



## Jeong-Sun Seo

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### From Bench to Genome Platforms: A Basic Medical Scientist's Journey to AI-Based Precision Medicine

(기초의학자의 AI 정밀의학으로의 여정: 실험실에서 지놈플랫폼까지)

#### <Biography>

Jeong-Sun Seo, MD, PhD, is the founder and chairman of MacroGen and Professor Emeritus at Seoul National University (SNU) College of Medicine, where he taught biochemistry from 1982 to 2017. He received both his MD and PhD from SNU and completed postdoctoral training at Rockefeller University, focusing on molecular oncology.

In the late 1980s, Dr. Seo pioneered research on stress proteins and oncogenesis using genetically engineered mice. After the human genome project, he led large-scale genomics efforts employing next-generation sequencing. He founded the ILCHUN Genomic Medicine Institute (GMI-SNU) in 1997 and directed it for 20 years, spearheading projects that established the foundations of the Asian Genome Project. His team sequenced the *Zymomonas mobilis* genome and constructed the AK1 BAC clone library to develop the Asian reference genome.

Dr. Seo also established the Mongolian Genome Biobank (2003–2009) and published the first Northeast Asian human genome sequence in *Nature* (2009). His later studies revealed population-specific genomic variations, leading to the Genome Asia 100K initiative for precision medicine.

In cancer genomics, he discovered the KIF5B–RET fusion gene in lung adenocarcinoma (2011), contributing to new therapeutic insights.

He founded MacroGen in 1997, the first Korean biotechnology firm listed on KOSDAQ, now providing sequencing services in over 100 countries. Recognized with multiple national awards, Dr. Seo continues advancing genomics and precision medicine across Asia.