

Stanford



Luis de Lecea

Professor of Psychiatry and Behavioral Sciences (Major Laboratories and Clinical and Translational Neurosciences Incubator)

CONTACT INFORMATION

- **Alternate Contact**

Ayesha Abid

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Bio

ACADEMIC APPOINTMENTS

- Professor, Psychiatry and Behavioral Sciences
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)

HONORS AND AWARDS

- Senior Fulbright Fellow, Fulbright Commission (2015)
- Member, Faculty of 1000 (2008-)
- Outstanding Scientific Achievement Award, Sleep Research Society (2016)
- Member, Board of Scientific Counselors, NIDA (2006-)
- Integrative Behavioral Neuroscience Prize, ACNP (2010)
- Distinguished Investigator Award, NARSAD (2013)

PROFESSIONAL EDUCATION

- Postdoc, The Scripps Research Institute , Molecular Neurobiology (1996)
- Ph.D., University of Barcelona , Molecular Biology (1991)
- B.Sc., University of Barcelona , Biology (1987)

LINKS

- Lab website: <http://delecea.stanford.edu>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My lab uses molecular, optogenetic, anatomical and behavioral methods to identify and manipulate the neuronal circuits underlying brain arousal, with particular attention to sleep and wakefulness transitions. We are also interested in the changes that occur in neuronal circuits in conditions of hyperarousal such as stress and drug addiction.

Teaching

COURSES

2018-19

- Sleep and Cancer: BIOS 278 (Win)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Chris Angelakos, Wenjie Bian, Kim Jennings, Keith Murphy, Erica Seigneur

Postdoctoral Research Mentor

Wenjie Bian, Erica Seigneur

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Molecular and Genetic Medicine (Fellowship Program)
- Neurosciences (Phd Program)
- Psychiatry and Behavioral Science (Fellowship Program)

Publications

PUBLICATIONS

- **VTA dopaminergic neurons regulate ethologically relevant sleep-wake behaviors.** *Nature neuroscience*
Eban-Rothschild, A., Rothschild, G., Giardino, W. J., Jones, J. R., de Lecea, L.
2016; 19 (10): 1356-1366
- **Sleep disruption impairs haematopoietic stem cell transplantation in mice** *NATURE COMMUNICATIONS*
Rolls, A., Pang, W. W., Ibarra, I., Colas, D., Bonnavion, P., Korin, B., Heller, H. C., Weissman, I. L., de Lecea, L.
2015; 6
- **Antagonistic interplay between hypocretin and leptin in the lateral hypothalamus regulates stress responses** *NATURE COMMUNICATIONS*
Bonnnavion, P., Jackson, A. C., Carter, M. E., de Lecea, L.
2015; 6
- **Optogenetic disruption of sleep continuity impairs memory consolidation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Rolls, A., Colas, D., Adamantidis, A., Carter, M., Lanre-Amos, T., Heller, H. C., de Lecea, L.
2011; 108 (32): 13305-13310
- **Tuning arousal with optogenetic modulation of locus coeruleus neurons** *NATURE NEUROSCIENCE*
Carter, M. E., Yizhar, O., Chikahisa, S., Nguyen, H., Adamantidis, A., Nishino, S., Deisseroth, K., de Lecea, L.
2010; 13 (12): 1526-U117
- **Phasic Firing in Dopaminergic Neurons Is Sufficient for Behavioral Conditioning** *SCIENCE*
Tsai, H., Zhang, F., Adamantidis, A., Stuber, G. D., Bonci, A., de Lecea, L., Deisseroth, K.
2009; 324 (5930): 1080-1084
- **Neural substrates of awakening probed with optogenetic control of hypocretin neurons** *NATURE*
Adamantidis, A. R., Zhang, F., Aravanis, A. M., Deisseroth, K., de Lecea, L.
2007; 450 (7168): 420-U9
- **Hypocretin/Orexins and Hyperarousal**
de Lecea, L.
SPRINGERNATURE.2020: 31

