DEPARTMENT OF BIOTECHNOLOGYMINISTRY OF SCIENCE & TECHNOLOGY

Scientific Infrastructure Access for Harnessing Academia University ResearchJoint Collaboration (DBT-SAHAJ Infrastructure)

Since 1986, the Department of Biotechnology (DBT) has been supporting the development of research infrastructure at universities and research institutes/ medical institutes. Initially, the Biotech facilities were supported under the 'Task Force on Infrastructure' to meet individual researchers and labs and departments. Since beginning of 12th plan the strategy of the scheme was shifted to funding of shared facilities with sustainability catering to the needs of several stakeholders such as academia, agriculture and medical service sector, bio-industry andproduct developers. The 'Task Force on Research Resources, Service Facilities and Platforms' consisting of multidisciplinary team representing stakeholders was initiated.

The Department of Biotechnology announced the Access of its Research Resources and Facilities supported across the country, by way of Scientific Infrastructure Access for Harnessing Academia University Research Joint Collaboration (DBT- SAHAJ Infrastructure).

Purpose:

The primary goal of DBT-SAHAJ Infrastructure is to create "**national**" service facility/ research resource/platform to provide access to resources that could not be provided by any single researcher's laboratory or scientific department but required for data acquisition, analysis and providing the proof of concept to cater the needs of a larger community. The service facilities are the research resources including the scientific and technical support, which are established to provide comprehensive services to users for creating efficient research and innovation environment. The main emphasis is to foster the long-term sustainability of research infrastructures through providing services to the scientific/industrial community on cost recovery and fee for service basis. The service facilities of GLP/non-GLP standards and up to the highest biosafety level may be supported.

A platform is a group of technologies that are used as a base upon which other applications, processes or technologies are developed. These platforms range from vast chemical libraries, ultra-high throughput screening and huge genetic databases in discovery, to predictive toxicology platforms, cutting-edge 'omics' and even deep-seated knowledge of particular therapeutic areas in development. Technological platforms are very expensive. Technology platforms follow a three- stage process. First, stakeholders forge a common vision. Secondly, they define a Strategic Research Agenda (SRA) setting out the necessary medium- to long-term objectives. Finally, they implement the SRA by facilitating the mobilization of the necessary human, financial and technological resources. In a Platform, all relevant stakeholders come together to address and resolve the challenges that lie ahead through a concerted and dedicated approach.

The overall aim of this programme is to establish the new or up-gradation of existing research resources/service facilities and platforms in Indian Institutions/Universities engaged in cutting edge research in frontier areas of Life sciences/Biotechnology and also to establish the infrastructure for various services

in agriculture, medicine, environment and industry in public interest.

The major objectives of this programme are -

- **Quantitative and qualitative expansion of existing or establishing of new research infrastructure**
- **Providing access to world class and state of the art facilities Technology**
- **driven capacity building**
- **Human resource development through training**
- **Improvement of institutional/university biotech infrastructure for educational and quality research leading to societal impact**
- **Encouraging the long term operational sustainability**
- **Fostering academic and industry cooperation Fostering**
- **partnerships to maximize opportunities strengthening**
- **global competitiveness**
- **Promote translational research leading to products testing, validation and development**
- **Provide services for food and environmental biosafety assessment, diagnostic and detection services related trade, medicine and agriculture and environment**

Eligibility

Public and deemed institution/university or private UGC recognized institution/University (including deemed universities) certified for doing Research and Development activities by Department of Scientific and Industrial Research (DSIR).

Proposals that have been not recommended for support can re-apply for this program for financial support with appropriate modifications and revisions after a gap of two years. The revisions made may be conveyed in a cover letter to DBT and the same should be highlighted in the proposal at relevant sections.

Terms and Conditions of Support

I. **General**
   A. The research infrastructure including the equipment/instruments must be acquired according to the sanction order and as per GoI norms.

   B. In addition, new specialized and customized support services and use models must be developed for intensified joint utilization of the research infrastructure, in particular by private business entities.

   C. Revenue generated through services need to be reflected on audited utilization certificate (UC) and Statement of expenditure (SE). It should be utilized for the maintenance of the facility with prior approval by DBT, or as instructed by DBT from time to time.

