

From ‘Kilo-Labor’ to CarboGen

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Abstract: CarboGen Laboratories AG, a chemical service company focusing on the supply of experimental active pharmaceutical ingredients (API) in kilo quantities to research-based pharmaceutical companies started-up originally in the under-used ‘Kilo Lab’ of the Institute of Organic Chemistry UZH. The encouragement and help of Prof. Hansen and other organic chemistry professors enabled CarboGen to develop into what is today a company employing more than 300 people with a turn-over of more than 100 million CHF.

Keywords: CarboGen Laboratories AG · Institute of Organic Chemistry UZH

In the late 1980s the ‘Kilo-Labor’ of the Institute of Organic Chemistry (OCI) was hardly ever used. The unit, originally conceived and designed for the synthesis of large amounts of organic intermediates and for high volume extractions of natural compounds, was still lacking an operational permit by the cantonal authorities. At this time, budget constraints were tough and funds for the recruitment of a well-trained chemical engineer, who could have managed the lab, were not available. So, the ‘Kilo-Labor’, with its entire well-designed and expensive infrastructure, stood idle.

The authors, both former members of Prof. Vasella’s group at the Institute, were well aware of this calamity. They dreamt of founding their own chemical company. Access to the Kilo Lab, *e.g.* by leasing it from the University, would have meant a major step towards their goal. First talks



The founders of CarboGen in spring 1990: T. Herzig, D. Beer and R. Julina (f.l.t.r.)

about the subject with Prof. H.-J. Hansen, then Director of the OCI, went unexpectedly well. Hansen, a seasoned expert of the pharmaceutical industry, could imagine renting out the lab and co-operating with a start-up company on his premises. His conditions were:

- the company had to get the operational permit;
- OCI reserved the right to use the lab if needed for the synthesis of intermediates;
- the prospective entrepreneurs had to grant training sessions in process chemistry to PhD students and finally,
- the whole operation was under the high-level supervision of the Director himself.

In spring 1989 all these points and many more were written down in a draft ‘Operating Agreement’, a basic document in negotiations with the Administrator of the University and finally, the cantonal Ministry of Education. The implementation of a privately run company on the premises of

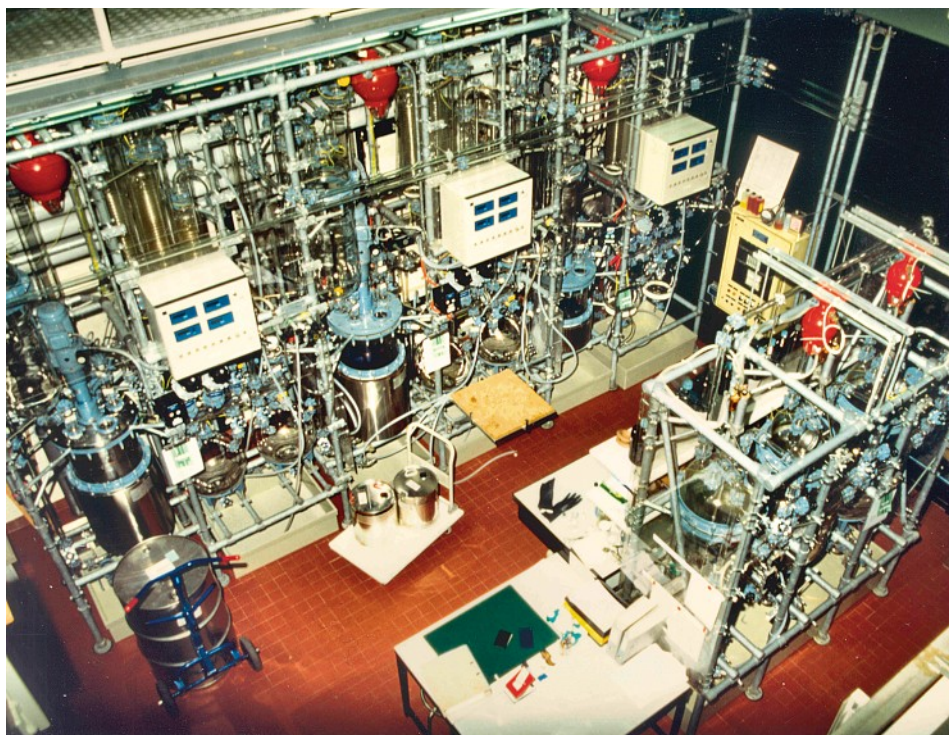
an Institute was unprecedented at the University of Zurich. Discussions of the pros and cons were sometimes emotional. And the courageous commitment of some, to mention Prof. Hansen, Prof. Vasella, Peter Bless (then Director of Administration), and other professors of the OCI met with fierce resistance of others.

