



# Karl Friedrich Bonhoeffer Lecture

Donnerstag, den 4.2.2010 -17:00 Uhr

Manfred-Eigen-Hörsaal,  
Max-Planck-Institut  
für biophysikalische Chemie

Am Fassberg 11, 37077 Göttingen



**Professor Dr. Jens C. Brüning**

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## **Genetic analysis of neurocircuits controlling metabolic homeostasis**

Energy homeostasis and fuel partitioning are under tight control of the central nervous system. Here, neurons have to receive and integrate information about the energy availability of peripheral organs and to initiate a coordinated response to accordingly adapt food intake, energy expenditure and locomotor activity. Over the last decade, both hormonal and nutrient signals as well as their primary neuronal target sites in control of these processes have been identified. Mainly through the use of transgenic mice, our work has focused on the identification of hypothalamic neurons responsive to signals such as leptin, insulin and nutrients and to identify the intracellular signaling pathways involved in the cell type-specific integration of these signals. Moreover, we are aiming to identify the cellular and molecular basis for the integration of these homeostatic control mechanisms with the hedonic control of feeding including olfactory cues, taste and rewarding aspects associated with food.

Gastgeber: Prof. Dr. Helmut Grubmüller