

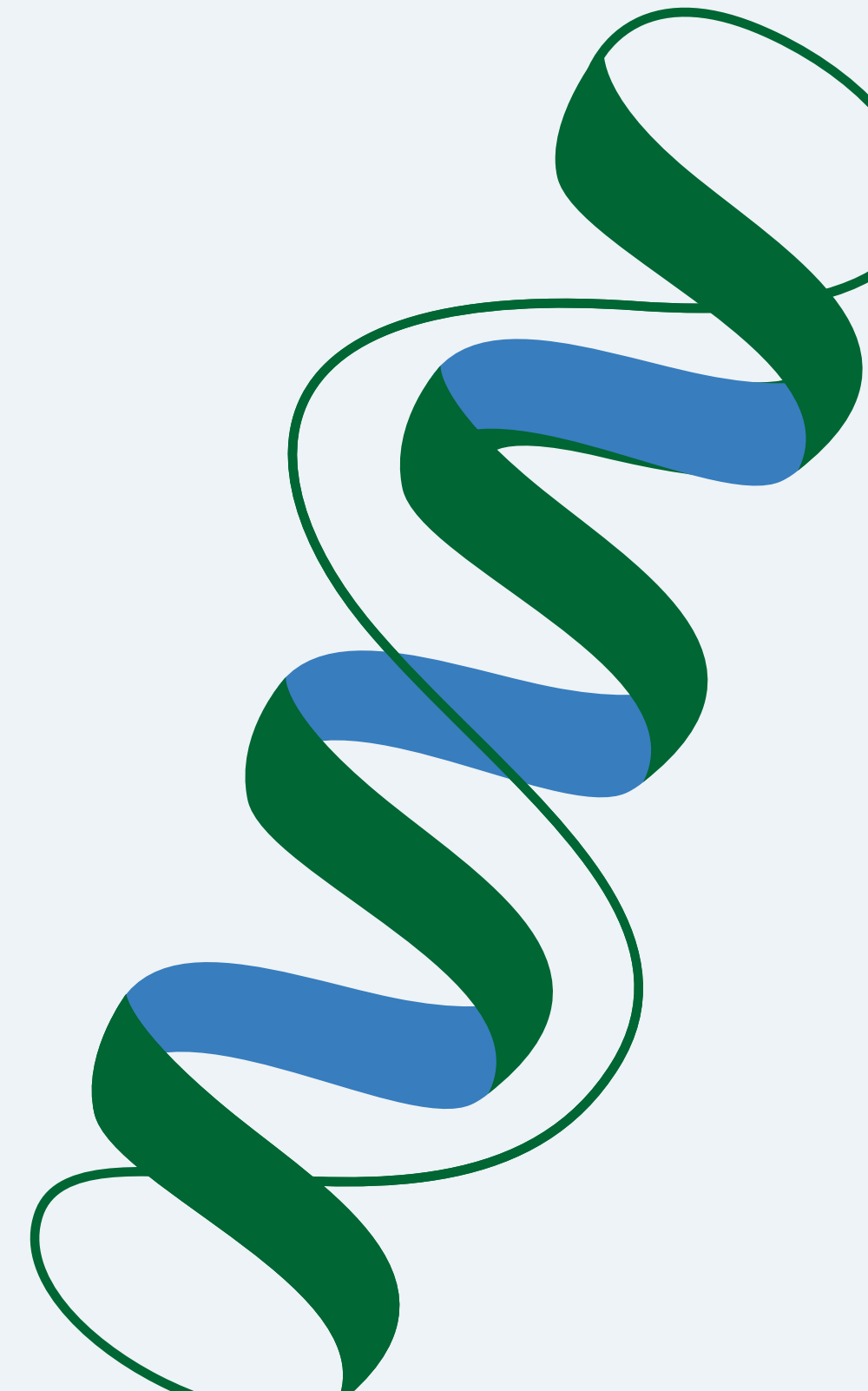
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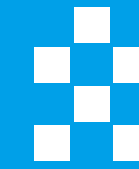
2025

# IIGM Research Units

## Chemical Biology



# The Chemical Biology Unit



Italian Institute for Genomic Medicine



**WE DEVELOP MOLECULAR AND IMAGING TOOLS TO DISCOVER THERAPIES FOR MEMBRANE TRAFFICKING-RELATED DISEASES**

## **TEAM:**

**Carlo Cosimo Campa** - PI

**Luca Gozzelino** - Post Doc

**Simone Tealdi** - Post Doc

**Lisset Chao Garcia** - Research Associate

**Salima Shiju** - Research Associate

## **KEY COLLABORATORS:**

Prof. Carla Bosia (POLITO); Prof. Emilio Hirsch (UNITO);

Prof. Saverio Minucci (IEO); Prof. Tobias Hermle (UNIV. FRIBOURG)



# Research Lines



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**01**

## **Molecular and Computational Decoding of Rab GTPases**

Molecular and computational tools for reading, mapping, and classifying Rab GTPase activity (IIGM)

**02**

## **Therapeutic Targeting of Rab GTPases in Hereditary Diseases**

Pharmacological strategies for Rab GTPase-related hereditary diseases (Telethon 2023, Telethon 2026)

**03**

## **Targeting Rab GTPase-Driven Cancer Behaviors**

Mechanistic and pharmacological approaches targeting Rab GTPase-related cancer behaviors (AIRC 2020 - 2025)

**04**

## **CRISPR & Drug-Tolerant Cancer Cells**

CRISPR-based strategies to investigate drug-tolerant cancer cells (5x1000 2024)

# Key Results



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01

We created a novel imaging pipeline and computational model to analyze Rab GTPase crosstalk, enabling dynamic visualization of intracellular signaling networks → [[iSCIENCE, 2025](#)].

02

We identified a small molecule with Rab GTPase inhibitory activity, opening new avenues for pharmacological intervention on Rab GTPase-related diseases → [[IJMS, 2024](#)].

03

We engineered a next-generation CRISPR-based editing system for pathway interrogation → [[NAT. METHODS., 2019](#)].

04

We designed a molecular tool for real-time Rab GTPase activity mapping in living cells, enhancing resolution and functional insight → [[NAT. CHEM. BIO., 2018](#)].

05

We identified a small molecule with kinase inhibitory activity improving lung function in asthma and fibrosis → [[NAT. COMM. 2018](#)]





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Interested in  
collaborations, projects, or  
scientific exchange?

**GET IN TOUCH WITH US!**

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