, Duarte JCG, Presse F, Nahon JL, Adamantidis A, Chee MJ, Sita LV, Bittencourt JC. Ciliary melanin-concentrating hormone receptor 1 (MCHR1) is widely distributed in the murine CNS in a sex-independent manner. **J Neurosci Res.** (2020) 98(10):2045-2071.

Pace M, Colombi I, Falappa M, Freschi A, Bandarabadi M, Armirotti A, Encarnación BM, Adamantidis AR, Amici R, Cerri M, Chiappalone M, Tucci V. Loss of Snord116 alters cortical neuronal activity in mice: a preclinical investigation of Prader-Willi syndrome. **Hum Mol Genet**. (2020) 29(12):2051-2064.

Karnani MM, Schöne C, Bracey EF, González JA, Viskaitis P, Li HT, Adamantidis A, Burdakov D. Role of spontaneous and sensory orexin network dynamics in rapid locomotion initiation. **Prog Neurobiol.** (2020) 187:101771.

Bandarabadi M, Gast H, Rummel C, Bassetti C, Adamantidis A, Schindler K, Zubler F. Assessing Epileptogenicity Using Phase-Locked High Frequency Oscillations: A Systematic Comparison of Methods. **Front Neurol**. (2019) 10:1132.

Gutierrez Herrera C, Girard F, Bilella A, Gent TC, Roccaro-Waldmeyer DM, Adamantidis A, Celio MR. Neurons in the Nucleus papilio contribute to the control of eye movements during REM sleep. **Nat Commun**. (2019) 10(1):5225.

Bandarabadi M, Boyce R, Gutierrez Herrera C, Bassetti CL, Williams S, Schindler K, Adamantidis A. Dynamic modulation of theta-gamma coupling during rapid eye movement sleep. **Sleep**. (2019) 42(12):zsz182

Komagata N, Latifi B, Rusterholz T, Bassetti CLA, Adamantidis A, Schmidt MH.Dynamic REM Sleep Modulation by Ambient Temperature and the Critical Role of the Melanin-Concentrating Hormone System. **Curr Biol.** (2019) 29(12):1976-1987.e4.

Müller Herde A, Mihov Y, Krämer SD, Mu L, Adamantidis A, Ametamey SM, Hasler G. Chronic Nicotine Exposure Alters Metabotropic Glutamate Receptor 5: Longitudinal PET Study and Behavioural Assessment in Rats. **Neurotox Res**. (2019) Nov;36(4):806-816.

Miladinović Đ, Muheim C, Bauer S, Spinnler A, Noain D, Bandarabadi M, Gallusser B, Krummenacher G, Baumann C, Adamantidis A, Brown SA, Buhmann JM.
SPINDLE: End-to-end learning from EEG/EMG to extrapolate animal sleep scoring across experimental settings, labs and species. **PLoS Comput Biol.** (2019) 15(4):e1006968.

Cissé Y, Toossi H, Ishibashi M, Mainville L, Leonard CS, Adamantidis A, Jones BE.Discharge and Role of Acetylcholine Pontomesencephalic Neurons in Cortical Activity and Sleep-Wake States Examined by Optogenetics and Juxtacellular Recording in Mice. **eNeuro**. (2018) 5(4)

Gent T, Bandarabadi M, Gutierrez Herrera C, Adamantidis A. Thalamic dual-control of sleep and wakefulness. **Nat. Neurosci.** (2018) *21(7):974-984*.

Pace M, Adamantidis A, Facchin L, Bassetti C. Role of REM Sleep, Melanin Concentrating Hormone and Orexin/Hypocretin Systems in the Sleep Deprivation Pre-Ischemia. PLoS One (2017) 6;12(1):e0168430.

Kassiri H, Chemparathy A, Salam MT, Boyce R, Adamantidis A, Genov R. Electronic Sleep Stage Classifiers: A Survey and VLSI Design Methodology. **IEEE Trans Biomed Circuits Syst**. (2017). *11(1):177-188.*

Boyce R, Glasgow SD, Williams S, Adamantidis A. Causal evidence for the role of REM sleep theta rhythm in contextual memory consolidation. **Science** (2016) May 13;352(6287):812-6.

