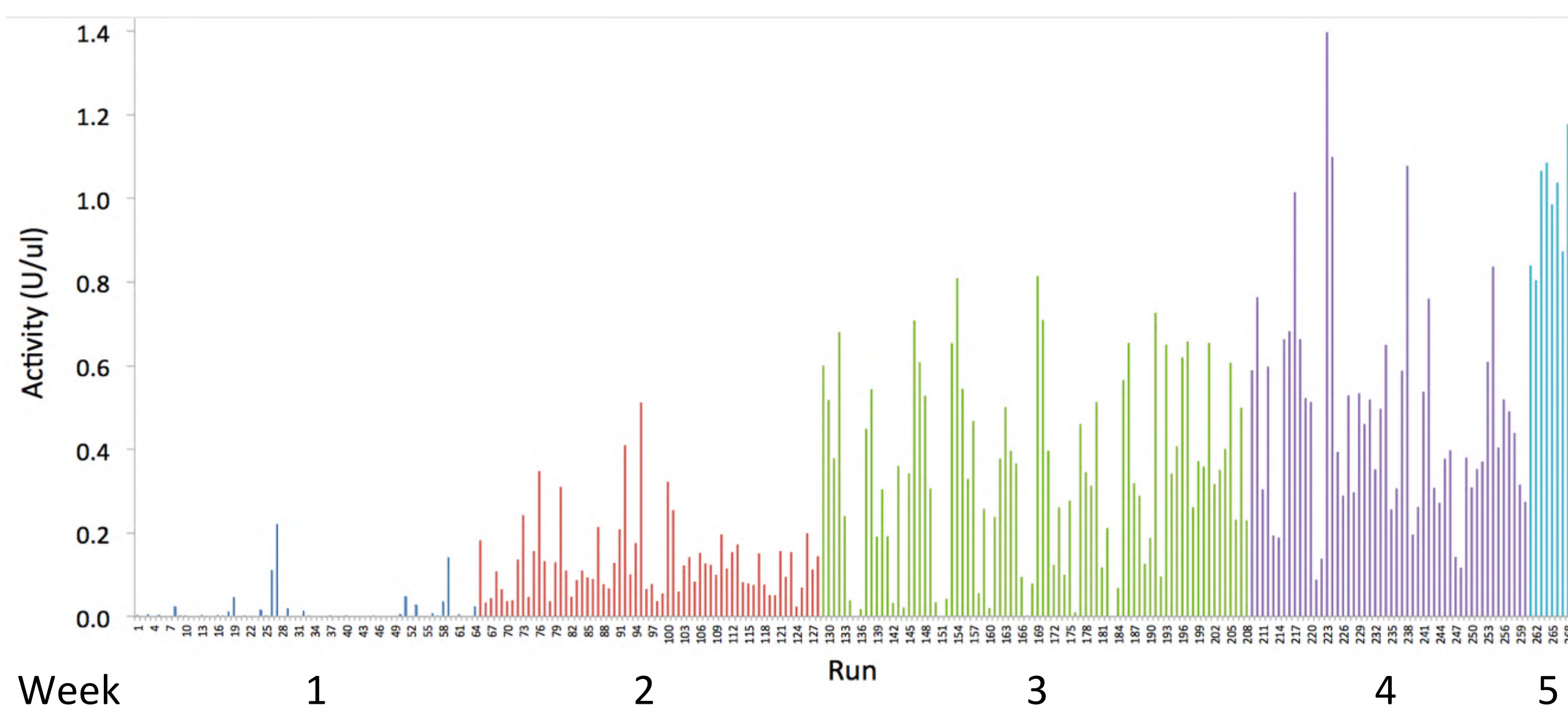


NEXT GENERATION BIOLOGICAL ENGINEERING

Combining high dimensional experimentation, biochemical engineering, automation, synthetic biology and computation, Synthace develops robust bioprocesses for the production of high-value products at scale.

