



# Interview with an Inventor



**Dr. Layla Jeeda Al-Mansoori**

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Intellectual property refers to creations of the human mind, including inventions, literary and artistic works, designs, symbols, names, and images used in commerce. An invention is an idea conceived by an inventor that provides a solution to a specific technical problem. A patent, on the other hand, is an exclusive right granted for an invention, allowing its owner to determine how—or whether—others may use it for a limited period. In exchange for this right, the patent holder provides the public with technical details of the invention through the published patent document. Herein, we meet Dr. Layla Jeeda Al-Mansoori, Research Assistant Professor at the Biomedical Research Center at Qatar University, who holds multiple patents for her innovative work.

### **Dr. Layla Al-Mansoori, how would you present yourself to the readers of Research Magazine?**

I am a passionate scientist and innovator dedicated to translating biomedical research into tangible health solutions. As a Research Assistant Professor at the Biomedical Research Center at Qatar University, my work is focused on bridging the gap between bench science and real-world medical applications, with a particular emphasis on innovation and intellectual property development.

### **Can you tell us about the patents you have obtained at Qatar University?**

I have been fortunate to work on several multidisciplinary projects that have led to filings and the granting of patents. These include GATA3 inhibitors for the promotion of subcutaneous fat deposition, which is granted and published under the number US11976282B2. The other one, which was filed by the end of last year, is related to diabetes and machine learning strategies for understanding insulin resistance.

### **In your opinion, how can inventions make a difference in patients' lives or contribute to improving society?**

Inventions are often the bridge between scientific discovery and tangible impact on human health. For example, our patented GATA3 inhibitors, which aim to enhance the body fat re-distribution by lowering visceral fat and promote subcutaneous fat deposition, have the potential to shift the way we address metabolic health and obesity-related disorders. Similarly, leveraging machine learning to understand insulin resistance brings us closer to personalized and predictive approaches in diabetes management. Such innovations can empower earlier diagnosis, more effective interventions, and better disease prevention strategies. Ultimately, they not only improve patient outcomes but also reduce long-term healthcare burdens on society.

### **What were the biggest challenges you faced during the development of your medical inventions, whether on a technical or research level?**

Each project presented its own unique challenges. For the GATA3 inhibitor work, one of the primary hurdles was identifying selective and bioavailable compounds that could modulate gene expression without off-target effects—this required extensive molecular modeling and in vivo validation. On the other hand, with the diabetes and machine learning project, the challenge was integrating large-scale biomedical datasets in a meaningful way while ensuring that the predictive models remained

clinically interpretable and reliable. Balancing technical rigor with translational relevance was a continuous process, but these challenges ultimately strengthened the innovation and its potential for real-world application.

### **Can you tell us about the support provided by the Innovation Office for inventors at Qatar University?**

The Innovation Office at Qatar University has been instrumental in supporting inventors by offering guidance on patent filings, IP strategy, and commercialization pathways. They provide essential legal and technical expertise, as well as opportunities for collaboration with industry partners. This ecosystem encourages a vibrant culture of innovation and empowers researchers to pursue impactful discoveries.

### **From your perspective, how can the integration of academic research and practical application accelerate medical innovations?**

Integrating research with real-world application ensures that discoveries are not only theoretical but also usable and relevant. When academia works closely with clinicians, industry, and policymakers, it accelerates the translation of ideas into market-ready solutions. This interdisciplinary collaboration shortens the time from lab to clinic and enhances the societal impact of academic efforts.

### **What advice do you have for students interested in entering the world of research and innovation?**

To dedicate their efforts sincerely in this noble path for the sake of Allah, and to remain curious and persistent. Innovation often begins with asking the right questions and being willing to explore the unknown. They should embrace interdisciplinary learning, seek guidance and mentorship, and not fear failure—it is often a stepping stone to success. Most importantly, they should align their research with a purpose that serves people, as real impact is the strongest driver of innovation.

### **What are your upcoming research goals, and how do you see the future of innovation in Qatar?**

My upcoming research focuses on precision medicine and bioengineered therapeutic systems tailored to the needs of our population. I see great promise in Qatar's innovation landscape, with increased investment in research, growing institutional support, and an inspiring generation of young scientists. The future holds immense potential for Qatar to emerge as a regional leader in health innovation and biotechnology.