

# Habenula

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In neuroanatomy, habenula originally denoted the stalk of the pineal gland, but gradually came to refer to a neighboring group of nerve cells with which the pineal gland was believed to be associated, the habenular nucleus. Currently, the Terminologia Anatomica term refers exclusively to this separate cell mass in the caudal and dorsal aspect of the dorsal thalamus, the epithalamus, embedded in the posterior end of the medullary stria from which it receives most of its afferent fibers. By way of the retroflex fasciculus it projects to the interpeduncular nucleus and other paramedian cell groups of the midbrain tegmentum. Despite its proximity to the pineal stalk, no connecting tissue is known to exist. The habenula is involved in receiving input from the brain via the stria medullaris thalami and output to many midbrain areas involved in releasing personality-related neurotransmitters and neuromodulators, such as dopamine, norepinephrine, and serotonin. The habenula is the only nucleus of the epithalamus. ([From the Wikipedia article Habenula](#).)

## Recent Publications on Habenula:



- [Brn3a and Nurr1 mediate a gene regulatory pathway for habenula development.](#)  
*The habenula is a dorsal diencephalic structure consisting of medial and...* 13th November, 2009  
Department of Psychiatry, University of California, San Diego, La Jolla,- J Neurosci. 2009 Nov 11;29(45):14309-22. ([DOI Direct Link](#))
- [Reinforcement learning, conditioning, and the brain: Successes and challenges.](#)  
*The field of reinforcement learning has greatly influenced the...* 10th November, 2009  
Columbia University,- Cogn Affect Behav Neurosci. 2009 Dec;9(4):343-64. ([DOI Direct Link](#))
- [Coincidence of neurokinin 1 receptor with the vesicular glutamate transporter 3 \(VGLUT3\) in the rat forebrain.](#)  
*The third vesicular glutamate transporter (VGLUT3) is expressed in a...* 10th November, 2009  
Department of Anesthesiology, Perioperative and Pain Medicine, Children's- Neurosci Lett. 2009 Oct 30;464(3):188-92. Epub 2009 Aug 21. ([DOI Direct Link](#))
- [In vitro and in vivo comparison of two non-peptide tachykinin NK\(3\) receptor antagonists: Improvements in efficacy achieved through enhanced brain penetration or altered pharmacological characteristics.](#)  
*Clinical evaluation of tachykinin NK(3) receptor antagonists has provided...* 3rd November, 2009  
Neurosciences Centre of Excellence for Drug Discovery, GlaxoSmithKline,- Eur J Pharmacol. 2009 Oct 30. ([DOI Direct Link](#))
- [Remission of Major Depression Under Deep Brain Stimulation of the Lateral Habenula in a Therapy-Refractory Patient.](#)  
*Clinical evaluation of tachykinin NK(3) receptor antagonists has provided...* 23rd October, 2009  
Department of Psychiatry and Psychotherapy, Central Institute of Mental- Biol Psychiatry. 2009 Oct 19. ([DOI Direct Link](#))
- [Localization of relaxin-3 in brain of Macaca fascicularis: identification of a nucleus incertus in primate.](#)

- Relaxin-3 (RLN3) is a highly conserved, ancestral member of the...* 22nd October, 2009  
 Florey Neuroscience Institutes, The University of Melbourne, Victoria- J Comp Neurol. 2009 Dec 20;517(6):856-72. ([DOI Direct Link](#))
- [Metamorphic pitx2 expression in the left habenula correlated with lateralization of eye-sidedness in flounder.](#)  
*The bilateral symmetry of flounder larvae changes through the process of...* 22nd October, 2009  
 Laboratory of Bioindustrial Informatics, Graduate School of Agricultural- Dev Growth Differ. 2009 Oct 15. ([DOI Direct Link](#))
  - [Fos After Single and Repeated Self-Administration of Cocaine and Saline in the Rat: Emphasis on the Basal Forebrain and Recalibration of Expression.](#)  
*The effects of addictive psychostimulant drugs on the brain change over...* 2nd October, 2009  
 Department of Pharmacological and Physiological Science, Saint Louis- Neuropsychopharmacology. 2009 Sep 30. ([DOI Direct Link](#))
  - [Lateral habenula projections to dopamine and GABA neurons in the rat ventral tegmental area.](#)  
*Ventral tegmental area (VTA) dopamine (DA) neurons and their forebrain...* 1st October, 2009  
 Department of Neuroscience, University of Pittsburgh, Pittsburgh, PA- Eur J Neurosci. 2009 Oct;30(7):1239-50. Epub 2009 Sep 29. ([DOI Direct Link](#))
  - [Early differences in epthalamic left-right asymmetry influence lateralization and personality of adult zebrafish.](#)  
*The habenulae are part of an evolutionary conserved conduction system that...* 22nd September, 2009  
 Department of General Psychology, University of Padova, Via Venezia 8, ZIP- Behav Brain Res. 2010 Jan 20;206(2):208-15. Epub 2009 Sep 16. ([DOI Direct Link](#))
  - [Evidence for structural abnormalities of the human habenular complex in affective disorders but not in schizophrenia.](#)  
*BACKGROUND: The habenular complex is composed of important relay nuclei...* 13th August, 2009  
 Department of Psychiatry, University of Magdeburg, Magdeburg, Germany.- Psychol Med. 2009 Aug 12:1-11. ([DOI Direct Link](#))
  - [Immunohistochemical localization of orexins \(hypocretins\) in the brain of reptiles and its relation to monoaminergic systems.](#)  
*With the aim of gaining more insight into the evolution of the orexinergic...* 12th August, 2009  
 Department of Cell Biology, Faculty of Biology, University Complutense,- J Chem Neuroanat. 2009 Aug 7. ([DOI Direct Link](#))
  - [Fos immunoreactivity in the rat forebrain induced by electrical stimulation of the dorsolateral periaqueductal gray matter.](#)  
*Electrical stimulation of the dorsolateral periaqueductal gray (dIPAG)...* 11th July, 2009  
 Department of Neuroscience, Maastricht University, Maastricht, The- J Chem Neuroanat. 2009 Oct;38(2):83-96. Epub 2009 Jul 7. ([DOI Direct Link](#))
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*Brain glucosensing is essential for normal body glucose homeostasis and...* 10th July, 2009  
 The John B Pierce Laboratory New Haven, CT, USA.- Front Integr Neurosci. 2009;3:12. Epub 2009 Jun 19. ([DOI Direct Link](#))
  - [Activation of the septohippocampal system differentiates anxiety from fear in startle paradigms.](#)  
*It has been suggested that different brain areas are involved in the...* 8th July, 2009  
 Department of Anatomy, 109 UMC St Radboud, University of Nijmegen, Geert- Neuroscience. 2009 Nov 10;163(4):1046-60. Epub 2009 Jul 3. ([DOI Direct Link](#))



