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How is really working adaptive immune system in mammals? A novel conception and reverse pathway theory, which will bring novel multibillion super-antibody (sab) technology for curing of all of infectious diseases and cancer!

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Contemporary Clonal-Selection Theory (CST) states that every B-Lymphocytes (B-cells) are randomly synthesizing unique Immune-Globulins (Ig-s) even before they met with Antigen Epitopes!? But CST couldn't explain why do Ig-genes in the naïve B-Cells undergo so called "Hyper-mutation" Phenomenon?! Keywords: ABO Blood Group System, Rhesus, COVID-19, Association Analysis, Antibodies. Also, 3 different chromosomal locations of Ig Gene Exons and different timing of Rearrangements of V parts of Heavy and Light Chains of Ig gene bring many unanswered questions about true molecular mechanisms of Ig genes rearrangements and synthesis of Final Ig gene. Also, high Antigen Specificities of T- Cell Receptors are highly questionable. The germline Theory and Somatic mutation Theory are wrong!

Let me explain my novel Conception of how really is working Adaptive Immune System and Reverse Pathway Theory:

1. Development of all B-cells in bone marrow is going the same way! There is not going any Random Rearrangement of Ig gene in B-cells! All naïve B-cells (nBCs) development in bone marrow is finishing the same way! Having IgM and IgD in their membrane surfaces! Actually both of IgM and IgD are not affine to any Antigen Epitope (AE)! They are not working as Immune Globulins, but both are the Receptors for interaction with Dendritic Cells (DC)!
2. 1-st step: When the nBC are coming to the peripheral Lymph Nodes or Spleen, the nBCs interact with DC and with the help of IgM and IgD are getting one by one Intra-luminal vesicles (ILV) from Multi-Vesicular Body (MVB)! Every ILV of DC is full of the same AE on MHC-2! Because of every ILV has different set of AE on MHC-2, every nBC is having different clone of AE or they becoming Polyclonal!
3. 2nd step: Interaction with Th4 cells: Because of after getting a massive amount of AE on MHC2 from DC (at list 50-100), nBC attract local Th4 cells! After connecting of nBC with Th4 cells through AE on MHC-2 activated Th4 cell is producing massive amount of Cytokines! Under these Cytokines in nBC begins synthesis of many proteins and enzymes! One of the these enzymes is unknown yet enzyme (I called it "Reverse Ribosome", but it is actually not a Ribosome)
4. 3-rd step: This "Reverse Ribosome" is using triplets of t-RNA-s which is connected activated amino-acids (aa), which affinly connected with aa-s of AE in the endosome of nBC is synthesize a short (36-75 bases) endosomal RNA (e-RNA), which is carrying genetic code of affine aa-s to given AE-s aa! I have called it Reverse Pathway Theory!

5. With the help of Nuclear Receptor(s) this e-RNA relocates to V-D-J section of Ig gene and replace Replacable Module (p-N-D-N-p) and only after that V part of Heavy Chain (HC) of Ig gene is getting high affinity to given AE! At the same time is going class switching to IgG constant region of HC and nBC becoming of Centroblast and is going 9 cell divisions and becoming Centrocytes and they move to damaged with Infectious Diseases or Cancer areas and becoming high affine IgG producing Plasma cells to given AE and of course some Memory cells! Only V parts of HC has affinity to given AE, but not Light Chain (LC) of IgG, LC is a helper chain which is connected with around molecules of AE non-specifically!
6. Th and Tc cells are only recognize self-tissues and organs receptors, but all foreign receptors recognize as non-celf! All T-cells do not have specificities to any foreign antigen!

Biography

Victor Alexander is a multifaceted scientist—combining deep expertise in microbiology, immunology, and stem cell science. With leadership roles in both clinical diagnostic laboratories and stem cell research at Capital Stem Cell Research Inc., he stands at the intersection of science and clinical translation. His combined credentials (MD–PhD, CLS certification, and PhD-level research) underscore a commitment to both rigorous scientific discovery and applied therapeutic development.

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