



**GUWAHATI  
BIOTECH PARK**



*Expression of Interest (EOI) for operation and maintenance of  
Fluorescence-Activated Cell Sorting (FACS) machine under  
Bioprospecting facility,  
Technology Incubation Centre,  
Guwahati Biotech Park, Amingaon, North Guwahati-31*



# **EOI For leasing out Fluorescence-Activated Cell Sorting (FACS) machine at Bioprospecting facility, Guwahati Biotech Park**

## **1. A brief about Guwahati Biotech Park**

Guwahati Biotech Park (GBP) is the first Biotech Park in North East India and is a joint initiative of Govt. of Assam and Department of Biotechnology (DBT), Government of India. The objective of GBP is to encourage and support the startup, incubation, innovation led business in biotechnology and allied areas accelerating entrepreneurship development and biotech industrial ventures in North East India. GBP provides laboratory infrastructure, instrument facility, business enterprise zone (BEZ), business support facility and other scientific and technical support to entrepreneurs in biotechnology or related areas in North East India and neighbouring countries connected to Assam, India.

The Technology Incubation Centre (TIC) at Guwahati Biotech Park is developed to lease out its state-of-the-art R&D infrastructure to entities and entrepreneurs who wish to develop innovative products in the fieldz of biotechnology and allied areas. The TIC, GBP is the first-ever biotechnology incubator in eastern India, has been promoted by the Assam government to promote entrepreneurship in biotechnology and related areas in the northeast. It also intends to encourage industrial growth to ensure proper and effective utilisation of the huge bio-resources in the region. The permanent campus of TIC, GBP is now located at Triptinagar, near SP Office, Amingaon, Guwahati-31, invites companies to engage in innovative technologies in four key areas, namely healthcare and pharmaceuticals, agro-technology, food processing, and bioinformatics.

## **2. Objects and activities of the Guwahati Biotech Park are:**

- To encourage and support the start up, incubation and development of innovation led, high growth knowledge based business in the multidisciplinary area of biotechnology.
- To provide state-of art infrastructure facilities and single window services for setting up biotechnology, chemical and biological industries in the park.
- To act as an engine for the growth of the biotechnology, chemical and biological industry and to act as a facilitator and a catalyst in the process of industry's development.
- To provide formal and operational links with centers of knowledge creation such as national R&D laboratories, Universities, Medical Institutions and research organizations in India and abroad and create a strong network.
- To promote setting up biotechnology industrial ventures, contract research organization and healthcare industry.

### **3.Introduction of Bioprospecting facility:**

Currently Technology Incubation Centre, Guwahati Biotech Park at Amingaon, Guwahati, has a well equipped Bioprospecting facility. It has all major infrastructure and equipments with laboratory facilities including a FACS machine (BD FACS Aria Fusion), Biosafety cabinet (Thermofisher), CO<sub>2</sub> Incubator (Thermofisher), Robotic Liquid Handling machine (Eppendorf), Confocal microscope (Leica), Freeze dryers, gradient PCR etc. which are intended to be used by students, researchers, start-ups, entrepreneurs of the region.

### **4. Proposal for operation and maintenance FACS machine**

The BD FACS Aria Fusion is an advanced system for experienced users, achieving high sensitivity and resolution with flexibility and control. The Aria Fusion can meet a variety of needs with its range of nozzle sizes, adjustable dynamic range of sample flow rates, and selection of sort devices- including 2-way and 4-way tubes as well as options for 6-, 24-, 48-, 96-, and 384-well plates. The FACS Aria Fusion at GBP has multicolour flow-cytometry analyzer cum cell sorter with 3 lasers (Blue laser 488nm; Red laser 640 nm; Violet laser 405nm), 14 colours, 16 parameter configurations and it is upgradable to six lasers and true UV laser (355nm)

Guwahati Biotech Park is looking for a startup/ company /organisation/entrepreneur to use the FACS machine along with other required equipments and laboratory facilities at GBP for their related research & development or in service sector. Preferences will be given to the long term users or users with multiple samples. The agency selected for this purpose will have to maintain the instrument as well as the facility as per desired standard guidelines of GBP. Initially the facility will be available for use for a period of two years, extendable on mutually agreed terms. During the operation, the agency has to provide the manpower/scientific personal, with sound knowledge and experiences on FACS machine as well as to interpret/analyze data and results. The consumables, chemicals, lab ware etc have to be borne by the agency only. The agency will be responsible to service/repair the instrument, if needed during its operation. The agency can jointly organize trainings/workshops/seminars related to operation/software use/data analysis etc of the instrument, fee and other financial matters will be framed as per the terms and conditions of GBP or on the basis of mutual agreement.

