

Scripps Research Team Wins \$5.1 Million To Develop DNA Sequencing Technology

EurekAlert

LA JOLLA, CA - September 16, 2010 - For Immediate Release - Scripps Research Institute Professor Reza Ghadiri, Ph.D., has been awarded a four-year, \$5.1 million grant as part of a National Institutes of Health (NIH) initiative to spur the development of the next generation of DNA sequencing technologies, which could enable biomedical researchers and health care workers to routinely sequence a person's DNA.

With the new grant, funded by the NIH's Human Genome Research Institute (NHGRI), the team will further develop an approach they call "nanopore strand sequencing."

In nanopore strand sequencing, a single strand of DNA moves through a narrow pore and the bases are identified as they pass a reading head. Ghadiri notes that this is a rapid real-time technology; it does not require the time-consuming cyclic addition of reagents.

"After implementing a chip with a million pores, we expect nanopore sequencing to achieve a 15-minute genome by 2014 with a very short sample preparation time," said Ghadiri, whose group will work with the laboratories of Hagan Bayley of the University of Oxford and Amit Meller of Boston University on the project. "In addition, nanopore sequencing will be able to identify modified bases and to sequence RNA directly."

The new grant is part of an \$18 million round of funding announced this week by the NHGRI, whose current goal is to make it possible to sequence a genome for \$1,000 or less.

Over the past decade, DNA sequencing costs have fallen dramatically fueled in large part by tools, technologies and process improvements developed as part of the successful effort to sequence the human genome. NHGRI subsequently launched programs in 2004 to accelerate the development of sequencing technologies and the rate of reduction of genome sequencing cost. Last year, the program surpassed the goal of producing high quality genome sequence of 3 billion base pairs - the amount of DNA found in humans and other mammals - for \$100,000. The cost to sequence a human genome has now dipped below \$40,000.

The new grants will fund ten investigator teams to develop revolutionary technologies that would make it possible to quickly and cost-efficiently sequence a genome, enabling the use of sequencing as part of routine medical care.

Scripps Research Team Wins \$5.1 Million To Develop DNA Sequencing Tech

Published on Chem.Info (<http://www.chem.info>)

[SOURCE](#) [1]

Source URL (retrieved on 10/01/2014 - 10:29pm):

<http://www.chem.info/news/2010/09/scripps-research-team-wins-51-million-develop-dna-sequencing-technology>

Links:

[1] http://www.eurekalert.org/pub_releases/2010-09/sri-srt091610.php