NATIONAL INSTITUTE OF BIOMEDICAL GENOMICS
(An Autonomous Institution of the Government of India)

P.O.: N.S.S., Kalyani 741251, West Bengal, INDIA
www.nibmg.ac.in

Advertisement No: NIBMG/ADMIN/ESTB/2021-22/192 **Date: 24-09-2021**

National Supercomputing Mission (NSM) Platform for Genomics and Drug Discovery:
Development of a fast, flexible, high performance computing framework to accelerate NGS omics-data analysis

Massively Parallel Sequencing or Next Generation Sequencing (NGS) has taken the scientific community by storm. After commercial availability of the technology from last decade onwards, even modest sized laboratories and institutions all over the world can effectively produce petabytes of data in weeks. Earlier the most robust Sanger sequencing technology can only generate 0.003 Gb of sequence data in a month whereas the present day an average next generation sequencer can generate 50000 Gb per month. This revolution in data generation technology warrants an array of statistical and computational advancement to translate information into knowledge. The stumbling blocks in translating the large volume of data (information) to biologically relevant inferences (knowledge) range from (a) information storage, retrieval of the raw data as-is generated from the sequencing machine - (b) large-scale fast computation and processing that is essential for the data to be useable by the general scientific community (c) sophisticated analysis that is required in transforming the enormous information to knowledge. Of the above, currently, (a) and (b) almost entirely falls in the domain of computational experts and basic scientists without appropriate competence in computational skills, fail to engage. Moreover, a full appreciation of (a), (b) and (c), particularly (b) and (c), require access to highly powerful computer architecture, which is even beyond the capability of a modest institute, let alone an individual. The objective of this project is to make available an easy and extremely flexible supercomputing analysis framework, preferably web-based, to the basic scientist. This would enable them to exercise their choice of programs sequentially in a seamless fashion to process the raw sequence data in accordance to their need and choice (i.e. (b)). It will also provide the research a wide array of tools for sophisticated data-analysis (i.e. (c)). The project also would keep in record the usage of the programs and would analyze the data to optimize and synchronize among different programs and modules.

We are looking for motivated and bright individuals interested to explore career opportunities in this innovative multi-organization initiative in National Supercomputing Mission (NSM) at NIBMG in the positions mentioned as below:

Name of Project	Name of the position	No. of Position	Consolidated Remuneration [INR] per month	Essential Qualifications	Desirable Qualifications	Nature of Duty
NSM	Software Engineer - Tier I	2	35000/-	(1) M.Tech /M.C.A/MSc in Computer Science/ Bioscience / Statistics/ Bioinformatics/ Biophysics/ Bioengineering or related discipline (2) Expert in next generation sequence (NGS) data analysis and Strong UNIX scripting knowledge. (3) Published scientific papers/whitepaper in reputed journals.	(1) Minimum 1 years of experience in web-development skills (Python and Django, HTML, CSS, JS) (2) Experience in Python or R (3) Experience in API & database development	(1) Building of web components/ back-end and front-end data integration /integrate bioinformatics pipeline. (2) Data analysis. (3) Report writing

These positions are contractual, and appointments will be initially given for **one year/co-terminus with the project**, which are extendable depending upon performance and requirements of the project. Please apply online at **https://apply.nibmg.ac.in** (no other form of application will be accepted). The last date of application is **15th October,2021 5PM**. Please visit our website **www.nibmg.ac.in** for further information. Only the shortlisted candidates will be called for on-line Interview/Test. No TA/DA will be provided for attending the Interview/Test.

The decision of NIBMG in all matters relating to eligibility, acceptance or rejection of application, mode of selection, and conduct of interviews will be final and binding on the candidates. In exceptionally meritorious cases, the eligibility requirements may be relaxed by the competent authority.