INTERNATIONAL SYMPOSIUM on
BIOINFORMATICS (InSyB 2020)
FOR DISEASE THERAPEUTICS
21-22 December 2020

Organized by the
Department of Biotechnology (NBA-Accredited)
Under the Aegis of
Asia-Pacific Bioinformatics Network (APBioNet)

ABOUT THE DEPARTMENT OF BIOTECHNOLOGY
The Department of Biotechnology at VFSTR was established in the year 2006. It was accredited by NBA in the year 2020. There are 24 doctorates among its faculty members. It supports the extension activities such as rural development by promoting the cultivation of medicinal plants to the local farmers, especially among women. The Department is very well established with COE, animal cell culture facility, bioprocessing lab, plant tissue culture lab, bioinformatics lab, animal house, clean room, and biogas plant, with an ample strength of students (600) and faculty. The Department has been supported by VFSTR, DST-FIST, and has attracted more than 10 external research projects to the tune of Rs. 3.5 crores. The Department offers B.Tech (Biotechnology and Bioinformatics), B.Tech. (Hons), M.Tech and Ph.D. Programs. Both B.Tech and M.Tech students undergo industrial internships, either in India or abroad. Every academic year, 20% of the students go for higher studies abroad, while 10% of the students prefer higher education in India, and the remaining 60% students get placements in various firms.

ABOUT THE SYMPOSIUM
The international symposium on bioinformatics (InSyB) is a flagship symposium of the Asia-Pacific Bioinformatics Network (APBioNet). This event is the fourth in the series, for the first time virtually, given the current pandemic situation. The last three InSyBs were held in Indonesia (2017), Malaysia (2018), and India (Punjab). Although this is the second time InSyB is being held in India, this time, it is being held in the southern parts of the country. InSyB as a symposium is targeted to the student group and younger researchers. The theme of InSyB 2020 “Bioinformatics for Disease Therapeutics” covers the whole spectrum of disease therapeutics, especially viral diseases like COVID-19, utilizing the tools of Bioinformatics and Omics. The prime aim of the symposium is to bring researchers, pharmacists, academics and industrial practitioners onto a single platform who can help in stimulating discussions and academic excellence. More than 10 experts in the field of bioinformatics have been invited from India and abroad (Australia, Japan, Singapore, Chile), who will deliver keynote/plenary talks on selected domains, entailing various aspects of disease therapeutics using various bioinformatics tools. We hope the participants will immensely benefit from attending the InSyB 2020.
Keynote Speakers

**Prof. Kenta Nakai**
(Keynote Speaker on 21st Dec, 2020)
Professor, Human Genome Center, The Institute of Medical Science, The University of Tokyo, Japan
**Topic:** Using Various Kinds of NGS Data for UnderstandingCell-Type Specific Regulation of Gene Expression

**Prof. G. P. S. Raghava**
(Keynote Speaker on 22nd Dec, 2020)
Professor & Head, Department of Computational Biology, Indraprastha Institute of Information Technology (IIIT-Delhi), New Delhi, India
**Former Chief Scientist, CSIR-Institute of Microbial Technology, Chandigarh**
**Topic:** Computer-Aided Immunotherapies to Fight Against Emerging Pathogens

**Prof. G. Narahari Sastry**
Director, CSIR-North East Institute of Science and Technology, Jorhat, Assam, India
**Topic:** Understanding Relationships between Infection and Immunity: Role of Modelling and Informatics

**Prof. Bruno Gaeta**
Senior Lecturer and Director of Studies, Bioinformatics Engineering, School of Computer Science and Engineering, UNSW Australia
**Topic:** Bioinformatics to Study a Range of Aspects of Immune Function

**Dr. Prashanth N Suravajhala**
Sr. Scientist, Systems Biology, Department of Biotechnology and Bioinformatics, Birla Institute of Scientific Research, Jaipur-302001, Rajasthan, India
**Topic:** Systems Genomics of Prostate Cancer: Indian Perspective

