



## Integrative Genomic Analysis of Schizophrenia in the Basal Ganglia, and the Frontal lobe

**Pranshi Agrawal**

Gargi College, India

### Abstract:

Schizophrenia is a mental disorder which results in disordered thinking, hallucinations and behavior that impair daily functions which affects multiple brain regions such as basal ganglia, frontal lobe and many more. Earlier studies have shown that COMT is linked to schizophrenia. COMT when deleted results in a complex syndrome, the psychiatric manifestations of which include schizophrenia and other psychoses and so I decided to take COMT as a reference gene for doing genomic analysis. The purpose of this study was to identify possible candidate genes for Schizophrenia by doing gene search of COMT correlates in Basal ganglia and Frontal lobe and do comparative analysis. Gene expression data of COMT gene correlates in the Basal Ganglia, and the Frontal lobe was obtained from Allen Brain Atlas. A bioinformatics approach was used to analyze gene expression profiles in order to identify candidate genes that have an effect on Schizophrenia. Bioinformatics tools used were DAVID, STRING database, Gene Ontology knowledge-base. Total 16 genes found linked to schizophrenia were CBS, DDR1, GSTP1, GSTT1, GSTT2, HOMER3, HLA-A, MAP4, PHGDH, PLXNB1, PSEN1, SMPD1,

SREBF1, TSPO, SOX10. More genes linked to schizophrenia were found in the Basal ganglia as compared to the Frontal lobe. Some genes linked to schizophrenia were found directly or indirectly interacting with each other whereas some were not found interacting at all. These gene interaction study can help us to further on finding the other gene linked to them and may also results in some possible early detection method of schizophrenia.

### Biography:

I have done the Bsc microbiology hons from Gargi College,



University Of Delhi

### Publication of speakers:

1. SINGH, H. & Aggarwal, Priyanshi & KUMAR, S.. (2010). ChemInform Abstract: Thermally Induced Transformations of 1-Substituted-4,4,6-trimethyl-1,4-dihydropyrimidine-2(3H)-thiones.. Cheminform. 22. 70-70. 10.1002/chin.199141070.
2. SINGH, H. & Aggarwal, Priyanshi & KUMAR, S.. (2010). ChemInform Abstract: Effect of Coreagents on the Reactions of Alcohols with 6-Methyl-1,3-oxazine-2,4(3H)-diones.. ChemInform. 23. 10.1002/chin.199240088.
3. Singh, H. & Singh, Pushpa & Aggarwal, Priyanshi & Kumar, s.Ramesh Kumar. (2010). ChemInform Abstract: Heterocyclic Transformations. Part 5. Studies in Reactions of 6-Methyl-1,3-oxazine-2,4(3H)-dione with Arylamines - A Facile Synthesis of 1-Aryl-6-methyluracils.. ChemInform. 24. no-no. 10.1002/chin.199333192.
4. Aggarwal, Priyanshi & Dollimore, D.. (1997). The production of active carbon from corn cobs by chemical activation. Journal of thermal analysis. 50. 525-531. 10.1007/BF01979025.

[International Conference on Clinical Microbiology | May 19-20, 2021 | Osaka Japan](#)

**Citation:** Pranshi Agrawal, Integrative Genomic Analysis of Schizophrenia in the Basal Ganglia, and the Frontal lobe; Webinar on Gene Therapy; October 6th, 2020; London UK