## **5. Fees**

To apply the agency has to pay a nominal fee of Rs 1000/- (One Thousand only) which is non-refundable.

The agency has to make a security deposit for 3 (three) months prior to use, which is based on mutual agreement.

The agency can use FACS machine along with laboratory spaces, other related instruments and facilities if needed.

The user charges for the FACS machine, laboratory space and other equipment will be as per official rate of Guwahati Biotech Park or as per the terms and conditions based on mutual agreements.

## **6. Submission of the proposal**

The Interested start-up/ company/organization/ agencies may submit their offer/proposal as per the open application format of TIC, GBP through email or link on website for consideration.

(Format can be downloaded from GBP website)

- There will be subject experts, who will evaluate the strength and practicality of the proposal.
- The proposal shall be evaluated by taking into consideration the agencies background/vision, experience/expertise in the relevant sector, outcome, fees to be quoted for all the applications at its discretion.
- An agreement will be executed between GBP and the selected applicant incorporating terms and conditions and other details by mutual consent.
- GBP will not be responsible for any IPR issues arising on the submitted proposals.
- Competent Authority of GBP reserves the right to reject any or all the applications without assigning reason(s) thereof.

## **7. General instructions:**

- Indenting applicants are advised to visit the facility to assess the instrument and facility details. Visit may be undertaken with prior information.
- All FACS related training materials/publishable materials/advertisements/news matters/brochures/flyers need to be approved by GBP before circulation and all programs to be conducted with GBP jointly.
- User have to maintain entry/exit; log book/time of operation/sample received/analysed which is to be recorded regularly.

- Applicants can receive the updates by visiting the GBP website – [www.guwahatibiotechpark.com](http://www.guwahatibiotechpark.com).
- The last date for submission of the proposal is 21 days from the date of publication of this advertisement.
- Proposals may also be submitted electronically to The Chief Executive Office, Guwahati Biotech Park (GBP) and can be mailed to [bioedp@guwahatibiotechpark.com](mailto:bioedp@guwahatibiotechpark.com).

## **8. Specification of the FACS machine under Bioprospecting Facility**

### **Item Description**

Model BD FACS Aria Fusion Fluorescence Activated Cell Sorter (FACS): Multicolor Flowcytometry Analyzer cum Cell Sorter with 3 Lasers 14 Colour 16 Parameter Configurations, Upgradable up to Six Lasers. True UV Laser (355 nm) upgradation is possible.

### **Optical Coupling**

The quartz cuvette flow cell is gel-coupled by refractive index-matching optical gel to the fluorescent objective lens for optimal collection efficiency.

Numerical aperture: 1.2

### **Laser details:**

3 Laser Bench Fixed optical alignment lasers upon the cuvette flow cell. Blue Laser 488 nm, Red Laser 640 nm, Violet Laser 405 nm. Upgradation Possibility: System is upgradable in future with upto Six lasers. System can be upgraded in future with 355 nm (True UV) Laser, 561 nm (Yellow Green) Laser and 445 nm Laser.

**Fluorescence Parameters:** 14 Fluorescence Parameters Fluorescence

### **Sensitivity**

Measurements performed at 70 psi and 90 kHz using SPHERO<sup>TMTM</sup> Rainbow Calibration Particles (RCP-30-5A)

FITC<87 MESF-FITC

PE 29 MESF-PE

### **Upgradation possibility:**

Additional detectors up to a total of 18 wavelengths can be added to the

### **2 numbers Physical Parameters:**

Forward Scatter (FSC) & Side Scatter (SSC)

### **Fluidic Cleaning Modes (Software)**

- Automated startup and shutdown

Clean flow cell

- Prepare for aseptic sort

Sample injection chamber for various sample input tubes, including micro- tubes, 12 x 75-mm, and 15 ml tubes

**Nozzles:** 70, 85, 100, and 130- $\mu\text{m}$ , removable and can be sonicated.

**Sample Acquisition Rate:** 70,000 events per second

**Sort Performance:** Two Way & Four way Sorting performances up to 70,000 events per second without affecting purity.

**Power:** Operation at 100/115/230 VAC and 50 or 60 Hz, Maximum power 1,500 watts

### Operating Software

**FACS Diva Software:** BD FACSDiva software to control the setup, acquisition, and analysis of flow cytometry data from the BD FACSAria III workstation.

