

课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 Course Title	药理学 A Pharmacology A
2.	授课院系 Originating Department	医学院, School of Medicine
3.	课程编号 Course Code	MED403A
4.	课程学分 Credit Value	3
5.	课程类别 Course Type	专业基础课 Major Foundational Courses
6.	授课学期 Semester	秋季 Fall
7.	授课语言 Teaching Language	中英双语 English & Chinese
8.	授课教师、所属学系、联系方式 Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	王玉琨, 教授, 南方科技大学医学院 Email:wangyk@sustc.edu.cn
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	无 NA
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
学时数 Credit Hours	48	0	0	0	48
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 None				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 None				
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 None				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

本课程是一门与医学和药学相关的综合性学科，涉及药学、基础医学和临床医学的相关内容。本课程主要介绍药物的药效学和药动学的内容，将以人体系统用药为主线，深入阐明临床常用药物在人体的代谢规律，作用机制，如何发挥其临床疗效等与生活息息相关现象。通过药理学学习，使学生理解药物的作用、作用原理及如何充分发挥其临床疗效，减少其不良反应，同时在掌握药理学基本理论、基本知识、基本技能的基础上，培养学生观察、分析、综合和解决问题的能力。This course is a medicine- and pharmacy- related comprehensive discipline, consisting of pharmacy, basic medicine, and clinical medicine. The course mainly introduces the pharmacodynamics and pharmacokinetics of drugs. It will focus on the use of drugs in the human body system, and clarify the phenomenon of the metabolism of the commonly used drugs in the human body, the mechanism of action, how to exert its clinical efficacy and other life-related phenomena. Through pharmacological learning, students can understand the role of drugs, the principle of action and how to give full play to its clinical efficacy, reduce its adverse reactions, and at the same time, on the basis of mastering the basic theories of pharmacology, basic knowledge and basic skills, training students to observe and analyze, the ability to integrate and solve problems.

16. 预达学习成果 Learning Outcomes

1. 掌握药物的体内过程，药物的基本作用，药物作用机制的受体理论，药物作用的非受体机制，药物的构效关系与量效关系，影响药物作用的因素。To understand the in vivo process of drugs, the basic role of drugs, the receptor theory of drug action mechanism, the non-receptor mechanism of drug action, the structure-activity relationship of drugs and the dose-effect relationship, and the factors affecting drug action.
2. 熟悉神经、呼吸、循环、消化、泌尿、内分泌等系统常用药的机制。To be familiar with the mechanisms of commonly used drugs in the system of nerves, respiration, circulation, digestion, urinary and endocrine.
3. 了解药理学和医学间的相互关系及该学科发展的前沿热点问题。Understand the interrelationship between pharmacology and medicine disciplines and the hot issues at the forefront of the development of the discipline.

17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）
Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

第一章	<p>总论和药物代谢动力学</p> <p>药理学概论</p> <p>药物的体内过程及跨细胞膜转运</p> <p>药物消除动力学</p> <p>药物代谢动力学的重要参数</p> <p>药物剂量的设计与优化</p>
Chapter 1	<p>General and pharmacokinetics</p> <p>Introduction to Pharmacology.</p> <p>Drug in vivo process and transport across cell membranes</p> <p>Pharmacokinetics</p> <p>Important parameters of pharmacokinetics</p> <p>Design and optimization of drug dosage</p>
第二章	<p>药物效应动力学和影响药物效应的因素</p> <p>药物的基本作用</p> <p>药物的量-效关系</p> <p>药物与受体</p> <p>药物因素与机体因素</p>
Chapter 2	<p>Pharmacodynamics and factors affecting drug effects</p> <p>The basic role of drugs</p> <p>Dose-effect relationship</p> <p>Drugs and Receptors</p> <p>Drug factors and body factors</p>
第三章	<p>传出神经系统概论及胆碱受体激动药</p> <p>传出神经系统概述及作用于传出神经系统的药物基本作用和分类</p> <p>胆碱受体激动药分类</p>
Chapter 3	<p>Introduction to the Outgoing Nervous System and Choline Receptor Agonists</p> <p>Overview of the efferent nervous system and the basic role and classification of drugs acting on the efferent nervous system.</p> <p>Choline receptor agonist classification.</p>
第四章	<p>胆碱受体阻断药和影响胆碱酯酶活性的药物</p> <p>M 胆碱受体阻断药</p> <p>N 胆碱受体阻断药</p> <p>抗胆碱酯酶药</p> <p>胆碱酯酶复活药</p>
Chapter 4	<p>Choline receptor blockers and drugs that affect cholinesterase activity</p> <p>M-choline receptor blocker.</p> <p>N-choline receptor blocker.</p>

