



|| Om Shri Manjunathaya Namah ||



MMK & SDM MMV

**Mysore Makkala Koota & Shri Dharmasthala
Manjunatheshwara Mahila Maha Vidyalaya**

Krishnamurthypuram Mysuru -5700 04

(Managed by: S.D.M.E Society (R) Ujire, Karnataka, India)
President: Padma Vibhushan Dr. D. Veerendra Heggede

Accredited by NAAC with B Grade

Vision: "Empowerment of women to face Global challenges"

TWO DAYS WORKSHOP

on

"BIOPATH – Bioinformatics for Beginners: Understanding Biology through Sequence Data"

Department of Biotechnology

On April 11th and 12th 2023

Prepared By:

Dr Shwetha S
HoD & Asst professor
Dept of Biotechnology

PRINCIPAL

MMK & SDM Mahila Mahavidyalaya
Krishnamurthypuram, Mysore-570 004

1. **PROGRAM TITLE:** Workshop on BIOPATH – Bioinformatics for Beginners: Understanding Biology through Sequence Data
2. **DEPARTMENT** – Department of Biotechnology
3. **DATE:** 11-04-2023 and 12-04-2023, **TIME:** 9am to 5pm, **VENUE:** Institute of Bioinformatics and Applied Biotechnology (IBAB), Bangalore.
4. **INTRODUCTION:** Bioinformatics is a scientific sub discipline that involves using computer technology to collect, store, analyze and disseminate biological data and information, such as DNA and amino acid sequences or annotations about those sequences. Scientists and clinicians use databases that organize and index such biological information to increase our understanding of health and disease and, in certain cases, as part of medical care. The department of Biotechnology organised the 2 days workshop for I, II and III yr B.Sc. Biotechnology students.
5. **OBJECTIVES:** To know Importance of Data in Biology, Bioinformatics Databases, Sequence Searching tools.
6. **PROCEEDINGS:** The SDM faculties and students were welcome by Prof. S Thiyagrajan. He introduced the Course resource person and briefed about both days work schedule. The director of IBAB also welcomed everyone and wished the best for the workshop.
7. **SUMMARY:** On April 11th, in the morning session, Prof. S Thiyagrajan taught Importance of Data in Biology, Bioinformatics Databases and Sequence Searching. The Hands-on tutorial was guided by Dr. ShubhadaHegde and other resource persons. In the afternoon session Prof. S Thiyagrajan thought Introduction of Sequence Analysis: Comparing sequences & Motif Finding, Evolutionary Analysis/Phylogeny and Dr. ShubhadaHegde guided Hands-on tutorial. The Multiple choice question and answers online was done after each session. On April 12th, in the morning session Dr. ShubhadaHegde and her research scholars thought Introduction to Genome Data, Microbial genomics, Gene regulation and systems biology and Hands-on tutorial were on Demonstration of bacterial and other genome databases; Online tools for bioinformatic analyses; Introduction to systems biology and protein interactions. In the afternoon session, Prof. Kshitish K Acharya thought Introduction to, and applications of microarrays data, and NGS for transcriptomics and protein-DNA interaction analysis, Human genome project. The Multiple choice question and answers online was done after each session. The workshop was concluded with students and faculties feedback and handing over certificates.
8. **NUMBER OF STUDENTS PARTICIPATED:** III yr B.Sc. Biotechnology students (29).
9. **OUTCOME:** The knowledge regarding bioinformatics tool and applications with instances was acquired by the students. The students were able to perform human and microorganisms sequence comparison & Motif Finding, Demonstration and practice of Gene Expression Omnibus (GEO), Sequence Read Archive (SRA), Protein Data



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10. Bank (PDB), GenBank, BLAST, Clustal W, Uniport, Swiss modeller, NCBI, EMBL and DDBG databases.

11. TIME TABLE OF THE PROGRAMME:

11 Apr, 2023		
Session	Broad Topic	Resource person
09:00-09:10 AM	Workshop Commencement	Prof.Thiyagarajan.H
09:10-09:40 AM	Bioinformatics - Sequence Searching	Prof.Thiyagarajan.H
9:40-10:15 AM	Hands-on tutorial	Dr.ShubhadaHegde
10:15-10:30 AM (Coffee/Tea Break)		
10:30-12:45 PM	Hands-on tutorial	Dr.ShubhadaHegde and research scholars
12:45-1:45 PM (Lunch Break)		
01:45-02:30 PM	Sequence analysis	Prof.Thiyagarajan.H
02:30-04:00 PM	Hands-on tutorial	Dr.ShubhadaHegde and research scholars
12 Apr, 2023		
Session	Broad Topic	Resource person
09:00-10:15 AM	Genome Data and systems biology	Dr.ShubhadaHegde
10:15-10:30 AM (Coffee/Tea Break)		
10:30-12:45 PM	Hands-on tutorial: Demonstration of bacterial and other genome databases	Dr.ShubhadaHegde
12:45-1:45 PM (Lunch Break)		

