Hands on Training DNA Isolation and Barcoding –

Report -

One of the current areas of research in the field of biology is DNA studies. For any study using DNA, the first step is its isolation, separation and bar coding. Hence it was decided to conduct Hands on training on DNA isolation and Bar coding for the students in association with Mr. Tojo Tharayil, Director, DRP Molecules, Kalamassery and Ms. Soja N.J. Research Assistant, DRP Molecules, Kalamassery 11th – 12th March 2019. Instruments such as PCR, gel reader etc were brought by Mr. .Tojo.

Hands on training on the isolation of DNA and DNA finger printing was given to the students. Students from the department took this as a golden opportunity. They could see the micro pipette for the first time .Different bacterial samples were taken to ascertain the sequence similarity between different samples of bacterial DNA.DNA is isolated first and then it is enzymatically fragmented using restriction enzyme. The restriction fragments .They are separated and denatures to get single stranded DNA on agarose gel. After incubation, the blotted DNA radioactively labelled. Then hybridized and autoradiographed. All these techniques were new to our students and the y could see and work with the instruments. These actually woke up their research instinct in them.

The program was inaugurated by College Principal Dr. Sr. Irene, on 11-03-2019, the resource persons were welcomed by Dr. Sr, Betsy, HOD, Dept. of Botany the hands on training commenced shortly after a briefing from the resource persons Mr. Jojo Tharayil, and Mr. Soja of DRP molecules, Kinfra park, Kalamassery. On 12th March 2019 the students shared their experiences .The student convenor Ms.Binitha Baby delivered vote of thanks. Thirty five students participated in the programme .Five students were old students who are pursuing their postgraduation in Zoology from St.Joseph's College, Irinjalakuda, Thrissur. Certificates were distributed to students after the training.

Students were divided into 4 groups and each group was able to separate DNA from bacterial cultures. Each group was given different set of instruments such as micropipette and glassware required. A demonstration of how the DNA separation was shown to each group by Mr. Tojo and Ms. Soja. The students followed the procedure to isolate DNA from the samples given to them. Though a few of them found it a struggle they were able to achieve the desired results after 2-3 trials. Mr. Tojo was patient in handling the inadequacies of the students and they eventually succeeded in the procedure. DNA was subjected to restriction fragmentation and then amplified using the PCR. The sample was then run through an

electrophoretic apparatus and separated. The separated was then viewed using fluorescence light.

All the students got a chance to use the different pipettes and other instruments. Mr. Tojo who had handled several sessions in other institutions was able to convey to the students the skill required to make this process a success.

11/03/2019 to 12/3/2019 – hands on training DNA isolation and bar coding – Mr. Tojo explaining how to use PCR

11/03/2019 to 12/3/2019 – hands on training DNA isolation and bar coding – group photo

11/03/2019 to 12/3/2019 – hands on training DNA isolation and bar coding – students loading the electrophoretic apparatus

