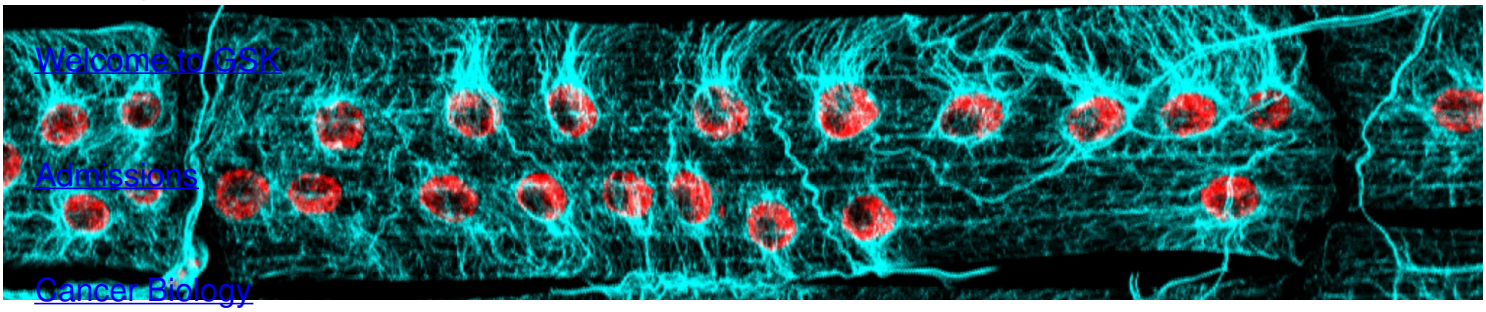
Gerstner Sloan Kettering
Graduate School of Biomedical Sciences



Welcome to GSK

Admissions

Cancer Biology

DEVELOPMENTAL BIOLOGY PROGRAM

Cancer Engineering

The Mary Baylies Lab

Research

Research

Alumni

Mary Baylies, PhD

Professor

Developmental biologist Mary Baylies studies the mechanisms that form and maintain muscle both during normal development and in disease.

View Lab Overview (https://www.sloankettering.edu/research-areas/labs/mary-baylies/overview)

Research Projects

- Mechanisms Required for Muscle Formation and Homeostasis
- Mechanisms Driving Muscle Wasting and Identification of Novel Therapeutics

Featured News

IN THE LAB

Scientists Home In On “Equation” for Muscle Cell Size

A new study in flies reveals a previously unknown type of cooperation at work in muscle cells.

At Work: Developmental Biologist Mary Baylies

Learn about Mary Baylies, a developmental biologist studying muscle biology at the Sloan Kettering Institute.

Student Lecture Highlights Major Trends in Modern Cancer Research

More than 500 high school students and their teachers filled the Rockefeller Research Laboratories to learn about recent discoveries.

Publications Highlights

Balakrishnan M,Yu SF, Chin S, Soffar DB, Windner S, Goode B, Baylies MK (2020). Cofilin loss in *Drosophila* contributes to muscle weakness through defective sarcomerogenesis during muscle growth. *Cell Reports.* 32(3): 107893. PMCID: PMC7479987.

Windner SE, Manhart A, Brown A, Mogilner A, Baylies MK. (2019.) Nuclear Scaling Is Coordinated among Individual Nuclei in Multinucleated Muscle Fibers. *Dev Cell.* Apr 8;49(1):48-62.e3. Featured as a cover image and in a Preview.

View All Publications

People

Mary Baylies, PhD

Professor

- The Baylies laboratory studies the mechanisms that form and maintain muscle both during normal development and in disease.
- PhD, The Rockefeller University

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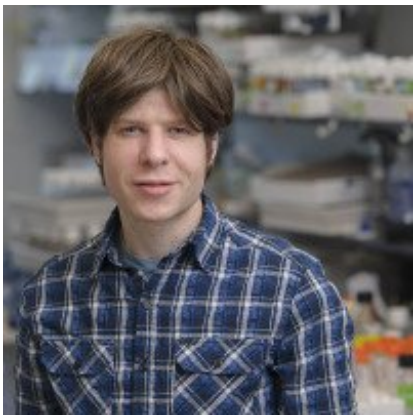
Download CV
PDF File