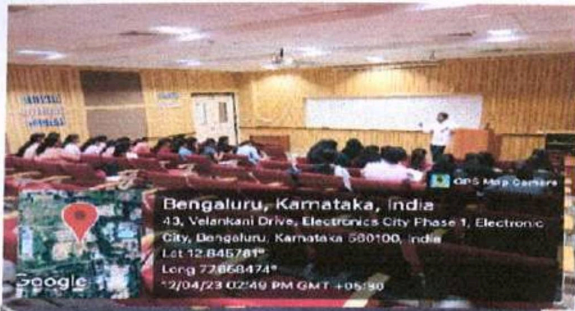
01:45-02:30 PM	Human genome project	Prof.Kshitish K Acharya
02:30-04:00 PM	Demonstration and practice of GEO and SRA databases	Prof.Kshitish K Acharya

12. PICTURE GALLERY



Hair
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Bengaluru, Karnataka, India
43, Velankani Drive, Electronics City Phase 1, Electronic City, Bengaluru, Karnataka 560100, India
Lat 12.845781°
Long 77.658474°
12/04/23 02:49 PM GMT +05:30



Bengaluru, Karnataka, India
RMV5+J84, Electronics City Phase 1, Electronic City, Bengaluru, Karnataka 560100, India
Lat 12.843871°
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12/04/23 04:41 PM GMT +05:30



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Bengaluru, Karnataka, India
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Bengaluru, Karnataka, India
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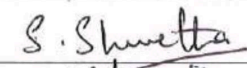

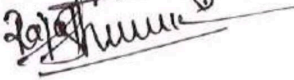
Session: 2 Days Workshop & Hands on training on "Bioinformatics for Beginners - Understanding Biology Through Sequence Data" at Institute of Bioinformatics And Applied Biotechnology (IBAB), Bangalore.

Faculty List

Date: 11-04-2023

Time: 10am-5pm

Venue: IBAB

Sl. No	Faculty Name	Department	Signature of the Faculty
1	Dr. SHWETHA S	Biotechnology	
2	Dr. WETHROE KAPFO	Biochemistry	
3	Smt RAJA RAJESHWARI	Microbiology	

SDM Coordinator

IBAB Coordinator

Principal

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Krishnamurthypuram, Mysore-570 004

MMK & SDM MAHILA MAHAVIDYALAYA

Krishnamurthypuram, Mysuru - 570004

Session: 2 Days SDM and IBAB Joint Workshop & Hands on training on
"Bioinformatics for Beginners - Understanding Biology Through Sequence
Data" at Institute of Bioinformatics And Applied Biotechnology (IBAB),
Bangalore.

Students List

Class: III BSc Biotechnology

Date: 11-04-2023

Time: 10am - 5pm

Venue: IBAB

Sl. No	Student Name	Signature of the student
1	ANANYA R BHATTA	Ananya R Bhatta
2	ANANYA S	Ananya S
3	BHOOMIK D R	BHOOMIKA D.R
4	CHAITHANYA A P	Chaithanya A.P
5	CHANDANA S	Chandana S
6	CHINMAYE BALAKRISHNA	Chinmaye Balakrishna
7	G DEEKSHITHA	G Deekshitha
8	HARSHITHA H	Harshitha H
9	JAGRUTHI JAIN B J	Jagruthi Jain
10	KAVITHA N	Kavitha N
11	KUMUDINI H D	Kumudini H.D
12	KUSUMA S	Kusuma S
13	MANTHRIAMOORTHY SHANMUGA PRIYA	Manthriamorthy Shanmuga Priya
14	NAYANA J	Nayana J
15	NISARGA C	Nisarga C
16	NISHAVARSHINI V	Nisha Varshini V
17	PRAMOLIKA M	Pramolika M
18	PRIYANKA PRADHAN KESHAB	Priyanka Pradhan Keshab
19	R M BHUVANA	R M Bhuvana
20	RAKSHITHA R	Rakshitha R
21	RISHA BOPANNA C	Risha Bopanna C
22	SAHANA G	Sahana G
23	SAHANA N BHAT	Sahana N Bhat
24	SHREESHA N S	Shreesha N S
25	SHRUTHI KUMARI SINGH	ABSENT
26	SINCHANA S	Sinchana S
27	SNEHA B S	Sneha B S
28	SONA G M	Sona G.M
29	SUPRIYA H P	Supriya H P
30	VAISSHNAVEE P J	ABSENT
31	ANUSHA S	Anusha S