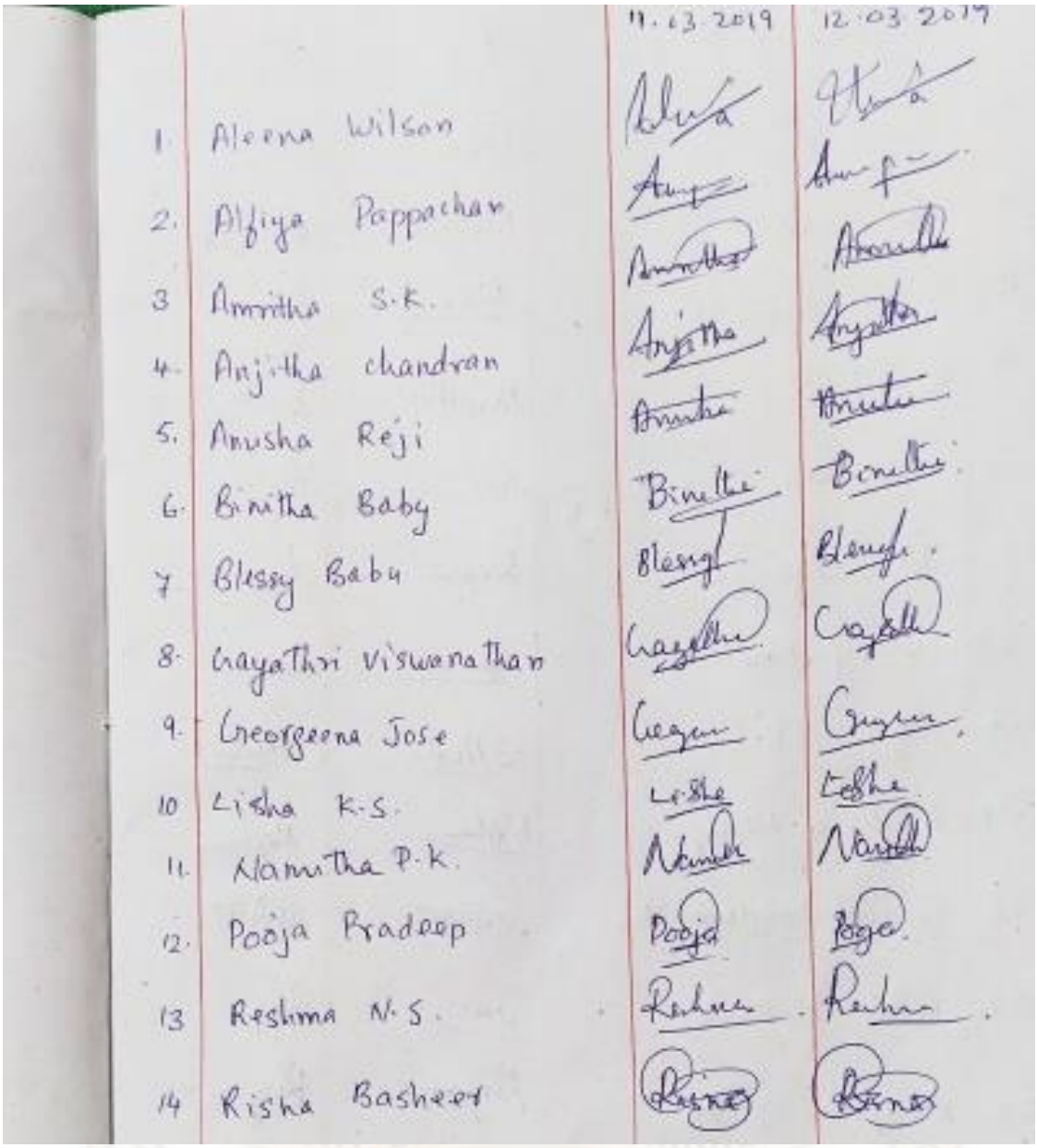
11/03/2019 to 12/3/2019 – hands on training DNA isolation and bar coding – Mr. Tojo showing students how to read the electrograph

List of participants -

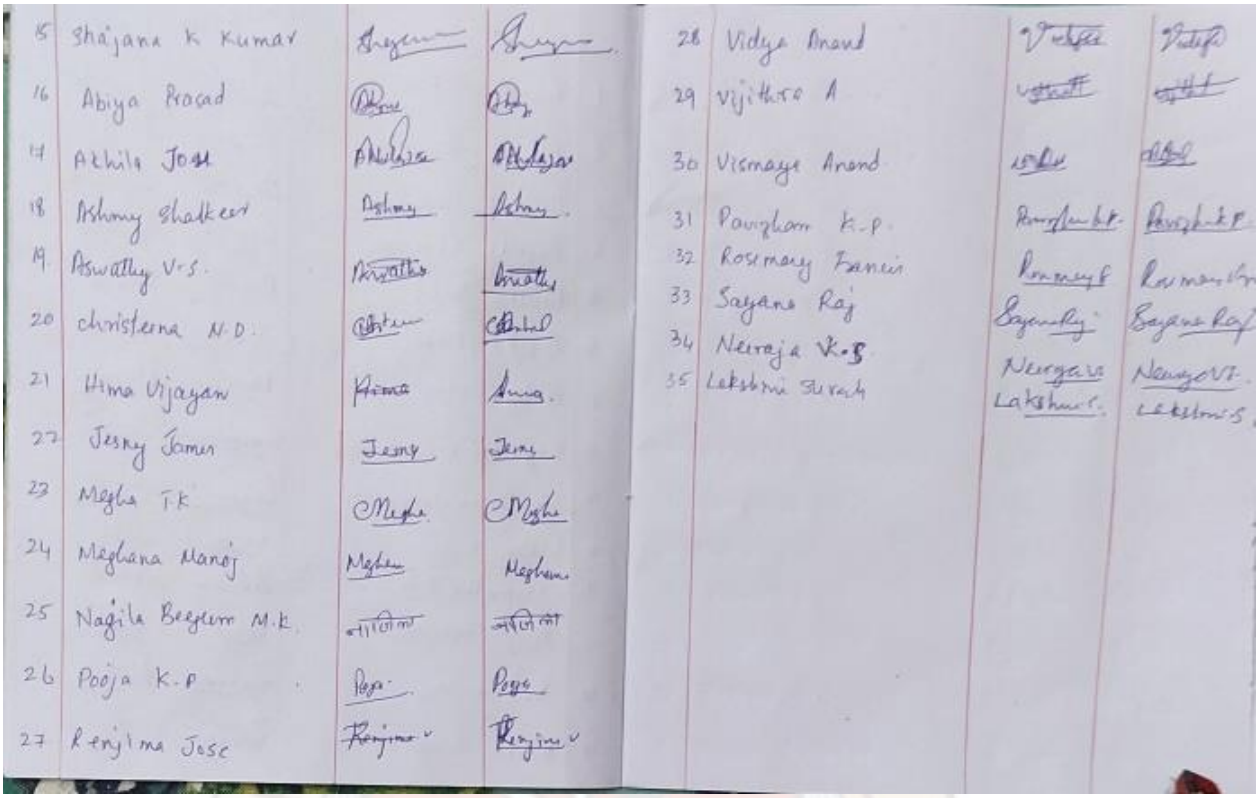
1. Pavizham K.P.
2. Sayana Raj
3. Rosemary Francis
4. Neeraja V.S.
5. Lakshmi Suresh
6. Aleena Wilson