- **Neural and Hormonal Control of Sexual Behavior.** *Endocrinology*
Jennings, K. J., de Lecea, L.
2020
- **Impaired hypocretin/orexin system alters responses to salient stimuli in obese male mice.** *The Journal of clinical investigation*
Tan, Y., Hang, F., Liu, Z., Stojilkovic, M., Wu, M., Tu, Y., Han, W., Lee, A. M., Kelley, C., Hajos, M., Lu, L., de Lecea, L., de Araujo, et al
2020
- **Multisensory modulation of body ownership in mice.** *Neuroscience of consciousness*
Buckmaster, C. L., Rathmann-Bloch, J. E., de Lecea, L. n., Schatzberg, A. F., Lyons, D. M.
2020; 2020 (1): niz019
- **The hypocretin (orexin) system: from a neural circuitry perspective.** *Neuropharmacology*
Li, S. B., de Lecea, L. n.
2020; 167: 107993
- **Neurobiological and Hormonal Mechanisms Regulating Women's Sleep.** *Frontiers in neuroscience*
Dorsey, A., de Lecea, L., Jennings, K. J.
2020; 14: 625397
- **Hypothalamic circuitry underlying stress-induced insomnia and peripheral immunosuppression** *Science Advances*
Li, S. B., Borniger, J. C., Yamaguchi, H., Hédou, J., Gaudilliere, B., de Lecea, L.
2020; 6 (37)
- **Sleep and neuropsychiatric illness** *NEUROPSYCHOPHARMACOLOGY*
Winkelman, J. W., de Lecea, L.
2020; 45 (1): 1–2
- **Brain Circuit of Claustrophobia-like Behavior in Mice Identified by Upstream Tracing of Sighing.** *Cell reports*
Li, P. n., Li, S. B., Wang, X. n., Phillips, C. D., Schwarz, L. A., Luo, L. n., de Lecea, L. n., Krasnow, M. A.
2020; 31 (11): 107779
- **Arousal-state dependent alterations in VTA-GABAergic neuronal activity.** *eNeuro*
Eban-Rothschild, A. n., Borniger, J. C., Rothschild, G. n., Giardino, W. J., Morrow, J. G., de Lecea, L. n.
2020
- **Editorial: Hypocretins/Orexins.** *Frontiers in endocrinology*
Lopez, M., de Lecea, L., Dieguez, C.
2020; 11: 357
- **CRISPR/Cas9 Editing of Neuropeptide Receptor Signaling Reveals an Extended Amygdala Circuit Mechanism Modulating Alcohol Drinking, Anxiety, and Avoidance**
Giardino, W., Yamaguchi, H., de Lecea, L.
NATURE PUBLISHING GROUP.2019: 505
- **Construction of Viral Vectors for Cell Type-specific CRISPR Gene Editing in the Adult Mouse Brain** *BIO-PROTOCOL*
Yamaguchi, H., de Lecea, L.
2019; 9 (16)
- **In vivo cell type-specific CRISPR gene editing for sleep research** *JOURNAL OF NEUROSCIENCE METHODS*
Yamaguchi, H., de Lecea, L.
2019; 316: 99–102
- **Hypocretin and the Regulation of Sleep-Wake Transitions** *HANDBOOK OF SLEEP RESEARCH, VOL 30*
Nevarez, N., de Lecea, L., Dringenberg, H. C.
2019; 30: 89–99
- **In vivo cell type-specific CRISPR gene editing for sleep research.** *Journal of neuroscience methods*
Yamaguchi, H., de Lecea, L.
2018

