

## DST-SWEDEN(VR) COOPERATION

### LIST OF RECOMMENDED PROJECTS

| <b>S.No.</b> | <b>Project title</b>   | <b>Indian PI</b>   | <b>Swedish PI</b>   |
|--------------|--|--|---|
| 1            | Technological Innovations In Regenerative Medicine With New Functional Biomaterials Combating Increased Bacterial Resistance In Emerging Bone And Joint Infections | Ashok Kumar<br>Professor Ph.D<br>Indian Institute of Technology Kanpur<br>Address : Department of Biological Sciences and Bioengineering IIT-Kanpur, 208016, UP, India | Lars Lidgren<br>Professor M.D., Ph.D.<br>Lund University<br>Address : Department of Orthopedics, Clinical Sciences Lund, Lund-221 85, Sweden                                      |
| 2            | Use of Nanoparticles as Protein Aggregation Modulators for Health Care and Pharmaceutical Applications   | Subramanian Venkatesan<br>Senior Principal Scientist Ph.D.<br>Central Leather Research Institute<br>Address : Sardar Patal Road, Adyar Chennai 600 020, India          | Hans Agren<br>Professor Ph.D<br>Royal Institute of Technology/Stockholm, Sweden<br>Address : Roslackstullsbacken 15 ,10639 , Stockholm  |
| 3            | Role of allosteric mutations in HIV-1 protease drug resistance: Useful insights for rational drug design   | Sanjib Senapati<br>Professor Ph.D<br>Address : Department of Biotechnology<br>Indian Institute of Technology, Madras Chennai 600 036, India                            | Jens Carlsson<br>Assistant Professor Ph.D.<br>Uppsala University<br>Address : Department of Medicinal Chemistry, BMC, Uppsala University, P.O. Box 574, SE-751 23 Uppsala, Sweden |
| 4            | Mycobacterial Cell Morphology and Antibiotic Resistance - an Indo  | Dipankar Chatterji<br>Professor<br>Indian Institute of Science,  | Leif A Kirsebom<br>Professor<br>Address : Dept of Cell and  |

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|   | Swedish Initiative   | Address : Bangalore – 560012  | Molecular Biology, Box 596,<br>Uppsala University,<br>Uppsala, Sweden  |
| 5 | Mining of medical image data with uncertainty for cardiovascular and pulmonary diseases  | Anjaneya Murthy Chivukula<br>Professor (HAG scale) M. Stat., Ph.D.<br>Indian Statistical Institute (ISI), Kolkata<br>Address : Machine Intelligence Unit, ISI, 203 B. T. Road, Kolkata – 700108, Indian | Orjan Smedby<br>Professor Dr. Med. Sci. KTH Royal Institute of Technology/School of Technology and Health (STH)<br>Address : Alfred Nobels alle 10<br>SE-14152 Huddinge Sweden |
| 6 | How do neuronal variability and noise affect network computations  | Upinder Bhalla<br>Professor Ph.D.<br>National Centre for Biological Sciences, TIFR<br>Address : Bellary Road, Bangalore 560065  | Arvind Kumar<br>Assistant Professor Ph.D. KTH, Royal Institute of Technology, Sweden<br>Address : KTH, Linstedsvaegen 24 100 44 Stockholm Sweden                               |
| 7 | Antimicrobial Peptides Against Crops Disease   | Anirban Bhunia<br>Associate Professor Ph.D.<br>Bose Institute<br>Address : Department of Biophysics, Bose Institute P-1/12 CIT Scheme VII (M), Kolkata 700054, India                                    | Martin Malmsten<br>Professor, Head of Department<br>Uppsala University<br>Address : Department of pharmacy Biomedical Centre P.O. Box 580 SE-751 23 Uppsala, Sweden            |
| 8 | Mother, father, child & diabetes risk -interplay between genes & environment in India & Sweden. A transethnic study of parent-of-origin effects in fetal | Chittaranjan Yajnik<br>Director<br>Diabetes Unit, 6 <sup>th</sup> floor, Banoo Coyaji Building, KEM Hospital Research Center, Rasta Peth, Pune- 411011<br>Address : Diabetes Unit, KEM                  | Rashmi Prasad<br>Postdoctoral Researcher Ph.D.<br>Address : Diabetes and Endocrinology, Department of Clinical Sciences, Faculty of  |

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|    | programming of diabetes using –omics approaches   | Hospital Research Center, Pune  | Medicine, Lund University, SE 20502 Malmo, Sweden  |
| 9  | Understanding the association between the prevalence of antibiotic resistance and CRISPR repeats in UPEC E. coli causing UTI                  | Manisha Yadav<br>Assistant Professor Ph.D<br>Address : Dr. B. R. Ambedkar centre for Biomedical Research (ACBR), University of Delhi, Delh -110007, India   | Diarmaid Hughes<br>Professor Ph.D.<br>Uppsala University, Sweden<br>Address : Department of Medical Biochemistry and Microbiology<br>582 SE -751 23, Uppsala, Sweden |
| 10 | Deep Learning for Bioinformatics/Life Sciences  | Michael M Gromiha<br>Associate Professor Ph.D., Indian Institute of Technology-<br>Address : Madras, Chennai - 600036   | Arne Elofsson<br>Professor Ph.D.,<br>Science for Life Laboratory, Stockholm University<br>Address : Box 1031, 17121 Solna, Sweden                                    |
| 11 | In Silico Studies of Magnetic and Vibrational Properties of Porphyrins for Diagnostic Applications  | Md Ehesan Ali<br>Scientist-E (Associate Professor)<br>Ph.D.<br>Institute of Nano Science and Technology-Mohali<br>Address : Habitat Centre, Phase-10, Sector-64, Mohali, Punjab   | Peter Oppeneer<br>Professor, Ph.D.<br>Department of Physics and Astronomy<br>Address : Uppsala University, Box 516<br>751 20 Uppsala, Sweden                         |
| 12 | Landscape of genomic alterations in Human Papilloma Virus Infection associated cancers– a genomics, bioinformatics and computational approach | Showket Hussain<br>Scientist-C Ph.D<br>Address : Division of Molecular Oncology, Institute of Cytology & Preventive Oncology, Indian Council Of Medical Research (ICMR)<br>Department of Health Research (Ministry of Health & Family Welfare, Govt. of | Neha Singh<br>Docent PhD, Postdoc<br>Address : School of Bioscience Research Centre University of Skovde<br>PO Box 408<br>SE-541 28 Skovde, Sweden                   |

