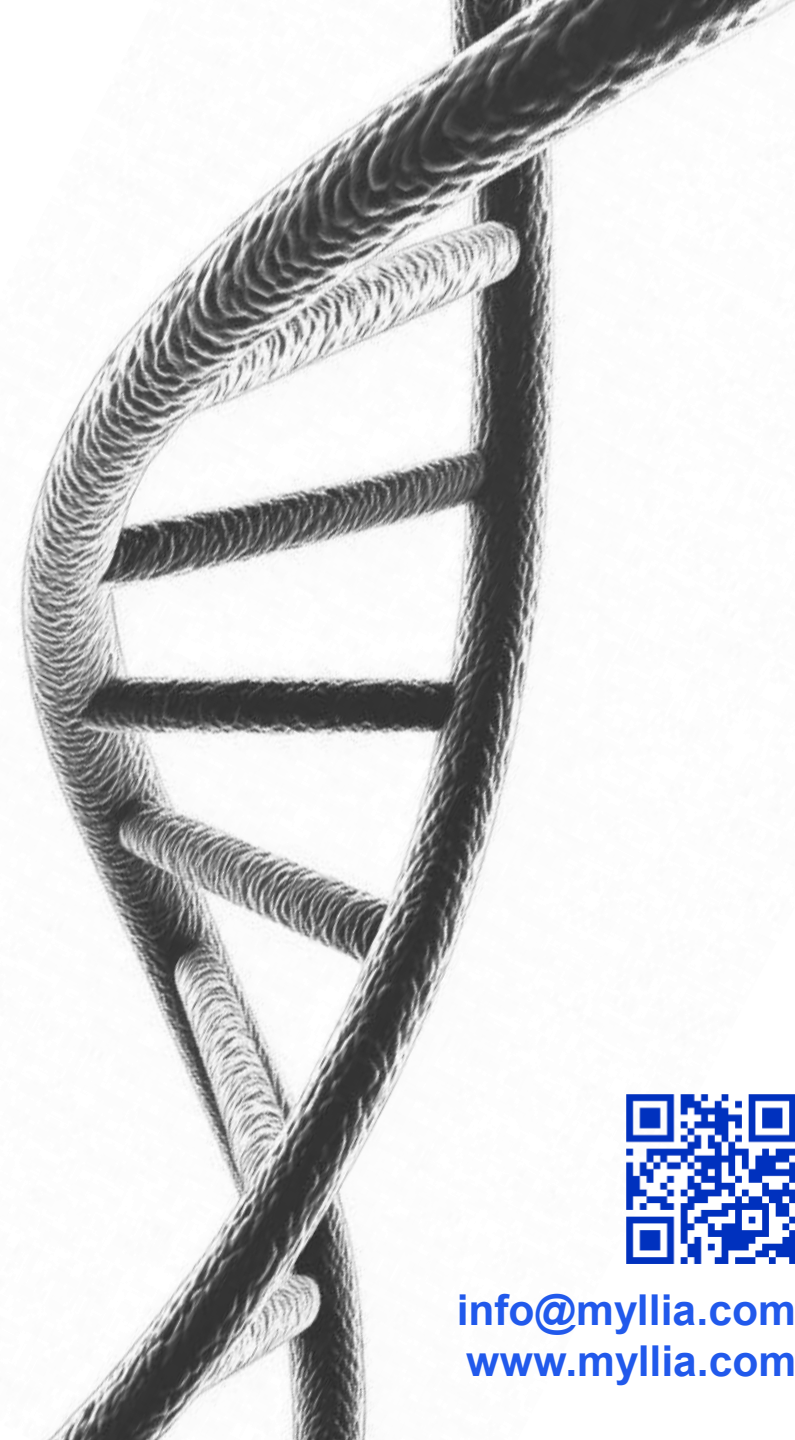




High-Content CRISPR Screens in Primary Human Cells for Causal Target Discovery and Bio-AI Foundation Models



Henrik Schmidt, PhD | VP, Commercial – Europe & APAC

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About Myllia | Our Fundamentals



- Myllia was founded in 2018 by Thomas Moser, Tilmann Buerckstuemmer and Christoph Bock
- We apply high-content CRISPR screens for drug target discovery in primary human cell models, incl. TAs such as Immunology, Oncology, Respiratory, CKD, and Obesity
- We collaborate with biotech and pharma customers in the US, Europe and APAC who access Myllia's platform for target discovery, functional genomics and the generation of perturbation datasets for single-cell foundation models (scFMs)
- Years of experience: We've conducted 120+ CRISPR screens across 35+ projects
- End-to-end wet-lab and computational biology with approx. 30 FTEs in Vienna, Austria



