

### SESSION 1

## Mooc - From Neuron to Behavior

Brain function determines our behavior and dictates who we are. Our brain function governs our every thoughts and every action. The brain processes information through the concerted activity of many neurons, which communicate with each other through contacts we call synapses organized in highly dynamic networks. In this course, we are taking a bottom up approach to studying the brain, starting from molecules to end with behaviors and mental disorders.

Objectives	Content
<p>to gain a detailed understanding of the structure and function of the fundamental building blocks of the mammalian brain.</p> <p>to understand how a given neural stem cell could give rise to fully organized brain circuits.</p> <p>to bring you to the fascinating world into which groups of neurons work together as interconnected neural cells.</p> <p>to approach neuronal disorders as consequences of brain circuit dysfunctions. We are going to consider what happens when the brain goes wrong with dramatic consequences for the individual and society as a whole.</p> <p>to place the brain inside a body interacting both with the external world and the internal state.</p>	<p>Understanding how the brain works is one of the greatest remaining mysteries that challenge mankind. This challenge is so huge that some people even think that it will never be possible to really understand how the brain functions. But modern neuroscience is making remarkable progress, so intense that we can feel to be part of a scientific revolution to a similar extent than the Copernican Revolution or Darwinian Revolution.</p> <p>Brain and behavior are inextricably linked in neuroscience. The function of the brain is to govern behavior, and the aim of this course is to causally link brain development to brain functions and their related behaviors. The brain processes information through the concerted activity of many neurons, which communicate with each other through synapses organized in highly dynamic networks. The course is devoted to describe how the brain develops and then functions to perceive the external world and learn from our experiences. Thus, this course aims for a causal and mechanistic explanation of brain functions that depend on two key players: the external world of course but also our internal states, of which the microbiota is an important component.</p> <p style="text-align: center;">From neuron to behavior</p>

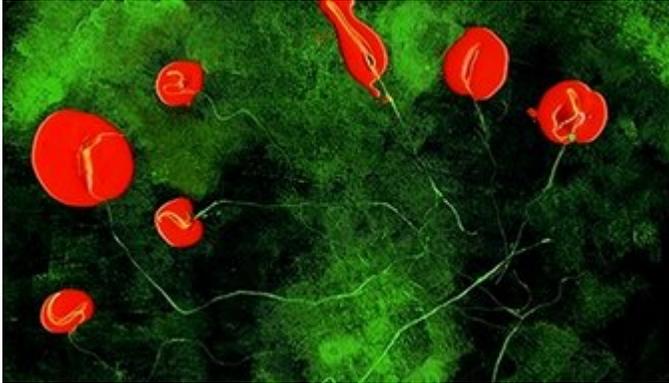
### Cnam's trainings in this area:

#### Diplôme

**Mastère spécialisé® (label CGE) en Santé publique de l'École Pasteur-Cnam de Santé publique**  
Entrée: bac +5 (75 crédits)

#### Course (online)

Partnership



May 16, 2016

June 18, 2016

More information and registration:



FRANCE  
UNIVERSITÉ  
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<http://foad.cnam.fr/tous-nos-moocs/mooc-from-neuron-to-behavior-796749.kjsp?RH=1486030162694>