Felix Meier

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Deep tech operator with a PhD in Synthetic Biology and a deep interest in applying frontier technology to complex, high-stakes problems. Currently architecting the AI and automation backbone of a national synthetic biology facility, integrating 30+ instruments into an event-driven AWS platform that turns wet-lab experiments into ML-ready datasets. Trained as a molecular biologist across four European research institutions, published in Nature Biotechnology, Nature Communications, and Cell Genomics, and a contributor to the international Sc2.0 synthetic yeast genome consortium. Drawn to investing as the highest-leverage path to compound scientific breakthroughs into companies that matter at planetary scale, particularly across healthcare, food systems, defence, space, and industrial biotechnology.

PROFESSIONAL EXPERIENCE

Australian Genome Foundry, Sydney AUS

Data Scientist & Automation Engineer

September 2025 – Present

- Architecting a production-grade, end-to-end data and automation platform integrating 30+ instruments into unified, event-driven cloud infrastructure (AWS) with automated ingestion, governance, dashboards, and ML pipelines.
- Designing intelligent workflows connecting robotic execution, experiment metadata, curated data lakes, and AI/ML systems for autonomous, closed-loop biological experimentation.
- Leading development of standardized reporting pipelines, LIMS integration, AI-assisted analytics, and automation-first lab processes enabling real-time, queryable, ML-ready biological datasets.
- Building AI agent-driven scientific tooling including MCP servers, Claude Code skills, and custom harnesses for reliable software generation by domain experts.

Uber, Berlin DEU

Marketplace Operations Coordinator / Data Analyst

March 2021 – February 2022

- Supported Uber Eats marketplace operations, analysing supply-demand dynamics to optimise courier availability and delivery performance using SQL and Python.
- Built SQL-driven dashboards for operational teams to monitor KPIs, identify bottlenecks, and drive real-time decision-making across the marketplace.
- Developed a lightweight demand forecasting tool incorporating weather-linked behavioural patterns to improve resource allocation.

Leonyte Biosystems, Berlin DEU

Microbiologist

April 2019 – September 2020

- Developed a rapid food-pathogen detection system within a multidisciplinary team, bridging wet-lab biology with engineering and product design.
- Co-developed and tested 3D-printed microfluidic sample-prep devices, integrating biological workflow requirements with downstream detection components.

CODING & ARCHITECTURE

AGF Live Platform
agflive.com
Next.js frontend and AWS serverless architecture integrating 30+ instruments

Welly
synbioexplorer.pythonanywhere.com
Web tool for 96/384 well data visualization

AGF Co-Scientist
github.com/SynBioExplorer/AGF_Co-Scientist
Multi-agent hypothesis generation

Agentic Coding Workflows
github.com/SynBioExplorer/Claude_Code_agentic_coding

Psilocybe Ancestral Sequence Reconstruction
github.com/SynBioExplorer/magic-mushroom-proteomics

Synechococcus Transcriptomics
github.com/SynBioExplorer/Synechococcus_PCC_11901_transcriptomics

SynBio NLP Analysis
github.com/SynBioExplorer/SynBio_NLP_analysis
NLP analysis of Synthetic Biology publications

KEY SKILLS

Python, TypeScript, SQL, R
React, Next.js, Electron, Tailwind
FastAPI, PostgreSQL, Redis, Node.js
AWS (Lambda, DynamoDB, S3, CloudFormation, Cognito)
Claude Code, MCP, Custom Agents
LangGraph, LangChain, Multi-Agent
Docker, GitHub Actions CI/CD
Plotly, Dash, Jupyter
LIMS Design & Lab Informatics
Bioinformatics (NGS, NLP)

EDUCATION

Macquarie University, Sydney AUS

Ph.D. Synthetic Biology (Chancellor's Commendation)

April 2022 – September 2025

- Contributed to the global Sc2.0 project, engineering synthetic chromosomes synXIV and synXVI.
- Engineered a 181 kb synthetic essential neochromosome carrying 75 backup genes to overcome SCRaMbLE lethality.
- Led adaptive laboratory evolution projects including pulsed ALE regimes and parallel ALE for debugging synthetic chromosome fitness defects.
- Developed bioinformatics and AI-driven tools including an NLP platform analysing 23,000+ synthetic biology papers, NGS analysis pipelines, and Welly, an open-source web tool for automated microplate data visualisation.

Ironhack Data Analytics Bootcamp

October 2019 – December 2019

400+ hour bootcamp covering Python, SQL, Tableau, data visualization, storytelling

Rijksuniversiteit Groningen, NLD

M.Sc. Molecular Biology and Biotechnology

September 2016 – November 2018

Master Thesis: Biosensors, current state and future directions. iGEM 2017 Groningen team.

National University of Singapore, SGP

Research Internship

March 2018 – August 2018

Supported by Marco Polo scholarship

Leopold-Franzens-Universität Innsbruck, AUT

B.Sc. Biology

October 2013 – July 2016

Bachelor Thesis: Antibiotic resistances in meat products

Evangelisch Stiftisches Gymnasium, DEU

Abitur

August 2005 – May 2013

A levels: Biology, English

PUBLICATIONS

1. Building synthetic chromosomes one yeast at a time: insights from Sc2.0. Nat Biotechnol 43, 1911–1918 (2025).doi.org/10.1038/s41587-025-02913-4
2. Construction and iterative redesign of synXVI a 903kb synthetic S. cerevisiae chromosome. Nat Commun 2025. doi.org/10.1038/s41467-024-55318-3
3. Welly: A Web-Tool for Visualizing Growth Curves from Microplate Data. Bioinformatics Advances 2025. doi.org/10.1093/bioadv/vbaf038
4. Navigating the Frontier of Synthetic Biology: An AI-Driven Analytics Platform. ACS Synth Biol 2023. doi: 10.1021/acssynbio.3c00192
5. Trimming the genomic fat: minimising and re-functionalising genomes using synthetic biology. Nat Commun 2023. doi.org/10.1038/s41467-023-37748-7
6. Parallel laboratory evolution and rational debugging reveal genomic plasticity to S. cerevisiae synthetic chromosome XIV defects. Cell Genomics 2023. doi.org/10.1016/j.xgen.2023.100379

RESEARCH PROJECTS

Synthetic Chromosomes —
Paulsen Lab, Macquarie Uni
Construction and debugging of synthetic S. cerevisiae chromosomes synXIV and synXVI as part of the international Sc2.0 consortium

Essential Neochromosome —
Paulsen Lab, Macquarie Uni
Design of a 181 kb synthetic neochromosome carrying 75 essential gene backups to enable SCRaMbLE-based genome minimization

Pulsed ALE —
Paulsen Lab, Macquarie Uni
Oscillating selection regimes between permissive and restrictive conditions to improve adaptive laboratory evolution outcomes

AI/NLP & Scientific Tools —
Paulsen Lab, Macquarie Uni
NLP platform for 23,000+ synthetic biology publications and Welly, a web tool for high-throughput growth curve analysis

Thermostable sfGFP —
Kuipers Lab, RUG / Chang Lab, NUS
Directed evolution of sfGFP thermostability in Parageobacillus thermoglucosidans

Dual Cas9 Detection —
iGEM 2017 Groningen
Viral DNA detection system using dual orthogonal Cas9 in L. lactis

LANGUAGES

German — Native
English — Fluent (C2)
Dutch — Good (B2)
Spanish — Elementary

OTHER INTERESTS

Kitesurfing, DJing, Geopolitics