   D. Audited Utilization Certificate (UC) and Statement of expenditure (SE) of the previous financial year ending on 31st March need to be submitted by May of the subsequent financial year.

   E. Maintenance of the facilities (in public institutions/universities only) may be

considered on the basis of revenue generated, utilization, working load and training provided, number of users benefitted each year etc. and recommendations of Task Force/Expert Committee.

II. **Specific**

1. A revenue model is mandatory requirement for consideration of project. **The revenue model may be exempted in case the project has a greater social impact; the exemption will depend upon the discretion of the Task Force/ Expert Committee and may vary on case to case basis.**

2. An established R&D institution and university (including public, deemed andprivate university) may put up a proposal with following conditions:

   a. For establishing/upgrading a shared facility in which the Equipment/Facility costing **Rs. 50 lakhs or above, only** will be supported. Any instrument/equipment below this limit may be acquired through competitive research grant system of any national funding agency.

   b. These proposals must have a component for **short term training** (1-2months) of faculties or junior level scientist of remote institutions/universities (both public and private).

   c. Applicant must propose a suitable revenue business model leading to sustainability within limited time frame. It is mandatory to operate these facilities/infrastructure created on service providing basis with a clear service charges approved appropriately. The private universities must be recognized by UGC & DSIR for research and contributed significantly in the growth of biological science during past 10 years.

   d. Proposal must involve a strong training opportunity for development of skilled and quality manpower.

   e. The proposal must have a strong research component based on the strength of the coordinator and participating investigators; also an exhaustive list of potential uses. Collaborators should highlight the purpose of setting up this facility in the host institute.

III. **Usage under DBT-SAHAJ:**

   A. Each facility supported under DBT-SAHAJ Infrastructure programme will be a National Facility & make available its high end equipment andinfrastructure to Research Institutes, Universities, colleges and start- ups / entrepreneurs. Their website reflects Infrastructure facility usage forms with well-defined usage charges terms and conditions.

B. The website shall host a well-defined link for the facility enumerating the details of user charges, mode of application and timelines for thedecision on the applications.

C. The user charges shall be separately defined for different categories viz. Research Institutes, Universities (central, state, private), colleges and start-up/ Entrepreneurs.

D. The Infrastructure access from will be online and all booking will be confirmed within 2 weeks.

E. Preferably at least one third of the time shall be allocated to the external users after a clear mapping has been done of how much timeis being dedicated for the host users.

F. The applicants (external users) having no government or other funding shall be allowed to put in a request for accessing infrastructure facility with details viz. Scope of the study. Objectives and work plan for usingthe facilityfor which cost will be met from the Infrastructure Access grant available with each host institute. Since the grant is capped at Rs10.00Lakhs per year per institute, the request shall be considered and supported by the host institute on competitive basis.

G. The infrastructure access grant cost shall be met under the contingent grant sanctioned by the DBT. In case the number of requirement considered exceeds Rs10.0Lakh per year, this shall be reimbursed by the Department on actual basis however not exceeding Rs10 lakhs/year.

H. The request for utilizing the facility shall be screened in a time bound manner by the Director of the host institute and decision conveyed within 4weeks.

IV. **Duration**

Project will be supported for a maximum period of five years and subsequent year grants will be released only after submission of the necessary documents. In General, NO extension will be provided beyond five years though project duration may be extended as follows:

A. Maximum of one year within the approved budget of the project with salary component.

B. Maximum of two years for projects showing exceptionally outstanding performance with additional budget. During extension period, ONLY the manpower, consumables and AMC will be provided.

C. Maximum of 5 years if the project is having extensive user data that shall be submitted by the host institute in the SAHAJ portal. Extension period will cover the cost of AMC, technical manpower personnel and consumables.

V. **Proposal Submission**

Proposals may be submitted through **one** set of hard copy (via speed post) & soft copy via email
(Garima.g@nic.in.)
Detailed guidelines are available at dbtindia.gov.in.

VI.   **Justification of the instrumentation**

The equipment/instruments proposed under this programme required to be justified as follows -

1. Necessity of the instrument/equipment in term of scientific and technical merits of a proposal and expected advancement of a knowledge.

2. Justification of the necessity of the procurement of the instrumentation, its performance class and equipment with accessories (usage load of the existing instrumentation, provision of additional measurement methods, testing of new measurement methods; other reasons).