**Dr. Tikam Chand Dakal**
Asst. Professor, Department of Biotechnology, Mohanlal Sukhadia University, Rajasthan, India
**Topic:** Bioinformatics analyses of SARS-COV-2 Spike Protein: Steps Towards Designing COVID-19 Therapeutics

**Dr. Aparna Banerjee**
Asst. Professor, Universidad Catolica del Maule, Talca, Chile
**Topic:** Genomic and Molecular Characterization of a Unique, Avirulent Variant of Bacillus Anthracis from Hot Springs

**Dr. Shandar Ahmad**
Professor, School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi, India
**Topic:** “Genome beyond a 4-letter sequence: emerging roles for local and global DNA shapes”

**Dr. G. P. S. Raghava**
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Professor & Head, Department of Computational Biology, Indraprastha Institute of Information Technology (IIIT-Delhi), New Delhi, India
**Former Chief Scientist, CSIR-Institute of Microbial Technology, Chandigarh**
**Topic:** Computer-Aided Immunotherapies to Fight Against Emerging Pathogens

**Dr. Prashanth N Suravajhala**
Sr. Scientist, Systems Biology, Department of Biotechnology and Bioinformatics, Birla Institute of Scientific Research, Jaipur-302001, Rajasthan, India
**Topic:** Systems Genomics of Prostate Cancer: Indian Perspective

**Dr. Tikam Chand Dakal**
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**ChIEF PATRONS**
Dr. L. Rathish
Chairman, Vignan’s Group

Sri. L. Sri Krishna Devavarayu
Vice-Chairman, Vignan’s Group

**PATRONS**
Dr. K. Ramamurthy Naidu, Chancellor, VFSTR
Dr. M. V. S. Prasad, Vice-Chancellor, VFSTR

**CO-PATRONS**
Cmde. Dr. M. S. Raghunathan, Registrar, VFSTR
Dr. D. VijayaRamu, Dean, Academics, VFSTR
Dr. G. Srinivasa Rao, Dean, R&D, VFSTR
Dr. S. Krupandhi, Dean-Planning and Monitoring, Head & Professor, Dept. of Biotechnology, VFSTR

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E-mail: jalaianravula@gmail.com

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E-mail: arilkumar99@gmail.com

**ORGANIZING SECRETARY**
Dr. A. Ranga Rao
Associate Professor
Dept. of Biotechnology, VFSTR
E-mail: arangarao99@gmail.com

**REGISTRATION**
Free for Students, Research Scholars, Scientists, and Faculty members from the Universities, Institutions, Colleges and Industries in India & Abroad.

**REGISTRATION**
Registration opens on 25th November 2020 | Registration closes on 15th December 2020
https://docs.google.com/forms/d/e/1FAIpQLSc2HyGwFp6X4dpv47O7xy2c5OCYh4vclA4M_Tp/viewform?usp=sf_link

**INSTRUCTIONS TO PARTICIPANTS**
Presentation will be held over a virtual platform, such as ZOOM. The ZOOM link will be provided to the registered participants. E-certificate will be issued for all the participants.

**VENUE**
NET working facility lab supported by the DST-FIST. Department of Biotechnology (NBA-Accredited).
Vignan’s Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi-522213, Guntur, Andhra Pradesh, India.
**Program Schedule**

International Symposium on Bioinformatics (InSyB-2020)
For Disease Therapeutics
Being Organized Under the Aegis of APBioNet and the Department of Biotechnology, VFSTR University, Vadlamudi-522213, Guntur
(from 21st to 22nd December, 2020)

