Barbieri Lab

NEUROBLASTOMA (NB)

From Modeling to Therapies
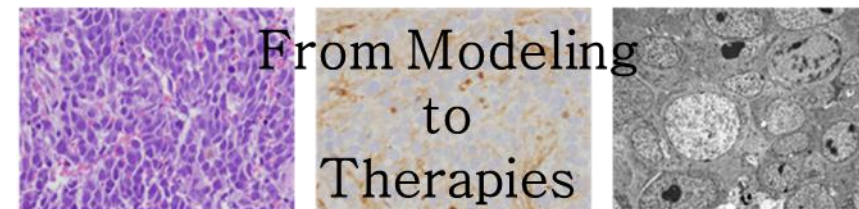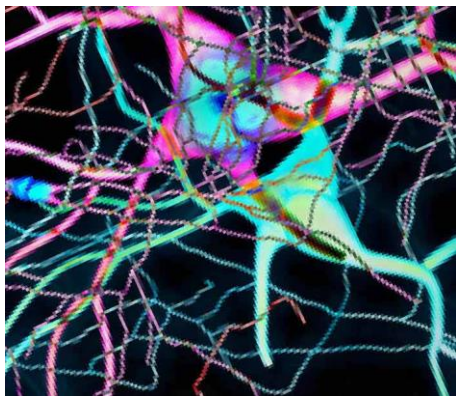
Current Research Projects:

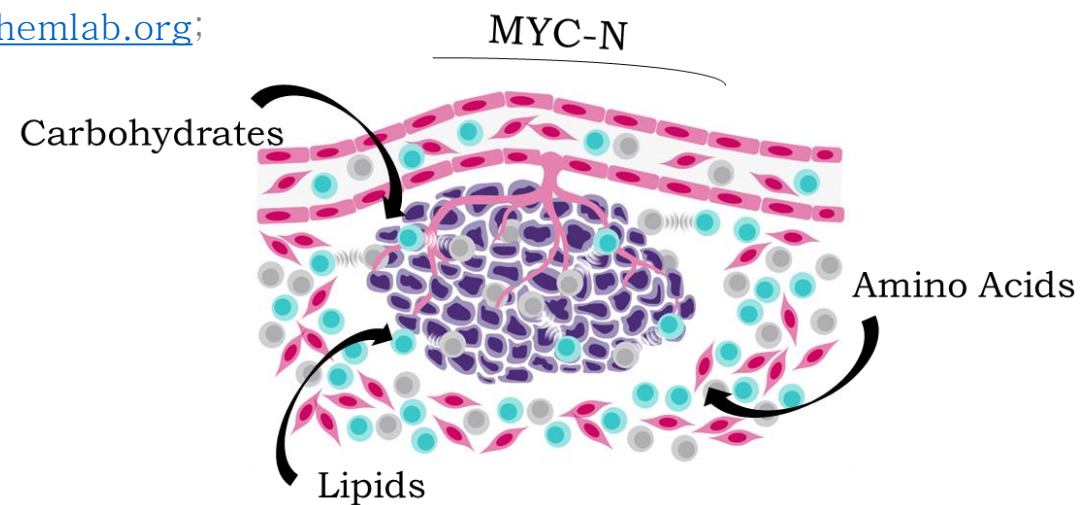**What are the events that control NB differentiation?**
A **block in normal neural crest (NC) differentiation** leads to the malignant transformation of neuro-ectodermal precursors into NB. We employ multiple animal and NC models to elucidate the molecular basis governing NB differentiation and identify novel therapeutic targets.
(Key collaborations: Parchem lab https://www.parchemlab.org; Uribe lab https://www.uribelabrice.com)

How does MYC-N rewire tumor metabolism to drive NB oncogenesis?
Cancer cells have different metabolic requirements than their normal counterparts. How can we exploit them for therapeutic benefit? We aim at defining and targeting the metabolic alterations driven by MYC-N that permit oncogenesis and an immuno-suppressive microenvironment.
(Key collaborations: Cristian Coarfa http://www.brl.bcm.tmc.edu; Putluri lab https://www.bcm.edu/research/labs/nagireddy-putluri)

MYC-N

Carbohydrates

Amino Acids

Lipids

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Relevant Publications:
Cancer Discovery News 2017, Vol 7, 12: Cancer Clock Opens New Therapeutic Avenues. Moreno et.al. Clin Cancer Res. 2017 Nov 1;23(21):6629-6639.