- **Parallel circuits from the bed nuclei of stria terminalis to the lateral hypothalamus drive opposing emotional states.** *Nature neuroscience*
Giardino, W. J., Eban-Rothschild, A., Christoffel, D. J., Li, S., Malenka, R. C., de Lecea, L.
2018
- **Hypocretin as a Hub for Arousal and Motivation** *FRONTIERS IN NEUROLOGY*
Tyree, S. M., Bomiger, J. C., de Lecea, L.
2018; 9: 413
- **Hypocretin/orexin deficiency decreases cocaine abuse liability** *NEUROPHARMACOLOGY*
Steiner, N., Rossetti, C., Sakurai, T., Yanagisawa, M., de Lecea, L., Magistretti, P. J., Halfon, O., Boutrel, B.
2018; 133: 395–403
- **Neuronal Mechanisms for Sleep/Wake Regulation and Modulatory Drive** *NEUROPSYCHOPHARMACOLOGY*
Eban-Rothschild, A., Appelbaum, L., de Lecea, L.
2018; 43 (5): 937–52
- **Optical Probing of Orexin/Hypocretin Receptor Antagonists.** *Sleep*
Li, S. B., Nevárez, N. n., Giardino, W. J., de Lecea, L. n.
2018
- **In vivo cell type-specific CRISPR knockdown of dopamine beta hydroxylase reduces locus coeruleus evoked wakefulness.** *Nature communications*
Yamaguchi, H. n., Hopf, F. W., Li, S. B., de Lecea, L. n.
2018; 9 (1): 5211
- **In vivo cell type-specific CRISPR knockdown of dopamine beta hydroxylase reduces locus coeruleus evoked wakefulness** *Nature Communications*
Yamaguchi, H., Hopf, F., Li, S., de Lecea, L.
2018; 9
- **Recent advances in understanding the roles of hypocretin/orexin in arousal, affect, and motivation.** *F1000Research*
Nevarez, N., de Lecea, L.
2018; 7
- **Hypothalamic Tubermammillary Nucleus Neurons: Electrophysiological Diversity and Essential Role in Arousal Stability** *JOURNAL OF NEUROSCIENCE*
Fujita, A., Bonnavion, P., Wilson, M. H., Mickelsen, L. E., Bloit, J., de Lecea, L., Jackson, A. C.
2017; 37 (39): 9574–92
- **To sleep or not to sleep: neuronal and ecological insights.** *Current opinion in neurobiology*
Eban-Rothschild, A., Giardino, W. J., de Lecea, L.
2017; 44: 132-138
- **Neuronal substrates for initiation, maintenance, and structural organization of sleep/wake states.** *F1000Research*
Eban-Rothschild, A., de Lecea, L.
2017; 6: 212-?
- **Rat intersubjective decisions are encoded by frequency-specific oscillatory contexts.** *Brain and behavior*
Schaich Borg, J. n., Srivastava, S. n., Lin, L. n., Heffner, J. n., Dunson, D. n., Dzirasa, K. n., de Lecea, L. n.
2017; 7 (6): e00710
- **Optogenetic Investigation of Arousal Circuits.** *International journal of molecular sciences*
Tyree, S. M., de Lecea, L. n.
2017; 18 (8)
- **Hypocretins and Arousal.** *Current topics in behavioral neurosciences*
Li, S., Giardino, W. J., de Lecea, L.
2016
- **Obesity- and gender-dependent role of endogenous somatostatin and cortistatin in the regulation of endocrine and metabolic homeostasis in mice** *SCIENTIFIC REPORTS*
Luque, R. M., Cordoba-Chacon, J., Pozo-Salas, A. I., Porteiro, B., de Lecea, L., Nogueiras, R., Gahete, M. D., Castano, J. P.