3. Selection criteria for a proposed equipment/instrument – Specifications, price, compatibility, maintenance and operational cost.

4. Tabular list of previous funding of third-party-funded projects in the last five years (funding body, reference number, title, funding amount).

5. Information on the direct and indirect users of the equipment/facility along with the usage time.

6. Use of the instrumentation in joint research projects with other institutions or industrial enterprises.

7. Existing major instrumentation - tabular list of the instrumentation: type and function, year of commissioning, working load & usage duration in hrs/month, technical staff responsible, funding source.

8. For a replacement instrument/equipment – justification/reason for replacement, utility of existing instrument at present and in future.

9. Additional information such as room conditioners, availability of electricity etc.

10. Instruments involving x-ray/strong magnetic field/ Pathogenic substance/ organisms – Access norms, safety training and trained staff availability.

11. The applicant may refer the Scientific Research Infrastructure Sharing, Maintenance and Network guidelines by the DST, GOI. (May please refer the link https://dst.gov.in/document/guidelines/scientific-research-infrastructure-sharing-maintenance-and-networks-sriman)

VII.   **Revenue Model**

A suitable revenue model has to be submitted by the applicant especially for Service Facilities or research resources/platforms where providing a service is proposed. The revenue model may be decided on case to case basis; however, the model must envisage the sustainability of the proposed facility at least after three years of operation.

The revenue model may be exempted in case the project has a greater social impact; the exemption will depend upon the discretion of the Task Force/ Expert Committee and may vary on case to case basis. Final authority regarding the exemption of revenue model will be Department of Biotechnology.

VIII.   **Contribution of Funds**

For establishing a service facility, a private university must follow the following Contribution of Funds model towards the establishment of facility to meet the total cost of the project —

Year	Percentage of Fund contribution	
	DBT	**Private University**
I	60	40
II	50	50
III	40	60
IV	30	70
V	20	80

The Private Institute must share 50% cost of the NR Head and this has to be listed/details provided during submission of the proposal.

IX.   **Communication of Decision after Screening or review**

Decision of the Expert Committee/Task Force will be electronically/hard copy communicated or as per GoI communication policy. The reviewer comments/report and feedback from the Expert Committee/reviewer(s), and instructions for submitting the final proposal will be forwarded to the applicant. Project appraisal process will consist of: screening, evaluation and approval by Expert Committee/Task Force. Decision of the Expert Committee/Task Force/ Committee constituted for on-site assessment will be final and cannot be disputed. However, Department of Biotechnology reserve the right to support a proposal after accommodating further revision(s) or completion of any documentary requirements or on the basis of sectoral/national priority for a particular financial year.

X.   Process and Criteria for Evaluation

The proposals shall be generated/ invited by DBT as per national priorities and emerging requirements. All applications shall be evaluated based on the following criteria by concerned Division of DBT:

1. National priorities
2. Emerging Areas,
3. Users (number, shared and scale),
4. Lack of access and maximizing open access
5. Non-Duplication and integration of facilities
6. Research quality and probable impact,
7. External leveraging and co-investment,
8. Operational cost,
9. Need and cost of maintenance,
10. Technical services

Based on internal assessment, an onsite assessment will be carried out for appraising on scientific, technical, financial needs and expertise available at host institute/ university. Such site visit may be undertaken either before or after the project has been evaluated by the "Task Force on Research Resources, Service Facilities and Platforms'. In case the site visit is performed after the proposals are considered by the respective Task Force, the recommendations of the site visit committee will be considered final for funding the proposal. However, the special cases may be considered on case by case basis.

XI.   International cooperation

International research facilities is essential for strategic development of Indian science through exploitation and management of access to highly acclaimed and huge world class facilities, which require tremendous investment to build/replicate. Access to such high tech facilities may be provided to Indian scientists to meet the demands of trans- disciplinary areas of Life science and Biotechnology. Proposals for such facilities should be submitted in consortium mode with nodal institutions/ university coordinating. The access to such facilities should be provided to all deserving stakeholders through inclusive and transparent process.

XII.   Termination of Project

A project supported under this programme may be terminated under conditions of excessive and unjustified delays, administrative lapses, non-availability of coordinator, unjustified cost overrun, misappropriation of funds, non-achievement of project objectives, loss of opportunities, legal issues and direction of court, recommendations of the expert committee and the request of a coordinator.

