

MEPNN Supplier Scouting Opportunity Synopsis

Item Information

Scouting Number	2023-157
Item to be Scouted	Benchtop nanopore RNA/DNA sequencer
Days to be scouted	30
Description	We require a small benchtop DNA/RNA sequencer designed to run up to two flow cells, which allows nanopore-based long-read sequencing of both RNA and DNA while preserving epigenetic modifications.
State item to be used in	Rhode Island

Contact Information

Email	
First Name	
Last Name	
Department / Company / MEP Center	
Bureau / Division / MEP Center Regional Office	Center for Environmental Measurement and Modeling, Atlantic Coastal Environmental Sciences Division

Supplier Information

Type of supplier being sought	Manufacturer
Reason	New product startup

Summary of technical specifications and performance requirements

Describe the manufacturing processes (elaborate to provide as much detail as possible)	Benchtop bio-electric DNA/RNA sequencing device
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Provide dimensions / size / tolerances / performance specifications for the item	<p>Specific characteristics of the device, initial reagents and supplies, and training that limit the availability to a sole source are as follows:</p> <ul style="list-style-type: none"> • Ability to generate long-read sequences. Long-read sequences (> 10 Mbp) are essential to enable genome assembly. Short-read sequencing technologies do not allow for the assembly of genomes due to the inability to assemble sequences with extensive homology such as repeat sequences. Furthermore, long-read sequences enable detection of copy number variation and other large-scale structural variation. • Ability to sequence both RNA and DNA in the absence of amplification. This is simpler, faster, potentially cheaper, and preserves modified bases, which facilitates examination of epigenetic marks on the molecules. • Ability to generate both DNA/RNA sequence and epigenetic data simultaneously. No other sequencing platform can provide information about the DNA or RNA sequence as well as the modifications that are found on the DNA or RNA. DNA and RNA base modifications that can be identified at single nucleotide resolution, include 5mC, 5hmC, 6mA, and BrdU in DNA, and m6A in RNA. • Targeted sequencing through rejection of unwanted sequences. The platform should allow the investigator to target the regions of the genome of most interest by programming the ability to reject any sequences that are not part of those to be sequenced. No other platform provides this function. • Ability to run two flow cells simultaneously and to reuse flow cells. The flow cells used in the technology allow the investigator to wash out the DNA/RNA in a run and add a new sample. • Ability to assess gene sequences in real time. This feature allows the investigator to see the sequence that is being generated from a sample while the sequencing is taking place allowing the investigator to determine if the sequencing run should proceed, decreasing time to result and reducing costs. No other sequencing platform provides this feature. • Cost for equipment, reagents, and flow cells. The cost for the equipment is priced to allow an investigator to set up a sequencing facility in their own lab at a low cost.
List required materials needed to make the product, including materials of product components	n/a
Are there applicable certification requirements?	No
Are there applicable regulations?	No
Additional Technical Comments	

Volume and Pricing

Estimated potential business volume	1 device with initial reagents and training
Estimated target price / unit cost information (if unavailable explain)	Approximately \$40,000

Delivery Requirements

When is it needed by?	6-12 months
Describe packaging requirements	Components wrapped and shipped as needed for intact delivery
Where will this item be shipped?	27 Tarzwell Drive Narragansett, RI 02882

Additional Comments

Is there other information you would like to include?

- "Vendor/company must be registered or will register in SAM.gov (<https://sam.gov/content/home>)."
- "This inquiry does not guarantee award of a contract."
- "EPA requires a commercial off the shelf instrument that is immediately available that meets the technical specifications attached. Vendors shall provide documentation that their proposed product meets or exceeds the technical specifications attached."