From Lab Keys to Tech Transfer in 12 Months: A Story of Rapidly-Established Modern CRO Labs

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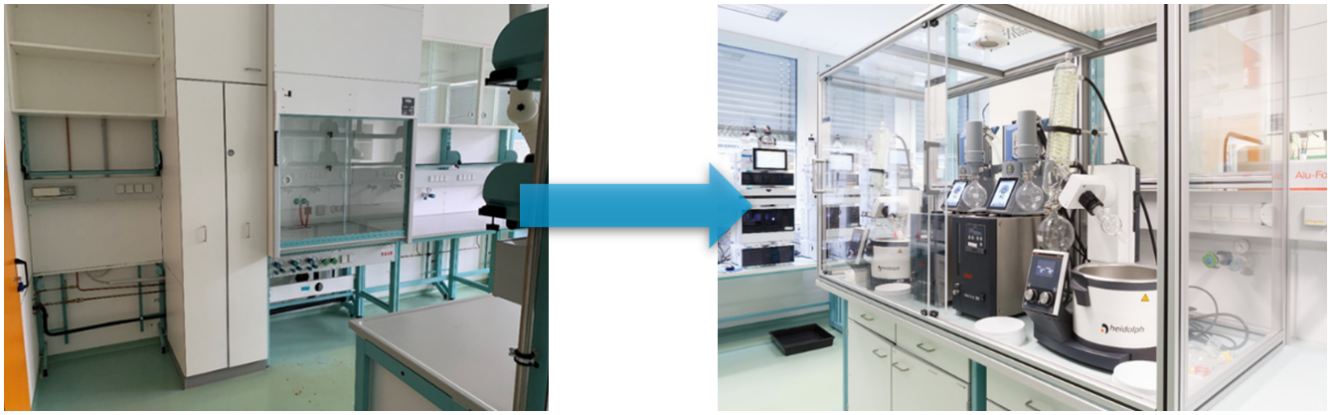
In the present economic and geopolitical climate, small molecule process chemistry within Europe faces significant challenges. New positions for process chemists are few and far between, leaving a wealth of talent ripe for tackling the ever-increasing complexity of small molecule drugs.[1] Based at an ex-pharma site in South Germany, a small team was recruited (beginning with just 4 PhD chemists with varied expertise) to set up labs from scratch. With a blank slate and a vision of a lean, efficient and science-focussed working environment, the team set out in September 2024. Setting up infrastructure and workflows, including health and safety systems, electronic lab notebook and inventory, proved to be no mean feat. The resulting state-of-the-art labs are now functioning at full capacity, including: analytics (NMR, LCMS, GCMS, DSC, XRF…), parallel reactors, jacketed reactors up to 5 L, flow chemistry, pressure reactors, plate-based chemistry and high throughput workflows, normal and reverse phase preparative chromatography.



Herein, we share insights and highlights from a remarkably successful first year of business. Multiple projects are concluded or ongoing, across the drug development spectrum: 1) Preclinical API route development and tech-transfer for kg-scale production; 2) New route toward a complex starting material for an API in phase 3 trials; 3) 2nd-generation route design for high-volume generic API. These successes were made possible by a science-led approach to chemical problem-solving, focusing on data-driven development of efficient and highly manufacturable synthetic routes.

[1] J. Krueger, A. P. Dieskau, J. Hassfeld, J. Gries, O. Block, H. Weinmann, D. Kaufmann, S. Hildbrand, V. Kraft, R. Moeckel, J. R. Dehli, U. Scholz, C. F. Nising, *Angew. Chem. Int. Ed.*, **2025**, *64*, e202420719.