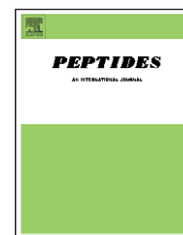


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Review

Endogenous opiates and behavior: 2005

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Abbreviations:

Ach, acetylcholine
ACTH, adrenocorticotrophic hormone
AGRP, agouti gene related peptide
AMSH, alpha-melanocyte-stimulating hormone
AS, antisense
ATP, adenosine triphosphate
BDNF, brain-derived neurotrophic factor
BEND, beta-endorphin
BFNA, beta-funaltrexamine
BNST, bed nucleus of the stria terminalis
Ca(2+), calcium
cAMP, cyclic adenomonophosphate
CART, cocaine and amphetamine-regulated transcript

ABSTRACT

This paper is the 28th consecutive installment of the annual review of research concerning the endogenous opioid system, now spanning over a quarter-century of research. It summarizes papers published during 2005 that studied the behavioral effects of molecular, pharmacological and genetic manipulation of opioid peptides, opioid receptors, opioid agonists and opioid antagonists. The particular topics that continue to be covered include the molecular-biochemical effects and neurochemical localization studies of endogenous opioids and their receptors related to behavior (Section 2), and the roles of these opioid peptides and receptors in pain and analgesia (Section 3); stress and social status (Section 4); tolerance and dependence (Section 5); learning and memory (Section 6); eating and drinking (Section 7); alcohol and drugs of abuse (Section 8); sexual activity and hormones, pregnancy, development and endocrinology (Section 9); mental illness and mood (Section 10); seizures and neurologic disorders (Section 11); electrical-related activity, neurophysiology and transmitter release (Section 12); general activity and locomotion (Section 13); gastrointestinal, renal and hepatic functions (Section 14); cardiovascular responses (Section 15); respiration and thermoregulation (Section 16); immunological responses (Section 17).

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CB, cannabinoid
CCK, cholecystokinin
cDNA, complementary deoxyribonucleic acid
CFA, complete Freund's adjuvant
CGRP, calcitonin gene-related peptide
COX, cyclooxygenase
C/P, caudate/putamen
CPP, conditioned place preference
CREB, Ca(2+)/cAMP responsive element binding protein
CRF, corticotropin factor
CSF, cerebrospinal fluid
DA, dopamine
DADL, D-Ala(2),D-Leu(5)-enkephalin
DALDA, D-Arg-Phe-Lys-NH₂
DAMGO, D-Ala(2),Nme(4),Gly-ol(5)-enkephalin
Delt, deltorphin
DOR, delta opioid receptor gene
DPDPE, D-Pen(2),D-Pen(5)-enkephalin
DRN, dorsal raphe nucleus
DYN, dynorphin
EEG, encephalographic
Enk, enkephalin
EPSC, excitatory post-synaptic currents
ERK, extracellular regulated signal kinases
GI, gastrointestinal
GIRK, G-protein inwardly rectifying K⁺ channel subunit
GnRH, gonadotropin-releasing hormone
GP, globus pallidus
HIV, human immunodeficiency virus
HR, heart rate
HVA, homovanillic acid
IPSC, inhibitory post-synaptic currents
K(+), potassium
KO, knockout
KOR, kappa opioid receptor gene
LC, locus coeruleus
L-DOPA,
1,3,4-dihydroxyphenylalanine
Lenk, Leu-enkephalin
LH, leutinizing hormone
LI, like immunoreactivity
LiCl, lithium chloride
L-NAME, N(omega)-nitro-L-arginine methyl ester
LTP, long-term potentiation
M3G, morphine-3-glucuronide
M6G, morphine-6-glucuronide
MAP, mean arterial pressure
MAPK, mitogen-activated protein kinase

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