

NAME:

HST175 Quiz I

09.21.05

1. Please give five examples of the protective role of antibodies in the immune system

- neutralization
- opsonization
- activation of classical complement system
- ADCC by NK cells
- agglutination

2. What physical characteristic of an agglutinin is crucial for its activity (one word, please!)?

Multivalency

3. List the classical three steps (in order) which are involved in naïve T cell **adhesion** to the HEV (before diapedesis) and the molecules (on the leukocyte or on/near the endothelium) that mediate each step of naïve T cell **adhesion** in the HEV:

Function/Name of the Step in Adhesion Cascade	Key Molecule on the naïve T cell	Key Molecule on/near the HEV
1. Rolling	L selectin	PNAd
2. Integrin Activation	CCR7	CCL21
3. Sticking	LFA-1	ICAM-1

4. When a patient has been exposed to rabies, an injection of antiserum is given. Is this considered active or passive immunity?

ACTIVE

PASSIVE

5. What receptor on immune cells is activated by lipopolysaccharide?

TLR4

6. What function do T cells provide that antibodies do not?

They can directly recognize infected cells which do not express any foreign proteins on their surface using the MHC/TCR recognition system. In addition, they are not “distracted” by free antigen and focus on these infected cells (unlike antibody, which cannot)

7. In the presence of “danger” signals, what is induced on dendritic cells that allows it to signal this problem to T cells?

B7.1/B7.2 or costimulatory ligands (also accepted MHC II)

Did not accept chemokines/cytokines because the questions asks for molecules induced **on** the DC (not released by the DC) to signal to T cells.