GUIDELINES FOR RESEARCH & DEVELOPMENT PROJECTS UNDER BIOINFORMATICS, COMPUTATIONAL AND SYSTEMS BIOLOGY

The Department of Biotechnology, as a nodal funding agency, invites proposals from individuals/institutions- either independent or joint multicentric in nature – for pursuing R&D in the area of bioinformatics, computational and Systems biology leading towards product and process development in specific to the following areas:

I DEVELOPMENTAL ACTIVITIES **II ANALYTICAL ACTIVITIES**

A) Database Development	A) **Systems & Computational Biology & Other areas**
• Integration of databases and software packages for addressing complex R&D issues in Biotechnology	• Analysis of system biology through Bioinformatics tools
• Development of Value added, dedicated and derived databases such as SNP, EST, clinical information, etc. on various genomes	• Identification of key pathways that support the survival of the infectious agents involved in their pathogenesis
• Documentation of biodiversity resources for appropriate utilization	• Bioinformatics Applications specific to Agriculture, Medical, Environmental Veterinary Science, Aquaculture, Marine biology, Medicinal and Aromatics Plants, etc.
B) Software Development	**III IN-SILICO Drug Discovery – Bioinformatics means**
• Development of new software tools for genomics and proteomics applications	• Understanding protein structure prediction leading to drug discovery & development.
• Development of tools for analysis of cellular functions and metabolic pathways	• Pharmacogenomics and Bioinformatics
• Software/algorithm Development for Systems Biology applications	• Effort for virtual experimental screening of chemical libraries with important targets from major infectious diseases

Two copies of the proposal in the prescribed format should be send to Dr. T. Madhan Mohan, Adviser, Department of Biotechnology, Block No.2, 7th floor, CGO Complex, New Delhi-110003. Please refer **Annexure** for Terms & Conditions. The application for submitting the proposal is given below.

PROFORMA FOR SUBMISSION OF RESEARCH & DEVELOPMENT PROJECTS UNDER BIOINFORMATICS

(To be filled by the applicant)

PART I : GENERAL INFORMATION

1. Name of the Institute/University/Organisation submitting the Project Proposal :
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.....
.....

2. a) State : .....

b) District ……

c) City ……

3. Status of the Institute …….

- University (Central/state)
- Deemed University(Public)
- Deemed University(Private)
- Govt. Autonomous Research Institute
- Govt. College
- Govt. Institutions
- State Govt.
- Regd. Society/NGO/Voluntary Organization
- Industry (PSU)
- Industry (Private)
- Others, Please Specify ……

4. Name and designation of the Executive Authority of the Institute/University forwarding the application
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.....
.....

5. Project Title :.....
.....
.....

6. Category of the Project (Please tick) : R&D in Bioinformatics

7. Specific Area (As given in the guidelines) :

8. Duration : ..... Years..... Months

9. Total Cost (Rs.) .....

10. Is the project Single Institutional or Multiple-Institutional S/M) ? :

11. If the project is multi-institutional, please furnish the following :

Name of Project Coordinator .....

Affiliation : .....

Address :.....

.....

.....

12. Project Summary (Not to exceed one page).

PART II : PARTICULARS OF INVESTIGATORS

13. Name :……..……..…….
.....…….....…..……
.....……
Date of Birth : .....…… Sex (M/F):.....…..……

Indicate whether Principal Investigator/Co-Investigator: ……

Designation …….

Department : ……..……

Institute/University : ……..……

Address :……

…….…..……

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PIN : .....Telephone : ..... Telex : .....…….....

Fax:..... ……e-mail :…….....…….....

No. of Projects being handled at present :.....…….....

***Note** : Use separate page, if more investigators are involved..*

PART III : TECHNICAL DETAILS OF PROJECT

(Under the following heads on separate sheets)

16. Introduction

16.1 Origin of the proposal

16.2 Definition of the problem

16.3 Objectives

17. Review of Current Status of research and development in the subject

17.1 International Status

17.2 National Status

17.3 Importance of the proposed project in the context of current status

17.4 Anticipated Products & Processes of Practical/Technological utility/Socio-economic relevance expected to be evolved by pursuing the project.

