

# QURGEN

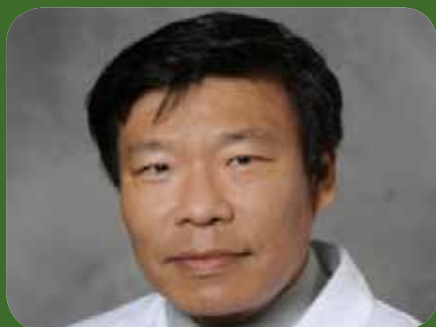
## Transforming Biotechnology through Ground-breaking Developments



**PROF. JIANJUN WANG, PHD**  
Founder, Chairman, Chief Scientist



**PROF. QIANQIAN LI, MD**  
Co-Founder, Director, Chief Technology Officer (CTO)



**PROF. FENG JIANG**  
Co-Founder, Director, Chief Operating Office (COO)

The field of biotechnology has long faced significant challenges in treating major diseases such as cancer, heart failure, and age-related degeneration. Traditional therapies, including chemotherapy, radiation, and immunotherapy, have limitations, often causing severe side effects, drug resistance, and complete remission. Moreover, transcription factor (TF) proteins, which regulate many genes expressions and play a crucial role in tissue homeostasis and disease mechanisms, have remained undruggable due to the lack of efficient delivery technologies. Hence, the time has yet come for a paradigm shift in medical treatment.

Qurgen is a pioneering biotechnology company dedicated to transforming the terrain of modern medicine through innovations in transcription factor drug development, in vivo disease tissue reprogramming, and next-generation cancer therapy. Founded by Dr. Jianjun Wang, a distinguished scientist and university professor, and his colleagues, Qurgen is committed to redefining therapeutic approaches for some of the most challenging diseases, including cancer, heart failure, diabetes, and age-related conditions.

### A VISION FOR BREAKTHROUGH BIOTECHNOLOGY

Qurgen, a Delaware company based in Michigan with research and manufacturing facilities in Michigan and China, specializes in making the previously undruggable transcription factors a viable class of therapeutics. Transcription factors are proteins that regulate gene expression within the nucleus of cells, playing a crucial role in cellular function and disease mechanisms.

Historically, the pharmaceutical industry has struggled to develop drugs targeting these proteins due to the lack of efficient delivery methods. Qurgen has successfully overcome this challenge with its proprietary protein delivery technology, ensuring near-100% efficiency in delivering transcription factor drugs directly into the targeted cellular organelles including nucleus.

*Qurgen prides itself on having a lean yet highly efficient team, where communication flows smoothly and effectively across all levels. The company fosters a collaborative environment, encouraging scientists, researchers, and operational staff to contribute ideas directly to leadership. This approach not only accelerates innovation but also ensures that Qurgen remains agile in an industry that demands rapid adaptation to scientific advancements.*

## KEY INNOVATIONS THAT SET QURGEN APART

Qurgen distinguishes itself from other biotech companies through 3 major technological breakthroughs:

### 1. Transcription Factor Drug Platform

Qurgen has developed the world's first viable transcription factor-based drugs. This innovative therapeutics is designed to regulate genetic pathways, offering new treatment possibilities for various diseases. The company's lead transcription factor drug, SON-DP, is currently in FDA-approved first-in-human Phase I clinical trials (IND #152226) at five leading U.S. institutions, including MD Anderson.

Unlike conventional cancer therapies that kill cancer cells, SON-DP reprograms cancer cells in situ into embryonic stem cell-like cells that differentiate into healthy tissue, utilizing pluripotent-based cell reprogramming with the world's first transcription factor drug.

The transcription factor proteins have the capability of interacting with the PROMOTERS and REPRESSORS of their target genes on the 23 pairs of human chromosomes inside CELL NUCLEI to regulate many molecular pathways. They have the ability to either regulate cellular functions or change cellular phenotypes, including reversing malignant phenotypes of tumor cells into non-malignant cells. Transcription factor proteins were previously considered undruggable due to the lack of a delivery technology that enables targeting TF into disease cell nuclei with minimal off-target effects by systemic injections of TFs. Qurgen developed a patented QQ-protein delivery technology (Patents: US 11154584B2), allowing for the development of multiple TF drugs to treat several major human diseases.