Guided by experience, driven by discovery



Dr. Thomas Moser | CEO

- 10+ years as Managing Partner at Pontis Capital
- Vice President Products and Head of Corporate Strategy at Horizon
- Long-standing history advising start-up companies



Dr. Tilmann Bürckstümmer | CSO

- Head of Innovation with global responsibility at Horizon Discovery
- Serial entrepreneur
- Creative thinker with 20+ publications and 10+ patent applications



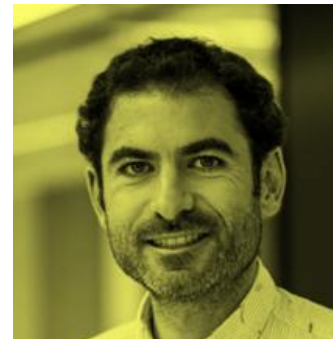
Dr. Christoph Bock | Advisor

- Principal Investigator at CeMM
- Research: Single-cell RNA sequencing, high-throughput technologies and bioinformatics
- Pooled CRISPR screening with single-cell transcriptome readout | Nature Methods



Dr. Luke Gilbert | Advisor

- Professor at UCSF and the Arc Institute
- Developed CRISPRa and CRISPRi
- Research: Single-cell CRISPR screens in oncology
- Co-founder of Chroma Medicine

