

**About our guest**

Andre Ghetti, PhD  
CEO, AnaBios



# De-risking drug development using functional human tissues

## Season 3, Episode 21

### Episode notes

In this episode of Speaking of Mol Bio, Dr. Andre Ghetti, CEO of [AnaBios](#), offers a deep dive into the world of translational preclinical research. AnaBios is redefining early human insights by using [ethically sourced](#), functional human tissues and cells to generate actionable data before compounds ever enter clinical trials. Ghetti walks us through the company's approach of offering human-relevant safety and efficacy data, validating drug targets, and supporting everything from small startups to major pharma groups.

We learn how AnaBios engages with clients to customize assays, especially in high-need areas like non-opioid pain therapies, fibrosis, and cardiac safety, and how they use a blend of standardized and novel functional assays, some of which required building their own hardware. He also discusses their integration of [RT-PCR](#), [RNA-seq](#), and calcium imaging, including genetically encoded sensors to monitor neuronal activity at scale.

From their use of machine learning to analyze massive data sets, to collaborations with the FDA, to their unique ability to preserve tissue viability across the U.S., AnaBios offers a powerful glimpse into the future of [translational biology](#). Dr. Ghetti also shares advice for young scientists and reflects on what's next for AnaBios, including oncology and stem-cell model integration.

### Andre Ghetti's recent publications

1. Stratton HJ, Dolatyari M, Kopruszinski C, Ghetti A, ..., & Porreca F. [A prolactin-targeting antibody to prevent stress-induced peripheral nociceptor sensitization and female postoperative pain](#). Proc Natl Acad Sci U S A. 2025 May 20;122(20):e2501229122. doi: 10.1073/pnas.2501229122
2. Staedtler ES, Sapiro MR, King DM, Maric D, Ghetti A, Mannes AJ, Iadarola MJ. [The  \$\mu\$ -opioid receptor differentiates two distinct human nociceptive populations relevant to clinical pain](#). Cell Rep Med. 2024 Oct 15;5(10):101788. doi: 10.1016/j.xcrm.2024.101788

*"In the early days, when we had to do everything manually, we had a situation where it may take a day for us to perform the experiment and the measurements and then would be two weeks to analyze the data. And so now we're down to minutes for running those type of analysis."*

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