

## **Brigitte L. Kieffer, Ph.D.**



Dr. Brigitte L. Kieffer is Professor at the Department of Psychiatry, McGill University and the Scientific Director of the Douglas Mental Health Research Center in Montréal since 2014. She also is Professor at the Université de Strasbourg France, where she developed most her past research activity (IGBMC, one of the leading European centres of biomedical research). Brigitte Kieffer has isolated the first gene encoding an opioid receptor, opening an entire research field towards understanding the molecular basis of opioid-controlled behaviors. Her genetic dissection of the opioid system has demonstrated that both analgesic and addictive actions of morphine are mediated by a single receptor protein, the mu receptor, and that this receptor is responsible for rewarding properties of most drugs of abuse. She also discovered that delta receptors improve anxiety and depressive-like responses. She elucidated the molecular mechanism by which an opioid receptor turns on, and finally achieved functional imaging of the delta opioid receptor in vivo. Her work has important implications the development of treatment of pain, drug abuse and emotional disorders. Relevant to this application, she recently has developed novel genetic tools to achieve functional imaging of opioid receptors in vivo and address circuitry aspects of opioid receptor function. She has received numerous awards, including the Lounsbery (French and US Academies of Science) and the Lamonica Award of Neurology (French Academy of Science). In march 2014, she also received the International L'OREAL-UNESCO Award for Women in Science (European Laureate). She became an EMBO (European Molecular Biology Organization) in 2009 and was elected as a member of the French Academy of Sciences in 2013. She has published more than 200 original papers in international peer-reviewed journals, written 45 invited reviews and book chapters, and has presented more than 200 Invited Conferences throughout the world since 1993.