<table>
<thead>
<tr>
<th>DAY-1: 21st December 2020</th>
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<tbody>
<tr>
<td>Each key note speaker will deliver 40-minute talk, but no questions and answers will be entertained</td>
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<td>Each invited speaker will deliver 30-minute talk followed by 5-minute discussion</td>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9.10 AM - 9.15 AM</td>
<td>Introduction of Honorable Guests of Inaugural Function - Dr. Abhinav Parashar</td>
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<td>Introduction of Keynote Speakers – Dr. K. Srikanth</td>
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<td>Scientific Program Coordinators</td>
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<tr>
<td>9.15 AM - 9.25 AM</td>
<td>Genesis of InSyb-2020 and Its Importance - Dr. A. Ranga Rao - Organizing Secretary of the Virtual Symposium</td>
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<tr>
<td>9.25 AM - 9.35 AM</td>
<td>Welcome Address by Dr. Lavu Rathaih Garu - Chairman, Vignan Group of Institutions</td>
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<tr>
<td>9.35 AM - 9.45 AM</td>
<td>Inaugural Address by Padma Shri Dr. M.Y.S. Prasad - Vice-Chancellor, VFSTR and Former Director, Space Center, Sriharikota, Andhra Pradesh, Distinguished Scientist in ISRO (APEX)</td>
</tr>
<tr>
<td>9.45 AM - 9.50 AM</td>
<td>About VFSTR – Commodore, Dr. M.S. Raghunathan - Registrar, VFSTR</td>
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<td>9.50 AM - 9.55 AM</td>
<td>About the Department of Biotechnology – Prof. S. Krupanidhi - Head, Department of Biotechnology, VFSTR</td>
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<tr>
<td>9.55 AM - 10.00 AM</td>
<td>About the InSyB-2020 Webinar - Dr. N. Jalaja, Convenor of the Webinar</td>
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<tr>
<td>10.00 AM - 10.40 AM</td>
<td>Keynote Speaker: Dr. Kenta Nakai - Professor, Institute of Medical Science, The University of Tokyo, Japan</td>
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<td>Topic: Using Various Kinds of NGS Data for Understanding Cell-Type Specific Regulation of Gene Expression</td>
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<td>10.40 AM - 11.15 AM</td>
<td>Invited Speaker: Shanti Swarup Bhatnagar Awardee - Dr. G. Narahari Sastry - Director, CSIR-North East Institute of Science and Technology, India</td>
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<td>Topic: Understanding Relationships between Infection and Immunity: Role of Modeling and Informatics</td>
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<td>11.15 AM - 11.50 AM</td>
<td>Invited Speaker: Dr. Bruno Gaeta - Professor, School of Computer Science and Engineering - The University of New South Wales, Australia</td>
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| 11.50 AM-12.25 PM | Invited Speaker: Dr. Adaikalavan Ramasamy  
Sr. Research Scientist, Genome Institute of Singapore, Singapore  
Topic: Bioinformatics to Study a Range of Aspects of Immune Function |                                                                                             |
| 12.25 PM - 1.40 PM | Lunch Break                                                        |                                                                                             |
| 1.40 PM-2.15 PM | Invited Speaker: Dr. Shandar Ahmad  
Professor, School of Computational and Integrative Sciences Jawaharlal Nehru University, New Delhi, India  
Topic: Genome Beyond a 4-letter Sequence: Emerging Roles for Local and Global DNA Shapes |                                                                                             |
| 2.15 PM - 3.00 PM | Oral Presentations by Faculty/Scholar/Students  
Each Oral Presentation will be of 12-Minute Duration Followed by 3-Minute Discussion |                                                                                             |
| 2.15 PM – 2.30 PM | Dr. S. Anil Kumar  
Assistant Professor, Department of Biotechnology  
VFSTR University, Vadlamudi  
Topic: Corona Virus Unknowns from the Knowns |                                                                                             |
| 2.30 PM – 2.45 PM | Patricio Gonzalez Faune  
Faculty of Agricultural and Forestry Sciences  
Universidad Catolica del Maule, Talca, Chile  