XIII.   Data submission

The coordinators are required to submit the desired data relevant to the project from time to time or whenever desired including usage, revenue generated, rent acquired, duration etc. as per the DBT format for SAHAJ. Subsequent release will be based on evaluation of data.

XIV.   Monitoring and Compliance

The progress of the project may be monitored by Department of Biotechnology regularly/annually or whenever desired and project is required to comply with all the regulations/procedures as notified by this Department and other Departments/Ministries of India. The review by the Project Monitoring Committee duly constituted by the approval of

Secretary DBT will be done regularly and will substantiate the review process. The review shall be done by at least One site visit (mid-term) and two presentations during the tenure of the project and one presentation for the completion of the project. Annual release will be subject to satisfactory evaluation by either of the two Committees i.e Project Monitoring Committee or the Task Force on Research Resources, Service Facilities and Platforms.

XV. **Access to Resources/ Facilities/Platforms through DBT-SAHAJ**

All Indian Researchers/Academicians/Industrialists must have open access to the resources/facilities/platforms as per the norms of the institution/GoI.

XVI. **Assets Rights**

The resources/ facilities/platforms established through this programme will be treated as Government of India assets/property. The retention of the equipment purchased out of the project grant after completion of the project in respect to Private Institutions will be as per the instructions/modalities/terms & conditions issued by the Department of Bio-technology keeping in mind overall public interest in accordance to instructions issued by Ministry of Finance vide OM dated 30.09.2021.

XVII. **Conflict of interest and confidentiality**

For discussion or evaluation of proposals, members of committee must declare a conflict of interest if they or close professional associates will or might benefit, directly or indirectly, from any support. The potential Conflict of Interest will be discussed and rated as high, medium or low and the member(s) will be either asked to leave the meeting for the duration of Committee's deliberations regarding the relevant proposal, or to refrain from any discussion and participation in decisions related to the proposal(s).

Members of Committee should observe the confidentiality of proposals and other applications for support, especially for proposals received from the private industries. However,Department of Biotechnology reserves the right to send the application to third parties for comment, advice or other action.

Check list

1. Undertaking by Head of the Institute Space availability to conduct theprogramme Establish the Research/ Facility/Platform.

2. Approvals and clearances of Statutory bodies (like Institutional Biosafety Committee, Animal Ethics Committee etc.) or Authorities [like clearance from D/o Environment, National Green Tribunal, Development authorities, Committee for the purpose of control and supervision of experiments on Animals (CPCSEA)]

3. DSIR certificate for recognition of in-House R&D units

4. Compliance to the following:

   a. National Biodiversity Authority guidelines
   b. Safety code for Industrial Radiography under Radiation Protection Rules, 1971
   c. OECD principles of Good Laboratory Practices (GLP) and National Good Laboratory Practice Compliance Monitoring Authority (NGCMA), DST

GENERAL CRITERIA

A. **Principal Investigator & Co-Investigator (s) and the Implementing Institution**

   i. The Principal Investigator (PI) has the primary responsibility of the implementation of the project. The project team consists of the PI, Co-Investigator(s) and the project personnel appointed as per the sanction order. Itis necessary to ensure that the project is carried out by the project team in a cohesive manner. Periodic meetings of the team are essential for this purpose.

   ii. In case of PIs who would be superannuating during the duration of the project, association of an "in-service" Co-Investigator should be ensured. In such cases, the Institute authorities should inform to this Department, well in advance, about their "no objection" for providing the infrastructural facilities to the PI for implementation of the project after his superannuation.

   iii. Having accepted the responsibility for the implementation of the project, the PI should be committed to implement the project over its duration and should have no plans to go on long leave.

   iv. In case the PI leaves the project due to unforeseen circumstances, the Co-Investigator could be considered as the PI subject to the approval of the PI, Head of the Institute and this Department. Such a request should be sent at least 4-6 months in advance along with a detailed bio-data of the Co-Investigator.

   v. The PI as well as the implementing institution has the responsibility of informing this Department about any change in the status of the PI/ Co-Investigator including relieving them on short term deputation for a continuous period of 3 months or more.

   vi. The project stands terminated in the absence of the PI/ Co-Investigator for a continuous period of 6 months without intimation to this Department.

   vii. The implementing institution has an important role to play and in consultation with this Department should take steps to ensure successful completion of the project, before relieving the PI.

   viii. The implementing Institute should provide full infrastructural facilities such as accommodation, water, electricity, library, and communication facilitiesetc. for smooth implementation of the project.