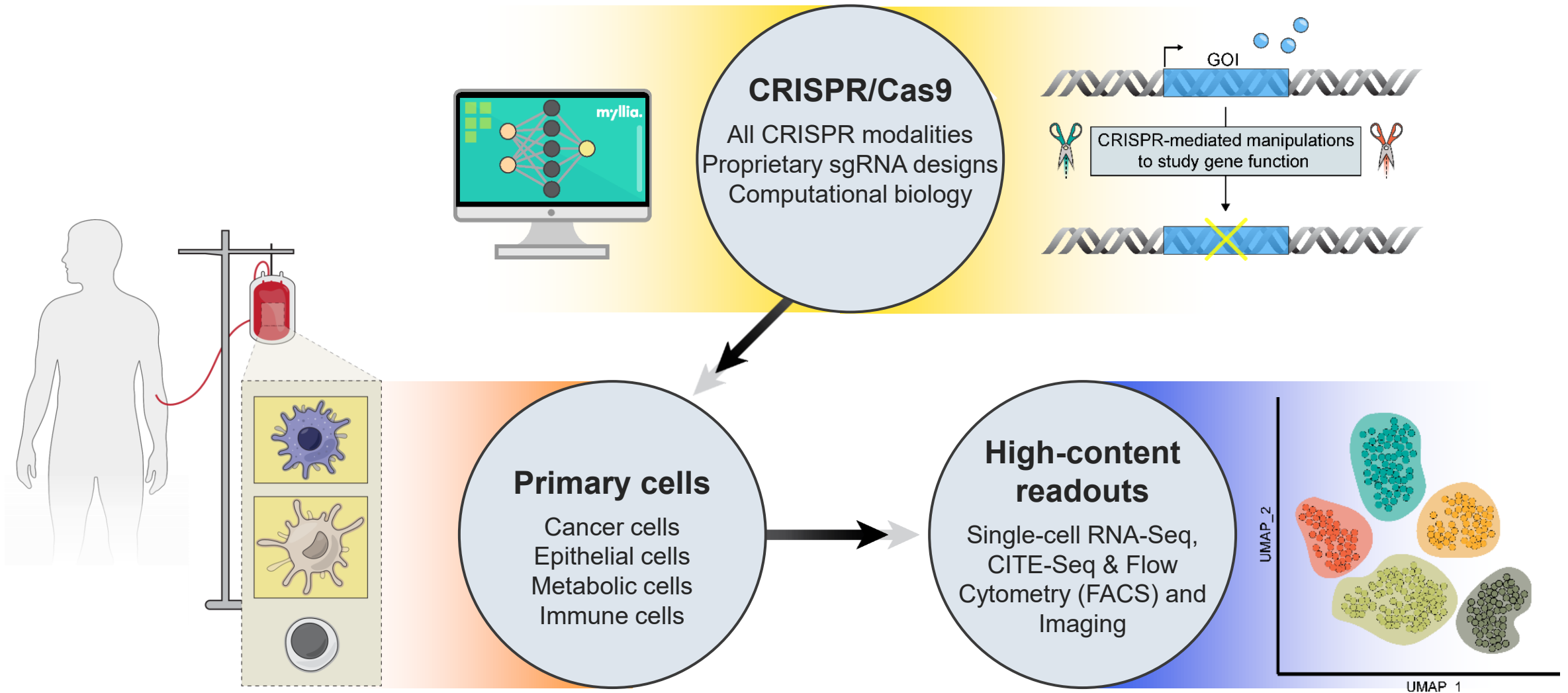


Dr. Rodrigo Santos | Advisor

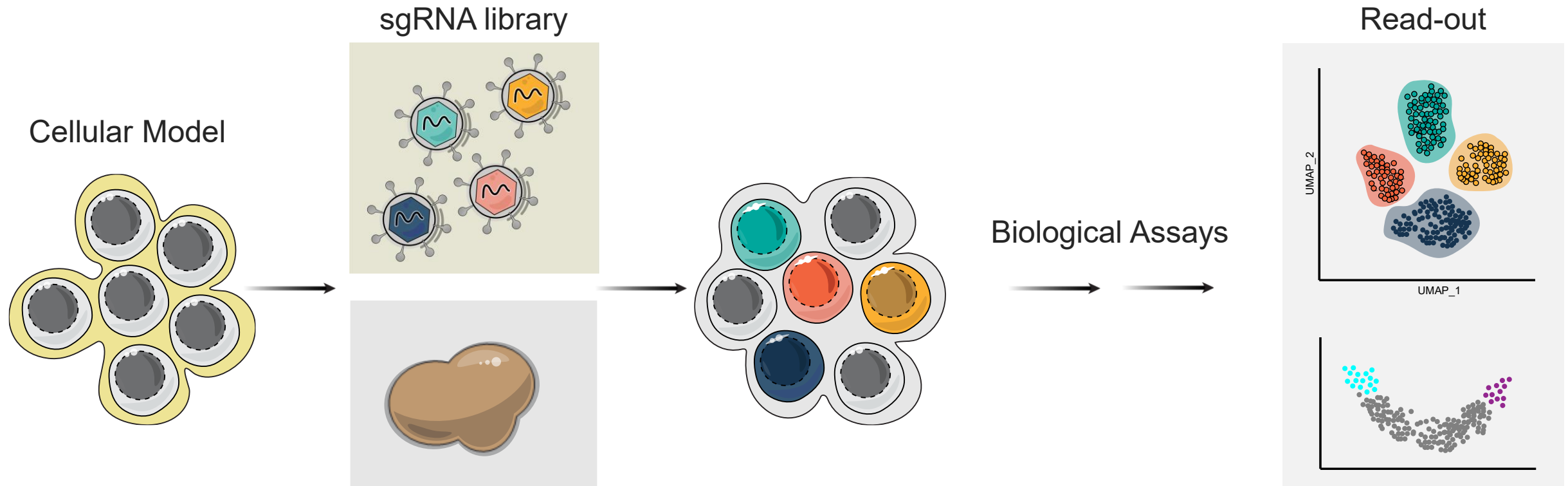
- EiR at CIC
- Previously at Horizon Discovery, bit.bio, Novo Holdings and clock.bio

Myllia's Technology Platform: Unbiased drug target discovery in primary human cells

myllia.

