

INRC 2010 Program

Sunday July 11, 2010

15.00 - 19.00 Registration

19.00 - 21.00 Reception

Monday July 12, 2010

08.30 Welcome/announcement

Christina Åkerman, Director-general of The Swedish Medical Products Agency (MPA)

8.45-9.30

Plenary Lecture (P1):

Professor Tomas Hökfelt (Stockholm, Sweden): Multiple messenger systems: Focus on neuropeptides and pain

Symposium #1: 09.30 - 10.30

Novel opioid peptide agonists and antagonists

Chairs: James Zadina & Aleksandra Misicka

Luca Gentilucci (Bologna, Italy): Interactions between atypical opioid agonists and MOR

Andrzej Lipkowski (Warsaw, Poland): Opioid-tachykinin chimeric peptides for chronic pain treatment

James Zadina (New Orleans, USA): Novel opioid peptide derived agonists

Coffee-break 10.30 - 11.00

Symposium #2: 11.00 - 12.30

Transcription and epigenetics of the opioid genes

Chairs: Georgy Bakalkin and Li-Na Wei

Jaques Drouin (Montreal, Canada): Genomic landscape regulating pituitary POMC expression

Li-Na Wei (Minneapolis, USA): Epigenetic control of the opioid receptor genes

Rui Yue and Gang Pei (Shanghai, China): Epigenetic regulation of gene transcription by b-arrestin

Hot topic #1 - Luda Diatchenko (Chapel Hill, USA): Expansion of the human opioid receptor gene architecture: Novel Functional variants

Discussion

Lunch 12.30 - 14.00

Symposium #3: 14.00 - 16.00

Ligand-directed Signaling and Functional Selectivity

Chairs: Lakshmi Devi & Brigitte Kieffer

Laura Bohn (Irvine, USA): Biased agonism at GPCRs with respect to barrestin2 regulation of signaling

Laurent Coubault (Caen, France): Extracellular signal-regulated protein kinase 1/2 (ERK1/2) activation after human delta-opioid (hDOP) receptor stimulation: Study of G protein receptor kinase 2 (GRK2) involvement in the neuroblastoma SK-N-BE cell line.

Amynah Pradhan (Montreal, Canada): Ligand-directed trafficking of the delta opioid receptor *in vivo*: two paths to analgesic tolerance

Graciela Pineyro (Montreal, Canada): Functional selectivity determines post-endocytic sorting and tolerance potential of delta opioid receptor (DOR) ligands

Hot topic #2 - Ivone Gomes (New York, USA): Novel peptide endocannabinoids reveal agonist directed signaling by cannabinoid receptors.

Discussion

Coffee-break 16.00 - 16.30

Poster session 1: 16.30 - 19.00

Tuesday July 13, 2010

08.30 - 09.30

Plenary Lecture (P2):

Professor Tony Yaksh (San Diego, USA): Spinal opiates and analgesia - A real bench to bedside story

Symposium #4: 09.30 - 10.30

Opioids in neuropathic pain

Preclinical part

Chairs: Lei Yu & Hiroshi Ueda

Hiroshi Ueda (Nagasaki, Japan): Epigenetic control of opioid receptor gene expression in neuropathic pain model

Zsuzsanna Wiesenfeld-Hallin (Stockholm, Sweden): Studies of anti-hyperalgesic effect of various opioids in a rat model of mononeuropathy

Masahiro Ohsawa (Tokyo, Japan): Changes of opioidergic systems in diabetic painful neuropathy

Coffee-break 10.30 - 11.00

Symposium #5: 11.00 - 12.30

Opioids in neuropathic pain

Clinical part

Chairs: Eija Kalso & Torsten Gordh

Torsten Gordh (Uppsala, Sweden): Opioid sensitivity in chronic pain patients correlates with the expression level of opioid peptide systems

Seturo Ogawa (Tokyo, Japan): Use of opioid analgesics and its potential problem in patients with neuropathic pain

Inna Belfer (Bethesda, USA): Genetic basis for individual variations in pain perception and association studies of neuropathic pain

Oleg Kristhal (Kiev, Ukraine): "Big dynorphin" induces profound conductance changes in the plasma membrane: a putative mechanism of cell signaling

Eberhard Weihe (Marburg, Germany): Plasticity of opioid peptides in specific glutamatergic pathways in experimental pain

Lunch 12.30 - 14.00

Symposium #6: 14.00 - 16.00

Opioids and stem cell research - Recent progress in the stem cell biology and adult neurogenesis

Chairs: Minoru Narita and Kurt Hauser

Pamela Knapp (Richmond, USA): Stage specific effects of opiates and HIV on CNS progenitor function

Minoru Narita (Tokyo, Japan): Role of G-protein-coupled receptors in the differentiation from embryonic stem cells

Amelia Eisch (Dallas, USA): Postnatal hippocampal neurogenesis and opiates

Hot topic #3 - Kurt Hauser (Richmond, USA): CNS exposure to morphine and HIV-1 TAT disrupts oligodendrocyte structure and survival in inducible transgenic mice.

