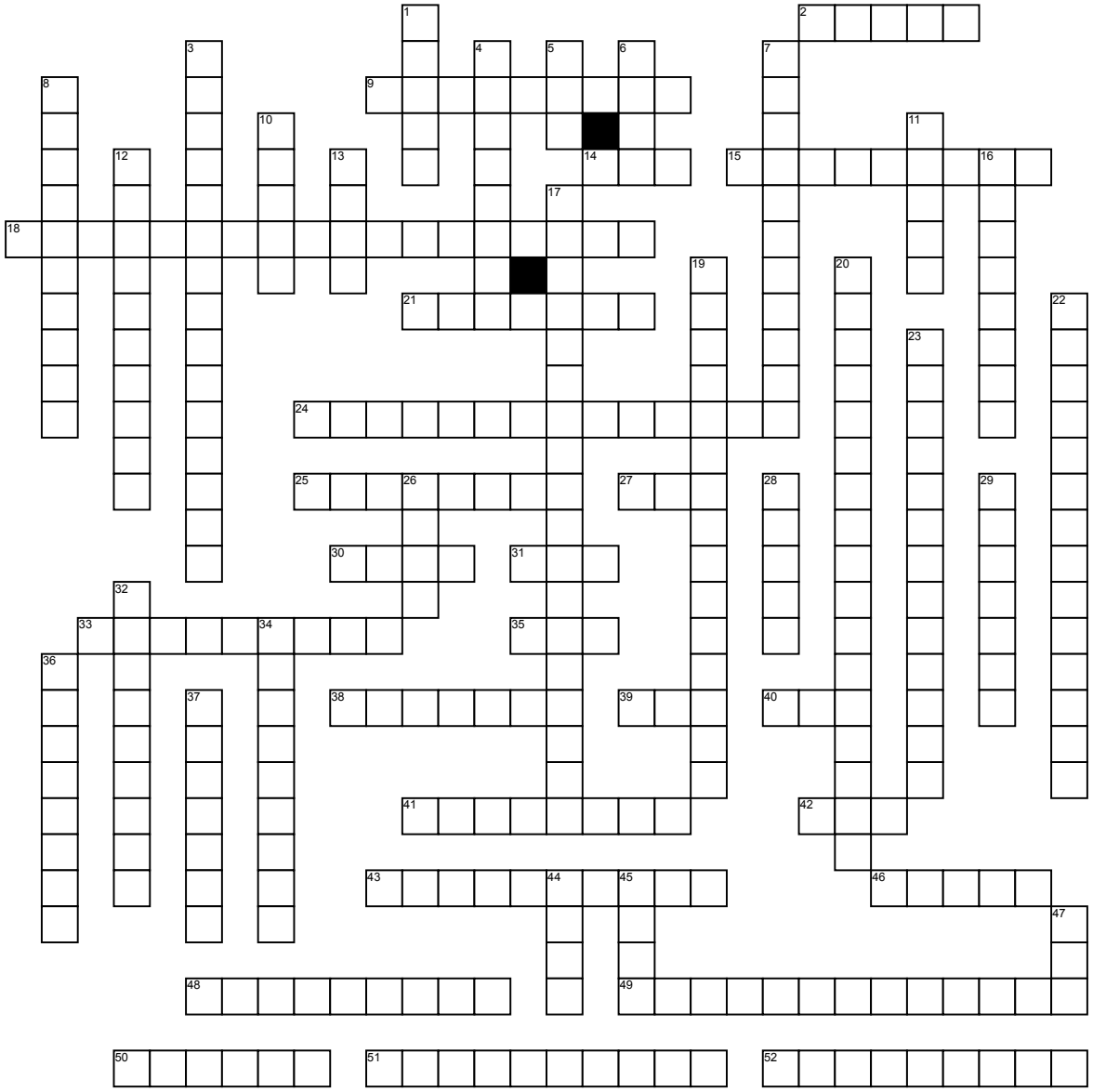
Immunology Acronyms



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