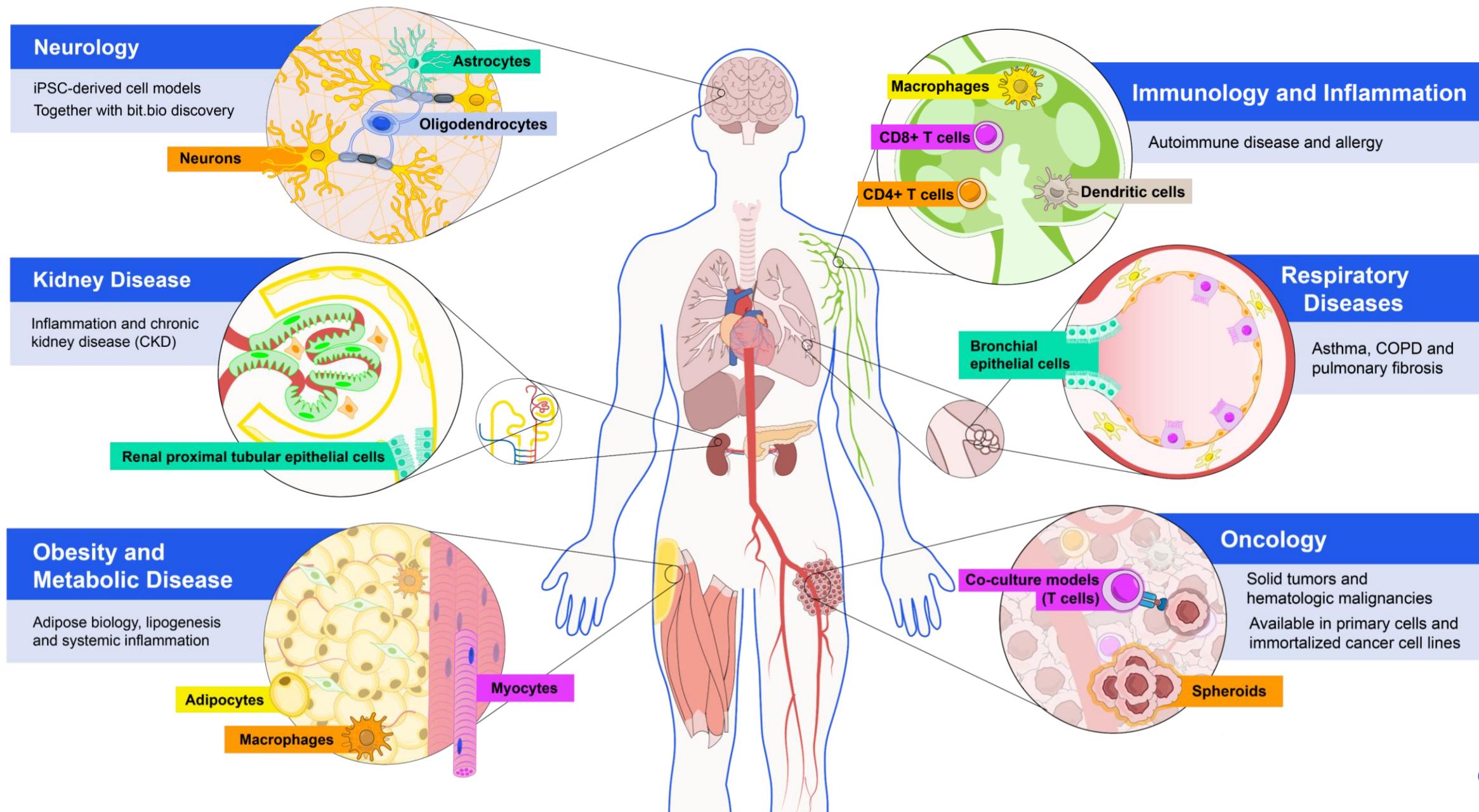


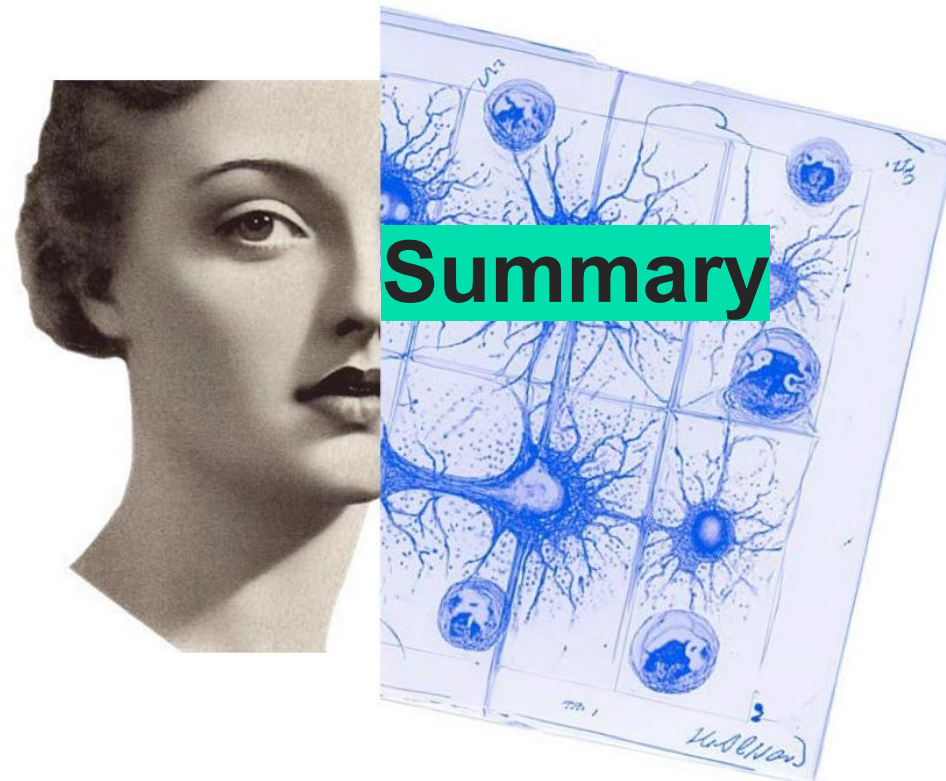
CRISPR Screens – The ideal approach for causal target identification and validation



