Course Description for Postgraduates, School of Basic Medicine

<table>
<tr><td colspan="3">Course Title: Basic Pathology</td><td colspan="3">Course Code: 510.529</td></tr>
<tr><td colspan="6">Course category: ■High-level course □International course □Advanced international courses □Common course</td></tr>
<tr><td colspan="6">Course Type: □1st-level discipline basic courses □2nd-level discipline basic courses ■Optional professional courses</td></tr>
<tr><td colspan="6">The Methods of Assessment: Paper Test or Review</td></tr>
<tr><td colspan="3">Teaching Method: Full English Teaching (Lecture & Practice)</td><td colspan="3">Applicable Educational Level: Master■ Doctor □</td></tr>
<tr><td colspan="2">The Beginning of the Term: the 2nd semester</td><td colspan="2">Total Hours/Teaching Hours: 36</td><td colspan="2">Credits: 2</td></tr>
<tr><td colspan="6">Applicable Specialty: for all medical majors</td></tr>
<tr><td>Name of the Teachers of the Course Group</td><td>Professional Title</td><td>Major</td><td>Age</td><td colspan="2">Academic Direction</td></tr>
<tr><td>Wang guoping</td><td>Professor</td><td>Pathology</td><td>52</td><td colspan="2">Cardiovascular and Molecular Pathology</td></tr>
<tr><td>Ruan qiurong</td><td>Professor</td><td>Pathology</td><td>51</td><td colspan="2">Cardiovascular Pathology</td></tr>
<tr><td>Wang xi</td><td>Professor</td><td>Pathology</td><td>44</td><td colspan="2">Respiratory Pathology</td></tr>
<tr><td>Ao qilin</td><td>Associate Professor</td><td>Pathology</td><td>44</td><td colspan="2">Respiratory Pathology</td></tr>
<tr><td>Jiansha Li</td><td>Associate Professor</td><td>Pathology</td><td>42</td><td colspan="2">Molecular Pathology</td></tr>
<tr><td colspan="6">Course Outline:
To study the pathological changes and mechanism of every basic pathological process, combining the latest study result of cellular biology, molecular biology, immunology, genetics and ultrastructural pathology. Through the study of basic theory and knowledge of pathology, to strengthen the master of pathology and form the solid foundation for every subject of medicine.</td></tr>
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Outline:

① Cellular pathology: To master the pathological changes of cytomembrane, nucleus, endoplasmic ergatoplasm, Golgi osome, mitochondrion, lysosome, over oxygen, cytoskeleton; and the relationship between the important disease and cytomembrane, nucleus, endoplasmic ergatoplasm, Golgi osome, mitochondrion, lysosome changes, morphological characteristics of the cell contains.

② cell outside matrix pathology: To study the structure and function of cell adhesion molecular, including calcium adhesion pigment, select pigment, integration pigment and immune globulin super family; structure and function of cell connection, including close connection, bridge grain and gap connection; the relationship between the cell adhesion molecular, cell connection and disease; normal structure function and pathological role of various cell outside matrix, including collagen, base film, non - collagen sugar protein and protein poly sugar .

③ Metabolismdisorders: metabolism disordersare characteristics of diseases. This chapter includestwoparts: inorganic and organic compounds. In inorganic part, which is mainlydescribed in calcium, ironandcopper metabolism , deficiency and excess. Functions and deficiency of 14 essential trace elements. In organic part,which is mainly describes the concepts, pathologicalchanges of glycogendepositiondisease, pathogenesis and pathologic features of 10 isoforms. Pathological changes of mainorgans in diabetesmellitus. theconcept of fatty degeneration, characteristics, the concept of fattydegeneration, etiology, pathogenesis, pathologicalchangesandcomplications in liver, kidney, heart. Concept, etiology, pathogenesis, pathological changes of gout.

④ Cell death: cell death is the end of cell life, is a prevalent phenomenon in organisms. Cell death is generally divided into two types: necrosis and apoptosis. In this chapter, it will describe the concepts, mechanisms and morphological characteristics of cell necrosis and apoptosis. Focuses on the mechanisms, the biological characteristics and method for detection of apoptosis.

⑤ Aging: Aging is the process of any living creature that must be experienced; each

individual rate of aging, aging of various organ systems in the same individual is also different. This chapter will show you what is aging? Why do people will be ageing? Which factors can influence the aging? The morphology and function changes of cells, tissues, organs in aging. Focuses on the concept, mechanism of aging, and change of form and function of the organs and tissues.

⑥ Thrombosis: Thrombosis is the common pathological phenomena in blood circulation disorders; usually cause the vascular obstruction and tissue infarction. Focuses on the mechanism, procedures and forms of thrombosis and the type of thrombosis and outcomes.

⑦ Inflammation: The concept of inflammation, inflammatory factorandthemostcommontypes of inflammatory; basicpathologicalchangesand the concept of inflammatorymediators, the causeandeffects of cellsandplasma - derivedmedia. Acuteinflammation: hemodynamics, bloodvesselwallpermeabilityanditsmechanism. Whitecells in diffusionprocess, therole of chemokines, phagocytosis, functionandoutcome of neutrophilandmacrophage. Types of acuteinflammation. Chronicinflammation : thecausesandcharacteristics, concept of chronic granuloma inflammatory, cells content of granuloma, type of granuloma andlesioncharacteristics of granuloma (include tuberculosis, leprosy, andsyphilis, typhoidGranuloma, fungalandparasitic granuloma, silicosis, foreignbodygranuloma.)

⑧ Tumor: Including the concept of tumor, and the hyperplasic features of tumor; basic morphologic feature of tumor; heterogeneity and atypia of tumor; vascular generated and molecular mechanism of tumor; growth and detection method of tumor; metastasis of tumor and molecular mechanism; precancerous condition, non-typical hyperplasia, dysplasia, and intraepithelial neoplasia; new classification introduction of WHO tumor.

Guide Books:

Robbins Basic Pathology, Vinay Kumar, 9th edition, 2014.

Main Reference Books:

Robbins Basic Pathology, Vinay Kumar, 9th edition, 2014