



SEMINAIRE COMMUN LOB & LCM

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RIGHT HANDED AMINO ACIDS : NEW MOLECULAR CODES IN BRAIN SIGNALING IN HEALTH AND DISEASE

The last two decades have witnessed remarkable advances in our understanding of the role of right-handed (D-) amino acids in Mammals and particularly in the nervous system: from the unknown, to known molecules with unknown functions, to key players in health and disease. D-Amino acids have emerged as an important class of neuromodulators. In particular, the exploration of the roles of D-serine in brain physiopathology is a vibrant field that has flourished at an accelerating pace. During my talk I will show how our discovery that D-serine is regulating NMDA receptors has dramatically transformed our vision of the mechanisms regulating excitatory neural circuitries and brain functioning and is now offering therapeutical promise for treating some of the major neuropathologies such as schizophrenia but also epilepsy or Alzheimer disease. I will also introduce new data from our lab that extends the physiological landscape of D-serine in circuits physiology but will also highlight the unmet frontiers to be next reached in order to better appreciate the diverse role(s) of this and other mirror-image amino acids.