

BIO 226N
Study Guide
Non Specific Resistance

A. SKIN, MUCOUS MEMBRANES, MUCUS, MECHANICAL 7 CHEMICAL BARRIERS

Epidermis – Keratin

Dermis – connective tissue

Epithelium layer – mucous membranes – mucus

Neisseria gonorrhoeae, Mycobacterium tuberculosis

Streptococcus pyogenes, Treponema pallidum

Tears – lacrimal apparatus – lysozyme

Sweat – flushing – lysozyme

Saliva; gastric juice (pH 1-3)

Urinary tract – flushing

B. PHAGOCYTOSIS (eat, cell)

White blood cells – leukocytes

Granulocytes (granules)

Neutrophils (red & blue) – phagocytic

Basophils (blue)

Eosinophils (red)

Agranulocytes (no granules)

Lymphocytes – lymphoid tissue

(specific defense)

Monocytes – mature into macrophages

Phagocytic

Phagocytic cells are called phagocytes

Blood = fluid (plasma) + cells: circulation

Blood flow: Heart – arteries – capillaries –

Tissue spaces – vein capillaries –

Vein – heart

Plasma in tissue space – interstitial fluid

Lymph = Name given to plasma which has become interstitial fluid and then entered lymph capillaries

Lymph flow: Lymph capillaries – lymph vessels

- lymph nodes – vein (now part of blood)

Macrophages – Wandering – move to invasion

- Fixed – lungs, Liver, Lymph System

Phagocytosis Steps (Neutrophils & Macrophages)

1. Chemotaxis –

2. Adherence

3. Ingestion – phagosome – phagocytic vacuole

4. Digestion – lysosome, phagolysosome, digestive vacuole

C. INFLAMMATION –

Redness, Pain, Heat, Swelling

1. Vasodilation & Increased Permeability

2. Phagocyte Migration

 Margination, Diapedesis

 Pus

 Abscess (pimple, boil, carbuncle)

3. Repair – heal

D. FEVER – Chapter 16 p. 417

hypothalamus –

E. INTERFERONS – antiviral proteins – Chapter 16 p. 421

Non-specific for viruses

Specific for animal