



4th Provence Summer Workshop France 2017

DON'T MISS EARLY BIRD!

Up & Down in the Hippocampus

*Set in the heart of Provence this Workshop will pick apart
dorsal-ventral segregation in the hippocampus*

International guest speakers

Professor Rene Hen, Columbia University, USA

Professor Craig Stark, UC Irvine, USA

Domaine des Escaunes, Provence, France

Wed 31st May– Sat 3rd June 2017

About the 4th Provence Summer Workshop

The 4th Provence Summer Workshop will explore dorsal-ventral (or anterior-posterior) distinctions in the hippocampus.

An overarching task will be to compare and contrast animal and human research. Are the findings interchangeable or even relevant?

World leaders will discuss:

- Structural connectivity in rodents
- Human functional connectivity
- Is there evidence for human functional segregation along the long axis?
- Live 1.28ppm hippocampal neurogenic signal in humans
- Depression and the dorsal-ventral hippocampus
- Pattern separation and dentate gyrus function

Breaking News!

The Provence Summer Workshop has a proud history of publication of proceedings. Previously, we have published opinion in *Molecular Psychiatry* as well as a special issue in *Frontiers in Biology*. This year, papers presented at this Workshop will be selected for a special issue of *Brain Plasticity*.

As always, the Workshop will emphasize open discussion in a relaxed and informal setting. There will also be ample opportunity for networking, socializing, and enjoying the magnificent environs.

Note that this is a 'boutique' workshop and so spaces are *very limited*. Capacity of the venue is 40 persons so book early to avoid disappointment.

Early Bird Registration (includes accommodation and meals)

Shared Room €850 +€250 after April 1st 2017	Includes: Meeting Registration, 3 nights' onsite accommodation, 3 dinners, 3 breakfasts, 2 lunches and transfers.
Private Room €970 +€280 after April 1st 2017	
Partners €500 +€100 after April 1st 2017 (only available in conjunction with private room registration)	

Register at: www.rng.org.au/provence2017



International Guest Speakers

Rene Hen, PhD, Professor of Psychiatry, Neuroscience & Pharmacology, Columbia University, New York City, USA



René Hen's research is focused on the contribution of serotonin (5-HT) receptors to pathological states such as depression and anxiety. Pharmacological studies and molecular cloning have identified several subtypes of receptors with distinct properties, signaling systems, and tissue distributions. However, the study of the function of individual serotonin receptor subtypes has been hampered by the lack of specific drugs. In addition, a number of the serotonergic drugs that are active in the treatment of neuropsychiatric disorders influence the whole serotonergic system. To dissect the contributions of individual serotonin receptors to physiology and behavior, mouse mutants lacking individual receptor subtypes were created in his laboratory, providing genetic models for a number of human behavioral traits such as impulsiveness, depression, and anxiety.

Recently his lab has also been investigating the function of the ventral hippocampus and the contribution of hippocampal neurogenesis to mood and cognition. Specifically, they have shown that antidepressants stimulate the division of neuronal progenitor cells in the dentate gyrus, which in turn results in an increase in the number of immature neurons in the adult hippocampus. Furthermore, using various ablation strategies they have shown that hippocampal neurogenesis is required for some of the behavioral effects of antidepressants. Novel antidepressant therapies aimed at targeting directly hippocampal stem cells are currently under investigation.

Craig Stark, PhD, Professor of Neurobiology and Behavior, University of California, Irvine USA



Professor Stark received his PhD from Carnegie Mellon University, studying with Jay McClelland, on the development of computational models of memory. He applied the principles of this computational approach to amnesia research and early studies using functional MRI during postdoctoral research into memory with Larry Squire at the University of California at San Diego. Much of his research has focused on the dynamic network of structures in the medial temporal lobe to support semantic and episodic memories. During his first faculty position at The Johns Hopkins University, he developed high-resolution functional MRI to investigate activity of hippocampal subfields in pattern separation.

After moving to the Department of Neurobiology and Behavior at the University of California at Irvine, he continued to develop high-resolution imaging techniques, including high-resolution diffusion tensor imaging to evaluate the integrity of white matter tracts feeding into and out of the hippocampus. He applied these techniques to studies of memory decline associated with aging and early forms of dementia, as well as the other end of the memory spectrum, in those individuals with Highly Superior Autobiographical Memory. He is motivated by questions like what are the roles of the subfields of the hippocampus and how are they affected in healthy aging? How does the process of pattern separation contribute to the encoding and retrieval of different kinds of information? What brain changes and behaviors can discriminate between healthy aging and early changes associated with Alzheimer's disease? Can we use false memories as "memory illusions" to understand the neural basis of memory as visual illusions helped us understand the neural basis of visual processing? What neural, cognitive, and personality factors contribute to extreme memory performance?