

ACAN – Genome Assembly, Saskatoon, SK

REQUIREMENT:

The Science and Technology Branch at Agriculture and Agri Food Canada (AAFC) requires the services of NRGene to generate an assembled genome for the mustard species *Sinapis alba*. This would include assembled contigs / scaffolds, raw sequence data used in the assembly process, as well as assembly statistics.

CONTRACT PERIOD:

The contract will be from the date of contract award to March 31, 2017

PROPOSED CONTRACTOR:

NRGene,
Golda Meir St.
Box 27
Park HA'MADA
Ness-Ziona 74036
Israel

SOLE SOURCE JUSTIFICATION:

NRGene owns the proprietary rights to the software 'denovoMAGIC' which can successfully generate very long sequences required.

NRGene's software product "denovoMAGIC" is based on five (5) years of research and optimization by an integrated team of algorithm developers, plant geneticists and molecular biologists, and was developed to be a turnkey solution for generating new reference genomes.

The process starts with NRGene's unique recipe for library preparation and Illumina sequencing to minimize bias and generate optimal raw data for assembly. After that, the reads are fed into a proprietary algorithm running on a cloud based computational cluster that supports the required computational complexity. The algorithm first builds correct contigs out of the short reads, and then stitches them together into long scaffolds or even pseudo-chromosomes, while minimizing artefacts and breaking chimeric links which erroneously connect unrelated contigs, confounding most other assembly suites.

Although NRGene's approach is experimental it has achieved success in generating plant genome sequences and there is no other software on the market that can generate the very long sequences that we need.

Development of genome sequences for complex species such as plants has historically been very difficult and has required significant resources, both financially and computationally.

'denovoMAGIC' makes it possible to contemplate sequencing a plant genome. Prior to the developments made by NRGene, a genome sequence would be made up of thousands (sometime millions) of very small fragments which provided little value for downstream applications, such as marker assisted breeding. The software, and the improvements that NRGene has made to the data which is generated to use with the software, allows complex plant genomes to be deciphered into a small number of exceptionally long segments. Having the genome organized in a small number of fragments, often representing entire chromosomes, is essential to be able to use the genome sequence as a tool in downstream applications.

ACAN NOTICE :

You are hereby notified that the government intends to negotiate with one firm only as identified above. Should you have any questions concerning this requirement, contact the Contracting Authority.

An Advance Contract Award Notice (ACAN) allows departments and agencies to post a notice, for no less than fifteen (15) calendar days, indicating to the supplier community that it intends to award a good, service or construction contract to a pre-identified contractor. If no other supplier submits, on or before the closing date, a Statement of Capabilities that meets the requirements set out in the ACAN, the Contracting Authority may then proceed with the award. However, should a Statement of Capabilities be found to meet the requirements set out in the ACAN, then the Contracting Authority will proceed to a full tendering process.

Inquiries on Submission of Statement of Capabilities

Suppliers who consider themselves fully qualified and available to provide the services/goods described herein, may submit a statement of capabilities in writing, either via letter, facsimile or Email to the contact person identified in this Notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

The Solicitation Number, Name of Contracting Authority and closing date of the ACAN must appear within your Statement of Capabilities in block letters.

The Crown retains the right to negotiate with suppliers on any procurement.