Sclafani A, Adamantidis A, Ackroff K. MCH receptor deletion does not impair glucose-conditioned flavor preferences in mice. **Physiol Behav**. 2016 Sep 1;163:239-44.

González JA, Iordanidou P, Strom M, Adamantidis A, Burdakov D. Awake dynamics and brain-wide direct inputs of hypothalamic MCH and orexin networks. **Nat. Commun**. 2016 Apr 22;7:11395. doi: 10.1038/ncomms11395.

Herrera CG, Cadavieco MC, Jego S, Ponomarenko A, Korotkova T, Adamantidis A. Hypothalamic feedforward inhibition of thalamocortical network controls arousal and consciousness. **Nat. Neurosci.** (2016) *19(2):290-8*.

Sherwood, A., Holland, P.C., Adamantidis, A., and Johnson, A.W. (2015) Deletion of Melanin Concentrating Hormone Receptor-1 disrupts overeating in the presence of food cues. **Physiol. Behav.** 152(Pt B):402-7.

Colby-Milley, J., Cavanagh, C., Jego, S., Breitner, J.C.S., Quirion, R., and Adamantidis, A. (2015) Sleep-Wake Cycle Dysfunction in the TgCRND8 Mouse Model of Alzheimer's Disease: From Early to Advanced Pathological Stages. **PLoS ONE** 10, e0130177.

Apergis-Schoute, J., Iordanidou, P., Faure, C., Jego, S., Schöne, C., Aitta-Aho, T., Adamantidis, A., and Burdakov, D. (2015) Optogenetic evidence for inhibitory signaling from orexin to MCH neurons via local microcircuits. **J. Neurosci.** 35, 5435–5441.

Amilhon, B., Huh, C.Y.L., Manseau, F., Ducharme, G., Nichol, H., Adamantidis, A., and Williams, S. (2015) Parvalbumin Interneurons of Hippocampus Tune Population Activity at Theta Frequency. **Neuron** 86, 1277–1289.

Schöne, C., Apergis-Schoute, J., Sakurai, T., Adamantidis, A., and Burdakov, D. (2014) Coreleased orexin and glutamate evoke nonredundant spike outputs and computations in histamine neurons. **Cell Rep** 7, 697–704.

Conductier G, Martin AO, Risold PY, Jego S, Lavoie R, Lafont C, Mollard P, Adamantidis A, Nahon JL. (2013) Control of ventricular ciliary beating by the melanin concentrating hormone-expressing neurons of the lateral hypothalamus: a functional imaging survey. **Front Endocrinol**. 4:182.

Jego, S., Glasgow, S.D., Herrera, C.G., Ekstrand, M., Reed, S.J., Boyce, R., Friedman, J., Burdakov, D., and Adamantidis, A.R. (2013) Optogenetic identification of a rapid eye movement sleep modulatory circuit in the hypothalamus. **Nat. Neurosci.** 16, 1637–1643.

Zhang Z, Cordeiro Matos S, Jego S, Adamantidis A, Séguéla P. (2013) Norepinephrine drives persistent activity in prefrontal cortex via synergistic α1 and α2 adrenoceptors. **PLoS One** Jun 13;8(6):e66122.

Conductier G, Brau F, Viola A, Langlet F, Ramkumar N, Dehouck B, Lemaire T, Chapot R, Lucas L, Rovère C, Maitre P, Hosseiny S, Petit-Paitel A, Adamantidis A, Lakaye B, Risold PY, Prévot V, Meste O, Nahon JL, Guyon A. (2013) Melanin-concentrating hormone regulates beat frequency of ependymal cilia and ventricular volume. **Nat Neurosci.** 16(7):845-7.

Schöne, C., Cao, Z.F.H., Apergis-Schoute, J., Adamantidis, A., Sakurai, T., and Burdakov, D. (2012) Optogenetic probing of fast glutamatergic transmission from hypocretin/orexin to histamine neurons in situ. **J. Neurosci.** 32, 12437–12443.

