

**MINUTES OF THE CURRICULUM PLANNING COMMITTEE
SUBCOMMITTEE ON THE SCIENTIFIC FOUNDATIONS OF MEDICINE**

October 7, 2009

PRESENT: Nirjhor Bhowmik, John Bigbee, Linda Costanzo, Steve Crossman, Margaret Grimes, Eddie Ishac, Deb Lebman, Nana Y. Ohene-Baah, and Ike Wood.

ABSENT: Cindi Cornelissen, Bob Diegelmann, Alan Dow, Richard Krieg, Virginia Pallante, and Kathryn Zedler.

The meeting was called to order at 3:05 p.m. by Ike Wood, Committee Chair.

The group reviewed the proposed topics and organized them into groups that would follow in sequence:

GROUP 1

- Principles of biochemistry (amino acids, proteins, carbohydrates and fatty acids)
- Gene expression
- DNA damage
- Cytoskeleton
- Enzymes
- pH
- Bioenergetics
- The cell cycle
- Organelles and basic processes

GROUP 2

- Connective tissue
- Epithelium and cell junctions
- Membrane structure
- Cell signaling (second messenger pathways)
- Membrane transport
- Simple modes of inheritance (Mendelian vs. non-Mendelian)
- Genetic variations

GROUP 3

- Morphology of the neuron
- Membrane potentials
- Action potentials
- Neuromuscular transmission
- Skeletal muscle
- Smooth muscle

GROUP 4

- Basic embryology (through neurulation)

- Basic vocabulary and orientation of the body
- Body/organs
- Pharmacokinetics
- Pharmacogenetics
- Pharmacodynamics
- Drug development
- Drug evaluation and regulation
- Factors modifying drug response

GROUP 5

- The autonomic nervous system, physiology and pharmacology
- Genetic basis of disease
- Introduction to clinical genetics
- Multifactorial basis of common diseases

GROUP 6

- Introduction to cells and tissues—B and T cells
- Antigen recognition
- Innate and adaptive immunity
- Lymphocyte development
- Cell signaling—chemokines and cytokines
- Response to infection
- Hypersensitivity
- Principles of autoimmunity
- Principles of vaccination
- Bacteria
- Viruses
- Fungi
- Parasites
- Antimicrobial therapy for each

GROUP 7

- Tools of molecular genetics
- Cellular injury and death
- Cellular adaptation
- Inflammation and repair
- Hemodynamic disorders
- Neoplasia
- Environmental pathology
- Principles of toxicology
- Molecular pathology
- Autopsy/utilization of the clinical laboratory

Dr. Wood stated the subcommittee will meet again on October 21, 2009 at 3:00 p.m. During that time, the subcommittee will again review and refine the sequencing of the topics and view them in light of the valued outcomes identified by the faculty and students.

The meeting was adjourned at 4:30 p.m.

Respectfully submitted,
Ike Wood, M.D., Committee Chair

REVISION

GROUP 1

- Principles of biochemistry (amino acids, proteins, carbohydrates and fatty acids)*
- Membrane structure*
- Organelles*, cytoskeleton* and their and basic processes
- The cell cycle*
- Gene expression
- DNA damage
- Enzymes
- pH
- Bioenergetics

GROUP 2

- Connective tissue
- Epithelium and cell junctions
- Cell signaling (second messenger pathways)
- Membrane transport

GROUP 3

- Basic embryology (through neurulation)
- Basic vocabulary and orientation of the body*
- Body/organs*
- Pharmacokinetics
- Pharmacodynamics
- Drug development
- Drug evaluation and regulation
- Factors modifying drug response

GROUP 4

- Morphology of the neuron
- Membrane potentials
- Action potentials

- Synaptic and neuromuscular transmission; pharmacology of the neuromuscular junction
- Skeletal muscle
- Smooth muscle

GROUP 5

- The autonomic nervous system, physiology and pharmacology
- Simple modes of inheritance (Mendelian vs. non-Mendelian)
- Genetic variations
- Genetic basis of disease
- Introduction to clinical genetics
- Multifactorial basis of common diseases
- Pharmacogenetics

GROUP 6

- Introduction to cells and tissues—B and T cells
- Antigen recognition
- Innate and adaptive immunity
- Lymphocyte development
- Cell signaling—chemokines and cytokines
- Response to infection
- Hypersensitivity
- Principles of autoimmunity
- Principles of vaccination
- Bacteria
- Viruses
- Fungi
- Parasites
- Antimicrobial therapy for each

GROUP 7

- Tools of molecular genetics
- Cellular injury and death
- Cellular adaptation
- Inflammation and repair
- Hemodynamic disorders
- Neoplasia
- Environmental pathology
- Principles of toxicology
- Molecular pathology
- Autopsy/utilization of the clinical laboratory

* Possible self-study, independent learning module