



Chimeric mouse with human dopamine neurons carrying Parkinson's disease mutation

BIO-596

Molecular genetic basis of neurodegenerative disorders & birth defects in humans.

Human genetics is one of the most exciting and fastest-growing fields in the biomedical sciences. The availability of the genome sequence has revolutionized our ability to discover the molecular basis for human genetic disease. This course covers current understanding of molecular and cellular basis of human diseases like neurodegenerative disorders and birth defects.

This course has been designed to cater to: (a) the graduate students (b) and the undergraduate students aspiring to get into the pre-medical, pre-dental or biomedical research programs or industry. The course will include readings and presentations with focus on current questions in the fields of medical and human genetics and methodologies appropriate to answer such questions.

Advanced topics in human genetics related to

1. Mendelian diseases, molecular genetics of neurodegeneration: age related disorders Parkinson's, Alzheimer's, Amyloid macular degeneration, retinal degeneration and birth defects like Aniridia, Alagille's syndrome.

2. Latest sensation in biomedical field pertaining to human diseases.

The course will help students to work creatively in their own field of special interest but will also be able to relate their findings to human diseases.

In addition, there will be efforts to get the guest speakers to come and discuss either their research in the area or some high impact paper in the field.

Duration: two hours. Presentation one hours, discussion 45 minutes

Applicable to: Graduate, Seniors and Juniors (on permission, limited spots)

Credits: 2

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