

Course Contents:

Introduction to cell signaling system, Signal molecules, classification of signal molecules, Function of signal molecules, Receptors, classification of receptors, Structure and function of Receptors (Receptor Tyrosine kinases, non-Receptor Tyrosine Kinases, Receptor tyrosine Phosphatases, G-protein coupled receptors, Toll-Like Receptors Death receptors). MAPK pathway as a model cell signaling pathway.

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos /films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work:	25 marks
Midterm Exam:	35 marks
Final term Exam:	40 marks

Text Book

1. John Hancock, Cell Signalling Ed 3rd, Publisher: Prentice Hall (November 19, 1997), ISBN-10: 0582312671

Books Recommended:

2. Bastien D. Gomperts, Ijsbrand M. Kramer , Peter E.R. Tatham, Signal Transduction, Second Ed., Publisher: Academic Press; 2 Ed. (August 19, 2009), ISBN-10: 0123694418.
3. Friedrich Marks, Cellular Signal Processing: An Introduction to the Molecular Mechanisms of Signal Transduction, Garland Science; 1 Ed. (November 14, 2008), ISBN-10: 0815342152
4. John Nelson, Structure and Function in Cell Signalling. Wiley; 1 Ed. (August 25, 2008), ISBN-10: 0470025514

UZO-434

Cell Signalling Systems-I (Lab.)

Cr. (1)

Course Contents:

Identification of various receptors from given material.

Identification of antagonists/inhibitors of various cell signaling pathways

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