Immunology Acronyms

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| **Across****2.** Nuclear factor of activated T cells, a key transcription factor that is required to bind to the IL-2 promoter to cause IL-2 transcription**9.** \_\_\_\_\_ cell, DC, a type of APC that presents antigen in the context of MHC to T cells**14.** Recombination signal sequences, short DNA sequences flanking Ig and TCR V, D and J gene segments that serve as the binding sites for the RAG complex, allowing Ig and TCR gene rearrangement (somatic recombination)**15.** human \_\_\_\_ antigen, HLA, name of MHC gene complex and proteins in humans**18.** \_\_\_\_\_ \_\_\_\_\_\_ receptors, PRR, receptors on immune cells and epithelial cells that recognize and bind to PAMPs on microbes**21.** \_\_\_\_\_\_-binding lectin, MBL, soluble acute phase response protein that can bind mannose on pathogens; can activate the lectin pathway of Complement and acts as an opsonin**24.** Ig, protein family to which antibodies and B-cell receptors belong**25.** Subset of CD4+ T cells characterized by the cytokines they produce; involved in fully activating macrophages and promoting CTL responses against intracellular pathogens**27.** Cell adhesion molecule**30.** Family names of chemokines, chemicals that are a sub-class of cytokines with cell-attractant properties**31.** B cell receptor, sIg on B cells that binds Ag and transmits signal 1 to activate B cells**33.** T cells that express the co-receptor protein CD4 which upon activation differentiate into distinct Thelper phenotypes with different roles in adaptive immunity**35.** Major histocompatibility complex, designation for a family of cell surface molecules involved in the presentation of peptide antigens to T cells**38.** \_\_\_\_\_ factor κB, NFκB, transcription factor that helps activate the expression of many pro-inflammatory genes**39.** Cell mediated immunity, adaptive immune responses in which there is a major role for effector T cells**40.** Membrane attack complex, end product of the Complement cascade that can kill pathogens directly by forming a pore in pathogen membrane leading to lysis**41.** Subset of CD4+ T cells characterized by the cytokines they produce; involved in stimulating B cells to produce antibody against extracellular pathogens**42.** Fragment with antigen binding, the part of an antibody (that can be isolated by protease digestion) responsible for antigen binding, consisting of the light chain and amino-terminal half of the heavy chain disulfide-bonded together**43.** mΦ, large mononuclear phagocyte that takes residence in many different tissues and organs and contributes to innate immune responses and can act as an effector cell in adaptive immune responses**46.** B lymphocyte that upon activation can differentiate into plasma cells secreting antibody molecules or B memory cells**48.** \_\_\_\_ T lymphocytes, CTL, CD8+ T cells with the effector function of targeting and killing virally infected cells and tumor cells by apoptosis**49.** Systemic lupus \_\_\_\_\_\_\_, SLE, autoimmune disease where autoantibodies (against DNA, RNA, and proteins associated with nucleic acids) form immune complexes**50.** Natural killer cell, large granular lymphocyte that serves as an innate effector cell by inducing apoptosis of target cells (virally infected cells or tumor cells)**51.** \_\_\_\_ regulator, AIRE**52.** Highly active anti-retroviral therapy, multiple drug treatment for HIV | **Down****1.** thymus-derived lymphocyte that are comprised of two different subsets, CD4 and CD8**3.** cluster of \_\_\_\_\_\_\_, CD, designation for specific cell-surface molecules on immune cells that help to differentiate one immune cell from another**4.** cell \_\_\_\_ molecule, CAM**5.** Surface immunoglobulin, an immunoglobulin that is expressed on B cell surface**6.** Acquired immune deficiency syndrome, the end stage of disease in HIV infection**7.** IL, general designation of many of the different cytokines, chemical messengers secreted by immune cells that help in their communication with other cells**8.** or Fc region, Crystallized fragment of antibody, the part of an antibody that consists of the carboxy terminal halves of the two heavy chains disulfide-bonded to each other; the Fc region of an antibody is where Fc receptors bind, and so is responsible for antibody effector function (after antigen binding occurs)**10.** immunodeficiency: human \_\_\_\_\_ virus, HIV**11.** Intracellular adhesion molecules, cells surface ligands for the leukocyte integrins; Critical in binding of lymphocytes and other leukocytes to certain cells**12.** IFN, family name for cytokines that help cells to resist viral infections; type 1 include IFN-alpha and IFN-beta, as distinguished from IFN-gamma**13.** Antibody dependent cellular cytotoxicity, a mechanism NK cells use to induce apoptosis in virally infected cells or tumor cells**16.** Immunoreceptor \_\_\_\_\_\_-based activation motifs, ITAMs, amino acid sequence in cytoplasmic domains of membrane receptors involved in signal transduction**17.** LPS, a cell wall component of gram negative bacteria which can be bound by TLR-4 on macrophages and dendritic cells**19.** \_\_\_\_\_\_ determining regions, CDR, the regions of the antigen binding loops of Ig molecules, antibodies and T cell receptors that come into contact with antigen**20.** \_\_\_\_\_\_ leukocytes, PMN, white blood cells with multi-lobed nuclei and cytoplasmic granules**22.** IR**23.** \_\_\_\_\_\_\_-activating genes, RAG1, RAG2, the two genes essential for Ig and TCR gene rearrangement; their gene products (RAG-1 & RAG-2) comprise the RAG complex**26.** Family names of chemokine receptors, the receptors that chemokines bind to all cell attraction to specific areas in the body**28.** Transcription factor expressed in Treg cells that is needed for Treg cell function**29.** Ag, a molecule that is recognized in native (original) structure by antibodies or B cell receptor, or a peptide that is presented by MHC molecules to T cell receptor**32.** T cells that express the co-receptor protein CD8 which upon activation differentiate into cytotoxic T lymphocytes (CTLs)**34.** \_-\_\_\_\_\_ protein, CRP, acute phase protein that binds to phosphocholine, a constituent of certain bacteria, that can trigger Complement activation and acts as an opsonin**36.** Ab, immunoglobulin secreted by plasma cells**37.**  \_\_\_\_ presenting cell, APC, a cell that is able to present antigen via MHC molecules to T cell receptors on T cells**44.** Pathogen associated molecular patterns, repeating molecular patterns on microbes that are recognized by PRRs on immune cells**45.** Autoimmune regulator, a transcription factor that causes several hundred tissue-specific genes to be transcribed by a subpopulation of epithelial cells in the thymus**47.** Member of TNF receptor family expressed on certain cells that makes them susceptible to being killed by cells expressing the ligand |