CASE STUDY: BIOPROCESS OPTIMISATION

- Five weeks lab work
- 15 factors: **genetic** and **process** factors optimised **simultaneously**
- Defines complex interactions
- **200 x** improvement on start point
- No high throughput assays needed
- Final step (cyan): **robustness** test



Current capabilities: up to **30 factors**, with automated genetic assembly to address large numbers of genetic factors in conjunction with the process factors they interact with.

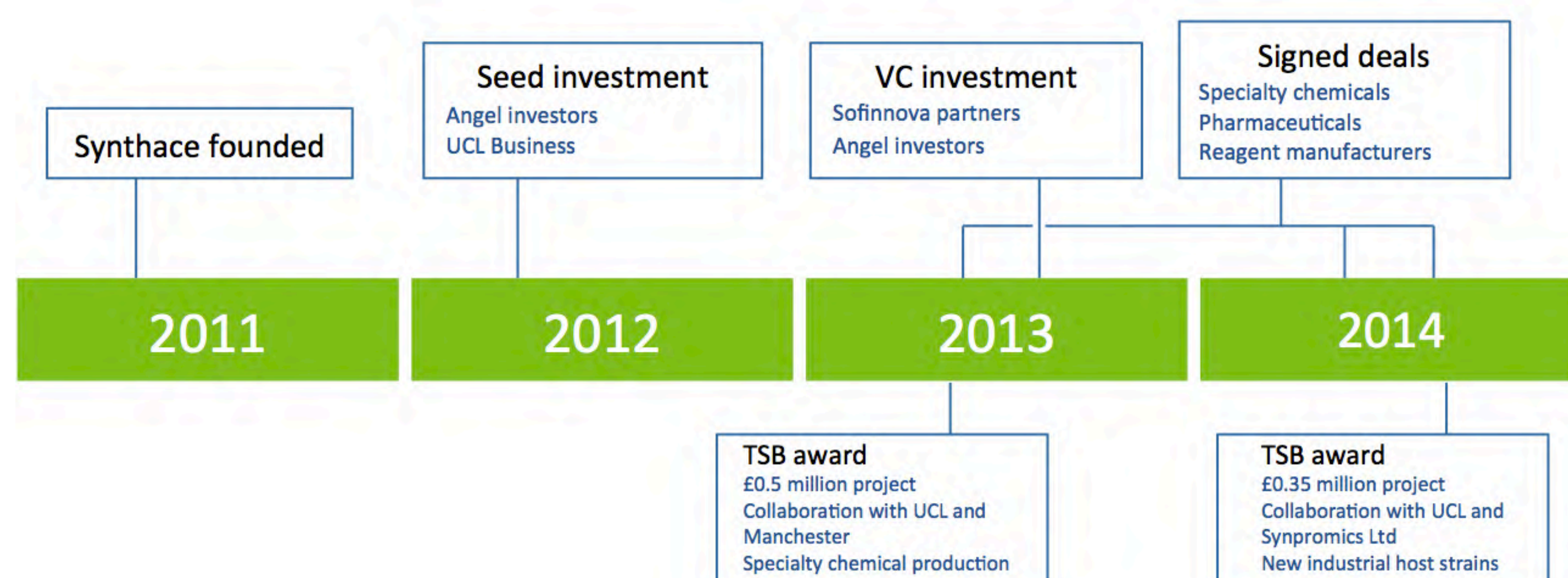
ROBUST SCALE UP



Automated fermentations and advanced data analysis yield sophisticated empirical models for robust scale up.

PARTNERING

We are interested in forming risk sharing partnerships with companies to develop highly optimised manufacturing processes to produce bio-based products. To date, we have partnered with specialty chemical, pharmaceutical and reagent companies.



Synthace was founded in 2011 and is based in London, with dedicated facilities within UCL's Department of Biochemical Engineering.

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SYNTHACE