# Student GROUP Maindia

#### Regional Student Group - India

"... Nour local window to global opportunities."

Affiliated to the Student Council of International Society for Computational Biology (ISCB)

## CONNECT

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"The great aim of education is not knowledge, but action" - Herbert Spencer

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- → 'BIO-Innovation' Online Bioinformatics Resource Collection.



RSG-India is glad to present before you the second edition of 'CONNECT'. First, we give you a foretaste of our new collaborations in the Initiatives section. We also focus on the regular sections, 'Top 10 posts on the Message Board' and 'Topic of the Month (TOTM) – NGS – Next Generation Sequencing'. Further, with the flourishing progression of the section titled 'BIO-Innovation', we include the link to a online tool which is helpful in the visualizing the transcriptomes - ZENBU. Lastly, we give you an update of the latest session held at CBDG-VIT. We also introduce a link to our Google Calendar Service at the bottom right corner of the newsletter.

We sincerely hope that you would find this edition much more informative and the RSG-India intent of academic excellence motivates you for all your current and future endeavors!

#### RSG-India's Initiatives – Spanning our wings...



We have spoken about several initiatives of RSG-India including conferences, workshops and collaborations in the earlier issues of 'CONNECT'. In this issue, we throw light upon online initiative, the RSG-India Google Calendar and activities related to CBDG(CompBio Discussion Group) and initiatives for its promotion and expansion in the last month.

Google Calendar is a free time-management web application offered by Google. Events and tasks can be added to the calendar with dates, venue, deadlines and other related fields. Reminders can be configured to be sent at a time via e-mails, pop-ups and also as a SMS or invitations to personal events. Events can also be imported from Microsoft Outlook, etc. or synchronized with public calendars. RSG-India Google Calendar is associated with our group since the past 2 years and updated daily by the core committee and all information pertaining to upcoming conferences, presentations and their respective deadlines for the submission of abstracts or papers.

About CBDG: CBDG is a platform for highly motivated students interested in learning and sharing information of their field of expertise with others. It has been a part of many institutes and where it conducts workshops, discussions and other informative sessions. Initiative to start CBDG at several other institutions in India was taken up by RSG core team member Inamul Hasan Madar. It included –visits to many colleges, institutions and universities and giving them a an insight on RSG, CBDG and about its initiatives.... will be continued ...

### POSTS ON THE MESSAGE BOARD

- 1. Opening: Faculty Position at the Stowers institute for medical research.
- 2. Opening: Bioinformatics researcher at the BMI division at Cincinnati childern's Hospital.
- 3. Opening: PostDoc position in biomolecular dynamics at New York University.
- 4. Opening: PostDoc position in bioinformatics at Harvard School of public health.
- 5. Article: Newly discovered virus lives in half of the world's population.

- 6. Conference: Beyond the genome 2014, at Harvard medical school, Boston.
- 7. Conference: International Conference on intelligent biology and medicine at University of Texas.
- 8. Conference: International conference on bioinformatics, Computational and System biology at New York.
- 9. Conference: International conference on System biology at Melbourne.
- 10. Workshop: BGI International workshop at Shenzhen, China.

#### **NGS: Next Generation Sequencing**



GS- The high demand for low cost equencing, has driven the development of high throughput sequencing, also termed as NGS. It is most commonly used and is a resourceful tool for analyzing, detecting, sequencing and mapping of genetic data. To follow the discussion, please click on the elements of the flowchart.

Work flow and pipeline

Introduction

conversion

File formats and

Conclusion

De novo algorithms

NGS-Advantages

#### CompBio Discussion Group (CBDG) -VIT, Vellore

The latest CBDG session at VIT, Vellore was a guest lecture on 'Proteogenomics as a tool for the Early Cancer Biomarker

Discovery' by Inamul Hasan Madar from South Korea University.

The discussion started off with an introduction to proteomics and Human Genome Project followed by a note on data analysis by using NGS & use of biomarkers for effective advancement in cancer detection. The session concluded with an interactive session, where in the students were given an opportunity to ask their queries related to RSG or the session itself.

#### **BIO-Innovation - ZENBU**

ZENBU is a data integration, data analysis, and visualization system enhanced for RNAseq, ChipSeq, CAGE and other type of next-generation-sequencing-tag (NGS) based data. ZENBU allows for novel data exploration through "on-demand" data processing and interactive linked-visualization and is able to make many-views from the same primary sequence alignment data which users can upload from BAM, BED, GFF and tab-text files