Hot topic #4 - Shilpa Buch (Omaha, USA): Morphine accelerates the neuropathogenesis of SIV infection in Rhesus Macaques.

Discussion

Coffee-break 16.00 - 16.30

Poster session 2: 16.30 - 19.00

Wednesday July 14, 2010

08.30 - 09.30

Founders Lecture:

Professor Masamichi Satoh (Hiroshima, Japan): The fruits of opioid research in Japan -- A personal view --

Symposium #7: 09.30 - 10.30

Opioids, Incentive Drive and Habit

Chairs: Toni Shippenberg and Florence Noble

Nigel Maidment (Los Angeles, USA): Licking, liking and longing: opioid modulation of goal-directed actions.

Agustin Zapata (Baltimore, USA): Kappa opioid receptors and cocaine seeking habits

Serge Ahmed (Bordeaux, France): Modeling heroin addiction in animals: effects of extended drug access on heroin consumption, motivation and preference.

Coffee-break 10.30 - 11.00

Symposium #8: 11.00 - 12.30

Opioid addiction – Clinical aspects

Chairs: Claes Post and Mats Berglund

Johan Kakko (Stockholm, Sweden): Methadone assisted treatment vs. a stepped strategy utilizing buprenorphine and methadone: results of the Swedish 3G study.

Mary Jeanne Kreek (New York, USA): Human molecular genetics and methylation of DNA related to heroin addiction.

Mahmoud Ahmed (Galveston, USA): Role of human placenta in regulating fetal exposure to opiate medications.

Hot topic #5 - John Mendelson (San Francisco, USA): The effects of 6B-naltrexol in opiate dependent subjects.

Discussion

Afternoon free

Thursday July 15, 2010

08.30 -09.30

Plenary Lecture (P3):

Professor Dan Larhammar (Uppsala, Sweden): Evolution of the opioid system

Symposium #9: 09.30 - 10.30

Opioids in alcohol addiction

Preclinical research

Chairs: Ingrid Nylander & Christine Gianoulakis:

Ingrid Nylander (Uppsala, Sweden): The impact of early environmental factors on ethanol-induced effects on opioid peptides in adult male rats

Christine Gianoulakis (Montreal, Canada): Effects of ethanol on opioid peptide release in CNS regions related to addiction

Andreas Zimmer (Bonn, Germany): Endogenous opioids and the commonalities of alcohol and nicotine

Coffee-break 10.30 - 11.00

Symposium #10: 11.00 - 12.30

Opioids in addiction to alcohol and central stimulants

Clinical research

Chairs: Mary Jeanne Kreek & Johan Franck

Karl Mann (Heidelberg, Germany): Searching for the naltrexone responder – the PREDICT Study

Anders Håkansson (Malmö, Sweden): Criminals with polydrug use – a comparison with heroin and amphetamine users

Johan Franck (Stockholm, Sweden): Opioid antagonist treatment for amphetamine dependence

Hot topic #6 - Jennifer Whistler (San Francisco, USA): Mu opioid receptor trafficking and responsiveness to drugs of abuse.

Hot topic #7 - Yan Zhou (New York, USA): Altered expression of opioid genes during heroin withdrawal and associated stress-induced relapse vulnerability in rats.

Discussion

Lunch 12.30 - 14.00

Symposium #11: 14.00 - 14.45

Endogenous opioids and addiction to gambling

Chair: Fred Nyberg

Mark Potenza (New Haven, USA): The neurobiology and genetics of impulse control disorders: relationships to drug addictions.

Discussion

NIDA-symposium 14.45 - 16.15

Chair: Rao S. Rapaka (NIDA/NIH)

David Shurtleff (NIDA/NIH, USA): Basic Neuroscience Research at NIDA: An Update

Danielle Piomelli (UC Irvine, USA): Neural lipidomics and human diseases

Alexandros Makriyannis (Boston, USA): Focused Proteomics Approaches for investigations of the endocannabinoid system

16.30 Business Meeting

19.30 Banquette dinner

Friday July 16, 2010

Symposium #12: 09.00 - 10.30

Opioids in neuroendocrinology – abuse of steroids

Chairs: Ruth Wood & Mathias Hallberg

Andrea Bedini (Bologna, Italy): Genomic and non-genomic effects of anabolic steroids on opioid receptor gene expression in neuronal cells

Ruth Wood (Los Angeles, USA): Anabolic-androgenic steroid dependence: overlap with opioid systems.

Discussion

Coffee-break 10.30 - 11.00

Symposium #13: 11.00 - 12.30

Opioid and cannabinoid interaction (joint session with the ICRS)

Chairs: Rafael Maldonado & Walter Fratta

Rafael Maldonado (Barcelona, Spain): Advances in the field of cannabinoid--opioid cross-talk.

Liana Fattore (Cagliari, Italy): Cannabis and reward – interaction with opioids

Charles France (San Antonio, USA): Interactions between μ agonists and delta⁹-tetrahydrocannabinol in Rhesus monkeys: Selective enhancement of antinociception.

End of conference

Lunch 12.30 - 13.30