7. Alfiya Pappachan
8. Amritha S.K.
9. Anjitha Chandran
10. Anusha Reji
11. Binitha Baby
12. Blessy Babu
13. Gayathry Viswanathan
14. Georgeena Jose
15. Lisha K.S.
16. Namitha P.K.
17. Pooja Pradeep
18. Reshma N.S.
19. Risna Basheer
20. Shajana K. Kumar
21. Abiya Prasad
22. Akhila Jose
23. Ashmy Shakkeer
24. Aswathy V.S.
25. Christeena N.D.
26. Hima Vijayan
27. Jesny James
28. Megha T.K.
29. Meghana Manoj
30. Najila Beegum M.K.
31. Pooja K.P.
32. Renjima Jose
33. Vidya Anand
34. Vijithra A.
35. Vismaya Vinod

Students Attendance



		11.03.2019	12.03.2019
1.	Aleena Wilson		
2.	Alfiya Pappachan		
3	Amritha S.K.		
4.	Anjitha chandran		
5.	Anusha Reji		
6.	Binitha Baby		
7	Blessy Baby		
8.	Gayathri Viswanathan		
9.	Georgeena Jose		
10	Lisha K.S.		
11.	Mamitha P.K.		
12.	Pooja Pradeep		
13	Reshma N.S.		
14	Risha Basheer		



15	Shajana K Kumar	Shajana	Shajana	28	Vidya Anand	Vidya	Vidya
16	Abiya Prasad	Abiya	Abiya	29	Vijithra A	Vijithra	Vijithra
17	Akhila Josh	Akhila	Akhila	30	Vismaya Anand	Vismaya	Vismaya
18	Ashamy Shaheer	Ashamy	Ashamy	31	Pavithra K.P	Pavithra K.P	Pavithra K.P
19	Aswathy V.S.	Aswathy	Aswathy	32	Rosemary Francis	Rosemary F	Rosemary
20	christeena N.D.	Christeena	Christeena	33	Sayana Raj	Sayana Raj	Sayana Raj
21	Hima Vijayan	Hima	Hima	34	Neeraja V.S	Neeraja V.S	Neeraja V.S
22	Jesny James	Jesny	Jesny	35	Lekshmi Suresh	Lekshmi S.	Lekshmi S
23	Megha T.K	Megha	Megha				
24	Meghana Manoj	Meghana	Meghana				
25	Nagila Beegam M.K	Nagila	Nagila				
26	Pooja K.P	Pooja	Pooja				
27	Renjima Jose	Renjima	Renjima				

Certificate

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HMT colony P. O, Kalamassery,
Cochin, Kerala - 683 503

CERTIFICATE

This is to certify that ~~Mr~~/Ms./~~Dr~~ Anusha Raji ,

of III DC Zoology, Sacred Heart College, Chalakudy

has attended hands on training on DNA isolation and DNA fingerprinting, organized by the Dept of Zoology, Sacred Heart College,Chalakudy, in association with DRP molecules, Kinfra park,Kalamassery on 11th&12th , March 2019 at Sacred Heart College,Chalakudy

Principal
Sacred Heart College,Chalakudy

Tojo G Tharayil
Director, DRP Molecules, Kochi

DRP MOLECULES PVT. LTD. ERNAKULAM

Syllabus

DNA finger printing

DNA Fingerprinting:

DNA Fingerprinting Applications, DNA Fingerprinting Methods, DNA Fingerprinting Principle, DNA Fingerprinting Steps, DNA profiling, Polymerase Chain Reaction (PCR), Polymerase Chain Reaction (PCR) amplification of short tandem repeats (STRs), Restriction fragment length polymorphism (RFLP).

References

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