Yashoda Shikshan Prasarak Mandal's
YASHODA TECHNICAL CAMPUS, SATARA
TEACHING PLAN

Name of Department: M.Pharm
Academic Year: **2024-25** **Subject**: Advance Medicinal chemistry
Class: F.Y.M.Pharm **(Sem VI)** **Name Of Teacher**: Ms. Devale R.P.

L.No.	Main Topic	Subtopic & Contents Planned
1	Drug discovery	Stages of drug discover
2		Stages of drug discover
3		Stages of drug discover
4		lead discovery
5		lead discovery
6		lead discovery
7		Identification, validation and diversity of drug target
8		Identification, validation and diversity of drug target
9		Identification, validation and diversity of drug target
10	Biological drug targets	Receptors, types, binding and activation
11		Receptors, types, binding and activation
12		Receptors, types, binding and activation
13		Theories of drug receptor interaction, drug receptor interactions
14		Theories of drug receptor interaction, drug receptor interactions
15		Theories of drug receptor interaction, drug receptor interactions
16		Agonists vs antagonists, artificial enzymes
17		Agonists vs antagonists, artificial enzymes
18	Prodrug Design and Analog design	Basic concept, Carrier linked prodrugs/ Bioprecursors
19		Basic concept, Carrier linked prodrugs/ Bioprecursors
20		Prodrugs of functional group, Prodrugs to improve patient acceptability, Drug solu
21		Prodrugs of functional group, Prodrugs to improve patient acceptability, Drug solu
22		Drug absorption and distribution, site specific drug delivery and sustained drug action
23		Drug absorption and distribution, site specific drug delivery and sustained drug action
24		Rationale of prodrug design and practical consideration of prodrug design.
25		Rationale of prodrug design and practical consideration of prodrug design.
26	Combating drug resistance	Causes for drug resistance
27		Causes for drug resistance
28		strategies to combat drug resistance in antibiotics and anticancer therapy
29		strategies to combat drug resistance in antibiotics and anticancer therapy
30		strategies to combat drug resistance in antibiotics and anticancer therapy

31		Genetic principles of drug resistance.
32		Genetic principles of drug resistance.
33		Genetic principles of drug resistance.
34	Analog Design	Introduction, Classical & Non classical, Bioisosteric replacement strategies, rigid analog
35		Introduction, Classical & Non classical, Bioisosteric replacement strategies, rigid analog
36		Alteration of chain branching, changes in ring size, ring position isomers, design of stereo isomers and geometric isomers
37		Alteration of chain branching, changes in ring size, ring position isomers, design of stereo isomers and geometric isomers
38		Alteration of chain branching, changes in ring size, ring position isomers, design of stereo isomers and geometric isomers
39		Fragments of a lead molecule, variation in inter atomic distance
40		Fragments of a lead molecule, variation in inter atomic distance
41	Medicinal chemistry aspects	Anti-hypertensive drugs,
42		Psychoactive drugs, Anticonvulsant drugs
43		H1 & H2 receptor antagonist, COX1 & COX2 inhibitors
44		Adrenergic & Cholinergic agents
45		Antineoplastic
46		Antiviral agents.
47	Stereochemistry and Drug action	Realization that stereo selectivity is a pre-requisite for evolution.
48		Role of chirality in selective and specific therapeutic agents.
49		Case studies, Enantio selectivity in drug adsorption, metabolism, distribution and elimination.
50	Rational Design of Enzyme Inhibitors	Enzyme kinetics & Principles of Enzyme inhibitors, Enzyme inhibitors in
51		Enzyme inhibitors in basic research, rational design of non-covalently and covalently binding enzyme inhibitors.
52	Peptidomimetics	Therapeutic values of Peptidomimetics
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54		Design of peptidomimetics by manipulation of the amino acids, modification of the peptide backbone, incorporating conformational constraints locally or globally.
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58		Chemistry of prostaglandins, leukotrienes and thromboxones.
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Particulars	**Subject Teacher**	**HOD &** **Academic in-charge**
Name		
Signature		
Remarks		