2016; 6

- **Hubs and spokes of the lateral hypothalamus: cell types, circuits and behaviour** *JOURNAL OF PHYSIOLOGY-LONDON*
Bonnavion, P., Mickelsen, L. E., Fujita, A., de Lecea, L., Jackson, A. C.
2016; 594 (22): 6443-6462
- **Fasting modulates GH/IGF-I axis and its regulatory systems in the mammary gland of female mice: Influence of endogenous cortistatin.** *Molecular and cellular endocrinology*
Villa-Osaba, A., Gahete, M. D., Cordoba-Chacon, J., de Lecea, L., Castaño, J. P., Luque, R. M.
2016; 434: 14-24
- **In vivo assessment of behavioral recovery and circulatory exchange in the peritoneal parabiosis model** *SCIENTIFIC REPORTS*
Castellano, J. M., Palner, M., Li, S., Freeman, G. M., Andy Nguyen, A., Shen, B., Stan, T., Mosher, K. I., Chin, F. T., de Lecea, L., Luo, J., Wyss-Coray, T.
2016; 6
- **Cortistatin Is a Key Factor Regulating the Sex-Dependent Response of the GH and Stress Axes to Fasting in Mice** *ENDOCRINOLOGY*
Cordoba-Chacon, J., Gahete, M. D., Pozo-Salas, A. I., de Lecea, L., Castano, J. P., Luque, R. M.
2016; 157 (7): 2810-2823
- **Superficial Layer-Specific Histaminergic Modulation of Medial Entorhinal Cortex Required for Spatial Learning** *CEREBRAL CORTEX*
He, C., Luo, F., Chen, X., Chen, F., Li, C., Ren, S., Qiao, Q., Zhang, J., de Lecea, L., Gao, D., Hu, Z.
2016; 26 (4): 1590-1608
- **Resting easy with a sleep regulator** *ELIFE*
Giardino, W. J., de Lecea, L.
2015; 4
- **Not So Giants: Mice Lacking Both Somatostatin and Cortistatin Have High GH Levels but Show No Changes in Growth Rate or IGF-1 Levels** *ENDOCRINOLOGY*
Pedraza-Arevalo, S., Cordoba-Chacon, J., Pozo-Salas, A. I., Lopez, F. L., De Lecea, L., Gahete, M. D., Castano, J. P., Luque, R. M.
2015; 156 (6): 1958-1964
- **Obesity Alters Gene Expression for GH/IGF-I Axis in Mouse Mammary Fat Pads: Differential Role of Cortistatin and Somatostatin** *PLOS ONE*
Villa-Osaba, A., Gahete, M. D., Cordoba-Chacon, J., de Lecea, L., Pozo-Salas, A. I., Javier Delgado-Lista, F., Alvarez-Benito, M., Lopez-Miranda, J., Luque, R. M., Castano, J. P.
2015; 10 (3)
- **The Hypocretin/Orexin System: An Increasingly Important Role in Neuropsychiatry** *MEDICINAL RESEARCH REVIEWS*
Chen, Q., de Lecea, L., Hu, Z., Gao, D.
2015; 35 (1): 152-197
- **Optogenetic control of hypocretin (orexin) neurons and arousal circuits.** *Current topics in behavioral neurosciences*
de Lecea, L. n.
2015; 25: 367-78
- **Optogenetics in Freely Moving Mammals: Dopamine and Reward.** *Cold Spring Harbor protocols*
Zhang, F., Tsai, H., Airan, R. D., Stuber, G. D., Adamantidis, A. R., de Lecea, L., Bonci, A., Deisseroth, K.
2015; 2015 (8): pdb top086330-?
- **A Framework for Quantitative Modeling of Neural Circuits Involved in Sleep-to-Wake Transition.** *Frontiers in neurology*
Sorooshyari, S., Huerta, R., de Lecea, L.
2015; 6: 32-?
- **Potential role of orexin and sleep modulation in the pathogenesis of Alzheimer's disease** *JOURNAL OF EXPERIMENTAL MEDICINE*
Roh, J. H., Jiang, H., Finn, M. B., Stewart, F. R., Mahan, T. E., Cirrito, J. R., Heda, A., Snider, B. J., Li, M., Yanagisawa, M., de Lecea, L., Holtzman, D. M.
2014; 211 (13): 2487-2496
- **Hypocretin (orexin) neuromodulation of stress and reward pathways** *CURRENT OPINION IN NEUROBIOLOGY*
Giardino, W. J., de Lecea, L.
2014; 29: 103-108