Sherwood, A., Wosiski-Kuhn, M., Nguyen, T., Holland, P.C., Lakaye, B., Adamantidis, A., and Johnson, A.W. (2012) The role of melanin-concentrating hormone in conditioned reward learning. **Eur. J. Neurosci.** 36, 3126–3133.

Adamantidis, A.R., Tsai, H.-C., Boutrel, B., Zhang, F., Stuber, G.D., Budygin, E.A., Touriño, C., Bonci, A., Deisseroth, K., and de Lecea, L. (2011) Optogenetic interrogation of dopaminergic modulation of the multiple phases of reward-seeking behavior. **J. Neurosci.** 31, 10829–10835.

Karnani, M.M., Apergis-Schoute, J., Adamantidis, A., Jensen, L.T., de Lecea, L., Fugger, L., and Burdakov, D. (2011) Activation of central orexin/hypocretin neurons by dietary amino acids. **Neuron** 72, 616–629.

Zhang F.*, Gradinaru V.*, Adamantidis A.R.*, Durand R., Airan R.D., de Lecea L., Deisseroth K. (2010) Optogenetic interrogation of neural circuits: technology for probing mammalian brain structures. **Nat Protoc.** 5(3):439-56.

Carter, M.E., Yizhar, O., Chikahisa, S., Nguyen, H., Adamantidis, A., Nishino, S., Deisseroth, K., and de Lecea, L. (2010) Tuning arousal with optogenetic modulation of locus coeruleus neurons. **Nat. Neurosci.** 13, 1526–1533.

Pachoud, B. *, Adamantidis, A. *, Ravassard, P., Luppi, P.-H., Grisar, T., Lakaye, B., and Salin, P.-A. (2010) Major impairments of glutamatergic transmission and long-term synaptic plasticity in the hippocampus of mice lacking the melanin-concentrating hormone receptor-1. **J. Neurophysiol.** (London) 104, 1417–1425.

Carter, M.E., Adamantidis, A., Ohtsu, H., Deisseroth, K., and de Lecea, L. (2009) Sleep homeostasis modulates hypocretin-mediated sleep-to-wake transitions. **J. Neurosci.** 29, 10939–10949.

Tsai, H.-C. *, Zhang, F. *, Adamantidis, A., Stuber, G.D., Bonci, A., de Lecea, L., and Deisseroth, K. (2009) Phasic firing in dopaminergic neurons is sufficient for behavioral conditioning. **Science** 324, 1080–1084.

Adamantidis A., Salvert D., Goutagny R., Lakaye B., Gervasoni D., Grisar T., Luppi P.H., Fort P. (2008)Sleep architecture of the melanin-concentrating hormone receptor 1-knockout mice. **Eur. J. Neurosci**. 27(7):1793-800.

Hoeberichts, F.A., Vaeck, E., Kiddle, G., Coppens, E., van de Cotte, B., Adamantidis, A., Ormenese, S., Foyer, C.H., Zabeau, M., Inzé, D., et al. (2008) A Temperature-sensitive mutation in the Arabidopsis thaliana phosphomannomutase gene disrupts protein glycosylation and triggers cell death. **J. Biol. Chem.** 283, 5708–5718.

Tyhon, A., Lakaye, B., Adamantidis, A., and Tirelli, E. (2008) Amphetamine- and cocaine-induced conditioned place preference and concomitant psychomotor sensitization in mice with genetically inactivated melanin-concentrating hormone MCH1 receptor. **Eur. J. Pharmacol.** 599, 72–80.

Adamantidis, A.R. *, Zhang, F., * Aravanis, A.M., Deisseroth, K., and de Lecea, L. (2007) Neural substrates of awakening probed with optogenetic control of hypocretin neurons. **Nature** 450, 420–424.

Adamantidis, A. *, Thomas, E. *, Foidart, A., Tyhon, A., Coumans, B., Minet, A., Tirelli, E., Seutin, V., Grisar, T., and Lakaye, B. (2005) Disrupting the melanin-concentrating hormone receptor 1 in mice leads to cognitive deficits and alterations of NMDA receptor function. **Eur. J. Neurosci.** 21, 2837–2844.

