

IMPACT REPORT

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Following students of Patna Women's College attended the STEM workshop in February 2018 and were motivated to participate in scientific activities and undergraduate research. The students feel that STEM workshop has been really helpful throughout their research. Listening to the highly qualified professors from Ohio State University about the implementations and virtues of STEM thoroughly motivated them. Now they are moving ahead with their undergraduate research keeping in mind that it will be the prime focus of their career as well. After completing their B.Sc course they intend to join M.Sc courses in their respective subjects. Some are definitely aspiring to join foreign universities.

1. **Sidra Perveen** of B.Sc II, Zoology submitted an abstract and has been invited for participation in the **India-International Science Festival 2018** to be held at Lucknow from 5th-8th October 2018, under the category, **Women Scientists and Entrepreneurship**. She will be given free fooding and lodging and to and fro travel grant.
2. **Sindhu Kumari** of BSc III, Zoology Honours is working on the research Project on the topic "**Insecticidal effect of *Euphorbia hirta* on *Callosobruchus chinensis* & *Sitophilus granarius*** .

The objective is to determine a cost effective method for protection of pulses and rice from these pests as *Euphorbia hirta* is a weed and usually procured for no cost and will not have any harmful effect on human health.

Sitophilus granarius is a serious pest of stored grain in cool climate. It is a pest of rice , wheat & barley grains. It also infects maize & other cereals grain & causes a greater damage to them.The pulse beetle *Callosobruchus chinensis* is a major insect pest of lentis , chickpea, green gram, broad beans etc.



Sindhu working with her team mate

3. **Zeba Anjum** of IIIrd year of B.Sc in Zoology Honours is working on the project titled " **FOOD PREFERENCES AND RATE OF MORTALITY CAUSED BY ASPARTAME ON CAMPONOTUS**".

Camponotus are being used for basic research work as they are easily available in the college campus and are easy to trap . Ants are collected from natural habitat in groups. Sweeteners such as jaggery, brown sugar, table sugar, aspartame , lactose , fructose , sucrose , stevia and sucralose are used for testing their preferences. It is also being tested whether aspartame causes mortality of ants or not.



Zeba Anjum working on ants

4. **Shabistan Jabin** of BSc III, Zoology Honours is working on " **IMPROVEMENT OF WATER QUALITY OF ADALATGANJ AREA, PATNA, BIHAR BY VERMIFILTRATION**"

The slum area of Adalatganj ,Patna,Bihar has filthy groundwater. In this project water analysis of the area and its filtration using both conventional as well as biological methods is being done by using earthworms (*Eisenia fetida*).



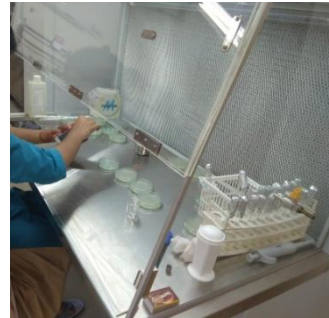
Shabistan Jabin's experimental setup

5. **Shafia Ambreen** of of B.Sc III Zoology Honours has been working on the project titled **“IDENTIFICATION OF MICROFLORA AND COMPARATIVE EVALUATION OF EFFICACY OF DISINFECTANT ON CONTAMINATED SURFACES”**.

The objective of this research is to collect the microbes from the surfaces of frequently used devices (mobiles, remote, refrigerator handle) and their identification. The other part of research is the comparative efficacy evaluation of disinfectant on the microbial contaminated surfaces.



Shafia Ambreen counting bacterial Cell colony



Shafia working on laminar bench

6. **Amita Shrivastave** of B.Sc III, Zoology Honours is working on **‘FAUNA DIVERSITY OF ZOOPLANKTON OF VARIOUS PONDS OF PATNA, BIHAR’**



Amita Shrivastava collecting water sample and identifying zooplanktons

7. **Smriti Mishra** of B.Sc III, Zoology Honours is working on **‘EFFECT OF DIFFERENT TEMPERATURE VARIATIONS ON HEN'S EGG’**



Smriti Mishra on her working table

8. **Pinki Kumari** of Industrial Microbiology 3rd year, is doing research on **"Isolation, characterization and extraction of oil from diatom collected from different water samples of Bihar region"**.

In this study, identification and characterisation of different diatoms from different water samples of Bihar region along with the cultivation of diatoms with high oil content in vivo under natural conditions is being done. The goal is preparing biofuel generating diatoms solar panels.



Pinki Kumari doing her experiment

9. **Adiba Kayenat** student of Industrial Microbiology (B.Sc 3rd year) is doing research on the topic **" Antimicrobial Activity of Plants extracts against Bacterial strains causing Food Poisoning disease and its application in food preservation"**



Adiba doing her experiment

10. **Shaeel Ashraf**, a student of Industrial Microbiology, third year, is currently involved in a research on the topic **'Antibacterial effect of essential oils alone and in combination with antibiotics against *Escherichia coli* and *Staphylococcus aureus*'**. The objective is to find a way to tackle with these two microorganisms, *E.coli* and *S.aureus*, who are known for their resistance to many conventional drugs.



Shaeel Ashraf doing her experiment

11. **Tanzah Anam** of Industrial microbiology 3rd year is working on the topic "**Antimicrobial activity of plants extract against Bacterial strains causing food poisoning disease and it's application in food preservation.** "



Tanzah Anam doing her experiment

12. **Ayisha Haque** of Industrial Microbiology 3rd year is working on the topic "**Comparative study of plastic degrading bacteria isolated from soil from different regions of Patna**".



Ayisha Haque working on Laminar air Flow

Students are extremely grateful to Sultana Nahar Madam for the exposure and guidance.

I am also thankful for considering me as a mentor.

