COLLOQUIUM #2
ALLERGY AND IMMUNOPATHOLOGY.

Structural questions.

1. List the main groups (3) of diseases that are included in immunopathology.
2. List the immune-mediated injuring mechanisms which were subdivided by Gell and Coombs into 4 types.
3. List the main stages (3) of pathogenesis of immunopathological reactions.
4. What types of cells can express a) antigens of MHC-I, b) antigens of MHC-II on their membranes?
5. List the three categories of antigen-presenting cells.
6. List the three categories of the cells of the immune system that take part in immunopathological reactions.

TYPE I.

1. What is allergy? Give the definition.
2. Give some examples of allergic diseases (atopic diseases).
3. List the main features (4) of atopic diseases.
4. Give the classification of allergens (with examples).
5. List the events (5) that take place during the first stage of type I hypersensitivity.
6. Name the kind of T –helper cells that take part in the first stage of type I hypersensitivity.
7. Name the cytokine that is responsible for the transformation of Th0 lymphocytes into Th2 cells.
8. List the cytokines (2) that are responsible for the transformation of B-lymphocytes into IgE-secreting cells.
9. List the main characteristics (4) of the IgE-antibodies.
10. List the main characteristics (5) of atopic antibodies.
11. List a) primary(2) and b) secondary(4) cell-targets for type I hypersensitivity.
12. List the events that take place during the second stage of type I hypersensitivity.
13. Name the causes of the antigen-specific degranulation of mast cells.
14. Point out a) primary (preformed) mast cell mediators(3) and b) secondary (synthesized) mediators (4).
15. List the most notable mediators (5) of type I hypersensitivity.
16. List the intracellular events (5) that take place in the specific activated mast cells and induce their degranulation.
17. List the main events (2) that take place during the third stage of type I hypersensitivity.
18. List the typical tissue reactions (5) on mediators of type I hypersensitivity.
19. List the typical signs (3)of the skin allergic reaction.
20. List the typical signs (6) of allergic rhinoconjunctivitis.
21. List the main allergic reactions (3) in the airways that lead to the difficulty of expiration during active asthma attacks.
22. List the methods (5) which can help to recognize atopic disorders.
23. List the main principles (6) of treatment of atopic diseases.

TYPE II.

1. Give some examples (3-4) of diseases which develop according to type II hypersensitivity reactions.
2. List the main stages (3) of the pathogenesis of type II hypersensitivity reactions.
3. List the main events (3) that take place during the first stage of type II hypersensitivity reactions.
4. List the main features (2) of the antibodies of type II hypersensitivity reactions.
5. Name the main events (2) that take place during the second stage of type II hypersensitivity reactions.
6. List the mediators (5) which are typical of type II hypersensitivity reactions.
7. Name the main cells (1) which are activated and secrete mediators during the second stage of type II hypersensitivity reactions.
8. List the main reactions (3) that destroy the target cells during the third stage of type II hypersensitivity reactions.

TYPE III.

1. Give some examples (3-4) of diseases which develop according to type III hypersensitivity reactions.
2. List the main stages (3) of the pathogenesis of type III hypersensitivity reactions.
3. List the main events (3) that take place during the first stage of type III hypersensitivity reactions.
4. List the main features of the antibodies (2) of type III hypersensitivity reactions.
5. List the main characteristics (4) of the immune complexes that make them pathogenic for the organism in type III hypersensitivity reactions.
6. List the main events (2) that take place during the second stage of type III hypersensitivity reactions.
7. List the main mediators (5-6) which are typical of type III hypersensitivity reactions.
8. List the main events (4) at the third stage of type III hypersensitivity reactions.

TYPE IV.

1. Give some examples (4) of diseases which develop according to type IV hypersensitivity reactions.
2. List the main stages (3) of the pathogenesis of type IV hypersensitivity reactions.
3. List the main events (3) that take place during the first stage of type IV hypersensitivity reactions.
4. Name the kind of T-helper cells that take part in the first stage of type IV hypersensitivity reactions.
5. List the main cytokines (2) that take part in the first stage of type IV hypersensitivity reactions.
6. List the main events (2) that take place during the second stage of type IV hypersensitivity reactions.

7. List the main mediators (4) which are typical of type IV hypersensitivity reactions.
8. List the main effector cells (3) which are typical of the third stage of type IV hypersensitivity reactions.
9. Name the substance (1) that secretes ThI cells and helps macrophages to kill the target cells during the third stage of type IV hypersensitivity reactions.
10. List the substances (2) that secrete activated lymphocytes (TCD8+) and kill the target cells during the third stage of type IV hypersensitivity reactions.
11. Name the two variants of the target cell death due to cytotoxic action of TCD8+ lymphocytes during the third stage of type Iv hypersensitivity reactions.
12. Name the main events (3) in a tissue at the third stage of type IV hypersensitivity reactions.

AUTOIMMUNE DISEASES.

1. Give examples (4) of autoimmune diseases.
2. Give examples of autoantigens (4) (molecules, cells, tissues, organs).
3. List the immune –mediated injuring mechanisms (by Gell and Coombs) which can take part in the pathogenesis of autoimmune diseases.
4. Name the main principles of therapy (5) of autoimmune diseases.

IMMUNODEFICIENCY DISEASES.

1. Give the classification of immunodeficiency diseases (IDD).
2. List the main causes (5) of secondary IDD.
3. List the common signs (4) of primary IDD.
4. List the ways (4) of HIV penetration into the organism and the main target cells(2) in AIDS.
5. List the groups (5) of adults at risk for developing AIDS.
6. List the major abnormalities (5) of the immune function in AIDS.
7. List the variants (4) of clinical manifestations of AIDS.
8. List the symptoms (5) that are mostly characteristic of the crisis phase of AIDS.
9. List the main principles (4) of therapy of AIDS.