

Submitted by: Stephen Lanier, Vice President, Research
William Decatur, Vice President, Finance and Business Operations

**NovaSeq Share Instrumentation Grant for Wayne State University –
National Institutes of Health S10 OD025170-01**

Recommendation

It is recommended that the Board of Governors authorize the President, or his designee, to approve acceptance of an NIH grant/contract (\$600,000) in combination with institutional match for expenditures not to exceed \$1,286,169 to Illumina, Inc for the purchase of the Illumina NovaSeq 6000 DNA Sequencing System.

Background and Project Description

Wayne State University requests approval to purchase an Illumina NovaSeq 6000 DNA Sequencing System to maintain and further develop the university's biomedical research program in genomic sciences. The NovaSeq6000 will replace the current outdated HiSeq2500 sequencing instrument that does not meet the demand or technology needs of the University, and is not cost effective to run.

Key strategic programs supported by this discovery and diagnostic platform in genome sciences includes the perinatology research initiative, the perinatology research branch, the NCI designated comprehensive cancer center, metabolic diseases, the microbiome and neurosciences. These programs account for the major portion of extramural funding from the National Institutes of Health. In addition, access to this enabling technology will accelerate continued growth of clinical research initiatives and industry sponsored clinical trials.

The NovaSeq uses massively parallel sequencing technology for genetic analysis and functional genomics. The instrument control computer conducts real-time analysis processing that automatically produces image intensities and quality-scored base calls directly on a four-processor PC, which is included in the requested equipment. The instrument is operated in single or dual flow- cell mode. Each flow cell can be operated independently with different read lengths and run parameters.

WSU was awarded the maximum grant allowable (\$600,000) for this project through a highly competitive grant from the National Institutes of Health and WSU must procure the instrumentation as defined in the grant. Wayne State University will contribute \$686,169 in matching funds. The purchase cost of \$1,286,169 includes \$895,365 for equipment and \$390,804 for a five year maintenance contract. The total aggregate purchase exceeds \$1M and thus requires approval by the Board of Governors.

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Project Budget

Funding Sources	
National Institutes of Health	\$600,000
Matching funds required for equipment purchase and associated maintenance contract	\$686,169
• Vice President for Research	\$386,169
• Karmanos Cancer Center	\$100,000
• School of Medicine	\$100,000
• Perinatology Initiative	\$100,000
TOTAL Sources	\$1,286,169
Expenditures Plan	\$1,286,169
TOTAL Expenditures	\$1,286,169