- **Basal Forebrain Cholinergic Modulation of Sleep Transitions** *SLEEP*
Irmak, S. O., de Lecea, L.
2014; 37 (12): 1941-U104
- **Control of sleep-to-wake transitions via fast amino acid and slow neuropeptide transmission** *NEW JOURNAL OF PHYSICS*
Mosqueiro, T., de Lecea, L., Huerta, R.
2014; 16
- **Light and chemical control of neuronal circuits: possible applications in neurotherapy.** *Expert review of neurotherapeutics*
Whittle, A. J., Walsh, J., de Lecea, L.
2014; 14 (9): 1007-1017
- **Hypocretin (orexin) regulation of sleep-to-wake transitions** *FRONTIERS IN PHARMACOLOGY*
de Lecea, L., Huerta, R.
2014; 5
- **Establishing a fiber-optic-based optical neural interface.** *Cold Spring Harbor protocols*
Adamantidis, A. R., Zhang, F., de Lecea, L., Deisseroth, K.
2014; 2014 (8): pdb prot083337-?
- **Control of sleep-to-wake transitions via fast amino acid and slow neuropeptide transmission.** *New journal of physics*
Mosqueiro, T. n., de Lecea, L. n., Huerta, R. n.
2014; 16
- **The hypocretins/orexins: integrators of multiple physiological functions** *BRITISH JOURNAL OF PHARMACOLOGY*
Li, J., Hu, Z., de Lecea, L.
2014; 171 (2): 332-350
- **Optogenetics: opsins and optical interfaces in neuroscience.** *Cold Spring Harbor protocols*
Adamantidis, A. R., Zhang, F., de Lecea, L., Deisseroth, K.
2014; 2014 (8): pdb top083329-?
- **Sleep to forget: interference of fear memories during sleep.** *Molecular psychiatry*
Rolls, A., Makam, M., Kroeger, D., Colas, D., De Lecea, L., Heller, H. C.
2013; 18 (11): 1166-1170
- **Paradoxical Effect of Cortistatin Treatment and Its Deficiency on Experimental Autoimmune Encephalomyelitis** *JOURNAL OF IMMUNOLOGY*
Souza-Moreira, L., Morell, M., Delgado-Maroto, V., Pedreno, M., Martinez-Escudero, L., Caro, M., O'Valle, F., Luque, R., Gallo, M., de Lecea, L., Castano, J. P., Gonzalez-Rey, E.
2013; 191 (5): 2144-2154
- **Optogenetics in psychiatric diseases.** *Current opinion in neurobiology*
Tourinho, C., Eban-Rothschild, A., de Lecea, L.
2013; 23 (3): 430-435
- **Cortistatin Inhibits Migration and Proliferation of Human Vascular Smooth Muscle Cells and Decreases Neointimal Formation on Carotid Artery Ligation** *CIRCULATION RESEARCH*
Duran-Prado, M., Morell, M., Delgado-Maroto, V., Castano, J. P., Aneiros-Fernandez, J., de Lecea, L., Culler, M. D., Hernandez-Cortes, P., O'Valle, F., Delgado, M.
2013; 112 (11): 1444-?
- **Functional wiring of hypocretin and LC-NE neurons: implications for arousal** *FRONTIERS IN BEHAVIORAL NEUROSCIENCE*
Carter, M. E., de Lecea, L., Adamantidis, A.
2013; 7
- **Hypothalamic Neurotensin Projections Promote Reward by Enhancing Glutamate Transmission in the VTA** *JOURNAL OF NEUROSCIENCE*
Kempadoo, K. A., Tourino, C., Cho, S. L., Magnani, F., Leininger, G., Stuber, G. D., Zhang, F., Myers, M. G., Deisseroth, K., de Lecea, L., Bonci, A.
2013; 33 (18): 7618-?
- **Repeated in vivo exposure of cocaine induces long-lasting synaptic plasticity in hypocretin/orexin-producing neurons in the lateral hypothalamus in mice** *JOURNAL OF PHYSIOLOGY-LONDON*