- Choose a cellular model
- Perturb cells with CRISPR/Cas9 and guide RNA library
- Perform a biological assay
- Link the screen to a phenotypic read-out

Disease areas and primary human cell models



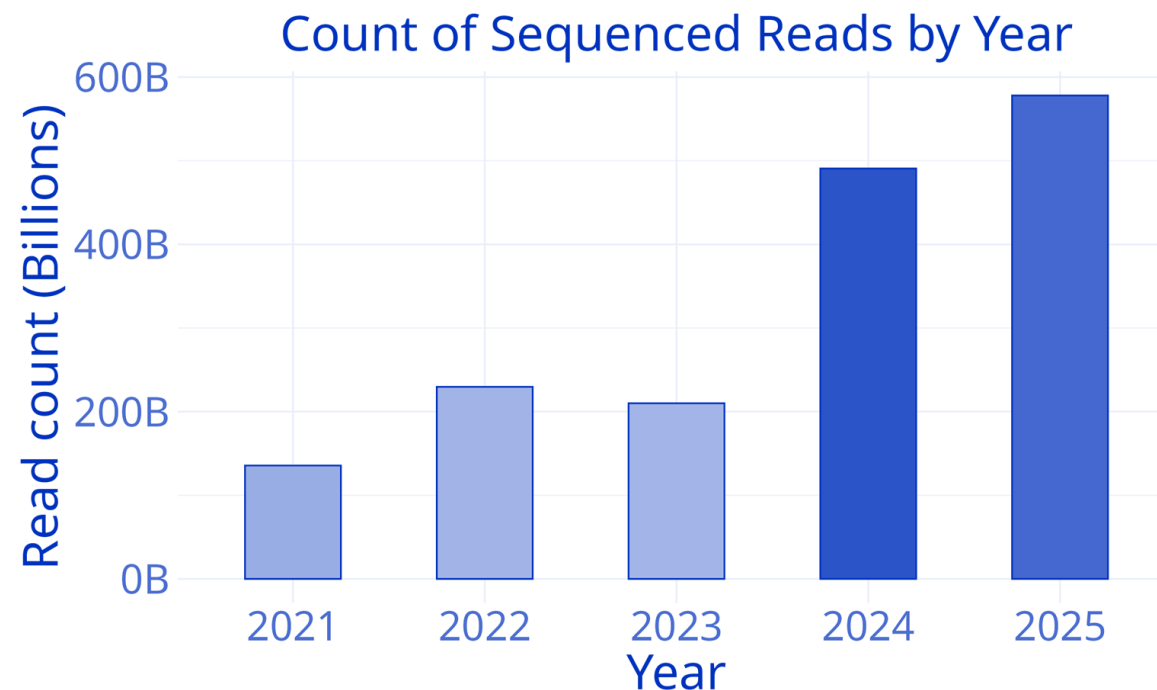


CROP-Seq screens:

- Screen in **human dendritic cells** (DCs, 2 donors):
 - # of target genes: **2,000**
 - # of perturbed/sequenced cells: **3 million in total**
- Screen in **HBECs** (4 donors):
 - # of target genes: **8,000** (all expressed genes)
 - # of perturbed/sequenced cells: **12 million in total**

FACS-based screens:

- Co-culture screen in **pan-T cells** (3 donors)
 - # of target genes: **12,000** (all expressed genes)
 - # of sorted cells: **900 million in total**
- Screen in **Tfh cells** (4 donors):
 - # of target genes: **7,000**
 - # of sorted cells: **600 million in total**



Fuel your next drug discovery programs with the most potent, context-specific targets

myllia.



