List of Inserm's Host Laboratories and Research Programs

1. Marcello Solinas, marcello.solinas@univ-poitiers.fr
   Effects of environmental enrichment on long-lasting dysregulation of brain functions associated with cocaine addiction: behavioral and neurobiological aspects
   Laboratory: Laboratoire de Neurosciences Expérimentales et Cliniques
   Équipe Neurobiologie et Neuropharmacologie de l'Addiction; INSERM U-1084
   Université de Poitiers
   Poitiers, France
   Phone: +33 5 49 36 63 43
   Website: http://www2.cnrs.fr/en/1433.htm

2. Jean-Luc Martinot, jean-luc.martinot@cea.fr
   Drug addiction and brain connectivity in human databases
   Testing hypotheses on the relationships between brain images and psycho-behavioral data would be part of the research exchange, involving multicenter comparison with samples from Europe and the United States.
   Laboratory: Research Unit 1000 “Neurolmagery and Psychiatry” INSERM - CEA, Université Paris-Sud and Université Paris Descartes
   97 Boulevard de Port Royal - Maison de Solenn, Paris and
   Service Hospitalier Frédéric Joliot, Orsay, France
   Phone: 016986 7757 - 015841 2841

3. Jean-Guy Gay, jggay@vjf.cnrs.fr
   The outputs of addiction without medical assistance, life trajectories, and assistance of people who have been addicted to opiates or cocaine
   Laboratory: Jean-Guy Gay, Secrétaire général du Cermes3, Centre de Recherche Médecine, Sciences, Santé, Santé mentale et Société, Unité INSERM 988 - UMR CNRS
   8211 - EHESS - Université Paris Descartes, Site CNRS
   Bâtiment C aile nord, 7, rue Guy Môquet, 94801 Villejuif cedex, France
   Phone: +33 (0)1 49 58 36 36
   Fax: +33 (0) 1 49 58 34 85
   Website: http://www.cermes3.fr (in French)

4 and 5. Jean-Paul Moatti, perrine.roux@inserm.fr
   Epidemiology and social sciences in the field of addictions
   Project 4: An epidemiological study enrolling a cohort of 800 injecting drug users with a 12-month follow-up and 3-month-interval interviews to assess the impact of individual and structural factors on health and risky behaviors.
**Project 5:** A pharmacological study to assess the effective dose of methylphenidate (MPH) in cocaine-dependent individuals using a combination of socio-behavioral and pharmacokinetic approaches preliminarily to a randomized clinical trial to evaluate the efficacy of MPH for cocaine dependence.

**Laboratory:** SESSTIM, INSERM UMR912-INSERM/IRD
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Fax: +33 (0)4 96 10 28 99
Website: http://www.sesstim-orspaca.org/presentation/index_GB.php

6. **Laurence Lanfumey,** laurence.lanfumey@upmc.fr or laurence.lanfumey@inserm.fr

**Ethanol and neuroplasticity in mouse brain: relation to epigenetic regulations**

We have recently shown that chronic ethanol intake could induce chromatin remodelling and brain-derived neurotropic factor (BDNF) overexpression associated with an increase in transcriptional activity due to an inhibition of histone deactylases (HDACs) expression. In order to further characterize these effects, we propose (1) to explore memory-related behaviors, (2) to analyze the intracellular signalling pathways coupled to BDNF/TrkB complex, (3) to examine the methylation profile of the main CpG islands present in the BDNF gene, and finally (4) to use novel pharmacological tools, targeting either epigenetic enzymes or the BDNF/TrkB complex.

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7. **Mickael Naassila,** mickael.naassila@inserm.fr

**Role of chromatin remodeling in alcohol addiction and its potential interest for therapeutics**

Recently, a growing body of evidence demonstrates that epigenetic mechanisms play a pivotal role in long-lasting changes in gene expression induced by drugs of abuse, by regulation of transcriptional potential. Self-administration of drugs of abuse induces transcriptional changes in the brain that represent a key mechanism affecting reward-related learning and further drug-related behaviors. Thus, voluntary drug intake controlled by a fine equilibrium of opposing molecular regulators can facilitate or inhibit compulsive drug use. This research has opened up new therapeutic strategies by modulation of transcriptional regulatory functions.

Related publications:
The histone deacetylase inhibitor sodium butyrate decreases excessive ethanol intake and relapse in rats. Submitted.
Effects of early cannabis exposure on the emotional brain

The widespread use of cannabis derivatives in adolescent and pregnant women is a major public health concern. However, how early cannabis exposure modifies afferent/efferent connectivity and synaptic activity in the neuronal circuits of emotional behavior (the prefrontal cortex and the accumbens) have seldom been studied. In this proposal, we will combine behavioral, optogenetic, optical, and electrophysiological approaches in clinically relevant models of in utero and adolescent cannabis exposure to question how cannabis use during specific critical periods of development modifies the emotional brain.

Laboratory: UFR Pharmacie, INSERM ERI-24, Groupe de Recherche sur l'Alcool and les Pharmacodépendances, Université de Picardie Jules Verne, UFR de Pharmacie
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Fax: 03 22 82 76 72
Website: http://alcobinge.crihan.fr/index.php?language=en

8. Olivier Manzoni, olivier.manzoni@inserm.fr

Stress and cannabis: crossed vulnerability during adolescence to long lasting cognitive and behavioral impairments in adult

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