Samuel Charles Fehling, PhD

Hoover, AL • sam@samuelfehling.com • ( ) - • samuelfehling.com • linkedin.com/in/samuel-fehling/

Professional Profile

Sr. Research Biologist with 10+ years of experience spanning translational oncology, molecular diagnostics and small molecule / antibody drug discovery. Expert in designing *in vitro* and *in vivo* preclinical studies, validating therapeutic targets and coordinating cross-functional pipelines to advance therapeutic candidates.

Work Experience

BioCryst Pharmaceuticals Inc.

Sr. Research Biologist July 2025 – Present

- Designed and qualified novel total and free drug target assays on the Gyrolab xPlore platform for non-human primate (NHP) pharmacokinetic studies, authoring formal validation reports.
- Accelerated preclinical programs by screening antibody candidates and generating data packages, figures and study reports to support regulatory Investigational New Drug (IND) filings.
- Independently performed surface plasmon resonance (SPR) assays on the Biacore T200 utilizing Protein A and CM5 chips to evaluate binding kinetics and cross-reactivity for antibody therapeutics.

Research Biologist December 2022 – July 2025

- Screened and characterized drug efficacy and mechanism of action of thousands of small-molecule therapeutics and antibody candidates using high-throughput cell-based and cell-free *in vitro* assays to drive medicinal chemistry and protein science pipelines.
- Evaluated rodent and NHP pharmacokinetics by analyzing plasma samples from treated models to quantify total and free protein expression levels.

BioGX Inc.

Research and Development Scientist February 2020 – December 2022

- Engineered 30+ direct-addition PCR assays for custom and FDA EUA-approved diagnostics, executing developments and IQ/OQ/PQ qualifications on BD MAX, QuantStudio, Bio-Rad and ABI 7500 platforms.
- Utilized data modeling and QC risk assessments to validate outgoing products, guide design decisions and train technical personnel.

University of Alabama at Birmingham (UAB)

Graduate Research Assistant August 2014 – December 2019

- Discovered synergistic drug combinations targeting cholangiocarcinoma by evaluating BET bromodomain inhibitors to downregulate c-Myc and Chk1.
- Established gemcitabine-resistant liver cancer models using advanced *in vitro* and *in vivo* techniques to study translational resistance mechanisms.
- Executed *in vivo* studies using athymic nude and C57BL/6 mice, managing oral gavage, IP injections and high-fidelity PDX models.

Education

University of Alabama at Birmingham – Ph.D., Biomedical Sciences, December 2019

University of Wisconsin – Eau Claire – B.S., Biochemistry & Molecular Biology, May 2014

Selected Publications

Aubrey L. Miller, Patrick L. Garcia, **Samuel C. Fehling**, Tracy L. Gamblin, Rebecca B. Vance, Leona N. Council, Dongquan Chen, Eddy S. Yang, Robert CAM van Waardenburg, Karina J. Yoon (2021). *The BET Inhibitor JQ1 Augments the Antitumor Efficacy of Gemcitabine in Preclinical Models of Pancreatic Cancer*. Cancers.

Samuel C. Fehling, Aubrey L. Miller, Patrick L. Garcia, Rebecca B. Vance, Karina J. Yoon (2019). *The Combination of BET and PARP Inhibitors is Synergistic in Models of Cholangiocarcinoma.* Cancer Letters.