



## POSTDOCTORAL CANDIDATE INTERESTED IN APPLYING FOR A MSCA POSTDOCTORAL FELLOWSHIP IN

### **Neurobiology of Language:**

Are you a postdoctoral researcher thinking about your next career move? The Marie Skłodowska-Curie Postdoctoral Fellowships (before called Individual Fellowships) are a great option if you are an experienced researcher looking to give your career a boost by working abroad.

[Institute of Neurosciences](#) of the [University of Barcelona](#) allows you to work in a first class research environment while benefitting from an attractive salary to cover living, travel and family costs.

### **Group and project information**

Applicants will be integrated into the research group “Brain Mechanisms of Language Learning” (Cognition and Brain Plasticity Unit); (P.I. Ruth de Diego-Balaguer).

The Brain Mechanisms of Language Learning group is an interdisciplinary group headed by Ruth de Diego-Balaguer with an international projection, integrated within a larger Unit, the Cognition and Brain Plasticity Unit ([www.brainvitge.org](http://www.brainvitge.org)), at the University of Barcelona. This Unit is composed of five groups (Dynamics of Memory Formation leaded by Dr. Lluis Fuentemilla, Learning from Reward leaded by Dr. Josep Marco-Pallarés, Brain Plasticity leaded by Antoni Rodriguez-Fornells and Diffusion MRI and Brain Connectivity leaded by Estela Cámara). The group works in different but complementary topics and methodologies. The Unit is characterised by its multidisciplinarity, grouping PIs, Post-docs, Master and PhD students coming from different disciplines (Physics, Biology, Neurology, Psychology, Engineering, Philology) and by a high level of interaction between the groups attested by co-supervised Thesis and co-authored papers from different lines of research. The group attracts increasing number of international students coming for long and short visits or doing their PhDs.

The group is searching for a postdoctoral researcher interested in integrating a line of research studying how temporal processing and in particular attention in the temporal domain affects language learning. Our sense of time and of the temporal relationship between events helps us anticipate the future and respond faster to our environment. This ability is most important for music or language that, by their own nature, are made of auditory sequences unfolding in time. Temporal expectations can derive from the intrinsic characteristics of the stimuli such as their regular rhythm or from the arbitrary association of a cue with a temporal interval. Both these different types of temporal expectancies are present in language. On the one hand, regular rhythmic information is embedded in speech by the syllable rate and by the weak-strong syllable pattern characterising prosody. On the other hand, in morphosyntactic dependencies, certain arbitrary elements such as the presence of “is” in English predicts the suffix “-ing” after the verb appearance (e.g. is play-ing). There is a tight relationship between the two types of cues and indeed prosodic cues boost learning of syntactic dependencies.



This line of research aims at unravelling by which mechanisms rhythmic cues present in language capture exogenous attention but also help to guide endogenous attention to the relevant elements that contain predictive information for upcoming dependencies.

#### **Requirements for candidates:**

##### *Skills/Qualifications:*

- PhD or equivalent (Recognised Researcher R2)
- Previous work on Attention /Language learning/ Speech perception or related topics and experience with EEG and/or MRI would be ideal.
- Experience with DTI analysis would be a plus.
- Programming skills and knowledge in the use of experimental software are necessary.

##### *Languages:*

English: Excellent

##### *Specific Requirements:*

- Candidates must fulfilled eligibility MSCA criteria

#### **Working conditions:**

- Full time temporary contract
- Gross salary of about € 50,000
- Duration: ranging from 12 to 36 months depending on the typology of the fellow
- Starting date: flexible from beginning of May 2022

#### **Support for candidates**

The [Institute of Neurosciences](#) and the [International Research Projects Office](#) at the University of Barcelona could offer you:

- Personalized support on the application
- Personalized mentoring if pre-selected (valued in 4000 euros)
- Support on other national calls such as [Beatriu de Pinós](#) and [Junior Leader](#)

#### **How to apply**

Please submit your CV, a Letter of Interest and the name of two referees to: Ruth de Diego Balaguer ([ruth.dediego@ub.edu](mailto:ruth.dediego@ub.edu)); Reference: MSCA PF Candidate)

**Deadline: 31 May 2021**

