

## T-CELL MATURATION, ACTIVATION, AND DIFFERENTIATION

- I. T-Cell maturation and the Thymus
- II. Thymic Selection of the T-Cell Repertoire
  - A. Positive Selection
  - B. Negative Selection
  - C. Experimental Evidence for Positive Selection
  - D. Experimental Evidence for Negative Selection
  - E. Some Central Issues in Thymic Selection
    - 1. Avidity Hypothesis
    - 2. Differential-Signaling Hypothesis
    - 3. Cell Fate
      - a. Instructional Model
      - b. Stochastic Model
- III. T<sub>H</sub>-Cell Activation
  - A. Some Common Themes in Signal Transduction
  - B. TCR-Coupled Signaling Pathways
  - C. The Co-Stimulatory Signal
  - D. Clonal Expansion *Versus* Clonal Anergy
  - E. SuperAntigen-Induced T-Cell Activation
- IV. T-Cell Differentiation
  - A. Generation of Effector and Memory T Cells
  - B. Co-Stimulatory Differences Among Antigen-Presenting Cells
- V. Cell Death and T-Cell Populations
- VI. Peripheral T Cells
  - A. Distribution of T Cells
  - B. Ligands Recognized by T Cells
  - C. Function of T Cells