	Anticholinesterase
	Cholinesterase Reactivating Drug
第五章	作用于肾上腺受体药物
	肾上腺受体激动剂
	肾上腺受体阻断剂
Chapter 5	Adrenal receptor drug
	Adrenal receptor agonist.
	Adrenal receptor blocker.
第六章	中枢神经系统药理学概论和全身麻醉药
	中枢神经系统的细胞学基础及常用药物
	全身麻醉药
Chapter 6	Introduction to central nervous system pharmacology and anesthetics
	Cytological basis of the central nervous system and commonly used drugs.
	General anesthetic.
第七章	局麻药与镇静催眠药
	局部麻醉药
	镇静催眠药
Chapter 7	Local anesthetics and sedative hypnotics
	Local anesthetic and sedative hypnotic local anesthetic
	Sedative hypnotics
第八章	抗癫痫药和抗惊厥药以及治疗中枢神经系统退行性疾病药
	抗癫痫药
	抗惊厥药
	抗帕金森病药
	治疗阿尔茨海默病药
Chapter 8	Antiepileptic and anticonvulsant drugs and drugs to treat degenerative diseases of the central nervous system
	Antiepileptic drugs
	Anticonvulsant
	Anti-Parkinson's disease drugs
	Alzheimer's disease medicine
第九章	抗精神失常药与镇痛药
	抗精神分裂症药
	抗躁狂症药
	抗抑郁药
	镇痛药
Chapter 9	Antipsychotic drugs and analgesics

	Anti-schizophrenia
	Anti-manic drugs
	Antidepressants
	Analgesics
第十章	解热镇痛抗炎药
	非选择性环氧化酶抑制药
	选择性环氧化酶-2 抑制药
Chapter 10	Antipyretic, analgesic and anti-inflammatory drugs
	Non-selective cyclooxygenase inhibitors
	Selective cyclooxygenase-2 inhibitor
第十一章	离子通道药物及部分心血管系统药
	离子通道概论
	抗心律失常药
Chapter 11	Ion channel drugs and some cardiovascular system drugs
	Introduction to ion channels.
	Antiarrhythmic drug.
第十二章	作用于肾素-血管紧张素系统药物和利尿药
	肾素抑制药
	血管紧张素转化酶抑制药
	袢利尿剂
	噻嗪类利尿药
	保钾利尿剂
	碳酸酐酶抑制药
	渗透性利尿剂
Chapter 12	Act on renin-angiotensin system drugs and diuretics
	Renin inhibitor
	Angiotensin converting enzyme inhibitor
	Loop diuretics
	Thiazide diuretics
	Potassium-sparing diuretics
	Carbonic anhydrase inhibitor
	Osmotic diuretics
第十三章	抗高血压药和治疗心力衰竭药
	常用抗高血压药
	其他抗高血压药
	治疗心力衰竭药
Chapter 13	Antihypertensive drugs and heart failure drugs
	Commonly used antihypertensive drugs

