About our guest
Gudrun Stengel, PhD
CEO and Founder
Alida Biosciences

The hidden language of RNA—how epigenetics is shaping medicine

Season 3, Episode 9

Episode notes

This episode teaches that innovation is born at the intersection of curiosity and persistence. Dr. Gudrun Stengel, co-founder and CEO of Alida Biosciences, reveals how her startup is transforming the landscape of RNA research through a technology called proximity barcoding. Dr. Stengel's story exemplifies the power of entrepreneurial spirit in driving scientific discovery, offering a glimpse into how one idea can reshape an entire field.

At Alida Biosciences, Dr. Stengel and her team are pioneering new tools for detecting RNA modifications, a largely unexplored realm of epigenetics. Using their proximity barcoding platform, researchers can read multiple RNA modifications simultaneously, uncovering potential biomarkers and therapeutic targets for diseases like cancer, Alzheimer's, and diabetes. This technology bridges a critical gap in multiomics, allowing scientists to dive deeper into how epigenetic changes influence gene expression and cellular behavior.

Beyond the lab, Dr. Stengel shares her experience as a first-time founder, balancing scientific rigor with startup life. She also offers valuable advice for budding scientists, encouraging them to embrace challenges and remain persistent in the face of setbacks.

Gudrun's recent publications

1. Sendinc E, Yu H, Hwang Fu YH, Santos J, Johnson Z, Kirstein JR, Niu J, Chabot MB, Cantu VA, Džakula Ž, Lam Q, Anmangandla A, Burcham TS, Davis EM, Miles ZD, Price AD, Purse BW, Gregory RI, Stengel G. Mapping multiple RNA modifications simultaneously by proximity barcode sequencing. bioRxiv [Preprint]. 2024 Oct 10:2024.10.09.617509

> "If we understand better how RNA modifications change the usage of messenger RNA, we can start to copy this complexity in the design of mRNA vaccines. So we could, for example, start putting modifications only in specific regions of the mRNA."

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