

AIM

The novel findings on BioSystems are relying on advanced techniques, which generate enormous data. The extraction of the relevant data from this available data is through the utilization of the Bioinformatics tools. Bioinformatics is an interdisciplinary field that develops computational methods and software packages for analyzing biological data. It has been used for In silico analyses of biological queries using mathematical and statistical techniques. This emerging discipline has a great scope in pharmaceuticals and scientific studies, which offer various opportunities after specialization. This workshop aims to provide a basic understanding of bioinformatics and intends to provide a basic understanding of bioinformatics and intends to develop a deep sense of interest in students for future carrier options.

LEARNING OUTCOMES

- Introduction to biological databases and tools. Getting acquainted with concept of sequence alignment.
- Learn how to do biological data acquisition, data mining, and analysis.

TOPICS TO BE COVERED

1. Introduction to Biological Databases: Types (NCBI, EMBL, DDBJ PDB) and their significance.
2. Retrieve, analyze and visualize DNA/RNA/ Protein sequences from NCBI & PDB.
3. Sequence Alignment: Introduction & Types- Pairwise Alignment & Multiple sequence alignment: ClustalW, COBOL Tools.
4. Sequence Analysis using BLAST. Different types of BLAST Tools/Techniques, E values.
5. Phylogenetics and Evolutionary Tree Construction: Analysis and Visualization.

ABOUT THE COLLEGE

The Government Degree College, Srikakulam, the first and foremost College in the district was established in 1951 vide. G.O.Ms.No.1887 of the Madras Government with the introduction of Intermediate Courses in 1951 and later upgraded to Government Degree College in 1954 with the introduction of undergraduate courses. This College was affiliated to Andhra University, Visakhapatnam and recently attached to the newly formed Dr. B.R. Ambedkar University, Etcherla, Srikakulam. This was recognized by the U.G.C under 2(f) and 12(b) from 06-10-1969. The College possesses a spacious building with the Central Library being the largest among the three districts of Zone-I of A.P. CBCS pattern with 6 semesters for UG has been introduced from the academic year 2015-16 with cumulative effect by APSCHE. Various courses are introduced to suit the latest developments in the respective fields. Recently, B.Sc., Electronics B.Com., Computers in UG and M. Sc., Botany in PG were introduced in the year 2015-16 in addition to M.Sc., Chemistry, M. Com., and M.A., Telugu. Efforts are being made to improve the laboratory facilities in all the newly introduced restructured courses. UGC is funding some of the major and minor research projects undertaken by the members of the staff of our College. Many of them have attended National Seminars and presented papers. Several National Seminars/workshops are being conducted with the financial assistance of funding agencies like UGC and DBT. The Department of Biotechnology alone has conducted 03 national seminars & 01 Refresher Course in the academic year 2020-21. The Institution always encourages the faculty members to take up research work. The College has 16 Ph.D. holders and 10 M.Phil holders out of 56 faculty members. Another 09 faculty members are pursuing Ph.D., under FDP/part-time programme. The College was accredited for 1st cycle with B++ (CGPA 83.05) by NAAC in February, 2005 and re-accredited for 2nd cycle in August, 2011 with B Grade (CGPA 2.87). Recently College undergone 3rd cycle accreditation on 25th & 26th September 2017 and graded with B++ (CGPA 2.90).

You are Cordially Invited



Government Degree College (Men) Srikakulam

(Affiliated to Dr. B. R. Ambedkar University-Srikakulam &
Reaccredited by NAAC with B++ Grade of 2.90 CGPA)

www.gcmsklm.ac.in

TWO DAYS WORKSHOP ON BIOINFORMATICS: RESOURCES, TOOLS AND ITS APPLICATIONS (For UG & PG Students)

Date: 24-11-2021 & 25-11-2021



Organized by

**DEPARTMENT OF BIOTECHNOLOGY
&**

DEPARTMENT OF MICROBIOLOGY
Government Degree College(M)
Srikakulam, Andhra Pradesh.