Topic: Computational Study on Temperature Driven Structure-Function Relationship of Biofilm Producing Glycosyl Transferase Enzymes |                                                                                             |
| 2.45 PM – 3.00 PM | Dr. A. Vijaya Sai  
Assistant Professor, Department of Biotechnology  
VFSTR University, Vadlamudi  
Topic: Molecular Phylogenetic Analyses of Pulmonata (Mollusca:Gastropoda) |                                                                                             |
| DAY-2: 22nd December 2020 | Each key note speaker will deliver 40-minute talk, but no questions and answers will be entertained  
Each invited speaker will get 30-minute time slot followed by 5-minute discussion |                                                                                             |
| 9.00 AM – 9.40 AM | Keynote Speaker: Prof. G.P.S. Raghava  
Professor & Head, Department of Computational Biology Indraprastha Institute of Information Technology (IIIT-Delhi), New Delhi, India; Former Chief Scientist, CSIR-Institute of Microbial Technology, Chandigarh, India  
Topic: Computer-Aided Immunotherapy to Fight Against Emerging Pathogens |                                                                                             |
| 9.40 AM – 10.15 AM | Invited Speaker: Dr. Prashanth N Suravajhala  
Sr. Scientist, Department of Biotechnology and Bioinformatics  
Birla Institute of Scientific Research, Jaipur, India  
Topic: Systems Genomics of Prostate Cancer: Indian Perspective |                                                                                             |
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<td>10.15 AM – 10.50 AM</td>
<td>Invited Speaker: Dr. Mohammad Asif Khan</td>
<td>President-APBioNet, Associate Professor &amp; Dean</td>
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<td>School of Data Sciences</td>
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<td>Perdana University, Malaysia</td>
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<td><strong>Topic:</strong> Mapping the Minimal Set of the Viral Peptidome</td>
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<td>10.50 AM - 11.25 AM</td>
<td>Invited Speaker: Dr. Tikam Chand Dakal</td>
<td>Assistant Professor, Department of Biotechnology</td>
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<td>Mohanlal Sukhadia University, Rajasthan, India</td>
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<td>11.25 AM - 12.00 PM</td>
<td>Invited Speaker: Dr. Sugunakar Vuree</td>
<td>Assistant, Professor, School of Bioengineering and Biosciences, Lovely Professional University, Ludhiana, Punjab, India</td>
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<td><strong>Topic:</strong> Envisioning the Role of Cancer Biomarkers Through the Intervention of Bioinformatics</td>
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<td>Assistant Professor, CIEAM, Universidad Catolica del Maule, Talca, Chile</td>
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<td>2.15 PM - 2.30 PM</td>
<td>Feedback from Participants</td>
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<td>2.30 PM - 3.35 PM</td>
<td>Valedictory Function</td>
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<td>Introduction of Honorable Guests of the Valedictory Function</td>
<td>Dr. Prakash Narayan Reddy</td>
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<td>2.40 PM – 2.50 PM</td>
<td>Symposium Summary Report by Dr. S. Anil Kumar</td>
<td>Coordinator – InSyB-2020</td>
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<td>2.50 PM – 3.00 PM</td>
<td>Prof. S. Asha - Feedback Report from Students of VFSTR</td>
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<tr>
<td>3.00 PM - 3.10 PM</td>
<td>Message by Guest of Honour - Prof. G. Srinivasa Rao</td>
<td>Dean, R&amp;D, VFSTR</td>
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<td>3.10 PM - 3.20 PM</td>
<td>Message by Guest of Honour - Prof. D. Vijaya Ramu</td>
<td>Dean, Academics, VFSTR</td>
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<tr>
<td>3.20 PM - 3.30 PM</td>
<td>Valedictory Address by Chief Guest</td>
<td>Sri. Lavu Sri Krishna Devarayalu</td>
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<td>Member of Parliament</td>
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<td>Vice-Chairman-Vignan Group of Institutions</td>
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<td>3.30 PM – 3.35 PM</td>
<td>Vote of Thanks – Prof. T.C. Venkateswarlu, Dept. of Biotechnology, VFSTR</td>
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