

**Drosophila Resource Center**  
**Department of Zoology**

- ❖ The Department of Zoology has developed resource centers for two animal model organisms: *Drosophila melanogaster* (Banana fruit fly) and *Danio rerio* (Zebra fish)
- ❖ The Department of Biotechnology, (GOI) expert committee appreciated the work being carried out on *Drosophila*, and awarded STAR status and special grant to be a resource centre for training students and staff of our college and different colleges of Delhi University. The center was established in the year 2011—
- ❖ The stock centre is maintaining wild type and different mutants of *Drosophila* such as vestigial, dumpy, cross-veinless, curly, amongst the wing mutations; white, white-apricot, sepia, bar, vermilion amongst the eye mutations; aristopedia, antennapedia, the homoeotic mutants; sepia-vestigial, sepia-curl, cross-veinless – white apricot, the double mutants. vestigial, dumpy, cross-veinless wings, forked bristles
- ❖ Main Activities include maintenance of *Drosophila* Wild type flies and Mutants; training to students and faculty of our college as well as from other colleges of Delhi
- ❖ Training provided University on colony maintenance, mutant studies collection of eggs, study of various Developmental stages, chromosome preparations. Analysis of chorionic, larval, pupal moulting proteins by simple SDS PAGE, eye pigment analysis by simple paper chromatography; demonstration of Mendelian Laws and other genetical studies
- ❖ The Animal ethics Committee has totally banned dissections, experiments with live organisms at the Undergraduate level as a result; students of Zoology and Life Sciences have no choice except end up doing dry Lab Experiments.
- ❖ To bring back a feel of handling live animals, an effort was made to introduce *Drosophila* as a model organism with some basic experiments designed to study various developmental Stages, Protein profiles, Mitotic Chromosomes, Salivary Gland Chromosomes, Mendelian Genetics, Evolutionary Biology etc.
- ❖ Learning is more effective when it is an active process
- ❖ Regular Hands on Training to students of Zoology, Life sciences and Botany Honours of the college
- ❖ The Drosophila Center also provides all strains to other Colleges
- ❖ The students from Life sciences. Zoology, Botany from our college are trained throughout the academic session in handling the flies, maintenance of the stocks, carry out simple experiments on Mendelian inheritance, Evolutionary biology, Developmental Biology etc

- ❖ A similar hands on training is also given to interested students from other colleges. The coordinator Dr. Chitra Bhasin has conducted five workshops in the college on *Drosophila* basics and transmission genetics and developmental biology , chromosome preparations, , behavior, developmental genetics etc.

**Note: Insert *Drosophila* Resource pic and *Drosophila* Resource3 pic**

## **Reproductive Biology lab**

Our Lab research efforts are focused on understanding key reproductive health problems and causing factors for these in young girls. We have completed the DU Innovation Project “Bio-Markers of Heat Stress & Acclimation” in 2015 and Star Innovation Project on “Incidence of PCOS in Young girls” in 2019. Our research have been fostered by doing projects with undergraduate students. We have successfully organized symposium and awareness Health camps in college for our students. Our students were trained through various workshops for excellence in public health data collection and analysis. We have presented our work in form of poster, oral presentation in various conferences and symposium and published research paper in scientific journals.

Professor Rita Singh from Department of Zoology, North Campus of Zoology was our mentor who guided us in our PCOS project. We have made collaboration with health clinics and Gynaecologist for our research.

### **List of Symposium and Health Camp Organized**

1. Bone Mineral Density Camp March 2014
2. Reproductive Health Camp April 2016
3. National Symposium and Awareness Programme March 2017
4. Sustainable Health Programe on PCOS Awareness September 2016
5. Skill Development Programme on “Life Style Management” July 3 rd -15 th 2017

### **List of Symposium and Conferences attended for Oral, Poster, and Paper presentation.**

1. “National Symposium on Reproductive Health in India: Cocerns & Awareness” Deshbandhu College, Feb 2016.
2. National Seminar on “A paradigm shift towards Empowerment of Women” Kalindi college, University of Delhi.
3. National symposium on “Lifestyle and Reproductive Health Challenges inYoung Girls”, Daulat Ram College, March 29 2017.
4. National Conference on Communicable Diseases, Zakir Hussain College, Jan 31-1 Feb 2018
4. Lifestyle risk factors and reproductive health in young women, S.S Jain Subodh PG (Autonomous) College, Jaipur

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