

# Umut Ağl?yu?z â?? Founder & CEO, Genz Biotechnology

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*Genz Biotechnology is a biotech startup working on novel diagnostic testing solutions. Its founder and CEO, Umut Ağl?yu?z, explains the origins of the company, the big opportunities that have arisen due to the COVID-19 pandemic, and how their solutions are a great match for low-income and rural communities.*

**Can you start by sharing the story of Genz, how it was born, your mission as a biotech startup, and the role you expect the company to play in the healthcare ecosystem?**

Genz is a spin-off from Middle East Technical University; it was born at the time I started studying genetic markers of early diagnosis of breast cancer and prognosis as part of my Ph.D. thesis.

In 2015, the project was financially supported by the Turkish Ministry of Health and was selected from 830 international early-stage startups for an accelerator program the following year. Not long after, we received our first investment from two Turkish VCs, which marked the official creation of Genz Biotechnology.

Genz was born with a mission to transform the diagnostics industry. As of today, Genz has received several research grants from the Turkish Ministry of Science; it has built 3 CE-IVD genetic tests,

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COVID-19 laboratory and POC tests, and established collaborations with scientists from prestigious universities such as Harvard, Brown University, and ETH Zurich.

During the pandemic, Genz focused on the R&D of high-tech diagnostic testing solutions, a process that can take several years. We are currently working on innovative technologies that will shape the future of the diagnostics market. Our current goal is to introduce our solutions to more than 200 potential international distribution channels, leveraging our partnerships with the largest IVD suppliers in the region.

**Can you explain the characteristics of one of your main products, the GENZPRO COVID-19 testing system?**

GENZPRO is perfect for emerging markets. Performed with one drop of blood and analysis in minutes, GENZPRO allows routine tests conducted at the point of care (POC) setting to be carried out as accurately as laboratory tests with an easy-to-use interface that does not require medical proficiency.

The results can be instantly shared with patients, physicians, and central health systems through the smart and cloud-connected platform. The first parameter of the GENZPRO platform is the COVID-19 neutralizing Ab test that shows recovery after a diagnosis of Sars-Cov2 and/or immunization level after vaccination. Soon, more test parameters will be offered on the platform, and we will develop the home testing version and AI health assistant.

**How did the COVID-19 pandemic developments influence your strategy to develop and launch products?**

The diagnostic industry received massive attention during the pandemic as biotech and medtech companies, even the non-IVD ones, rushed to develop COVID-19 testing solutions. We believe the pandemic accelerated the development of many breakthroughs, and it will be only for the good of humanity.

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We think it will be important to perform antibody tests before the third or the fourth booster vaccine shots. Because of that, I should admit COVID-19 created pressure on us to introduce our solution to the market faster. Each member of our organization is working really hard to deliver the solution to help healthcare professionals and patients.

As I mentioned earlier, COVID-19 changed many things, including patient behavior and needs. People don't want to go to hospitals to avoid contagion risk, increasing the need for on-site POC testing solutions like GENZPRO.

**Are you concerned that the story of Theranos, the disgraced American diagnostics company, could negatively impact the interest of investors in similar startups?**

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We hear this joke and question often. As it is well known, Theranos promised scientifically really hard to achieve technology, hundreds of tests from one drop of blood. We don't want to give sci-fi-based false promises; we focus on improving patient outcomes through novel, fast, affordable, and more convenient testing. We have already conducted several validation studies with third parties such as university hospitals.

### **How do you assess the Turkish biotechnology R&D ecosystem and what are the main challenges faced by startups like Genz?**

Anti-aging, cell therapies, oral vaccines, anti-cancer therapeutics, and homecare POC medical technologies appear to be the biggest trends for the next five years.

In order for us to succeed, academic R&D facilities should be improved, and biotechnology research grants increased. Unfortunately, biotechnology research is expensive, which constraints improvements by academic institutions, startups, or small enterprises. There are qualified researchers waiting to be supported financially. It should be a governmental strategy to increase the grants for biotechnology research, joint projects, and international collaborations.

### **As a startup in search of funding from different institutions, how do you view the company's contributions to sustainability?**

Our main sustainability commitment is about reducing the inequality amongst different communities, namely rural ones when it comes to access to healthcare.

We position our products in the market as accessible and affordable for low-income communities, and our post-pandemic plan includes expanding our product offerings for senior care. Genz's solutions will be affordable for elders, especially those with mobility issues. Our platform's features, such as mobility, cloud service software options, and 24-hour battery life, will significantly benefit them.

### **Do you have a message for our international audience about Genz?**

We have spent years developing and testing the GENZPRO device and chip and are looking forward to starting to do more demonstrations and validation studies at prestigious institutions to prove that we have engineered the single most advanced commercially available diagnostic device with the help of ELISA on-chip technology, and we believe that it is time for a resource like GENZPRO Platform to enter the diagnostic market.

### **Can you share your background and how you became involved with Genz?**

I received my master's degree in biomedical engineering from Bogazici University, studied bioinformatics and biomarker discovery, and participated in several research studies at Harvard Medical School, ETH Zurich, and prestigious universities in Turkey. I quit my Ph.D. from Middle East Technical University 4 years ago to launch Genz Biotech. I am also currently a member of the IVEK Foundation and Rare Disease Volunteers Foundation.

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