Duncan EA1, Sorrell JE, Adamantidis A, Rider T, Jandacek RJ, Seeley RJ, Lakaye B, Woods SC. (2007) Alcohol drinking in MCH receptor-1-deficient mice. **Alcohol Clin Exp Res.** 31(8):1325-37.

Tyhon, A., Adamantidis, A., Foidart, A., Grisar, T., Lakaye, B., and Tirelli, E. (2006) Mice lacking the melanin-concentrating hormone receptor-1 exhibit an atypical psychomotor susceptibility to cocaine and no conditioned cocaine response. **Behav Brain Res** 173, 94–103.

Pirottin, D., Grobet, L., Adamantidis, A., Farnir, F., Herens, C., Schrøder, H.D., and Georges, M. (2005) Transgenic engineering of male-specific muscular hypertrophy. **Proc. Natl. Acad. Sci.** 102, 6413–6418.

Lakaye, B., Adamantidis, A., Coumans, B., and Grisar, T. (2004) Promoter characterization of the mouse melanin-concentrating hormone receptor 1. **Biochim. Biophys. Acta** 1678, 1–6.

Verlaet, M., Adamantidis, A., Coumans, B., Chanas, G., Zorzi, W., Heinen, E., Grisar, T., and Lakaye, B. (2002) Human immune cells express ppMCH mRNA and functional MCHR1 receptor. **FEBS Lett.** 527, 205–210.

REVIEWS, PERSPECTIVES & OPINIONS

Adamantidis AR. How the gut talk to the brain ? Perspectives on Gabanyi et al Science (2022) 376(6590)

Oesch LT, Adamantidis AR. How REM sleep shapes hypothalamic computations for feeding behavior. **Trends Neurosci.** (2021) 44(12):990-1003.

Oesch LT, Adamantidis AR. Sleep and Metabolism: Implication of Lateral Hypothalamic Neurons. Front Neurol Neurosci. (2021) 45:75-90.

Adamantidis AR, Schmidt MH, Carter ME, Burdakov D, Peyron C, Scammell TE. A circuit perspective on narcolepsy. **Sleep**. (2020) 43(5):zsz296.

Adamantidis AR, Gutierrez Herrera C, Gent TC. Oscillating circuitries in the sleeping brain. **Nat Rev Neurosci.** (2019) 20(12):746-762.

Bassetti CLA, Adamantidis A, Burdakov D, Han F, Gay S, Kallweit U, Khatami R, Koning F, Kornum BR, Lammers GJ, Liblau RS, Luppi PH, Mayer G, Pollmächer T, Sakurai T, Sallusto F, Scammell TE, Tafti M, Dauvilliers Y. Narcolepsy - clinical spectrum, aetiopathophysiology, diagnosis and treatment. Nat Rev Neurol. (2019) 15(9):519-539.

Mensen A, Pigorini A, Facchin L, Schöne C, D'Ambrosio S, Jendoubi J, Jaramillo V, Chiffi K, Eberhard-Moscicka AK, Sarasso S, Adamantidis A, Müri RM, Huber R, Massimini M, Bassetti C. Sleep as a model to understand neuroplasticity and recovery after stroke: Observational, perturbational and interventional approaches. **J Neurosci Methods.** (2019) 313:37-43.

Latifi B, Adamantidis A, Bassetti C, Schmidt MH. Sleep-Wake Cycling and Energy Conservation: Role of Hypocretin and the Lateral Hypothalamus in Dynamic State-Dependent Resource Optimization. **Front Neurol.** (2018) 9:790.

Gent TC, Bassetti C, Adamantidis AR. Sleep-wake control and the thalamus. **Curr Opin Neurobiol.** (2018) 52:188-197.

Boyce R, Williams S, Adamantidis A. REM sleep and memory. Curr Opin Neurobiol. (2017) 44:167-177.

Ferreira JGP, Bittencourt JC, Adamantidis A. Melanin-concentrating hormone and sleep. Curr Opin Neurobiol. (2017) 44:152-158.