Registration Link: https://docs.google.com/forms/d/e/1FAIpQLSerBlcRP_OgxuLHX5jW6zHGWEklqf56btqQl75luxKPPjV5Zg/viewform?ve=0&e=0&w=1&flr=0

ABOUT RESOURCE PERSON



Mr. Ramakrishna Meduri

Researcher

Mail ID: ramameduri@gmail.com

BIOSKETCH

Dr. Ramakrishna Meduri is a Highly motivated and dedicated researcher with contributions in the fields of Genetics, Bioinformatics and its related fields. He has experience in Biological Programming in PERL, PYTHON and R (Bio-conductor), Statistical tools and methodologies in Machine learning and A.I for Bio-sciences, Hands-on in different tools/ techniques in Next Gen Sequencing data analysis, structural modeling studies/ analysis using SWISS-MODEL and visualization tools like NCBI's inC3D, PyMol and RASMOL, Knowledge and hands on in Genome, Nucleotide, and Protein databases; Gene ontology (GSEA) studies and Phylogenetic analysis, Proficient in Neuroscience related data analysis tools like Neuromatic and Neurolucida packages to analyze the Neuronal Dendritic architecture, Hands-on in Adobe Photoshop, Dreamweaver and Flash CS4 and HTML.

He did his Bachelors and Masters in Molecular Genetics at Andhra University-Visakhapatnam, M.S. Bioinformatics at George Mason University/Polytechnic Institute of NYU, USA. Completed several certificate courses like Probability: The Science of Uncertainty & Data by MIT, USA; Next generation Sequencing using Python by Stanford University, USA; Introduction to Data Science, using R by Johns Hopkins University, USA & Introduction to Python Programming by University of Michigan, USA.

He involved in several research projects and Carried out research in Fly genetics and Developmental Neuroscience, Genome Annotation of Mariprofundus ferroxydans pathways, various enzymes in Gluconeogenesis pathway in Glucose Metabolism etc. He has 04 research publications, involved in several national & international seminars & workshops.

His honors & awards include: Won the 2011 J. Shelton Horsley Research Award, the highest honor bestowed by the Virginia Academy of Sciences- Richmond, VA;



ORGANIZING COMMITTEE



Chief Patron

Dr. Chappidi Krishna

RJD CCE, Rajahmundry

Patron

Dr. P. Surekha, M.Sc, Ph.D

Principal

Government Degree College (Men)-Srikakulam

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GDC (M), Srikakulam

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GDC (M), Srikakulam

Organizing Secretary

Dr. R. Haritha

Department of Biotechnology
GDC (M), Srikakulam

REGISTRATION

Registration fee:

- Rs. 100/- (workshop) for Internal Participants & 250 for External Participants
- Maximum up to 30 per batch including research students and scientists (Total 2 Batches)
- Registration includes Participation Certificate, Lunch & Snacks

Contact Numbers:

8555911961; 7702203953; 9052177822

Registration Link: https://docs.google.com/forms/d/e/1FAIpQLSerBlcRP_OgxuLHX5jW6zHGWEklqf56btqQl75luxKPPjV5Zg/viewform?vc=0&c=0&w=1&flr=0

PROGRAM SCHEDULE

24-11-2021

9.00 am – 9.30 am	: Registration
9.30 am – 10.00 am	: Inauguration
10.00 am – 11.30 am	: Technical Session-I
11.30 am – 12.00 Noon	: Tea Break
12.00 Noon – 1.30 pm	: Technical Session-II
1.30 pm – 2.30 pm	: Lunch Break
2.30 pm – 4.00 pm	: Technical Session-III
4.00 pm – 5.00 pm	: Tea Break & Interaction

25-11-2021

9.00 am – 9.30 am	: Registration
9.30 am – 10.00 am	: Inauguration
10.00 am – 11.30 am	: Technical Session-I
11.30 am – 12.00 Noon	: Tea Break
12.00 Noon – 1.30 pm	: Technical Session-II
1.30 pm – 2.30 pm	: Lunch Break
2.30 pm – 4.00 pm	: Technical Session-III
4.00 pm – 5.00 pm	: Tea Break & Validictory

