

Kyle Fitzgerald

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Summary

Scientific leader with broad experience building and developing teams with a focus on multidisciplinary research projects. Fifteen years of experience in discovery, engineering and characterization of antibodies and antibody-drug conjugates from early research through IND-enabling studies. Data-driven scientist motivated by turning research into patient-centered stories.

Skills

Cross-functional team leadership
Antibody discovery & engineering
Early research / Proof of Concept (PoC)
Target Product Profile (TPP) definition

Research pipeline management
Development candidate (DC) nomination
IND-enabling studies
CRO management

Experience

Mythic Therapeutics, Waltham, MA

09/2018 – Present

Mythic's FateControl Technology dramatically increases potency of antibody-drug conjugates without compromising safety, unlocking the potential of targeted therapies against a broad array of tumor targets.

Associate Director, Exploratory Research

03/2024 - Present

- Project team lead for research projects from PoC through lead selection and onto DC nomination. Close collaboration with senior research and development team stakeholders to define TPP and perform stage-appropriate derisking as research projects progressed through Mythic's pipeline.
- Research pipeline management from exploratory stage onto PoC and DC nomination. Led cross-functional stage-gate meetings, guided the team on identifying and mitigating biological (target-related) and platform (linker-toxin) risks and lead selection. Collaborated with *in vivo* biology, preclinical, CMC, project management, and senior leadership teams to align with research and corporate strategy.
- Scientific leader who cultivated a broad understanding of the therapeutic landscape and opportunities through key opinion leader (KOL) outreach, scientific conference attendance, and literature review. Engaged with internal and external stakeholders including scientific advisory board and board of directors to align research priorities. Evaluated new targets for fit within the Mythic pipeline.

Sr. Scientist, Biologics

02/2021 - 03/2024

- Engineered and evaluated bispecific antibodies to advance internal oncology programs. Managed internal and external partners on the production, QC, and testing of these molecules as naked mAbs and ADCs in *in vitro* (HPLC, BLI, ELISA, Cytotox) and *in vivo* (CDX, PDX, PK) and *in silico* (immunogenicity) assays.
- Effectively communicated with internal and external stakeholders as a protein engineering technical lead and project lead in a matrixed environment. Managed vendors responsible for critical reagent generation.
- Built an internal antibody characterization pipeline to assess therapeutic antibody developability along with biological activity. Analyzed and compiled data from multiple sources to determine lead molecules in programs that had hundreds of candidates and thousands of variants.

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Scientist, Biologics

09/2018 - 07/2021

- As a part of a small scientific team, laid the groundwork for Mythic's FateControl technology. Innovated creative solutions to meet the aggressive deadlines of a seed-stage biotech, culminating in DC nomination of Mythic's clinical asset, MYTX-011.
- Designed and oversaw display-based and *in vivo* antibody discovery campaigns. Managed CROs running discovery campaigns and adapted the output to fit into Mythic's pipeline. Managed data aggregation and candidate selection for multiple campaigns, including humanization and functional improvements.
- Trained, mentored, and supervised junior scientists on relevant technical skills and techniques as well as core competencies to build more rounded and engaged team members.

Elstar Therapeutics, Cambridge, MA

11/2016 – 8/2018

Scientist

- Lead a discovery team with ownership from antigen design to lead generation via phage display. Funneled multiple internal and external discovery efforts into a single characterization funnel.

121 Bio, Lexington, MA

10/2014 – 07/2016

Associate Scientist

- Responsible for binding molecule discovery via phage-display and biophysical characterization. Integrated characterization data to enable lead selection.

Early Career

Momenta Pharmaceuticals (acquired by Johnson and Johnson), Cambridge, MA

Sr. Research Associate

Illumina, San Diego, CA

Research Associate II

Affomix Corp. (acquired by Illumina), Branford, CT

Research Associate I

Scientific Publications

Niquille, D. L., **Fitzgerald, K. M.**, & Gera, N. (2024). Biparatopic antibodies: therapeutic applications and prospects mAbs, 16(1).

Gera, N., **Fitzgerald, K. M.**, Ramesh, V., et al., (2024) MYTX-011: A pH-Dependent Anti-c-MET Antibody-Drug Conjugate Designed for Enhanced Payload Delivery to c-MET-Expressing Tumor Cells Molecular Cancer Therapeutics (2024) 23 (9): 1282–1293.

Gera, N., **Fitzgerald, K.**, Ramesh, V., et al., (2023, April 18) MYTX-011: A novel cMET-targeting antibody drug conjugate (ADC) engineered to increase on-target uptake in and efficacy against cMET expressing tumors [Poster Abstract #5000] American Association for Cancer Research Annual Meeting 2023, Orlando, FL, United States.

Patent Applications

Gera, N., Fiske, B. **Fitzgerald, K. M.** *Lrrc-15-binding protein constructs and uses thereof*

WO2024081729A2

Fiske, B., Gera, N., Chittenden, T., **Fitzgerald, K.** *Itgb6-binding proteins and uses thereof*

WO2024263932A2

Education

Quinnipiac University - Master of Science in Molecular and Cell Biology

University of Vermont - Bachelor of Science in Biological Science

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