Prof. Dr. Denis Jabaudon

Department of Basic Neurosciences
University of Geneva
Geneva, Switzerland

Input-dependent control of neuronal diversity within visual thalamic circuits

Abstract:

Inhibitory interneurons (IN) critically control the excitability and plasticity of neuronal networks, but whether activity can direct IN into specific circuits during development is unknown. I will discuss recent work from our laboratory showing that retinal activity instructs the migration, molecular differentiation, and functional integration of IN in the visual thalamus (dLGN). These findings identify an input-dependent mechanism regulating circuit inhibition, which may account for the progressive recruitment of IN into expanding excitatory circuits during evolution.