

# Daniel Duque Doncos

## Personal details

Birth date: January 23, 1985  
Birthplace: Barcelona, Spain  
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## Education

2010-2014 PhD (with distinction) in Neuroscience  
Institute for Neuroscience of Castilla y Leon, University of Salamanca, Spain  
2009-2010 MSc Degree in Neuroscience  
University of Salamanca, Spain  
2006-2009 BSc Degree in Biochemistry  
University of Barcelona, Spain  
2003-2009 BSc Degree in Biological Science with Biomedicine  
University of Barcelona, Spain

## Research experience

2018-now Postdoctoral Researcher Cortical Circuits Dynamic Group  
IDIBAPS, Barcelona, Spain  
2014-2018 Postdoctoral Researcher Neural Systems Laboratory  
Institute for Systems Research, University of Maryland, College Park MD, US  
2011-2012 Research Assistant Auditory Pharmacology Laboratory  
Southern Illinois University School of Medicine, Springfield IL, US  
2006-2009 Research Assistant Neurobiology and Neuroprotection Laboratory  
Cellular Biology Department, University of Barcelona, Spain

## Publications

Elgueda D, **Duque D**, Radtke-Schuller S, Yin PB, David SV, Shamma SA, Fritz JB (2019) *State-dependent encoding of sound and behavioral meaning in a tertiary region of the ferret auditory cortex*. Nat Neurosci 22(3):447-459. doi: 10.1038/s41593-018-0317-8.

**Duque D**, Pais R, Malmierca MS (2018) *Stimulus-specific adaptation in the anesthetized mouse revealed by brainstem auditory evoked potentials*. Hear Res 370:294-301. doi:10.1016/j.heares.2018.08.011.

**Duque D**, Wang X, Nieto-Diego J, Krumbholz K, Malmierca MS (2016) *Neurons in the inferior colliculus of the rat show stimulus-specific adaptation for frequency, but not for intensity*. Sci Rep 6 (24114), doi: 10.1038/srep24114

Ayala YA, Pérez-González D, **Duque D**, Palmer AR, Malmierca MS (2016) *Extracellular Recording of Neuronal Activity Combined with Microiontophoretic Application of Neuroactive Substances in Awake Mice*. J Vis Exp 53914, doi: 10.3791/53

**Duque D**, Ayala YA, Malmierca MS (2015) *Deviance detection in auditory subcortical structures: what can we learn from neurochemistry and neural connectivity?* Cell Tissue Res 361(1):215-32. doi: 10.1007/s00441-015-2134-7

**Duque D**, Malmierca MS (2014) *Stimulus-specific adaptation in the inferior colliculus of the mouse: anesthesia and spontaneous activity effects*. Brain Struct Funct 220(6):3385-98. doi: 10.1007/s00429-014-0862-1

**Duque D**, Malmierca MS, Caspary DM. (2014) *Modulation of stimulus-specific adaptation by GABA<sub>A</sub> receptor activation or blockade in the medial geniculate body of the anesthetized rat.* J Physiol 15;592:729-43. doi: 10.1113/jphysiol.2013.261941.

Redondo-Castro E, Romero R, Torres-Espín A, Utrera J, **Duque D**, Junyent F, Auladell C. (2014) *Dithiocarb (DEDTC) decreases levels of biogenic monoamines in the adult mouse brain.* Neuropathol Appl Neurobiol 40(6):747-58. doi: 10.1111/nan.12083.

J Ayala YA, Pérez-González D, **Duque D**, Nelken I, Malmierca MS. (2013) *Frequency discrimination and stimulus deviance in the inferior colliculus and cochlear nucleus.* Front Neural Circuits 14;6:119. doi: 10.3389/fncir.2012.00119.

**Duque D**, Pérez-González D, Ayala YA, Palmer AR, Malmierca MS (2012) *Topographic distribution, frequency, and intensity dependence of stimulus-specific adaptation in the IC of the rat.* J Neurosci 5;32(49):17762-74. doi: 10.1523/JNEUROSCI.3190-12.2012.

Junyent F, Utrera J, Romero R, Pallas M, Camins A, **Duque D**, Auladell C (2009) *Prevention of epilepsy by taurine treatments in mice experimental model.* J Neurosci Res 1;87(6):1500-8. doi:10.1002/jnr.21950.

#### Posters & talks (selection)

**Duque D**, de la Rocha J (2020) *Sensory independent history biases in an auditory categorization task in rats*, Glasgow: FENS abstr 4828. Poster.

**Duque D**, de la Rocha J (2019) *Sensory and contextual dependencies of choice biases during decision making*, Spain: SENC abstr 453. Poster.

**Duque D**, Joshi N, Elgueda D, Fritz JB, Shamma SA (2017) *Neural responses to recognition and segregation of speech in a ferret cocktail party model*, Spain: SENC abstr 650. Talk.

**Duque D**, Shamma SA, Fritz JB (2017) *Neural Responses to Behaviorally Relevant Syllable Sequences in the Ferret Auditory Cortex.* In. Baltimore, US: ARO abstr 242. Poster.

**Duque D**, Shamma SA, Fritz JB (2016) *Establishment of a Ferret Behavioral Model for Speech Perception.* In. San Diego, US: ARO abstr 242. Poster.

**Duque D**, Wang X, Malmierca MS (2015) *The width of the frequency channels determines SSA in the inferior colliculus of the rat.* In. Baltimore, US: ARO abstr 428. Poster.

**Duque D**, Martinez de Lagrán M, Dierssen M, Malmierca MS (2014) *Stimulus-specific adaptation and novelty detection in a Down syndrome mouse model overexpressing Dyrk1A.* In. Washington, US: SfN abstr 15.12. Talk.

#### Fellowships

2018-2020 Juan de la Cierva Incorporación Fellowship  
Spanish Ministry of Science MICINN

2019 EMBO short-term Fellowship  
EMBO Mobility Program

2015-2017 Beatriu de Pinós Modalitat-A Fellowship (Marie-Curie Action)  
Catalan Generalitat de Catalunya Science Department AGAUR

2014-2015 Auditory Cognitive Neuroscience (ACN) Fellowship  
Erasmus Mundus Mobility Program

2011-2014 FPI PhD Fellowship  
Spanish Ministry of Science MICINN

2010 Master Fellowship from "La Caixa" Foundation  
La Caixa Fellowships Program

## Courses

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| 2020 | Animal Handling Course Functions b, c and d<br>Animalaria (Spain)  |
| 2019 | Optical Imaging and Electrophysiological Recording in Neuroscience<br>Spring School, Paris (France)                |
| 2014 | Teófilo Hernando Pharmacology Summer School<br>Universidad Internacional Menéndez Pelayo (UIMP), Santander (Spain) |
| 2010 | Experimental models in epilepsy<br>INCyL, Universidad de Salamanca (Spain)   |
| 2008 | Consciousness: brain, individual and society<br>Summer School Universitat de Barcelona                             |
| 2005 | Introduction to Neuroscience<br>Summer School Universitat de Barcelona   |

## Awards

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| 2014 | Best poster for Popularization of Science<br>University of Salamanca, Spain   |
| 2014 | Remedios Caro Almela Travel Award (Society for Neuroscience Meeting)<br>Institute for Neuroscience of Alicante, Spain |
| 2012 | Young researcher award; Institute for Neuroscience Federico Olóriz<br>University of Granada, Spain                    |