During summer and fall 1989 negotiations advanced slowly, mainly because the operational permit had to be acquired before signing the lease agreement, and many discussions with a variety of authorities were required. This nerve-racking period, however, was used to refine the business plan and the financing of the start-up (the latter by straight bank loans, which was common practice in those days...).

At about the end of 1989 everything was in place: All of the twelve different cantonal and local authorities had granted the operational permit, and the lease agreement was sealed by the Ministry of Education.

Early in 1990 three young entrepreneurs (the authors together with Dr. Radomir Juli-

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View of the Kilo Lab in early 1991

course in process chemistry to PhD students. When CarboGen left the premises of OCI for space reasons in early 1996, twelve more chemists were on its pay-roll.

Months later, the laboratories were taken over by Cilag of Schaffhausen in an almost seamless transfer. Today, the facilities operate as the *Laboratorium für Prozessforschung (LPF)* under the full control of the University.

In the meantime, CarboGen has built three more lab facilities in Switzerland, and by 2002 expanded to a size of almost 300 employees, a 100 million Swiss Franc business.

We take the opportunity of the 175th birthday of the University of Zurich to thank everybody who helped (or tolerated) us during the very exciting start-up phase, enabling mutual and sustainable success.

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na) founded CarboGen Laboratories AG as a chemical service company, focusing on the supply of experimental active pharmaceutical ingredients (API) in kilo quantities to research-based pharmaceutical companies. This niche had been identified in numerous interviews with industrial players – we owe special thanks to the late Dr. Ado Kaiser of Roche whose predictions proved to be extremely precise.

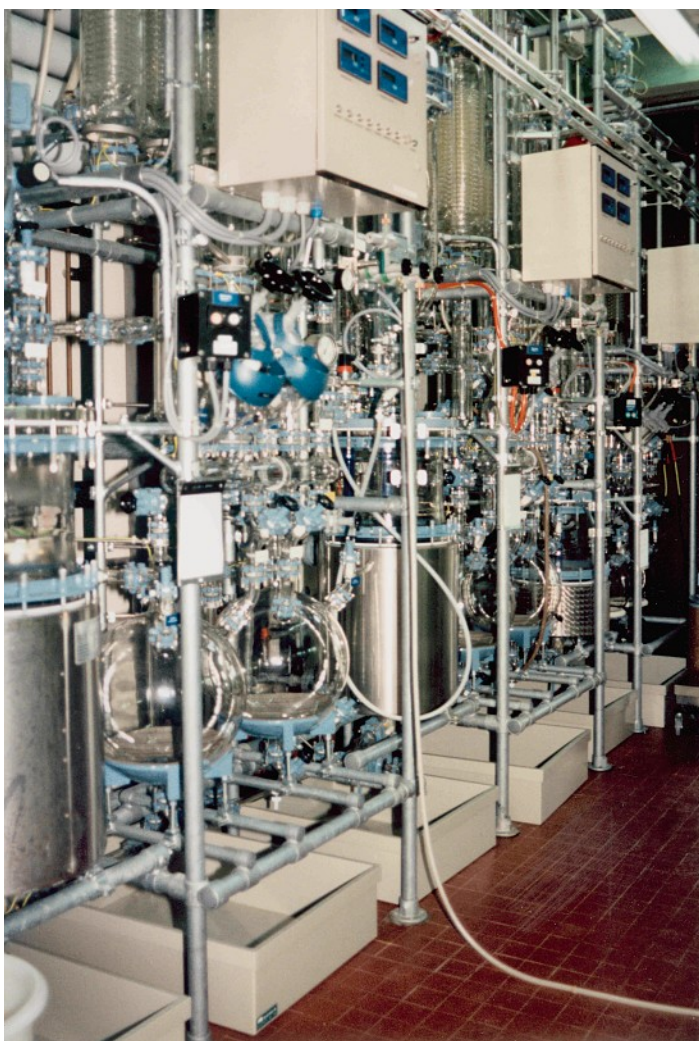
In fact, our service was well-accepted in the US, with our very first customer to be DuPont de Nemours, at that time the largest chemical company in the world. Soon followed Abbott, Merck, Searle, Lilly, Pfizer and some Californian start-up biotech companies.

To satisfy the increasing demand, the 'Kilo Lab' and its adjacent preparation labs were equipped to the last square inch with reaction vessels, heating and cooling devices, work-up facilities, analytical instruments and related material.

Thomas Herzig, our chemical engineer, applied all his know-how and his experience in planning and building the Kilo Lab facility, always in close co-operation with Büchi AG from Uster, who became our main supplier of fine custom-made equipment.

The result was impressive: Early in summer 1990 the facility was entirely operative.

One year later, the company employed four additional chemists, was certified according to ISO 9001, executed the first contracts under full current good manufacturing principles (cGMP), and gave the first



Set of 100 liter and 50 liter vessels