B. **Project Staff**

   i. All the Research personnel appointed under the project, for the full/ part duration of the project, are to be treated as contractual employeesand will be governed by the circulars issued in this regard by the funding agency (DBT/DST/ICMR).

   ii. The sanction order specifies the number of personnel, in different

categories along with their consolidated/Stipendiary/Fellowship emoluments, sanctioned under the project.

iii. Scale and emoluments for the posts not covered under this order are governed by norms prevalent in the implementing Institution or as may be decided by this Department.

iv. In case of recruitment of JRF/ SRF candidates, NET/ GATE qualified candidates must be preferred.

v. Projects staff can avail the leaves as per the leave rules of the project implementing organization. The recruitment, duration of employment and termination of the project staff will be as per rules of the project implementing organization.

C. **Release of grants in yearly installment and financial management**

i. The grants for the project are released on the basis of yearly requirements taking note of the technical progress and expenditure incurred. The first sanction order indicates the budgetary allocation for the duration of the project under various heads like Equipment, Civil work, Manpower, Travel, Consumable, Contingency, Overhead, Books/journals, Workshop & Training, AMC/CMC for existing facility etc.

ii. The first installment of grant is released along with the Sanction order. The first year release consists of the entire or part of the Non-recurring grant and part of the recurring grant including 'Overheads'.

iii. Diversion of funds from non-recurring head to recurring head like Manpower, Consumable etc. is NOT allowed. However, any re- allocation/ re-appropriation of grants under different heads require prior approval of this Department.

iv. The equipment sanctioned in the project should be procured at the earliest to avoid any cost escalation. The PI and the implementing Institute should complete all formalities in advance for placing the order. Institutions are NOT allowed to purchase equipment other than sanctioned in a project without DBT's prior permission.

v. The subsequent installment of grant would be released annually on the basis of expenditure incurred in the previous financial year and expected expenditure in that year.

However, any request for release of the next installment should be accompanied by the following documents:

a. Utilization Certificate and Statement of Expenditure for the financial year (in original or copy if sent earlier) ending on 31st March, which is followed by submission audited statements for the same financial year up to May for the next financial year,

b. Latest authenticated Utilization Certificate and Statement of Expenditure (may include Committed Expenditure), for expenditure since 1st April of that financial year till the previous month; and

c. Technical Annual Progress Report.

d. Consolidated Assets Certificate (including the name of the equipment, Date of purchase and Installation, Cost of the equipment in Indian and Foreign Currency),

e. Manpower Certificate (including their qualification whether NET/ GATE etc. or similarly qualified, Date of Joining and Leaving, Salary paid per month and annum).

f. Un-spent non-recurring grant balance should be refunded via online NTR Portal at Bharatkosh and e-receipt generated should be sent; kindly note that sending provisional receipt or challan is not accepted.

vi. The Statement of Accounts and the Utilization Certificates must be financial year wise and to be submitted within a period of one month from the 31st of March of that year. (ie. If date of start of the project is 12.06.2018, then the first statement of account and utilization certificate will be for the period 12.06.2018 to 31.03.2019, the next statement will be for the period 01.04.2019 to 31.03.2020 and so on).

vii. The implementing institute will maintain a Zero Balance Subsidiary Account (ZBSA) for the project. Any interest earned should be reported along with interest earned certificate obtained from concerned bank, to this Department and should be reflected in the Statement of Expenditure.

viii. The institute will not entrust the implementation of the work for which the grant is being sanctioned to another institution nor will it divert the grant to other institute as assistance. In case the Institute is not able to implement the project, it should refund the entire grant or the balance grant at the earliest to this Department.

ix. For permanent, semi-permanent or infrastructural assets acquired solely from the project grants, an audited record in the form of a register in the prescribed format shall be maintained by the Institute. The term "Assets" include (a) the immovable property acquired out of the grant; and (b) movable property of capital nature where the value exceeds Rs 1,000/-. The Institute is required to send to this Department a list of assets acquired from the grant.

