

BIO/LES Advanced Business Development

April 2013, Chicago

Case Study Non-Confidential information

Yelsed Biotech

Yelsed Biotech was founded four years ago in Boston on a platform technology which included X-ray protein crystallography and computational chemistry. The equipment is very high tech and required a significant investment to install and set it up. Yelsed is, however, one of the leading groups of scientists in the world that performs this kind of work in order to identify small molecules that bind to and inhibit target proteins based on their X-ray crystal structures. The technology is useful in many therapeutic areas, and Yelsed has been successful in putting in place collaborations with large pharmaceutical companies in the areas of alzheimer's disease, inflammation, autoimmune diseases and cancer. Yelsed's internal focus for their proprietary programs is in cancer.

Yelsed is still privately held and currently employees 60 people. They have raised a total of \$45 million since their founding. The last fundraising was closed in March of 2011 and totaled \$25 million. It is not clear from the publicly stated information how many employees Yelsed had in March of 2011 nor how much money they have remaining as cash or cash equivalents.

Yelsed's interest is in partnering their lead program which is a PRAT kinase inhibitor (YPKI-45) that is currently in Phase 1 trials at the NCI in non small cell lung cancer (NSCLC). PRAT kinase inhibitors have been a very hot topic in cancer for the last 6 months. There are many companies working in this field and publishing their results, both in academia and in industry. To date, no one has managed to get any encouraging clinical results with PRAT specific inhibitors although there have been a couple of compounds that have been in Phase 1 trials. There is an existing cancer therapeutic currently used in patients that is a non-specific kinase inhibitor which is strongly active in-vitro against PRAT as well as other targets. This compound has some activity in patients, but its toxicity limits its usefulness.

Yelsed also has 4 other programs in cancer that are ongoing in the company. Three of these programs are in kinase inhibitors with the most advanced (other than the PRAT inhibitor) currently undergoing simultaneous in-vivo experiments and lead optimization. The technology platform allows the Yelsed scientists to move from a micromolar affinity hit to a nanomolar or picomolar affinity compound normally within 6-9 months. The scientists have proven their practical planning capabilities by being able to carry on these optimization programs in several chemical series in parallel so that they have more than one structural family to choose from for lead optimization or pre-clinical development.

Sturtz Pharma

Sturtz Pharma is a medium sized pharmaceutical company based in Germany but with offices and research facilities in Germany and in the US and worldwide sales forces.

They have an annual turnover of \$1.2 billion. Although the company is majority family owned, a certain percentage of the shares are traded publicly. Their top drugs on the market are in primary care (asthma and allergies), dermatology, and CNS disease (stroke). They have ongoing research programs in CNS (schizophrenia and attention deficit disorder), immunology, and cancer. Sturtz normally invests approximately 15% of its annual revenue in its R&D programs. Sturtz has stated publicly that it has a goal of building its cancer franchise both through internal drug development and through in-licensing programs from other companies. As proof of their seriousness, they have just announced the purchase of a small specialty oncology company based in Italy and its associated southern European sales force of 35 people. They have also recently announced the hiring of a senior executive in the United States to head oncology sales and build a sales force there.

The oncology initiative at Sturtz Pharma was announced publicly approximately 14 months earlier. The company does have a reputation of formerly being difficult to collaborate with although it has stated at business and science meetings that it has reorganized internally to combat this reputation and prove that it is a partner of choice.