18. Work Plan (Incase fo multi institutional projects, work plan, role & responsibility of each institute to be given separately)

18.1 Methodology

18.2 Proprietary/patented items, if any, expected to be used for this project.

18.3 Organisation of work elements

18.4 Suggested plan of action for utilisation of research outcome expected from the project.

18.5 Time schedule of activities giving milestones.(Physical/Scientific separately)

Sr.No.	Name of Milestone	Expected Start (Month/Year)	Expected Completion (Month/Year)

18.6 Project implementing Agency/Agencies

Name of Agency	Address of Agency	Proposed Research Aspects	Proposed Amount	Cost Sharing %

19. Name and address of 5 experts in the field

Sr.No.	Name & Designation	Address	Email

PART IV : BUDGET PARTICULARS

(In Rupees)

20. Budget

A. Non-Recurring (e.g. equipments, accessories, etc.)

S. No	Item	Year 1	Year 2	Year 3	Total

Sub-Total (A)

B. Recurring

B.1 Manpower (See guidelines at Annexure-III).

S. No.	Position No	Consolidated Emolument	Year1	Year2	Year3	Total

Sub-Total (B.1) =

B.2 Consumables

S. No.	Item	Quantity	Year1	Year2	Year3	Total

Sub-Total (B.2) =

Other items	Year 1	Year 2	Year 3	Total
B.3 Travel				
B.4 Contingency				
B.5 Overhead Charges (If applicable).				
Sub-Total (B = B.1 + B.2 + B.3 + B.4 + B.5)				
Grand Total (A + B)				

***Note** : Please give justification for each head and sub-heads separately mentioned in the above table. Financial Year : April - March*
In case of multi-institutional project, the budget estimate to be given separately for each institution.

PART V : EXISTING FACILITIES

21. Available equipment and accessories to be utilized for the project :

S. No.	Name of equipment /Accessories	Make	Model	Funding Agency	Year of Procurement

PART VI : DECLARATION/CERTIFICATION

It is certified that

a) the research work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.

b) the same project has not been submitted to any other agency/agencies for financial support.

c) the emoluments for the manpower proposed are those admissible to persons of corresponding status employed in the institute/university or as per the Ministry of Science & Technology guidelines (Annexure-III)

d) necessary provision for the scheme/project will be made in the Institute/University/State budget in anticipation of the sanction of the scheme/project.

e) if the project involves the utilisation of genetically engineered organism, it is agreed that we will ensure that an application will be submitted through our Institutional Biosafety Committee and we will declare that while conducting experiments, the Biosafety Guidelines of the Department of Biotechnology would be followed in toto.

f) if the project involves field trials/experiments/exchange of specimens, etc. we will ensure that ethical clearances would be taken from concerned ethical Committees/Competent authorities and the same would be conveyed to the Department of Biotechnology before implementing the project.

g) it is agreed that any research outcome or intellectual property right(s) on the invention(s) arising out of the project shall be taken in accordance with the instructions issued with the approval of the Ministry of Finance, Department of Expenditure, as contained in Annexure-V.

h) we agree to accept the terms and conditions as enclosed in Annexure-IV. The same is signed and enclosed.

i) the institute/university agrees that the equipment, other basic facilities and such other administrative facilities as per terms and conditions of the grant will be extended to investigator(s) throughout the duration of the project.

j) the Institute assumes to undertake the financial and other management responsibilities of the project.

Signature of Project Coordinator with date

Signature of Executive Authority of Institute/ University with seal
Date

Signature of Principal Investigator with date

Signature of Co-Investigator with date

PART VII: PROFORMA FOR BIOGRAPHICAL SKETCH OF INVESTIGATORS

Provide the following information for the key personnel in the order listed on PART II.
Follow this format for each person. **DO NOT EXCEED THREE PAGES**

Name : ...…….....
Designation :…….....

Department/Institute/University : .....

Date of Birth : ..... Sex (M/F) ..... SC/ST : .....

Education (Post-Graduation onwards & Professional Career)

Sl No.	Institution Place	Degree Awarded	Year	Field of Study

Position and Honors

Position and Employment (Starting with the most recent employment)

Sl No.	Institution Place	Position	From (Date)	To (date)

Honors/Awards

Professional Experience and Training relevant to the Project

B. Publications (Numbers only) .....
Books : ..... Research Papers, Reports : .....General articles
:.....
Patents : .....Others (Please specify) :.....

Selected peer-reviewed publications (Ten best publications in chronological order)

List maximum of five recent publications relevant to the proposed area of work.

Research Support

Ongoing Research Projects

Sl No.	Title of Project	Funding Agency	Amount	Date of sanction and Duration

Completed Research Projects (State only major projects of last 3 years)

Sl No.	Title of Project	Funding Agency	Amount	Date of completion

Place : Signature of Investigator

Date :