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|  |  | India),<br>I-7, Sector-39, Noida 201301,<br>India |  |
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The above proposals have been recommended by both Indian and Swedish Subject Expert Committees. The Indian Project Investigators are requested to submit the enclosed check list( Annexure-I), bank details (Annexure-II) and Budgetary details as proposed in the project with sufficient justification for processing the individual cases for sanctioning the Projects from DST side. The documents submitted by post to the following address.

Dr. Chadaram Shivaji  
Scientist – F  
International Bilateral Cooperation Division  
Department of Science & Technology  
Ministry of Science and Technology  
Government of India  
Technology Bhavan, New Mahrauli Road  
New Delhi – 110016  
Email: [sivaji@nic.in](mailto:sivaji@nic.in)

**C H E C K L I S T**

1. Title of the Project :
2. Initiating Institute of project :
3. Sponsoring Agency/Ministry :
4. Total cost of the project :

Nature and Quantum of foreign

Collaboration sought

- (i) Financial support: :
- (ii) Equipment support :
- (iii) Technical support :
- (iv) Manpower training :
- (v) Miscellaneous :

5. Is there any possibility, however remote of use of data, information

of result of the work which may

impinge on India's national security?

If yes, the nature of such a use may

be indicated. (In case the concerned

scrutinizing Ministry do not have clear

answer, the matter should be referred

to the DRDO and MHA for examination).

**II. ORIGIN OF THE PROJECT AND ITS SPONSORS:**

6. If the proposal is foreign-originated, what is the background of the foreign agency or organization which is sponsoring the project? Information available, if any on past collaboration by foreign agency with Indian Institution.

7. Are the foreign agency, organization, scientists concerned, known to have taken up any project of military significance in the past or are known to be associated with any military organization or project? (if the above information is not known or if there is definite information that there is no such association, these should be clearly indicated).
8. Is the proposer (Indian) known to the foreign collaborator and his group for some time and has this emerged naturally from the research work done by the two sides?

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### **III. FUNDING OF THE PROJECT**

9. Is the foreign source known to have funded research into sensitive and national security areas in its own country or in other countries?
10. Are there reasons to believe that the foreign source is a cover name for some other sponsor?

### **IV. ADMINISTRATION AND CONTROL OF THE PROJECT**

11. Give a list of the likely places of visit : within the country planned by the foreign collaborator. Also give a list of the institutions which the collaborator is likely to visit.
12. Will any sensitive source material be referred to during the course of the research?
13. (I) Does the collaboration involve
  - a) Transfer of biological material(s) :

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- b) Use of radioactive materials :
  - c) Use of environmentally or otherwise hazardous material(s) :
  - d) Use of Genetically Modified Organisms :
  - e) Field trials or testing :
  - f) Ethical issues :
  - g) Issues related to Intellectual Property Rights (IPR) :
14. If answer to any section of question 13 is yes, are the investigators/ proposers aware of the relevant regulations and have they agreed to abide by them?
15. Will the research be conducted in accordance not only with the country's own ethical and environmental standards, but with international standards as well?

Signature with date of the Principal Investigator

Signature with date and seal of Head of Department/ Institute

**PROJECT SUMMARY**

1. Project Title:
2. Total cost of the project (Indian side) (in Rs.):
3. Duration of the Project.
4. Project Investigators (PIs) and Co-Investigators:
  - 4.1 Indian PIs
  - 4.2 Foreign
5. Other Project participants:
  - 5.3 Indian
  - 5.2 Foreign
6. Implementing Agencies / Institutions:
  - 6.1 Indian
  - 6.2 Foreign
7. Sponsoring Agency / Department / Ministry
  - 7.3 Indian



7.2 Foreign

8. Administrative Ministry in Government of India:
9. Has the Project been cleared by Secretary of the Administrative/  
Sponsoring Ministry/Department from security/sensitivity angle?: Yes/No
10. If answer to (9) above is 'No', then does the Administrative/  
sponsoring Ministry/Department recommend the Project to  
be considered by High Level Committee of Secretaries? Yes/No

Signature of the concerned Officer  
in the Administrative/Sponsoring  
Ministry/Department

International Cooperation Division  
Department of Science & Technology  
Bank details for transfer of DST fund electronically

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|---|--|
| Agency name as registered with DST CPMS |  |
| Agency Code as per CPMS                 |  |
| Account Holders name/ designation       |  |
| Name of Bank and address                |  |
| Saving Bank Account Number              |  |
| IFSC Code                               |  |
| MICR Code                               |  |

-: 11 :-

I do hereby certify that the above mentioned account is an interest bearing account and I take all responsibility for declaring the interest so accrued on the released grant from DST in the SE/UC to be furnished to DST.

**Signature of Finance Authority with seal**

(Please note that Agency name and Account holders name should be identical.)