Qurgen's anti-cancer TF drug, SON-DP, has been approved by the FDA for a first-in-human Phase I trial (IND #: 152226; ClinicalTrials.gov ID: NCT05989724). The current 27-patient data demonstrated safety and initial efficacy of SON-DP. Several other TF drugs have also been developed to treat heart failure, diabetes, reverse aging, and eye diseases, which are in the IND application stages.

### 2. Safe In Vivo Disease Tissue Reprogramming Technology

Building on the Nobel Prize-winning IPS (Induced Pluripotent Stem Cell) technology, Qurgen has developed

a second-generation reprogramming technology. Unlike the traditional IPS approach, which converts skin cells into stem cells in vitro, Qurgen's innovation enables the direct reprogramming of diseased tissues into different types of healthy stem cells inside the body in vivo by systemic administrations of the world first transcription factor drugs.

The 2nd generation of safe in vivo/in situ disease tissue reprogramming technology is based on Yamanaka's in vitro iPS technique, Qurgen combined QQ-protein delivery with different TF drugs and developed this 2nd generation of safe in vivo disease tissue reprogramming technology. This helps the reprogramming of disease tissues into different types of stem cells, including transient iPSCs (tiPSCs), transient heart stem cells, transient neural stem cells, and transient pancreatic stem cells through systemic injections of different transcription factor protein drugs.

This breakthrough has profound implications for regenerative medicine, with potential applications in reversing aging, repairing damaged organs, and treating degenerative diseases. Qurgen's regeneration medicine programs utilize its proprietary, world-first, transcription factor drugs to reverse malignant phenotypes, repair damaged and degenerated tissues to restore organ functionality, addressing critical health challenges.

### 3. Cell-Converting Cancer Therapy

Traditional cancer treatments, such as chemotherapy, radiation, targeted therapy and immunotherapy—are primarily designed to kill cancer cells. However, these methods often lead to significant side effects and drug resistance, making long-term treatment challenging for late stage cancer patients. Qurgen's novel cancer therapy takes an entirely different approach.

Qurgen presents a new cancer therapeutic strategy, named Cell-Converting Cancer Therapy, that completely differs from traditional cancer treatments. Instead of killing cancer cells, Qurgen's SON-DP transcription factor drug reprograms malignant cancer cells into normal tissue cells by transforming them into transient iPSCs (tiPSCs), which immediately differentiate into normal resident tissue cells. The transient iPSC approach resolved the issues of teratoma and tumor formation caused by the traditional iPSC

approach, providing safe therapies for different human disease treatment. Qurgen's long-term (6-years) primate animal pre-clinical data and now human clinical data demonstrated the safety of this approach.

Qurgen's cardiology program targets heart failure by reprogramming cardiac fibroblasts in the injured heart tissue into transient heart progenitor cells that immediately differentiate into functional heart muscle tissues and blood vessels. Preclinical data on large animals showed remarkable restoration of left ventricular ejection fraction. This therapy demonstrates high efficacy in severe heart failure cases, presenting a transformative solution for millions of heart-failure patients.

### **ADVANCING CANCER TREATMENT WITH CLINICAL SUCCESS**

Qurgen's lead cancer drug, SON-DP, is currently undergoing first-in-human Phase I clinical trials, demonstrating promising results. To date, the drug has been tested on 27 patients across multiple cancer types, including colorectal cancer, melanoma, pancreatic cancer, breast cancer, ovarian cancer, mesothelioma, and sarcoma. Unlike conventional therapies, SON-DP has shown no significant side effects, while already exhibiting tumor shrinkage and disappearance of small lung metastatic lesions at mid-SON-DP dose level. This success positions Qurgen as a frontrunner in the development of next-generation cancer treatments.

