



Doğan Taşkent

Partner, Corporate Finance - Arkan&Ergin JPA International

Biotech Startups and Development in Turkey

'Innovation' and 'startups' are the major economical fad in Turkey. We jumped on the bandwagon later than the US but we are working hard on that. Our major success stories in startups were, to no one's surprise, from the related endeavors internet (gittigidiyor.com, yemeksepeti.com, markafoni.com, etc.). For many the westerner eye the obvious reason can be briefly summarized as being 'fast product development time', 'new generation services', 'fast growth rates', etc. However this is Turkey and we are sitting at the gate of the Orient, we have different market dynamics in this part of the world. Namely competition prefers, as the UN Secretary General Ban Ki-moon stated by his last visit to Turkey, 'know-who', instead of 'know-how'. That is a great hurdle for startup with merit based ambitions. However 'internet' platform, through enabling the startups to reach the consumers directly bypassed the middle man (the know-who guy) hence democratized the business-to-consumer environment.

The environment for the high-tech companies that mostly operate in the business-to-business domain looks tougher. For them to survive they need next to merit based market entry platform, which doesn't exist, they need also a knowledge cluster that supports their complex technology with the right lab technicians, test labs, certification labs, regulatory advisors, IP advisors, financial support mechanisms, etc. When we look where we find such a cluster, we come across 3 major industrial clusters: automotive in Bursa region, defense in Ankara and biotechnology in Izmir. Automotive and defense doesn't offer startups a fruitful environment, but Izmir with its Biotech Cluster and strong bridge to some major biotech institutions in Istanbul gives a great hope for Turkish biotech startups.

There are many dimensions of that cluster, however few of them have the highest density in Izmir and makes the difference - test & certification infrastructure: the 2 major Universities namely Ege and Dokuz Eylül with each approximately 60,000 students focus on independent health and life sciences industries. Each has complementary technoparks (ideEGE-Lifesciences Technopark, DEPART- Health Technopark), university hospitals and university labs. It is very critical that those labs also serve next to university R&D the industry as well. Those are: Pharmaceutical Sciences Research Center-FABAL, Biotechnology and Bioengineering Research and Application Center- BIOMER, Electronics and Materials Production and Application Center-EMUM, Drug Development and Pharmacokinetics Research and Application Center – ARGEFAR (the only accredited Phase1 clinical trial environment in TR), International Biomedicine and Genome Institute – IBG. Under the Izmir Biotech Cluster initiative those labs offer to a biotech startup end-to-end product

development, testing and certification environment. It is also very critical to mention that this cluster has many collaboration partners outside of Izmir like Inovita, ISEK, and Technopark Istanbul in Istanbul.

At the funding side we see also development regarding high tech investments. TÜBİTAK, the Turkish NSA, supports with its various grants high tech startups, however the size can be considered as 'seed level'. There was a big gap to reach the Venture Capital (VC) funding. This year 3 major funding the fund initiative should bridge that gap between initial fund and the VC level fund. The joint Technology Transfer Accelerator Turkey (TTA Turkey) fund with the support of the European Investment Fund (EIF) and TUBİTAK went life in march 2015 with the Diffusion Capital Partners, TTA Turkey 2 fund is under due diligence process and TUBİTAK 1514 (deadline June 2015) that should help to establish another 6 high tech early stage-VC's that should focus on high tech (read no internet, mobile or gaming). That professional investment groups entry will give a great boost to biotech startups.

Another important stepping stone is the development of University-Industry-Government collaboration to support biosimilar drugs under the KAMAG (TUBİTAK 1007) initiative. In this initiative the government offers grant to develop biosimilar drugs to pharma companies. Although the commercialization know-how resides in the industry the drug development and testing know-how resides in the universities. That caused an organic collaboration between the industry and universities. That allowed many R&D focused labs has openings for MS and PhDs to work with this industry related research. Even some startups with novel techniques find places in these structures.

Parallel to that we observe industrial PhD programs focused on biotech and pharma led by Bogaziçi University, Ege University and Dokuz Eylül University. Many those universities open lab technician education certificate programs. One of the strongest Turkish Economic Thinktank – TEPAV- has dedicated team developing strategies to accelerate Life Sciences, especially Biotech industries.

Nevertheless there are also entry barriers for biotech production development in Turkey, as an example we share our observation on the biosimilar side:

- less than a handful of API manufacturers remaining in operation
- compared to small molecules a higher cost of initial investment into production and analytical equipment and knowhow
- no regulatory approval by MOH for locally produced biosimilars as yet
- low perception of important doctors towards locally produced biosimilars
- difficulty of finding trained scientists for biosimilars production

Yes, there are handful universities, early stage VCs, NGOs and pioneers involved in that sector, yes the trust towards to the biotechnology and especially biosimilars needs to be build. However the groups are all closely tight, support and communicate with each other and with the international community to create the right eco system to develop products to compete in the international arena.