Link For registration:

https://docs.google.com/forms/d/e/1FAIpQLSerBlcRP_OgxuLHX5jW6zHGWEklqf56btqQl75luxKPPjV5Zg/viewform?vc=0&c=0&w=1&flr=0



GOVERNMENT DEGREE COLLEGE MEN), SRIKAKULAM
EVENT ORGANIZED REPORT
(2021-2022)



Name of Department	Biotechnology
Name of Event Organized	Two Day Workshop
Title of the Event	Bioinformatics: Resources, Tools and It's Applications
Date of Event Organized	24 th & 25 th Nov, 2021
Name of the coordinator of the Event	Sri. M. Pradeep
No. of Participant (Student +Staff)	125
Name of the Expert with designation	Dr. Ramakrishna Meduri Researcher
Contact number & Address of the Expert	Dr. Ramakrishna Meduri Researcher
Objective of the Event	<ul style="list-style-type: none">• To provide a basic understanding of Bioinformatics• To develop a deep sense of interest in students for future career options.
Description of the event	<p>The resource person Dr. Ramakrishna Meduri gave an introductory talk on the biological databases like NCBI, EMBI, DDBJ and PDB. He also explained their significance to the students.</p> <p>Hands-on training was provided to the students on retrieving, analyzing and visualizing DNA/RNA / Protein sequence from NCBI and PDB. Introduction was also given for the types of sequence alignment tools like Pairwise alignment and Multiple Sequence alignment Clustal W & COBOL.</p> <p>The students were made to do sequence analysis using BLAST tools/ techniques and E values. Phylogenetic and Evolutionary Tree</p>

	<p>construction including the analysis and visualization were also demonstrated to the students.</p> <p>Dr. Ch. Krishna, Regional Joint Director, CCE, Rajahmundry addressed the students and congratulated the students on their successful completion of the workshop. He emphasized the significance of bioinformatics knowledge for their better career opportunities.</p>
Outcome of the Event	<ul style="list-style-type: none"> • Acquainted the students with the concept of Biological databases and tools. • Provided hands on training in biological data acquisition, data mining and analysis.



Event Coordinator



Principal

PRINCIPAL
Govt. Degree College (Men)
SRIKAKULAM ✓



GOVERNMENT DEGREE COLLEGE MEN), SRIKAKULAM
EVENT PHOTO GALLERY
(2021-2022)



ఆధునిక సాంకేతికతను ఆకళింపు చేసుకోవాలి

కళాశాల ఆర్జేడి సీహెచ్ కృష్ణ



శ్రీకాకుళం, నవంబర్ 25 (ప్రభన్యూస్): నేటికరం విద్యార్థులు ఆధునికసాంకేతికతను ఆకళింపు చేసుకోవాలని రాజమండ్రి డిగ్రీ కళాశాల ఆర్జేడి సీహెచ్ కృష్ణ అన్నారు. ఈ మేరకు స్థానిక ఆర్ట్స్ పురుషుల కళాశాలలో నిర్వహించిన బయో ఇన్ఫర్మేటిక్స్ రిసోర్స్స్, టూల్స్ అండ్ అప్లికేషన్స్ అనే కార్యక్రమాన్ని గురువారం ముగింపు కార్యక్రమంలో పాల్గొన్నారు. ఈ సందర్భంగా ఆయన మాట్లాడుతూ, సాంకేతిక పరిజ్ఞానంతో పాటు, సంస్కృతి సంప్రదాయాలపై అవగాహన కలిగి ఉన్నప్పుడే విద్యార్థులకు మంచి భవిష్యత్ ఉంటుందన్నారు. ఆర్ట్స్ కళాశాల ప్రిన్సిపాల్ పి. సురేఖ మాట్లాడుతూ, ఎపిఎస్ఎస్డిసి ఆధ్వర్యంలో ఈ సైన్స్ కార్యక్రమం నిర్వహించడం సంతోషంగా ఉందన్నారు. ఈ కార్యక్రమంలో ప్రదీప్, సీహెచ్ శాంతి, హరిత, ఐక్యూఎస్ నై, పోలినాయుడు, జెకెసి కోఆర్డినేటర్ డి. సైదితల్లి, గ్రావణి తదితరులు