

Postdoctoral Position at the Paris Brain Institute (ICM), Paris, France

A Postdoctoral position is available at the ICM – Institut du Cerveau | Paris Brain Institute in the group of Alberto Bacci.

Our research mainly focuses on the cellular physiology of various elements of cortical microcircuits, the properties and plasticity of their synaptic connections and their contribution to the generation of various cognition-relevant network activities¹. Through our collaborators, we also study cortical circuit deficits in several animal model of brain disease (<http://baccilab.org/>).

The successful candidate will work on inhibitory circuits of the visual cortex of mice. This project is focused on cortical circuits formed by a specific subtype of GABAergic interneuron, the parvalbumin (PV)-expressing basket cells, their physiological, synaptic and circuit properties in the endogenous presence and absence of perineuronal nets (PNNs). PNNs are extracellular aggregates of proteoglycans, whose accumulation around PV cells regulates the plasticity of cortical networks.

We use a combination of single and multiple-cell electrophysiology, 2-photon imaging and electrophysiology *in vivo*, pharmacology, anatomy, immunocytochemistry, molecular manipulations of specific neuron types and computational approaches (through established collaborations).

Applications must consist of a single pdf file and must be sent to alberto.bacci@icm-institute.org (subject line must be: Postdoc Application Bacci; PNNs)

Please include:

- Curriculum Vitae (CV)
- 1 page summary of previous research
- Brief statement of current research interest
- Contact information of at least two referees

Applicants with a strong background in *in vivo* electrophysiology and/or computational neuroscience will be preferred, but it will not be a pre-requisite. Highly motivated candidates are encouraged to apply.

Excellent verbal and written communication skills in English are required.

Contact Information:

Alberto Bacci, Ph.D.

ICM - Institut du Cerveau | Paris Brain Institute

47 Boulevard de l'Hôpital

75013 Paris, France

phone: +33 1 5727 4062

email: alberto.bacci@icm-institute.org

¹ Koukoulis F*, Montmerle M* et al. *Cell Reports* 40(8):111202 (2022); Lourenço J et al. *Cortex* 132:258-280 (2020); Lourenço, J. et al. *Cell Rep.* 30, 630-641 (2020); Zorrilla de San Martín, J. et al. *eLife* (2020); Deleuze, C. et al. *PLoS Biol.* 17, e3000419 (2019); Faini, G. et al. *eLife*. 7, (2018); Marinelli, S., *Nat. Neurosci.* 12, 1488-1490 (2009); Bacci, A. & Huguenard, J.R. *Neuron* 49, 119-130 (2006); Bacci, A., et al., *Nature* 431, 312-316 (2004).