A brief blurb on your background

The team of Molecule.one is bridging the gap between technology and chemistry. The varied background of our team, which includes computer scientists, PhDs, designers, mathematicians, chemists and medical doctors, directly translates to faster development pace and is utterly important with the novel approaches we are trying every day.

The unique diversified background of Maxus and I makes Molecule.one stand out. Many other projects in the area of chemical software development fail due to lack of understanding between chemists and software developers. Bridging this gap is crucial for any project in this field and will be the key factor driving Molecule.one’s success.

Genesis of the product

Maxus and I have met in a chemical lab during high school. We quickly found that we share a strong view that there are many activities in the workflow of an organic chemist that should be automated. The design of synthesis pathways seemed a particularly underdeveloped area.

We went on to study medicine, chemistry and mathematics. Studying medicine gave us a deep understanding of the huge impact organic synthesis has on the lives of ordinary people, through its role in the drug discovery process. Therefore, while still at university, we engaged in a research project in the field of synthesis planning. However, we quickly became dissatisfied with their approach to the problem and lack of progress there. Therefore we quit the team.

Then we found out there is a large demand for such solutions on the market and that introducing such solution could have a huge potential impact on the drug discovery process. Therefore we started Molecule.one with Pawel. He decided to join us because he very much liked the idea of helping to improve drug discovery while utilizing his experience in introducing novel technologies to the HR and financial industry.

Almost 50 years ago E. J. Corey -- 1990 Nobel Prize Laureate in Chemistry, the founding father of synthesis planning -- started the journey towards automated organic synthesis by introducing his expert system LHASA. Unfortunately, 50 years later, not a single solution for synthesis planning has become the market standard. Until now.
What is your co-founder/team background? (If you have specialists on your team relevant to the success of your company, INCLUDE their information)

Maxus and I are medical doctors with a chemistry degree and strong mathematics/computer science background. We have extensive understanding of both chemistry (“what the user needs”) and computer science (“what can be done”). That allows for much faster pace of the development process (much less time wasted for unnecessary or inviable directions). We have known each other for almost 10 years now, having worked together on various endeavors for the better part of this time.

Paweł has a significant track record in both software (18 years of experience) and business development (9 years of experience). He successfully helped build one of the most successful Polish startups (in HR-tech) and made an exit. Prior to his involvement with Molecule.one, he built a mobile bank from scratch in a mixed CTO/COO role. His experience allowed us to convert our technology into enterprise software and helped us bring this software onto the market.

Stanislaw Jastrzębski, PhD -- our Machine Learning Lead -- has got vast experience in both theoretical machine learning and the applications of ML to chemistry, which is extremely rare among top ML specialists. He built industry grade software and he has worked with top ML researchers in the world, such as Prof. Yoshua Bengio (MILA, Turing Award 2018) or, as a postdoc, with Prof. Kyunghyun Cho (NYU, Facebook AI).

The development team altogether has experience in software development across multiple industries. This allows Molecule.one to develop a fully functional software rather than just scientific research. We also frequently collaborate with chemists from top Polish research institutions to evaluate the quality of results achieved.

What is your funding level?

Pre-seed/seed -- we have raised 385k USD in total, from two angels and an early-stage German VC.

What are you launching?

We are launching our synthesis planning solution that is able to design how to make a blockbuster drug within the time limit prescribed for the onstage demo. Using our
product, the pharmaceutical companies gain a tool they can use to make medicines faster.