

NHGRI Sequencing Technology Development Projects by Category Active Grants May 2015

Sequencing-by-Synthesis - improved read characteristics and various detection modes

R01	HG006876	Edwards, Jeremy	Haplotype Resolved Sequencing Technology
R01	HG006889	Esfandyarpour, Hesaam	Low Cost Sequencing with Re-usable Magnetic Arrays and Nanoelectronic Sensors
R01	HG006283	Shendure, Jay Ashok	Massively Parallel Contiguity Mapping
R01	HG006882	Shepard, Kenneth L; SG Lemay; SW Turner	Single Molecule Real Time Electronic Sequencing
R01	HG007836	Zhang, Kun; Xiaohua Huang	Single-stranded sequencing using microfluidic reactors (SISSOR)

Free-running enzyme

R21	HG006291	Barnes, Wayne Morris	Fluorescent Amino Acid Probe of Template-strand Bases
R43	HG007386	Kotseroglou, Theofilos	Accurate, Long Read Length, Whole Human Genome Sequencing Under \$100
R43	HG007871	Kotseroglou, Theofilos	Sequencing by Transcription Using Single-molecule Field-effect Transistors
R21	HG006873	Wanunu, Meni; Jonas Korlach	Picogram-level DNA Sequencing using Nanopores and Zero-Mode Waveguides

Synthetic nanopore/gap w/electronic detection

R01	HG007406	Aksimentiev, Oleksii	Plasmonic Nanopores for Trapping, Controlled Motion and Sequencing of DNA
R21	HG006313	Drndic, Marija	DNA Sequencing Using Single-layer Graphene Nanoribbons with Nanopores
R21	HG007856	Drndic, Marija	High-bandwidth DNA Sequencing Using Graphene Nanoribbon-nanopore Devices
R01	HG003703	Golovchenko, Jene A; Daniel Branton	Electronic Sequencing in Nanopores
R01	HG006323	Lindsay, Stuart M	Instrument to Optimize DNA Sequencing by Recognition Tunneling
R01	HG006879	Shepard, Kenneth L	Integrated, Multiplexed High-frequency Electronic Analysis of DNA in Nanopores
R21	HG006314	Takulapalli, Bharath Reddy	High Speed DNA Sequencing by Chemical Recognition using Novel Nanopore Technology

Biological nanopore w/electronic detection

R01	HG006321	Akeson, Mark A	Optimization of Processive Enzymes for DNA Sequencing using Nanopores
R01	HG007827	Akeson, Mark A	Optimization of Nanopore Genomic DNA Sequencing
R21	HG007833	Boyanov, Boyan	Hybrid Nanopore Platform for DNA Sequencing
R01	HG003709	Ghadiri, M Reza	Single-molecule DNA Sequencing with Engineered Nanopores
R01	HG005115	Gundlach, Jens; Michael Niederweis	Nanopore Sequencing of DNA with MspA
R01	HG007415	Ju, Jingyue; GM Church, James J Russo	An Integrated System for Single Molecule Electronic Sequencing by Synthesis
R01	HG002776	Muthukumar, Murugappan	Modeling Macromolecular Transport through Protein Channels and Nanopores
R43	HG006878	Schibel, Anna	Towards Viable Nanopore Sequencing by Slowing DNA Translocation

Nanopore with modified analyte

R01	HG005871	Meller, Amit; CM Klapperich; Z Weng	Single Molecule Sequencing by Nanopore Induced Proton Emission (SM-SNIPE)
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Other

R43	HG007843	Farinas, Javier	Enzyme Switch: Many Reporter Molecules From a Single-molecule-sequencing Product
R01	HG007404	Ramsey, John Michael	Nanofluidic Platforms for High Resolution Mapping of Genomic DNA
R44	HG005144	Raz, Tal	Microfluidic DNA Sequencing