Boyce R, Adamantidis A. REM Sleep on It! **Neuropsychopharmacology**. 2017 42(1):375.

Herrera CG, Ponomarenko A, Korotkova T, Burdakov D, Adamantidis A. Sleep & metabolism: The multitasking ability of lateral hypothalamic inhibitory circuitries.
Front Neuroendocrinol. 2017 44:27-34.

Lőrincz ML, Adamantidis AR. Monoaminergic control of brain states and sensory processing: existing knowledge and recent insights obtained with optogenetics.
Prog Neurobiol. 2016 Sep 12. pii: S0301-0082(16)30034-X.

Adamantidis A, Arber S, Bains JS, Bamberg E, Bonci A, Buzsáki G, Cardin JA, Costa RM, Dan Y, Goda Y, Graybiel AM, Häusser M, Hegemann P, Huguenard JR, Insel TR, Janak PH, Johnston D, Josselyn SA, Koch C, Kreitzer AC, Lüscher C, Malenka RC, Miesenböck G, Nagel G, Roska B, Schnitzer MJ, Shenoy KV, Soltesz I, Sternson SM, Tsien RW, Tsien RY, Turrigiano GG, Tye KM, Wilson RI.
Optogenetics: 10 years after ChR2 in neurons--views from the community.
Nat Neurosci. 2015 Sep;18(9):1202-12.

Bassetti CL, Ferini-Strambi L, Brown S, Adamantidis A, Benedetti F, Bruni O, Cajochen C, Dolenc-Groselj L, Ferri R, Gais S, Huber R, Khatami R, Lammers GJ, Luppi PH, Manconi M, Nissen C, Nobili L, Peigneux P, Pollmächer T, Randerath W, Riemann D, Santamaria J, Schindler K, Tafti M, Van Someren E, Wetter TC. Neurology and psychiatry: waking up to opportunities of sleep. : State of the art and clinical/research priorities for the next decade.
Eur J Neurol. 2015 Oct;22(10):1337-54.

Adamantidis AR. (*Editorial*) [Modern neurosciences: with or without optogenetics?]. **Med Sci (Paris).** 2015 Mar;31(3):231-2.

Herrera CG, Adamantidis AR. (*Highligth*) An integrated microprobe for the brain. **Nat Biotechnol.** 2015 Mar;33(3):259-60.

Adamantidis AR.(*Highligth*) Sleep: the sound of a local alarm clock. **Curr Biol.** 2015 Jan 5;25(1):R49-51.

Jego S, Adamantidis A. MCH neurons: vigilant workers in the night. (2013) **Sleep** 36(12):1783-6.

Carter ME, de Lecea L, Adamantidis A. Functional wiring of hypocretin and LC-NE neurons: implications for arousal. (2013) **Front Behav Neurosci.** 7:43.

de Lecea, L., Carter, M.E., and Adamantidis, A. (2012) Shining Light on Wakefulness and Arousal. **Biol. Psychiatry**, 1–7.

Adamantidis, A., Carter, M.C., and de Lecea, L. (2010) Optogenetic deconstruction of sleep-wake circuitry in the brain. **Front Mol Neurosci** 2, 31.

Adamantidis, A., and de Lecea, L. (2009) A role for Melanin-Concentrating Hormone in learning and memory. **Peptides** 30, 2066–2070.

Adamantidis, A., and de Lecea, L. (2009) The hypocretins as sensors for metabolism and arousal. **J. Physiol.** (Lond.) 587, 33–40.

Adamantidis A., de Lecea L. (2008) Sleep and metabolism: shared circuits, new connections. **Trends Endocrinol Metab**. 19(10):362-70.

Adamantidis, A., and de Lecea, L. (2008) Physiological arousal: a role for hypothalamic systems. **Cell. Mol. Life Sci.** 65, 1475–1488.

BOOK CHAPTERS

Gazea, M., del Rio Bermudez, C., Nissen, C., & Adamantidis, A. 2019. Functions and circuits of REM sleep. *Handbook of Sleep Research*, Dringenberg, H. (Ed.), Vol. 30.