Members

Mary Baylies

Member



David Soffar

Research Technician

Hannah Arkin

Graduate Student

Samantha Davis

MSK Engage scholar

Sarah DeFrancisco

Graduate Student

Meg Distini

Administrative Assistant

Lab

Alumni

Lab Affiliations

Achievements

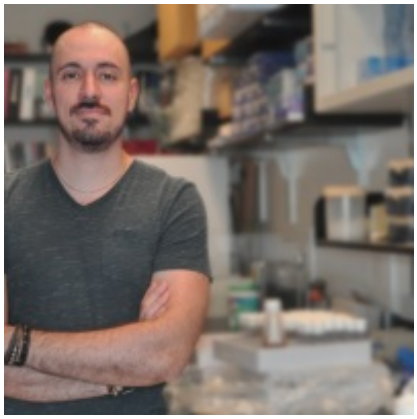
- Identified that global, regional, and local inputs contribute to nuclear size regulation in multinucleated skeletal muscle fibers.
- Demonstrated that properly placed nuclei are critical for healthy muscle function.
- Discovered that microtubules are critical for the movement and positioning of nuclei in the multinucleated skeletal muscle cell.
- Developed Drosophila models of muscle wasting in cancer cachexia and aging.
- Identified how actin filament dysregulation contributes to skeletal muscle dysfunction in models of nemaline myopathy.

Open Positions

To learn more about available postdoctoral opportunities, please visit our [Career Center]

To learn more about compensation and benefits for postdoctoral researchers at MSK, please visit [Resources for Postdocs]

Get in Touch

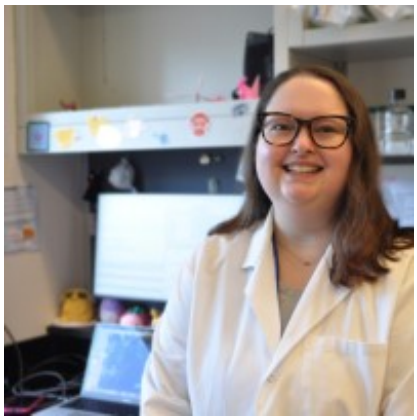


Marco Gualtieri

Postdoctoral Research Scholar

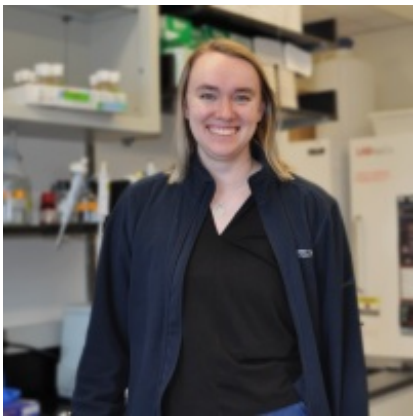
Therandë Jashari

Graduate Student



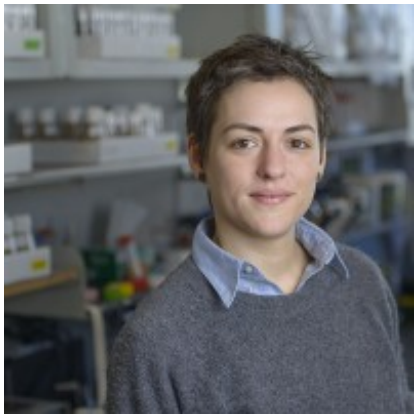
Cassandra Manrique

WCGS Graduate Student



Isabelle Top

GSK Graduate Student



Stefanie Windner

Senior Research Scientist

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Lab Resources

Disclosures

Members of the MSK Community often work with pharmaceutical, device, biotechnology, and life sciences companies, and other organizations outside of MSK, to find safe and effective cancer treatments, to improve patient care, and to educate the health care community. These activities outside of MSK further our mission, provide productive collaborations, and promote the practical application of scientific discoveries.

MSK requires doctors, faculty members, and leaders to report (“disclose”) the relationships and financial interests they have with external entities. As a commitment to transparency with our community, we make that information available to the public. Not all disclosed interests and relationships present conflicts of interest. MSK reviews all disclosed interests and relationships to assess whether a conflict of interest exists and whether formal COI management is needed.

Carolina Zapater
Postdoctoral Research Scholar

Mary Baylies discloses the following relationships and financial interests:

- French National Research Agency

  Professional Services and Activities (Uncompensated)

- Howard Hughes Medical Institute

  Professional Services and Activities

The information published here is a complement to other publicly reported data and is for a specific annual disclosure period. There may be differences between information on this and other public sites as a result of different reporting periods and/or the various ways relationships and financial interests are categorized by organizations that publish such data.

This page and data include information for a specific MSK annual disclosure period (January 1, 2024 through disclosure submission in spring 2025). This data reflects interests that may or may not still exist. This data is updated annually.

Learn more about MSK's COI policies here . For questions regarding MSK's COI-related policies and procedures, email MSK's Compliance Office at ecoi@mskcc.org .

View all disclosures (https://www.sloankettering.edu/disclosures)