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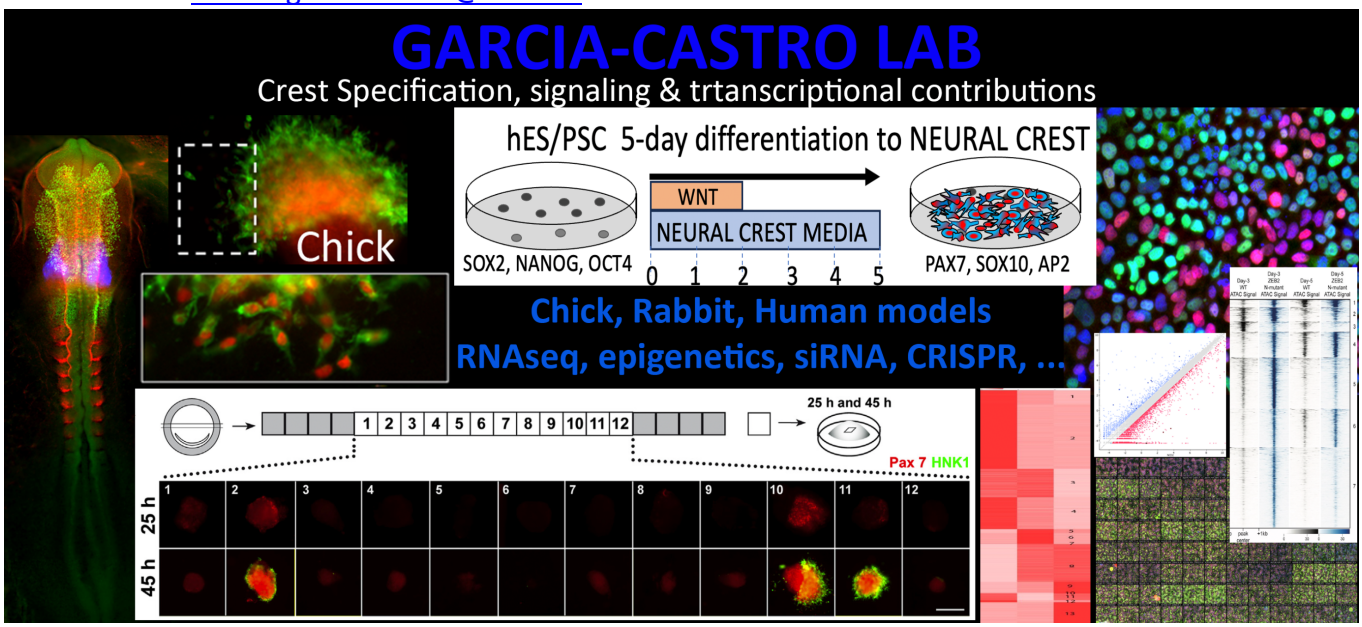
# GARCIA-CASTRO LAB, Research Positions:

## "Induction, specification and differentiation potential of Neural Crest Cells"

Neural Crest (NC) cells, are a multipotent migratory cell of central relevance for vertebrate evolution and diversity which are also involved in many human health conditions. We embraced a comparative approach in a number of amniotes (**chick, mouse, rabbit, and human**) identifying signaling pathways, transcriptional and epigenetic mechanisms responsible for NC formation. We have pioneered work analyzing earlier events in the formation of NC in amniotes, and established a fast, robust and efficient human model based in pluripotent stem cells. We are also engaged in promising translational efforts to address Neurocristopathies and possible therapeutics.

We are looking for passionate researchers (**Postdoctoral Scholars** and lab assistants) with experience in molecular biology, stem cell biology and/or early embryology. Please e-mail CV, summary and relevance of your current research, a brief description of your interest in our lab, and the names of up to three references to: martin.garcia-castro@ucr.edu.

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**Selected Publications:**

Charney et al. (2023) Mowat-Wilson syndrome factor ZEB2 controls early formation of human neural crest through BMP signaling modulation. **Stem Cell Reports**. DOI: 10.1016/j.stemcr.2023.10.002.

Prasad, et al.. (**2020**). Distinct molecular profile and restricted stem cell potential defines the prospective human cranial neural crest from embryonic stem cell state. **Stem Cell Research**. DOI: 10.1016/j.scr.2020.102086.

Prasad, et al. (2019). Blastula stage specification of avian neural crest. **Developmental Biology**, 458: 64-74. PMC7050198**.** doi: 10.1016/j.ydbio.2019.10.007 *Selected, recommended by Faculty of a Thousand.*

Gomez, et al. **(2019).** WNT/β-CATENIN modulates the axial identity of ES derived human neural crest. **Development** DOI: 10.1242/dev.175604.

Betters, et al. (**2018**). Early specification and development of the rabbit neural crest cells. **Dev. Biol.Suppl** 1, DOI: 10.1016/j.ydbio.2018.06.012.

Leung, et al. (2016). WNT-β-catenin mediates human neural crest induction via a pre-neural border intermediate. **Development**, 10.1242/dev.130849

Stuhlmiller, T. & **Garcia-Castro, M.I**. (2012). FGF/MAPK signaling is required in the gastrula epiblast for avian neural crest induction. **Development**, DOI: 10.1242/dev.070276, *Selected, recommended by Faculty of a Thousand.*

Basch,et al**.** (2006). Specification of the neural crest occurs during gastrulation and requires Pax7. **Nature**, DOI: 10.1038/nature04684 *Featured in Research Highlights in Nature Reviews/ Neuroscience 7:1 and Selected by three reviewers for Faculty of a 1000 as a must read.*

**Full publication record**: https://scholar.google.com/citations?user=8UTmlsoAAAAJ&hl=en, https://www.ncbi.nlm.nih.gov/myncbi/1r9IzyfG8vp/bibliography/public/