Schöne, C.& Adamantidis, A. 2018. Optogenetics Dissection of Sleep Circuits and Functions. Molecular-Genetic and Statistical Techniques for Behavioral and Neural Research. Gerlai, RT. (Ed.), Academic Press: Elsevier.

Yizhar, O., & Adamantidis, A. 2017. Cell Type-Specific Targeting Strategies for Optogenetics. *Optogenetics: A Roadmap* Stroh, A. (Ed.), Springer, Berlin.

Adamantidis A, Lüthi A. Optogenetic Dissection of Sleep-Wake States In Vitro and In Vivo. Handb Exp Pharmacol. (2018)

Luppi, PH., Adamantidis A., Fort P. A The neurophysiology and neurobiology of sleep ESRS 40th Anniversary book.

Adamantidis, A., Carter, M.E. and de Lecea, L. Optogenetic control of arousal neurons.Shaw, P., Tafti, M. & Thorpy, M. The Genetic Basis of Sleep and Sleep Disorders. Cambridge University Press.

Zhang, F., Tsai, H.-C., Airan, R.D., Stuber, G.D., Adamantidis, A.R., de Lecea, L., Bonci, A., and Deisseroth, K. (2015) Optogenetics in Freely Moving Mammals: Dopamine and Reward. Cold Spring Harb Protoc.

Adamantidis, A. & de Lecea, L. Optogenetic Probing of Hypocretin Regulation of Wakefulness. (2011) In Narcolepsy. Baumann, C.R., Bassetti, C.L., and Scammell, T.E. Springer Eds.

Adamantidis, A.R., Zhang, F., de Lecea, L., and Deisseroth, K. (2014) Establishing a fiber-optic-based optical neural interface. Cold Spring Harb Protoc 2014, 839–844.

Adamantidis, A.R., Zhang, F., de Lecea, L., and Deisseroth, K. (2014) Optogenetics: opsins and optical interfaces in neuroscience. Cold Spring Harb Protoc 2014, 815–822.

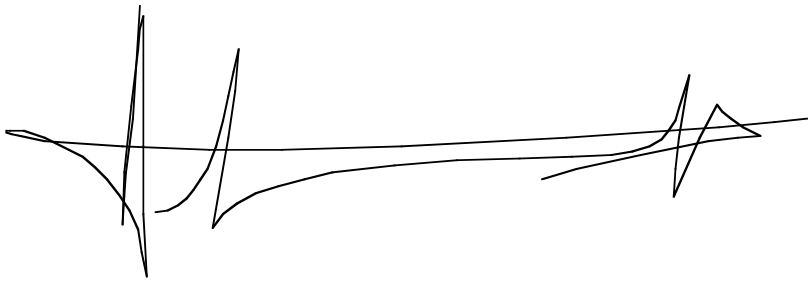
Zhang, F., Cong, L., Stuber, G.D., Adamantidis, A., and Deisseroth, K. (2011) Analysis of Neuronal Circuits with Optogenetics. Springer, Humana Press, pp. 207–223.

Adamantidis, A.R., Zhang, F., de Lecea, L. and Deisseroth, K.D. (2011) Optogenetics: Opsins and Optical Interfaces in Neuroscience in "Imaging in Neuroscience: A Laboratory Manual", Edited By Fritjof Helmchen, Arthur Konnerth, Series Editor, Rafael Yuste. Cold Spring Harbor Laboratory Press.

Zhang, F., Tsai,H.C., Airan, R.D., Stuber, G.D., Adamantidis, A.R., de Lecea, L., Bonci, A. and Deisseroth, K.D. (2011) Optogenetics in Freely Moving Mammals: Dopamine and Reward in "Imaging in Neuroscience: A Laboratory Manual", Edited By Fritjof Helmchen, Arthur Konnerth, Series Editor, Rafael Yuste. Cold Spring Harbor Laboratory Press.

Zhang, F., Cong, L., Stuber, G.D., Adamantidis, A., and Deisseroth, K. (2011) Analysis of Neuronal Circuits with Optogenetics. Springer, Humana Press, pp. 207–223.

Bern, April 25th 2023



Prof. Antoine Adamantidis