Unbiased Discovery

Pooled CRISPR screens (CROP-seq, Perturb-seq) deliver the best targets in an unbiased fashion



Primary Human Cells

Target identification happens in the only cells that matter – primary cells from human donors



High Translatability

Targets identified in primary cells *in vitro* have a high chance of translating *in vivo*

Our approach to working together

Each client and project is unique. We shape the scope to match your specific needs.

Tailor-made

Science can be unpredictable. We adjust your project on the flight whenever needed.

Flexible

We work on a simple fee-for-service basis, and the data we generate belong entirely to you.

No strings attached

Example testimonials: Trusted by industry leaders



GSK has partnered with Myllia to leverage their single-cell CRISPR screening platform for identifying novel drug targets across the following therapeutic areas:

1. CRISPR screens in primary human T cells to uncover novel targets in autoimmune disease and immuno-oncology
2. CRISPR screens to identify novel targets in solid tumors
3. CRISPRi (CRISPR interference) screens to modulate target gene expression



“We have worked with Myllia on a target discovery project. Their single-cell CRISPR screening platform is cutting-edge and delivered both known and intriguing novel hits. We will definitely consider Myllia for future projects.”

Oliver Rausch,
Chief Scientific Officer



Cell Reports

Article

Genetic dependencies associated with transcription factor activities in human cancer cell lines

Venu Thatikonda,^{1,4,*} Verena Supper,¹ Johannes Wachter,¹ Onur Kaya,¹ Anju Kombara,¹ Ceren Bilgili,¹ Madhwesh C. Ravichandran,¹ Jesse J. Lipp,¹ Rahul Sharma,² Lukas Badertscher,³ Andrew S. Boghossian,² Matthew G. Rees,² Melissa M. Ronan,² Jennifer A. Roth,² Sarah Grosche,¹ Ralph A. Neumüller,¹ Barbara Mair,¹ Federico Mauri,¹ and Alexandra Popa^{1,5,*}

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<https://doi.org/10.1016/j.celrep.2024.114175>

Myllia has partnered with **6 of the top 10 large pharma companies**

➤ Several multi-year CRISPR screening collaborations

- Functional genomics and unbiased target discovery
- Perturb-Seq data generation for bio AI foundation models

We have strong industry partnerships

myllia.

Cell Providers



Technology Providers



Please get in touch to discuss your next project

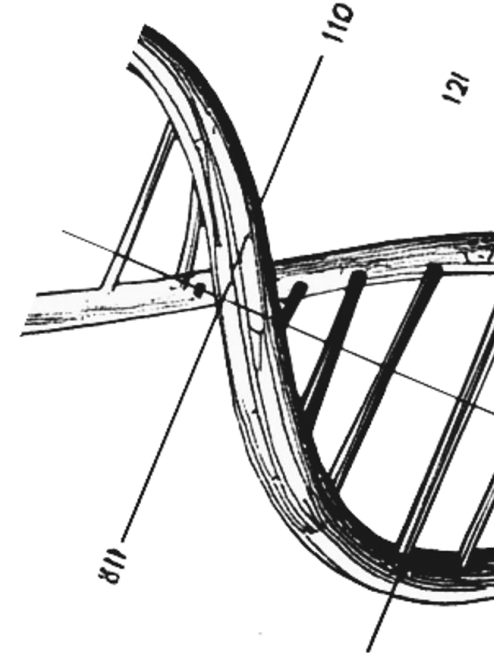
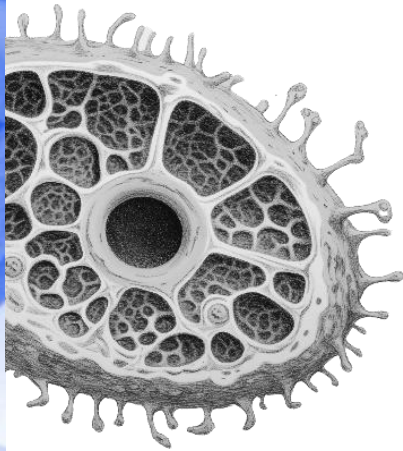
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