x. The grant shall not be utilized for construction of any building unless specific provision is made for this purpose in the sanction order.

xi. All the assets acquired from the grant will be the property of Government of India and should not be disposed off or encumbered or utilized for purpose other than those for which the grant had been sanctioned, without the prior sanction of this Department.

xii. After completion/ termination of the project, the Government of India will be free to sell or otherwise dispose of the assets which are the property of the Government. The Institute shall render to the Government necessary facilities for arranging the sale of these assets. The Government of India also has the discretion to gift the assets to the Institute or transfer them to any other Institute if it is considered appropriate and justified.

xiii. This Department reserves the right to terminate the project at any stage if it is

convinced that the grant has not been properly utilized or appropriate progress is not being made.

xiv. The Comptroller & Auditor General of India, at his discretion, shall have the right of access to the books and accounts of the Institute maintained in respect of the grant received from the Government of India.

D. Progress Evaluation and Monitoring

i. The PI through the implementing Institute will furnish to this Department an electronic copy and the desired number of hard copies of Annual Scientific & Technical Progress report for the work carried on the project on an annual basis. (ie. if the date of start of a project is 12.01.2000 the first Annual Technical Progress report shall be for the period 12.01.2000 to 31.01.2001, the next will be from 01.02.2001 to 31.01.2002 and so on).

ii. In addition, this Department may designate Scientist/ Specialist or an Expert Panel to visit the Institute periodically to review the progress of the work being carried out and to suggest suitable measures to ensure realization of the objectives of the project. The implementing Institute will provide all facilities to the visiting scientist/ specialist or the Expert Panel by way of accommodation/Local Travel/TA/DA etc. at the time of their visit.

iii. This Department also organizes Monitoring Workshops/ Experts committee meetings wherein the PIs/ Co-PIs and research staff are invited to present the technical progress of their project. The Investigators should attend such workshops since it provides an opportunity to review their progress based on which any midterm requests by the PIs for additional grants/ extension in duration etc. are considered by this Department. Subsequent releases of grant would be based on the reviewing and monitoring committee's recommendations.

iv. On completion of the project, the PI through the Institute should send the following documents to this Department to enable us to settle the account:

a. Consolidated Project Completion Report (Both soft copies and desired number of hard copies) with a summary sheet as first page indicating that Number of People Trained (separately as JRF, SRF,RA, Assistant Prof. etc.), Number of Patents (File and Granted separately), Number of Research Publications (total as well as with IF >3 separately), Achievement of the project in bullet format, Number and name of the lead molecules (if any).

b. Consolidated audited Statement of Expenditure and Utilization certificates (Financial Year wise).

c. Consolidated Assets Certificate (including the name of the equipment Date of purchase and Installation, Cost of the equipment in Indian and Foreign Currency).

d. Manpower Certificate (including their qualification whether

NET/BET/GATE or similarly qualified, Date of Joining and Leaving, Salary paid per month and annum)

e. Un-spent balance should be sent via online NTR Portal at Bharatkosh and e-receipt generated should be sent; kindly note that sending provisional receipt or challan is not accepted.

f. Revenue generated FY wise; Number of Users (internal, external which further may be classified as from academia, institutes, industry or start- up) and overall time allocated and utilized by external users.

g. No. of research grants/ projects that utilized this facility and their outcome.

E. **Guidelines for publication of results**

i. It is mandatory to acknowledge financial support provided by DBT via inclusion of Reference/Grant number, Name of the Department (i.e. DBT) and the duration of the financial support including the dates in acknowledgement section of publications/patents/technology transfer documents vide notification no. DBT/PCAH/Gen/01 dated 7th June 2012.

ii. The Investigator(s) should not enter into collaboration with a foreign party (individual/ industry) without prior approval of this Department.

iii. Investigators are also requested to publish some of the research papers emerging out of the project work in leading Indian Journals.

iv. If the results of research are to be legally protected, the results should not be published without action being taken to secure legal protection for the research results.

v. It should be ensured that manuscripts should not be published in predatory journals.

Guidelines/ Instructions for Technology Transfer and Intellectual Property Rights
General guidelines for Technology Transfer and Intellectual Property Rights as approved with GOI shall be applicable.