- Rao, Y., Mineur, Y. S., Gan, G., Wang, A. H., Liu, Z., Wu, X., Suyama, S., de Lecea, L., Horvath, T. L., Picciotto, M. R., Gao, X.
2013; 591 (7): 1951-1966
- **Mechanism for Hypocretin-mediated sleep-to-wake transitions** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Carter, M. E., Brill, J., Bonnavion, P., Huguenard, J. R., Huerta, R., de Lecea, L.
2012; 109 (39): E2635-E2644
 - **Shining Light on Wakefulness and Arousal** *BIOLOGICAL PSYCHIATRY*
de Lecea, L., Carter, M. E., Adamantidis, A.
2012; 71 (12): 1046-1052
 - **Hypocretins and the neurobiology of sleep-wake mechanisms** *OREXIN/HYPOCRETIN SYSTEM*
de Lecea, L.
2012; 198: 15-24
 - **Cortistatin Is Not a Somatostatin Analogue but Stimulates Prolactin Release and Inhibits GH and ACTH in a Gender-Dependent Fashion: Potential Role of Ghrelin** *ENDOCRINOLOGY*
Cordoba-Chacon, J., Gahete, M. D., Pozo-Salas, A. I., Martinez-Fuentes, A. J., de Lecea, L., Gracia-Navarro, F., Kineman, R. D., Castano, J. P., Luque, R. M.
2011; 152 (12): 4800-4812
 - **Plasma levels of neuropeptides and metabolic hormones, and sleepiness in obstructive sleep apnea** *RESPIRATORY MEDICINE*
Sanchez-de-la-Torre, M., Barcelo, A., Pierola, J., Esquinas, C., de la Pena, M., Duran-Cantolla, J., Capote, F., Masa, J. F., Marin, J. M., Vila, M., Cao, G., Martinez, M., de Lecea, et al
2011; 105 (12): 1954-1960
 - **Activation of Central Orexin/Hypocretin Neurons by Dietary Amino Acids** *NEURON*
Karnani, M. M., Apergis-Schoute, J., Adamantidis, A., Jensen, L. T., de Lecea, L., Fugger, L., Burdakov, D.
2011; 72 (4): 616-629
 - **Neural Integration of Reward, Arousal, and Feeding: Recruitment of VTA, Lateral Hypothalamus, and Ventral Striatal Neurons** *IUBMB LIFE*
Gutierrez, R., Kay Lobo, M., Zhang, F., de Lecea, L.
2011; 63 (10): 824-830
 - **Optogenetic Interrogation of Dopaminergic Modulation of the Multiple Phases of Reward-Seeking Behavior** *JOURNAL OF NEUROSCIENCE*
Adamantidis, A. R., Tsai, H., Boutrel, B., Zhang, F., Stuber, G. D., Budygin, E. A., Tourino, C., Bonci, A., Deisseroth, K., de Lecea, L.
2011; 31 (30): 10829-10835
 - **Optogenetic investigation of neural circuits in vivo** *TRENDS IN MOLECULAR MEDICINE*
Carter, M. E., de Lecea, L.
2011; 17 (4): 197-206
 - **Neuropeptide S facilitates cue-induced relapse to cocaine seeking through activation of the hypothalamic hypocretin system** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Kallupi, M., Cannella, N., Economidou, D., Ubaldi, M., Ruggeri, B., Weiss, F., Massi, M., Marugan, J., Heilig, M., Bonnavion, P., de Lecea, L., Ciccocioppo, R.
2010; 107 (45): 19567-19572
 - **Sleep and metabolism: Role of hypothalamic neuronal circuitry** *BEST PRACTICE & RESEARCH CLINICAL ENDOCRINOLOGY & METABOLISM*
Rolls, A., Borg, J. S., de Lecea, L.
2010; 24 (5): 817-828
 - **Hypocretins in the Control of Sleep and Wakefulness** *CURRENT NEUROLOGY AND NEUROSCIENCE REPORTS*
Bonnavion, P., de Lecea, L.
2010; 10 (3): 174-179
 - **Reelin Regulates Postnatal Neurogenesis and Enhances Spine Hypertrophy and Long-Term Potentiation** *JOURNAL OF NEUROSCIENCE*
Pujadas, L., Gruart, A., Bosch, C., Delgado, L., Teixeira, C. M., Rossi, D., de Lecea, L., Martinez, A., Delgado-Garcia, J. M., Soriano, E.
2010; 30 (13): 4636-4649
 - **A decade of hypocretins: past, present and future of the neurobiology of arousal** *ACTA PHYSIOLOGICA*
de Lecea, L.