## Habenula Patents:

- 6709866- [Methods for enhancing survival of a neuron](#)
- 6987005- [DNA encoding SNORF33 receptor](#)
- 6992077- [Spirocyclic ligands for sigma receptors, and libraries and methods of use thereof](#)
- 6994856- [ErbB4 receptor-specific neuregulin related ligands and uses therefor](#)
- 6998472- [Obesity gene](#)
- 7001720- [Cloning of a gene mutation for parkinson's disease](#)
- 7014838- [Use of biomolecular targets in the treatment and visualization of brain tumors](#)
- 7022321- [Use of marrow-derived glial progenitor cells as gene delivery vehicles into the central nervous system](#)
- 7030235- [Compositions to detect lesions associated with hearing loss in the cochlear gene, COCH5B2](#)
- 7034112- [Methods for diagnosis and treatment of MDK1 signal transduction disorders](#)
- 7041496- [DNA encoding rodent KCNQ2 potassium channel](#)
- 6987004- [Genes integrating signal transduction pathways](#)
- 6967244- [Neuronal nicotinic acetylcholine receptor compositions](#)
- 6962985- [Mammalian neuralized family transcriptional regulators and uses therefor](#)
- 6750196- [Methods of treating disorders of the eye](#)
- 6762177- [Spirocyclic ligands for sigma receptors, and libraries and methods of use thereof](#)
- 6777236- [Process for producing a neuronal host cell in vitro comprising regulatory sequences of the .beta.2-subunit of the neuronal nicotinic acetylcholine receptor](#)
- 6780871- [Methods and compositions for treating addiction disorders](#)
- 6790656- [DNA encoding galanin GALR2 receptors](#)
- 6818391- [Glutamate transporters](#)
- 6849727- [DNA encoding mammalian neuropeptide FF \(NPFF\) receptors and uses thereof](#)
- 6907280- [Method and apparatus for objectively measuring pain, pain treatment and other related techniques](#)
- 6933122- [A-form of cytoplasmic domain of nARIA \(CRD-neuregulin\) and uses thereof](#)
- 6958323- [Uses of .alpha.-conotoxin peptides](#)
- 7041795- [Potassium channel interacting polypeptides and uses thereof](#)
- 7060449- [Method of preparing GALR2 receptors composition](#)
- 7405053- [Materials and methods relating to G-protein coupled receptor oligomers](#)
- 7416848- [DNA encoding SNORF25 receptor](#)
- 7439029- [Human 9q polypeptides method](#)
- 7465549- [Methods for identifying agents that bind a levetiracetam binding site \(LBS\) or compete with LEV binding to a LBS of a synaptic vesicle protein 2 \(SV2\)](#)
- 7482431- [KCNQ2 potassium channels](#)
- 7507742- [Spirocyclic derivatives](#)
- 7517658- [Methods for preparing compositions using a SNORF33 receptor](#)
- 7541335- [Nogo-receptors and methods of use](#)
- 7556938- [Nucleic acids encoding potassium channel interactors](#)
- 7563862- [Neural regeneration peptides and methods for their use in treatment of brain damage](#)
- 7371535- [Processes for determining compounds that interact with snorf33 receptor](#)
- 7294463- [Method of screening for compounds that modulate activity of a regulatory sequence of the .beta.-2 subunit of a neuronal nicotinic acetylcholine receptor](#)
- 7276339- [DNA encoding mammalian neuropeptide FF \(NPFF\) receptors and uses thereof](#)

- 7078481- [Potassium channel interactors and uses therefor](#)
- 7090985- [Methods for the identification of agents for the treatment of seizures, neurological diseases, endocrinopathies and hormonal diseases](#)
- 7115381- [Methods for treating cardiovascular disorders](#)
- 7122326- [Identification of modulators of neurotransmitter activity of xanthurenic acid](#)
- 7132248- [Uses of galanin GALR2 receptors](#)
- 7235366- [Methods of identifying agonists and antagonists of opioid receptors](#)
- 7241805- [Modified release formulations of a bupropion salt](#)
- 7250496- [Bioinformatically detectable group of novel regulatory genes and uses thereof](#)
- 7252945- [DNA encoding mammalian neuropeptide FF \(NPFF\) receptors and uses thereof](#)
- 7262289- [KCNQ potassium channels and methods of modulating same](#)
- 7598048- [Screening methods for identifying agents that modulate output of a circadian pacemaker](#)

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