

A social outreach programme on

Bacterial Exopolysaccharide and its Application

Under the guidance of
Dr. Rajib Bandopadhyay

Professor
Department of Botany
The University of Burdwan



Submitted by
SANJUKTA GHOSH
M.Sc. in Botany
Microbiology Special paper
Roll No.-BUR BOT 2017/049
Registration No- 014927 of 2014-15
Session: 2017-2019

~~Examined~~
R. Bandyopadhyay
05/8/19
S. Bandyopadhyay
05/8/19
R. Bandyopadhyay
05/8/2019
K. Bandyopadhyay
5/8/19
Rajib Bandopadhyay
05/08/19



DEPARTMENT OF BOTANY

MAHARAJADHIRAJ UDAY CHAND WOMEN'S COLLEGE

B.C. Road, Burdwan- 713 104 Phone- (0342)2533168/2531900

Govt. Sponsored Degree College. Estd.- 1955

www.mucwcburdwan.org

Date: 26-07-2019

TO WHOM IT MAY CONCERN

This is to certify that, Ms Sanjukta Ghosh, an M.Sc. student (SEM-IV) of the Dept. of Botany, Burdwan University has very soundly and successfully delivered her seminar lecture on the topic 'Bacterial Exopolysaccharide and its Application' as a social outreach programme in this department on 26th July, 2019. The seminar topic is based on the student's project work performed under the supervision of Prof. Dr. Rajib Bandopadhyay of Botany Department, The University of Burdwan. I wish her all success in life.

Swarnendu Mondal

26/7/2019

Swarnendu Mondal

HOD, Dept. of Botany

MUC Women's College

Purba Burdwan

West Bengal, India

Head
Department of Botany
U C Women's College
Burdwan - 713104

Acknowledgement

I want to acknowledge first my respected guide **Dr. Rajib Bandopadhyay**, Professor, Department of Botany, The University of Burdwan because of his continuous support and encouragement for my social outreach programme and his valuable speeches for making my dreams complete and to find the way to construct our carrier.

I acknowledge to **Dr. Sikha Dutta**, Professor & Head of the Department of Botany, The University of Burdwan for giving me the chance to do the social outreach program.

I acknowledge my respected teachers **Prof. Ambarish Mukherjee**, **Prof. Jai Prakash Keshri**, **Prof. Soumen Bhattacharjee**, **Prof. Tushar Kanti Maity**, **Dr. Abhijit Bandyopadhyay**, **Dr. Sujit Roy**, **Dr. Ashoke Ghosh**, **Dr. Saikat Naskar** and **Ms. Tithi Soren** for their valuable teaching, thinking and kind behaviour inspired me.

I am grateful to **Dr. Swarnendu Mondal**, Head of the department of Botany and **Mr. Chandan Das**, faculty member of M.U.C. Women's' College to permit me to perform my social outreach programme in that college.

I express immense gratitude to **Ms. Urmi Halder**, **Mr. Raju Biswas** and **Ms. Bhramar Dutta** for their loving guidance and affections.

I am also grateful to **Ashutosh da**, **Krishnendu da**, **Karuna di**, **Moitri di** and **Shrabana di** for their loving guidance as my elder brothers and sisters during this project.

I am thankful to my friends like **Debarati**, **Amit**, **Ranju**, **Mamata**, **Supriyo**, **Bristikana**, **Kabita**, **Riya**, **Aditi**, **Mousumi**, **Soumen** and all my other classmates.

And last but not the least nothing is possible without my family.

Date: 05.08.19

Place: Burdwan

Sanjukta Ghosh. 05.08.19
(SANJUKTA GHOSH)

Rajib Bandopadhyay
05/08/19

DR. RAJIB BANDOPADHYAY
PROFESSOR
DEPT. OF BOTANY
THE UNIVERSITY OF BURDWAN
GOLAPBAG, BURDWAN-713104
WEST BENGAL, INDIA

3.4. Discussion and interaction with the students:

Though it was explained in very basic level for understanding of the students but as the topic was new to them some questions were arisen in their mind such as –

1. What is biofilm?

Ans. Biofilm is the organized microbial communities, producing layer on any inanimate objects.

2. What is bioflocculant?

Ans. Bioflocculants are the biological substances which are used in purification of pollutants in water by clumping and precipitation of the pollutants. e.g., exopolysaccharides of bacteria act as bioflocculants.

3. Why exopolysaccharides are produced by bacteria?

Ans. Exopolysaccharides are protecting substance in bacteria against any stress condition. So bacteria produce EPSs for their protection.

Overall students showed interest and well response in the class.



Fig 3: Performance in the classroom during social outreach programme



Fig4: Picture with the students

4. Outcome of the programme:

Students were partially illuminated by this Social Outreach Programme. It will be a great achievement if the students are benefitted with this discussion and presentation. They were interested to study further and work in science laboratory and to discover new helpful research objectives.

5. Conclusion:

After the discussion and interaction with students, it can be concluded that the Social Outreach Programme has been given new idea to the students. The prime message of this programme has been conveyed to the students i.e. to build their interest in applied Biological Science that help them to think eco-friendly. The students were happy to be a part in completion of this programme and it was an enriched experience for me to take the class in front of the students first time. Overall, the Social Outreach Programme was successful.