	Other antihypertensive drugs
	Heart failure medication
第十四章	调节血脂药和抗心绞痛药
	调节血脂药
	常用抗心绞痛药
	其他抗心绞痛药
Chapter 14	Lipid-regulating drugs and antianginal drugs
	Lipid-regulating drugs
	Commonly used anti-angina drugs
	Other antianginal drugs
第十五章	作用于血液及造血系统药物、影响自体活性物质药物
	抗凝药
	抗血小板药
	纤维蛋白溶解药
	促凝血药
	膜磷脂代谢产物类药物及拮抗药
	5-羟色胺类药物及拮抗药
	组胺和抗组胺药
	多肽类
	一氧化氮及其供体与抑制剂
Chapter 15	Drugs acting on blood and hematopoietic system, drugs that affect autologous active substances
	Anticoagulant
	Antiplatelet drugs
	Fibrinolytic drugs
	Procoagulant
	Membrane phospholipid metabolites and antagonists
	Serotonin drugs and antagonists
	Histamine and antihistamines
	Peptides
	Nitric oxide and its donors and inhibitors
第十六章	呼吸系统和消化系统药物
	平喘、镇咳、祛痰药
	慢性阻塞性肺疾病治疗药
	治疗消化性溃疡的药物
	消化系统功能调节药
Chapter 16	Respiratory and digestive medicine

	Asthma, antitussive, expectorant.
	Chronic obstructive pulmonary disease medicine
	Medicine for treating peptic ulcer
	Digestive system function regulator
第十七章	作用于子宫平滑肌的药物及性激素
	子宫平滑肌兴奋药
	子宫平滑肌抑制药
	雌激素和孕激素类药
Chapter 17	Drugs and sex hormones acting on uterine smooth muscle
	Uterine smooth muscle stimulant
	Uterine smooth muscle inhibitor
	Estrogen and progestin drugs
第十八章	肾上腺皮质激素类和甲状腺激素相关药
	盐皮质激素
	糖皮质激素
	促皮质激素与皮质激素抑制药
	甲状腺激素
	抗甲状腺药物
Chapter 18	Adrenocortical hormones and thyroid hormone related drugs
	Mineralocorticoid
	Glucocorticoid
	Corticotropin and corticosteroid inhibitors
	Thyroid hormone
	Antithyroid drugs
第十九章	胰岛素、降糖药及抗骨质疏松药
	胰岛素
	口服降糖药
	抗骨质疏松症药物
Chapter 19	Insulin, hypoglycemic drugs and anti-osteoporosis drugs
	insulin
	Oral hypoglycemic agents
	Anti-osteoporosis drugs
第二十章	抗菌药物概论和β内酰胺类抗生素
	抗菌药物作用机制与分类
	β内酰胺类抗生素
Chapter 20	Introduction to Antibacterials and β-lactam Antibiotics
	Antibacterial action mechanism and classification.

β lactam antibiotic

第二十一章 大环内酯类、林可霉素、多肽类、氨基糖苷类抗生素

大环内酯类

林可霉素类

多肽类

氨基糖苷类

Chapter 21 Macrolides, lincomycin, peptides, aminoglycoside antibiotics

Macrolides

Lincomycin

Peptides

Aminoglycosides

第二十二章 四环素类、氯霉素类、人工合成抗菌药

四环素类

氯霉素类

喹诺酮类

磺胺类

Chapter 22 Tetracyclines, chloramphenicol, synthetic antibacterial drugs

Tetracyclines

Chloramphenicol

Quinolones

Sulfa

第二十三章 抗病毒、真菌药物和抗结核、麻风病药物以及抗寄生虫药物

抗病毒药

抗真菌药

抗结核药

抗麻风病药

抗疟疾药

抗阿米巴及抗滴虫药

抗血吸虫、丝虫病药

Chapter 23 Antiviral, fungal and anti-tuberculosis, leprosy and antiparasitic drugs

Antiviral drugs

Antifungal

Anti-tuberculosis drugs

Anti-leprosy drugs

Antimalarial drugs

Anti-amebic and anti-trichomoniasis

Anti-schistosomiasis, filariasis medicine

第二十四章 抗恶性肿瘤药和免疫功能调节药物

抗恶性肿瘤药的药理作用及分类

免疫抑制药

免疫增强药

Chapter 24 Anti-malignant drugs and immune function regulating drugs

Pharmacological action and classification of anti-malignant drugs.

Immunosuppressive drug.

