

Malik Azeem Anwar, March 2015

- **Studied Zoology at the Department of Zoology, AMU and secured three Gold Medals.**
 - **University Gold Medal:** Faculty of Life Sciences topper at M.Sc and P.G Courses 2012.
 - **Babar Mirza Inayat Ali Gold Medal:** Department of Zoology topper at M.Sc-2012.
 - **Prof. Osman M Adhami Gold Medal:** Section of Genetics topper at M.Sc-2012.
- **Qualified GATE, a national level test conducted by the IITs(90.83 Percentile)**
- **Received the INPIRE Fellowship in 2013 from the Department of Science and Technology, Govt. of India.**

I had a good theoretical background into the subject, but had no hands on experience in lab. It has been around more than six months and by the co-operation and motivation of my OSU Research Advisor, now I have learnt a lot so far and still learning. I also made some progress in a research project.

Research Project:

Our lab is interested in studying the RNA: protein complexes responsible for modulating the expression of genes. These RNA:protein complexes control different aspects of gene regulation. We are specifically interested in the ones which are deposited as a consequence of splicing at the Exon-Exon junctions called the Exon Junction Complex. The EJC interacts with other complex called the ASAP complex that is constituted of proteins involved in splicing, apoptosis and nucleo-cytoplasmic transport. I am interested in studying how the ASAP complex interacts with the EJC to mediate different functions involved in gene regulation.

Some of the Techniques I learnt:

- **Gene Cloning:** It is a recombinant DNA technology used to engineer a piece of DNA into a bacteria for studying its function. It involves a number of step.
 - **Gene Amplification:** It is the synthesis of a segment of DNA by using the PCR reaction. This technique involves using the online data bases and bioinformatics tools for designing primers.
 - **Bacterial Culture:** It is a technique used by molecular biologists to culture Bacteria which contains our gene of interest. Simply to increase the copy of our gene of interest.
- **Cell culture:** it is technique used in biological and medical research to study function of the gene, function of the protein in a cells which are derived from either human or other mammals.
- **Western Blotting:** it is a technique which involves the identification and study of the protein of interest usually from the cultured cells.
- **Immunoprecipitation:** It is a technique used by life researchers which uses specially designed antibodies against protein of interest to precipitate it and its associated cellular machinery.

Some advanced techniques to learn in near future:

- **RIPiT-Seq:** a high-throughput approach for footprinting native and endogenous RNA:protein complexes.
- **Creating deep-sequencing libraries.**