2010; 198 (3): 203-208

- **The role of hypocretin in driving arousal and goal-oriented behaviors** *BRAIN RESEARCH*
Boutrel, B., Cannella, N., de Lecea, L.
2010; 1314: 103-111
- **Hypocretins Regulate the Anxiogenic-Like Effects of Nicotine and Induce Reinstatement of Nicotine-Seeking Behavior** *JOURNAL OF NEUROSCIENCE*
Plaza-Zabala, A., Martin-Garcia, E., de Lecea, L., Maldonado, R., Berrendero, F.
2010; 30 (6): 2300-2310
- **Optogenetic interrogation of neural circuits: technology for probing mammalian brain structures** *NATURE PROTOCOLS*
Zhang, F., Gradinaru, V., Adamantidis, A. R., Durand, R., Airan, R. D., de Lecea, L., Deisseroth, K.
2010; 5 (3): 439-456
- **Optogenetic deconstruction of sleep-wake circuitry in the brain.** *Frontiers in molecular neuroscience*
Adamantidis, A., Carter, M. C., de Lecea, L.
2010; 2: 31-?
- **A role for Melanin-Concentrating Hormone in learning and memory** *PEPTIDES*
Adamantidis, A., de Lecea, L.
2009; 30 (11): 2066-2070
- **Sleep Homeostasis Modulates Hypocretin-Mediated Sleep-to-Wake Transitions** *JOURNAL OF NEUROSCIENCE*
Carter, M. E., Adamantidis, A., Ohtsu, H., Deisseroth, K., de Lecea, L.
2009; 29 (35): 10939-10949
- **The Hypocretins and their Role in Narcolepsy** *CNS & NEUROLOGICAL DISORDERS-DRUG TARGETS*
Kroeger, D., de Lecea, L.
2009; 8 (4): 271-280
- **Neuropeptide S Reinstates Cocaine-Seeking Behavior and Increases Locomotor Activity through Corticotropin-Releasing Factor Receptor 1 in Mice** *JOURNAL OF NEUROSCIENCE*
Paneda, C., Huitron-Resendiz, S., Frago, L. M., Chowen, J. A., Picetti, R., de Lecea, L., Roberts, A. J.
2009; 29 (13): 4155-4161
- **The brain hypocretins and their receptors: mediators of allostatic arousal** *CURRENT OPINION IN PHARMACOLOGY*
Carter, M. E., Borg, J. S., de Lecea, L.
2009; 9 (1): 39-45
- **The hypocretins as sensors for metabolism and arousal** *JOURNAL OF PHYSIOLOGY-LONDON*
Adamantidis, A., de Lecea, L.
2009; 587 (1): 33-40
- **Sleep and metabolism: shared circuits, new connections** *TRENDS IN ENDOCRINOLOGY AND METABOLISM*
Adamantidis, A., de Lecea, L.
2008; 19 (10): 362-370
- **Optogenetic probing of hypocretin neuronal network** *19th Congress of the European-Sleep-Research-Society*
Adamantidis, A. R., Zhang, F., Aravanis, A., Deisseroth, K., De Lecea, L.
WILEY-BLACKWELL.2008: 88-88
- **Effect of cortistatin on tau phosphorylation at Ser262 site** *JOURNAL OF NEUROSCIENCE RESEARCH*
Rubio, A., Perez, M., de Lecea, L., Avila, J.
2008; 86 (11): 2462-2475
- **Somatostatin, cortistatin and their receptors in health and disease. Foreword.** *Molecular and cellular endocrinology*
Castaño, J. P., Ghigo, E., Kineman, R. D., de Lecea, L., Malagón, M. M., Vaudry, H.
2008; 286 (1-2): 1-2
- **Cortistatin - Functions in the central nervous system** *MOLECULAR AND CELLULAR ENDOCRINOLOGY*
de Lecea, L.

2008; 286 (1-2): 88-95

- **Neuropeptide interactions and REM sleep: A role for Urotensin II?** *1st Meeting of the Japan Branch of the International-Neuropeptide-Society*
de Lecea, L., Bourgin, P.
ELSEVIER SCIENCE INC.2008: 845–51
- **Physiological arousal: a role for hypothalamic systems** *CELLULAR AND MOLECULAR LIFE SCIENCES*
Adamantidis, A., de Lecea, L.
2008; 65 (10): 1475-1488
- **Somatostatin receptor subtype 4 couples to the m-current to regulate seizures** *JOURNAL OF NEUROSCIENCE*
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