

Immunobiology workshop

- 1) TLR act by detecting danger signals and mediating the immune response. Dysregulation of TLR contributes to autoimmune and inflammatory diseases
- 2) Interferon mediated disease involve defects in nucleic acid sensing, DNA repair defects and alteration of protein involved in transportation of interferon signals and IFN signalling
- 3) Targeted therapeutics such as anifrolumab are already in clinical use
- 4) Therapeutics like Eculizumab and Avacopan targeting complement components (C5a) show promise in managing AIRDs.
- 5) The role of the inflammasome has expanded to include myocardial infarction, metabolic diseases, and others
- 6) Therapeutic targeting of inflammasome components is being explored in both immune-mediated and non-immune diseases
- 7) Immune memory, involving innate and adaptive responses, is key to vaccine mechanisms
- 8) combination and sequential targeting of CD19/CD20 and the BAFF/APRIL pathway is being evaluated in B cell dependent disease
- 9) T cell immunotherapeutics, including CAR T cells and regulatory T cell-based therapies, are emerging as innovative options for treating AIRDs.
- 10) Bispecific T Cell Engagers (BiTEs): BiTEs are engineered antibodies that link T cells to specific inflammatory target cells, offering a precise and potentially transformative therapeutic option in rheumatology by eliminating pathogenic cells while sparing healthy immune cells.
- 11) The Genomics Menu for the Practicing Rheumatologist: The most important aspects are knowing when and what to order
- 12) Single gene defects are best detected by using NGS and sangers technique, where as chromosomal microarray are utilised for large duplications/ deletions/ copy number variations.

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