Interview: Prof. Dr. Murat Özgören – Vice-Rector, Dokuz Eylül University, Turkey

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Prof. Dr. Murat Özgören, the architect behind the ambitious BioIzmir project, talks about its potential and how it intends to educate new talent to address critical future needs of the pharmaceutical industry.

To begin, Dr. Özgören, could you give us an overview of the intent behind the BioIzmir project?

The aim of BioIzmir is to act as an accelerator of health technologies. Today we see that developing a basic drug takes 20 years and a couple of billion euros, and this is unsustainable. So we looked at the industry in Turkey and abroad to find the issues holding the industry back. Exploration has been given the green light in Turkey, and marketing is great, we are the great marketers of pharma. So the bottleneck is not there. However, there are big gaps, most glaringly in R&D. To address this, we have created an all-in-one concept, which was my design, to facilitate the more rapid development of drugs. In the long run we hope this will allow us to respond more quickly to emerging threats, such as new diseases. It is critical for us to significantly cut the time it takes to develop drugs. We intend to do this by bringing together the university, with its research facilities, students and academics, and private companies and healthcare professionals. We have a unique cluster of expertise here not found anywhere else, and we hope that having these people work closely together will bring great benefits to all of us.

Why is Izmir the ideal place for such a project?

We have a great strategic advantage over other areas. Logistically speaking, there is a nice new international airport within 15 minutes from here, the same time it takes to get to a parking garage in Istanbul. We also have ESBAS, Turkey's free trade zone, which is halfway between BioIzmir and the airport. We are strategic partners with them so that when we do have an innovation expo it is very easy for anyone to reach us and do business here. The university is an important factor as well, with 80,000 students and staff and some very good research facilities attached to it. In this way we hope to tie private companies more closely to the university.

BioIzmir emphasizes the role it has to play for the future. What changes are you expecting in the Pharmaceutical industry, and how does BioIzmir fit in?

We expect that around the year 2026 there will be a dramatic shift in the healthcare industry towards personalized medicine. Personalized in the sense that when you are sick you can have your data analyzed in a meaningful time, minutes, and then a solution to your specific problem is found based on that data. The idea is that we can cut away much of the side effects current drugs have, because instead of a blanket solution we will have specific targets for the medicine. It will be a game-changer because Big Pharma may not be able to cope with every part of that, it is too specialized and too large a field. Instead we will see many small companies highly specialized in their respective niches. However, for this we do not need doctors, we need bioinformatics people, and the jobs that will be needed for this, do not exist yet. That is one of the critical aims of BioIzmir and the university; to train these types of people, through what we call our Biomedical Industrial PHD program, and prepare them for the future.

How would the Biomedical Industrial PHD program work?

The industry would create a PHD topic for our students. Imagine company 'x' comes to us and says they would like to develop a product. One of our students would take this job on and it becomes their PHD thesis. They can then utilize the university's resources, in combination with the company's expertise to find a solution to a real-world industry problem. That way when the thesis is finished, the company has their solution and the student has gained valuable expertise as well as made herself an excellent candidate for hire by company 'x'. The minister of development is supporting this project, and I proposed it at the European level where it was very much cheered, so we are very optimistic about its potential.

Looking beyond BioIzmir, could you give an overview of the position of Dokuz Eylül University within Turkey's academic community?

That has a more complicated answer than you may think. We are hosting the largest and most advanced facilities for biomedical sciences in Turkey right now, making most others obsolete. So really there is a new start here, nobody knows their relative position as there is no comparable history to base it on. However, I believe that in this new start we will have a lead as we have already established our techno park for instance. We have also brought a lot of new talent on board, and they are bringing their big track records with them. Mehmet Öztürk for example, the leader of our new iBG-Izmir facility, is the best scientist in Turkey in his field. So it is a new game starting, and we have invited the best available in Turkey to help us get off the ground.

I cannot tell you how we compare to other universities in Turkey as what we are doing here has not been done before, it did not exist even a few years ago. I do certainly think we are properly positioned to do well in this new area.

Furthermore, we are targeting a new 'focused approach' for research topics, of which bio-technology is our our most important. We are hosting the largest institute of Health Technologies in Turkey together with the health innovation campuses. We are planning to move in not only doctors, but also other professionals with multiple centers to support them. We are creating multidisciplinary programs with different institutes so that, for instance in molecular biology we will have 8-10 different disciplines working together. So rather than have a single-disciplinary approach, we have developed a multidisciplinary approach, especially for our PHD programs.

One of the most important considerations for developing Turkey's more innovative abilities and in turn increasing exports in high-technology products is skilled labor. To this end, in your opinion, how would you evaluate Turkey's pipeline for talent, and do you think students these days are equipped to compete on a global scale?

Yes and no. Yes, because we have a very good education system in high school and later in University. No because we do not yet have enough interdisciplinary teaming skills, and we are working on that. That is why we developed multidisciplinary programs, in the PHD programs especially, precisely so that they can develop those skills. We are targeting unorthodox ways to build those skills. However, we are still missing huge amounts of technicians and so on. For those we are hoping to get some training projects to create new specialists in fields currently facing a shortage.

From your position of Vice-Rector how do you envision the university's role in Turkey's own ambition of becoming one of the top 10 economies for health services by 2023?

We are very ambitious about that. Via iBG and the whole BioIzmir project we want to be one of the best players in Europe and the MENA region. We would like to be a trigger of many projects, not only those here in Turkey but also internationally.

In that sense we want to shed our narrow Dokuz Eylül focused view and adopt a new global view of the world, in this I believe we are succeeding. We already have different countries and representatives of different universities represented here. We also realize we cannot achieve our view on our own, so when new international projects come in we really try to match them to the best fitting university rather than immediately trying to bring it to Dokuz Eylül. So we are trying to make this community of universities into a real ecosystem. I know this is a common word, and it is becoming a used word, but I think we have really shown that we are successful at creating a universal amalgamation point.

What has been the response you have been getting from other institutes and Big Pharma?

Very good, we have been visited by many CEOs of Big Pharma; formerly with Baxter, Sterigenics, we are talking with Bayer, and others. It seems that if we can show a good number of success stories we see an exponential growth in the arrival of new projects. For those we are fortunate to have already been working on some of them for many years and soon we will able to share some success stories more openly. Don’t forget there’s a twenty-year cycle for some of these projects, so we are fortunate to be nearing the stage on some of them that signs of success are being seen which we hope to share in the near future.

If you were to use our platform to send out a message to the academic and business community globally, what would be your message?

I would say that we believe we have created a small oasis, like a DAVOS of business which people can easily reach and where they can develop their best new ideas. The T-20 message was that we have to create new high-tech jobs with every single project, to create startups which can serve larger companies and to be a model for developing countries with regards to health innovation, and that is critical for us.

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