### **A BROAD PIPELINE FOR HUMAN HEALTH**

While cancer treatment remains a key focus, Qurgen is also employing its transcription factor drug technology to develop therapies for a range of other conditions, including:

- **Diabetes:** Developing innovative treatments to improve insulin regulation and pancreatic function.
- **Aging and Longevity:** Pioneering therapies that reverse age-related cellular damage and extend healthy lifespan.
- **Glaucoma:** Qurgen has developed a pioneering eye drop that delivers transcription factor drugs directly to the eye, effectively lowering intraocular pressure, regenerating retinal ganglion neurons, and offering a potential breakthrough in reversing vision loss.
- **Ovarian Rejuvenation and Skin Regeneration:** Expanding into broader regenerative applications, Qurgen targets age-related tissue degeneration, including ovarian rejuvenation for fertility restoration and skin regeneration for both medical and aesthetic purposes. Preclinical studies confirm reversed ovarian aging, restored reproductive function, and enhanced skin elasticity and texture.

### **A STRONG FOUNDATION OF INTELLECTUAL PROPERTY**

Qurgen's ground-breaking research is backed by a supported portfolio of over 50 international patents. These patents cover the company's key innovations, ensuring exclusivity in the development and commercialization of its novel therapies. The intellectual property is co-owned by Qurgen and Wayne State University, where Dr. Wang and his team have conducted extensive research to bring these transformative technologies to market.

### **REVENUE MODEL AND GROWTH STRATEGY**

Qurgen employs a diversified revenue strategy that integrates licensing agreements, co-development partnerships, strategic collaborations, and direct sales of products and therapeutic indications. Licensing deals provide upfront payments, milestone revenues, and recurring royalties, creating a strong foundation for long-term financial growth. Co-development partnerships leverage shared expertise and resources to accelerate product development while supporting steady cash flow. Direct sales, focused on innovative therapies and future indications, are poised to drive significant revenue as the company transitions from clinical progress to commercialization.

To support these efforts, Qurgen focuses on optimizing operational efficiencies, reinvesting in research and development, and maintaining a steady pipeline of ground-breaking therapies. Potential exit opportunities, including IPOs, strategic licensing agreements, co-development partnerships, and acquisitions, offer pathways for long-term value creation.

### **IN-HOUSE DRUG MANUFACTURING**

Unlike many biotech companies that rely on third-party manufacturers, Qurgen operates its own GMP-certified drug manufacturing facility. This in-house capability ensures quality control, faster production timelines, and cost-effective scalability, giving Qurgen a strategic advantage in bringing its therapies from the lab to clinical application.

### **A CULTURE OF INNOVATION**

Qurgen prides itself on having a lean yet highly efficient team, where communication flows smoothly and effectively across all levels. The company fosters a collaborative environment, encouraging scientists, researchers, and operational staff to contribute ideas directly to leadership. This approach not only accelerates innovation but also ensures that Qurgen remains agile in an industry that demands rapid adaptation to scientific advancements.

### **A TRUSTED NAME IN BIOTECHNOLOGY**

With a world-class team of scientists, clinical researchers, and advisors, Qurgen continues to push the boundaries of biotechnology. Its breakthrough technologies have the potential to revolutionize medicine, offering hope to millions of patients worldwide. The company actively collaborates with major pharmaceutical firms for licensing opportunities and strategic partnerships to expand its impact globally.

### **A PARADIGM SHIFT IN MEDICINE**

Qurgen is not just another biotech company; it is a catalyst for change in modern medicine. By developing therapies that make the impossible possible, Qurgen is setting new standards and concepts in cancer therapy, regenerative medicine, and longevity research. With its commitment to scientific excellence, intellectual property strength, and in-house manufacturing capabilities, Qurgen is poised to become a global leader in next-generation therapeutics.

Due to these major innovations and achievement, Qurgen has been named as one of the "Top 10 BioTech Startup Solution Providers 2025".