

제놀루션, '2022 아시아태평양 유전체 솔루션 기업 Top 10' 선정

- ▶ 유전체 솔루션 분야 확장을 통한 글로벌 기업으로 발돋움
- ▶ RNA 합성 기술을 바탕으로 한 전세계 식량 안보에 기여

<2022-07-19> 체외진단기기 전문기업 제놀루션(225220, 대표이사 김기옥)이 분자진단, 유전체 기술 및 농업 발전을 위한 우수한 핵산 추출 기술 역량을 인정받아 미국 생명공학 전문지인 '라이프 사이언스 리뷰(Life Science Review)'서 '2022 아시아태평양 유전체 솔루션 기업 Top 10(Top 10 Genomics Solutions Companies in APAC 2022)'에 선정됐다고 밝혔다.

제놀루션은 유전자 기반 기술을 바탕으로 10 여년 동안 핵산 추출 분야를 광범위하게 연구하여 고농도, 고수율의 DNA 와 RNA 를 추출할 수 있는 Nextractor® 핵산추출 장비 개발에 앞장서며 빠른 핵산추출 처리속도를 통해 코로나 19 방역 기여에 대한 높은 평가를 받았다.

특히 제놀루션이 다양한 분야에서 연구자들이 유전체 서비스를 개선하는데 활용될 수 있는 혁신적인 제품개발에 주력한 것이 이번 선정에 큰 영향을 미쳤다는 분석이다.

제놀루션은 시장의 니즈에 맞게 Nextractor® 제품 라인업을 다양하게 구성하고 있다. 일례로NX-Junior를 개발하여 다량의 샘플 처리를 필요로 하지 않는 소규모 실험실에 판매를 하고 있으며, 최근에 출시한 NX-Duo는 96개의 다양한 샘플에서 핵산을 추출할 수 있을 뿐만 아니라 24개의 체액 샘플(예, 소변 및 혈장)에서 세포유리DNA(cfDNA)를 추출함으로써 액체생검 추출 분야로 확장을 하고 있다.

또한 차세대염기서열분석(NGS) 기술을 통하여 임상 미생물학 및 전염병 분석 키트를 자체 개발하고 있다.

제놀루션 김기옥 대표는 "핵산추출부터 액체생검, 유전체 분석까지 다양한 포트폴리오 구성을 통해 유전체 솔루션 분야의 글로벌 혁신 기업으로 나아가고 있다"며 "RNA를 이용해 농업분야를 포함한 다양한 유전체 분야에서도 동일한 성과를 달성할 것으로 기대하고 있어 제놀루션의 유전자 솔루션으로 한국 뿐만 아니라 전세계의 식량 안보에 이바지 함으로써 인류의 건강한 삶을 책임지는 기업이 되고자 한다"라고 밝혔다.

GENOLUTION

Superior DNA/RNA Extraction Capabilities for MDx, Genomics, and Agricultural Development

Studying the intricacies of the biological universe, and understanding its inner workings, is the future of medicine; and South Korea-based Genolution Inc., recognized the value of viewing the world from a molecular perspective very early on. The company, established in 2006, has been dedicatedly focused on improving the quality of life for patients everywhere through its solutions borne from comprehensive molecular diagnostics research. It initially concentrated on RNA interference (RNAi)—Small Interfering RNA (siRNA) for antiviral, antibacterial, and antitumoral agents. However, after delving deeper into its research, the company concluded that the extraction of RNA, DNA, or nucleic acids is the most critical step in advancing the life sciences and drug development industry.


Since this realization, Genolution has spent the last decade extensively researching and developing nucleic acid extraction. Moreover, the company also noticed a gap in the market for faster, more accurate, and cost-effective product development solutions. It thus worked toward addressing these unmet industry requirements tirelessly. The results of Genolution's efforts and longstanding experience in the field are now presented to the world in the form of Nextractor, a robust automated, and easy-to-use DNA and RNA extraction instrument, the company's flagship offering.

The Nextractor instrument plays a vital role in supporting downstream genomics processes, extracting nucleic acids in its purest state from various sample types such as blood, saliva, or tissue.

The chemistry of Genolution's reagent further improves the yield quality, directly affecting the downstream applications in next-generation sequencing (NGS) and polymerase chain reaction (PCR) testing. Nextractor's capabilities particularly shined during the COVID-19 pandemic as Genolution's devices showcased an impressive processing and turnaround time of 20 minutes that

quickly overtook the industry standard of one or two hours. "We believe that our fast, robust, and affordable products can provide researchers with the benefits they need to improve their genomic services," expresses Gi Ok Kim, CEO of Genolution.

The company's Nextractor line of products has multiple variants for differing sample processing needs. Innovating atop this breakthrough technology, the genomics expert developed Nextractor NX-Junior to accommodate smaller labs and their restrictive budgets. Genolution's NX-Duo, on the other hand, helps organizations extract genetic substances from 96 samples or extract cDNA from 24 samples, such as urine and plasma; this feature is expected to be extremely vital in processes requiring high-throughput DNA and RNA extraction in facilities such as genetic testing centers. Moreover, the company's latest R&D involves automated robotic based liquid handling systems, consisting of sample preparation, extraction, and PCR testing capabilities to better manage epidemics or pandemics, all while reducing the need for manual intervention. The company is also developing its own NGS-based clinical microbiology and infectious diseases assays that could be scalable with its own liquid handling systems.

With the help of such a powerful portfolio of devices, Genolution aims to be at the forefront of genomic extraction innovation in the global marketplace and expects to achieve the same in different genomics fields, including the agricultural field. It is fascinating to note that Nextractor has found significant applications in testing and identifying species in food and other fast-moving consumer products. In light of the same, the company supports GMO and rice testing operations performed in Korea with its solution and plans to expand in the Asian market and ensure the security of food across the planet in the near future. Additionally, owing to the company's expertise and long-standing experience with nucleic acids, especially RNA, Genolution's long dsRNA (double-stranded RNA) synthesis service can aid in functional genomics for pest control development and crop improvement. It provides RNA on a kilogram basis to ensure that large-scale synthesis will never be a problem for the development of RNA-based pest control. The company is set to change the lives of humans worldwide with its expertise in molecular biology and genomics, both in terms of the world inside the body and out. 



Gi Ok Kim,
CEO