CHRISTIAAN DE KOCK

Dutch neuroscientist

CAREER

At the beginning of his university studies(1999-2004), he was already involved in biophysical research. During his post-doc project (2004-2006), he was trained in *in vivo* systems physiology in the lab of Bert Sakmann. The long-term goal of their experiments is to study the computational role of different cortical layers during various aspects of sensory-guided behavior. Initial experiments were in urethane anaesthetized animals where they showed that sensory information from the whiskers was most reliably represented by layer 5B neurons. Subsequently, he recorded from head-fixed animals and showed that the temporal structure of ongoing (spontaneous) activity in cortex of awake, un-anaesthetized animals was different compared to anaesthetized conditions. Most recently, he studied the phenomenon in awake rats. These experiments show that in barrel cortex, passive and active movement of whiskers is encoded by different cortical layers.

In 2006, he moved to the Erasmus Medical Center to start his own lab where he continued to study the structure-function relationship of cortical neurons.

Since 2009, Christiaan de Kock is assistant professor at the CNCR, VU University Amsterdam. In his research group, their current focus is on sensory representation in awake animals. In addition, in a long-standing collaboration with Bert Sakmann, they aim to model the cortical column *in silico* by serial reconstruction of biocytin-labeled neurons from *in vivo* experiments.