SDM Coordinator

IBAB Coordinator

Principal

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MMK & SDM MAHILA MAHAVIDYALAYA

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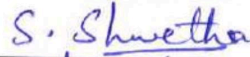
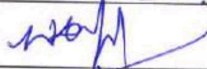
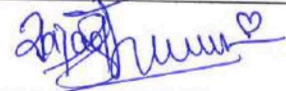
Session: 2 Days SDM and IBAB Joint Workshop & Hands on training on “Bioinformatics for Beginners - Understanding Biology Through Sequence Data” at Institute of Bioinformatics And Applied Biotechnology (IBAB), Bangalore.

Faculty List

Date: 12-04-2023


Time: 9am – 4pm

Venue: IBAB

Sl. No	Faculty Name	Department	Signature of the Faculty
1	Dr. SHWETHA S	Biotechnology	
2	Dr. WETHROE KAPFO	Biochemistry	
3	Smt RAJA RAJESHWARI .R	Microbiology	

SDM Coordinator


IBAB Coordinator


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Krishnamurthypuram, Mysuru - 570004

Session: 2 Days Workshop & Hands on training on "Bioinformatics for Beginners - Understanding Biology Through Sequence Data" at Institute of Bioinformatics And Applied Biotechnology (IBAB), Bangalore.

Students List

Class: III BSc Biotechnology

Date: 12-04-2023

Time: 9AM

Venue: IBAB

Sl. No	Student Name	Signature of the student
1	ANANYA R BHATTA	Ananya Bhatta
2	ANANYA S	Ananya S
3	BHOOMIK D R	Bhoomika D.R
4	CHAITHANYA A P	Chaithanya A.P
5	CHANDANA S	Chandana S
6	CHINMAYE BALAKRISHNA	Chinmaye B.
7	G DEEKSHITHA	G Deekshitha
8	HARSHITHA H	Harshitha H
9	JAGRUTHI JAIN B J	Jagruthi Jain
10	KAVITHA N	Kavitha N
11	KUMUDINI H D	Kumudini H.D
12	KUSUMA S	Kusuma S
13	MANTHRIAMOORTHY SHANMUGA PRIYA	Manthriamorthy
14	NAYANA J	Nayana J.
15	NISARGA C	Nisarga C
16	NISHAVARSHINI V	Nisha Varshini V
17	PRAMOLIKA M	Pramolika M.
18	PRIYANKA PRADHAN KESHAB	Priyanka Pradhan
19	R M BHUVANA	Bhuvana
20	RAKSHITHA R	Rakshitha R
21	RISHA BOPANNA C	Risha Bopanna C
22	SAHANA G	Sahana G
23	SAHANA N BHAT	Sahana N Bhat
24	SHREESHA N S	Shreeshas
25	SHRUTHI KUMARI SINGH	ABSENT
26	SINCHANA S	Sinchana S
27	SNEHA B S	Sneha B.S
28	SONA G M	Sona G.M.
29	SUPRIYA H P	Supriya H.P
30	VAISSHNAVEE P J	ABSENT
31	ANUSHA S	Anusha S

SDM Coordinator

IBAB Coordinator

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MMK & SDM MMV

**Mysore Makkala Koota & Shri Dharmasthala
Marjunatheshwara Mahila Maha Vidyalaya**



An initiative of the Department of
Electronics, IT, BT, and S&T of the
Government of Karnataka
Degree awarded by Bangalore University

Jointly Present

Workshop & Hands on Training on

“Bioinformatics for Beginners: Understanding Biology through Sequence Data”

CERTIFICATE OF TRAINING

This is to certify that _____ has participated and successfully completed the

Hands-on Workshop on “Bioinformatics for Beginners: Understanding Biology through Sequence Data”

organised by IBAB, Bengaluru and Department of Biotechnology, MMK & SDM MMV, Mysuru

held at IBAB, Bengaluru on April 11th and 12th 2023.

S. Shwetha
Dr. Shwetha S

Coordinator
HOD & Asst. Prof
Dept. of Biotechnology
Mysuru

H. I. Subramanyam
Prof. H S Subramanya

Director
IBAB & Biocon Chair
Bengaluru

Pradeep
Prof. Sainath Malligemadu
Principal
MMK & SDM MMV
Krishnamurthy Mysuru Mysore-57