### Data Workstation:

FACS Aria Win 7 Z220 Branded **WORKSTATION BUNDLE** with compatible and updated Technical specifications, includes 19-inch LCD monitor- 2 No.s, colour laser printer, UPS with 1 hr backup.



## **High-performance analysis, high-performance sorting**

The BD FACSAria Fusion features fluorescence sensitivity comparable to state-of-the-art dedicated analysis platforms. This is accomplished by using a gel-coupled cuvette design similar to the BD FACSCanto™, BD FACSVerse™, and BD LSRFortessa™ systems, and the same fixed optical architecture. Through the precise coordination of the optical and fluidic systems, the BD FACSAria Fusion delivers exceptional optical detection sensitivity compared to traditional stream-in-air systems, in which particle speeds are the same for both analysis and sorting.

### **9. Biosafety**

Flow cytometry facilities are multi-user facilities, where many different samples from various sources that may contain known or unknown human pathogens are also investigated. A biosafety questionnaire has to be answered and submitted to agency and to GBP, who so ever uses the equipment and facility of GBP as the safety of facility personnel and the user is of ultimate concern. Investigators using the equipment with animal model, if any pathogens or transforming agents, transformed cells, cancer cells, engineered cells etc. have to submit details of sample type, biohazard concern, ethical clearance etc and to follow standard safety protocols.

Information about the sample sources and potentially infectious agents has to be mentioned clearly on biosafety questionnaire. Consequently, this sample information form must be filled out completely and signed by the laboratory user who will analyse or sort in the flow cytometry facility at GBP. The same biosafety questionnaire will be maintained on file for future reference

**Applicant may also visit:** [https://www.bdbiosciences.com/content/dam/bdb/marketing-documents/BD\\_FACSAria\\_fusion\\_tech\\_specs.pdf](https://www.bdbiosciences.com/content/dam/bdb/marketing-documents/BD_FACSAria_fusion_tech_specs.pdf)

[https://www.bdbiosciences.com/content/dam/bdb/marketing-documents/BD\\_FACSAria\\_fusion\\_brochure.pdf](https://www.bdbiosciences.com/content/dam/bdb/marketing-documents/BD_FACSAria_fusion_brochure.pdf)

### **10. For more information please contact:**

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**Application for EOI of Fluorescence-Activated Cell Sorting (FACS) at Guwahati Biotech Park, North Guwahati, Amingaon**

SI.No	Details about the Applicant	
1	<b>Type of entity:</b> Individual/Student/Partnership/Company/Others: (a) Name: (b) Country of incorporation: (c) Address of the registered office, corporate headquarters, and its branch office(s), if any, in India: (d) Registration no. of the entity, if any: (e) PAN No: (f) GST No: (g) Date of incorporation and/or commencement to business (Please submit necessary documents of registration and proof of office address): (h) Phone No. and Email for communication:	
1.1	Name of the Company/Service provider (If any)	
1.2	Brief description of the project/activities (ongoing)	
1.3	Justification for using FACS machine	
1.4	Details on adequacy of experience, approach & methodology in the sector	
1.5	Completed projects/services (if any)	
1.6	Details of technical expertise and current manpower	
2	<b>Requirements</b>	
2.1	Requirement of space for operating FACS at GBP <ul style="list-style-type: none"> <li>• Sample storage</li> <li>• Chemical storage</li> <li>• Freezer</li> <li>• Sample preparation area etc</li> </ul> Please mention any other requirement	
2.2	Requirement of additional equipments (if any)	
2.3	Requirement of other facilities, (if any)	
3	<b>Past experience</b>	
3.1	Any training/workshops organized/attended in the mentioned area	
3.2	Number of years in the relevant sector	
3.3	R&D set-up in India or abroad, if any	
3.4	Experience in the North Eastern Region of India, if any	
3.5	Previous work done/service provided in the related sector	
4	<b>Financial Arrangement</b>	
4.1	Mechanism of financing including financial status	
5	Revenue generation model for 2 years or more	
6	Any expenses, for operation & maintenance of FACS for 2 years or more.	
7	<b>Any other relevant information</b>	

Name and Signature of the authorized official:

Date:

Seal:

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