Immunopotentiating drug

Section	Hour	Teaching Contents
1	2	总论和药物代谢动力学 General and pharmacokinetics
2	2	药物效应动力学和影响药物效应的因素 Pharmacodynamics and factors affecting drug effects
3	2	传出神经系统概论及胆碱受体激动药 Introduction to the Outgoing Nervous System and Choline Receptor Agonists
4	2	胆碱受体阻断药和影响胆碱酯酶活性的药物 Choline receptor blockers and drugs that affect cholinesterase activity
5	2	作用于肾上腺受体药物 Adrenal receptor drug
6	2	中枢神经系统药理学概论和全身麻醉药 Introduction to central nervous system pharmacology and anesthetics
7	2	局麻药与镇静催眠药 Local anesthetics and sedative hypnotics
8	2	抗癫痫药和抗惊厥药以及治疗中枢神经系统退行性疾病药 Antiepileptic and anticonvulsant drugs and drugs to treat degenerative diseases of the central nervous system
9	2	抗精神失常药与镇痛药 Antipsychotic drugs and analgesics
10	2	解热镇痛抗炎药 期中考试 Antipyretic, analgesic and anti-inflammatory drugs, Mid-term exam
11	2	离子通道药物及部分心血管系统药 Ion channel drugs and some cardiovascular system drugs
12	2	作用于肾素-血管紧张素系统药物和利尿药 Act on renin-angiotensin system drugs and diuretics
13	2	抗高血压药和治疗心力衰竭药 Antihypertensive drugs and heart failure drugs
14	2	调节血脂药和抗心绞痛药 Lipid-regulating drugs and antianginal drugs
15	2	作用于血液及造血系统药物、影响自体活性物质药物 Drugs acting on blood and hematopoietic system, drugs that affect autologous active substances
16	2	呼吸系统和消化系统药物 Respiratory and digestive medicine
17	2	作用于子宫平滑肌的药物及性激素 Drugs and sex hormones acting on uterine smooth muscle

18	2	肾上腺皮质激素类和甲状腺激素相关药 Adrenocortical hormones and thyroid hormone related drugs
19	2	胰岛素、降糖药及抗骨质疏松药 Insulin, hypoglycemic drugs and anti-osteoporosis drugs
20	2	抗菌药物概论和β内酰胺类抗生素 Introduction to Antibacterials and β-lactam Antibiotics
21	2	大环内酯类、林可霉素、多肽类、氨基糖苷类抗生素 Macrolides, lincomycin, peptides, aminoglycoside antibiotics
22	2	四环素类、氯霉素类、人工合成抗菌药 Tetracyclines, chloramphenicol, synthetic antibacterial drugs
23	2	抗病毒、真菌药物和抗结核、麻风病药物以及抗寄生虫药物 Antiviral, fungal and anti-tuberculosis, leprosy and antiparasitic drugs
24	2	抗恶性肿瘤药和免疫功能调节药物 Anti-malignant drugs and immune function regulating drugs



18. 教材及其它参考资料 Textbook and Supplementary Readings

教材 Text book:

杨宝峰, 陈建国.药理学第九版[M].北京:人民卫生出版社,2018.

参考书 Reference books:

[1] 姚明辉.药理学(第一版)[M].北京:人民卫生出版社,2006.

[2] 杨世杰,郭青龙,李卫东.人体解剖生理学[M].北京:中国医药科技出版社, 2015.

[3] George M. Brenner PhD , Craig Stevens PhD.Pharmacology.2017

课程评估 ASSESSMENT

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance		10		
课堂表现 Class Performance				
小测验 Quiz		10		
课程项目 Projects				
平时作业 Assignments				
期中考试 Mid-Term Test		30		
期末考试 Final Exam		50		
期末报告 Final Presentation				
其它(可根据需要 改写以上评估方式) Others (The above may be modified as necessary)				

20. 记分方式 GRADING SYSTEM

- A. 十三级等级制 Letter Grading
 B. 二级记分制(通过/不通过) Pass/Fail Grading

课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority

本课程已经过医学院教学副院长张文勇教授审核通过。

