Victor Alexander et al., Immunome Res 2018, Volume 14
DOI: 10.4172/1745-7580-C1-014

9th Molecular Immunology & Immunogenetics Congress

March 08-09, 2018 | London, UK

Discovering of a reverse pathway in lymphocytes will change not only random theory of immune globulin synthesis and the central dogma of molecular biology, also will bring a novel super-antibody (sab) technology for very effective and fast treatment and cure of all of infectious diseases and cancer!

Victor Alexander[1], **Seveen Alexander**[2] and **Chris Boseovski**[2]
[1]Independent Research Scientist, USA
[2]Trinity University, USA

Many unexplainable evidences in contemporary molecular immunology about Immune Globulin (Ig) synthesis (existence of high quantity of exons in V parts of Ig gene; formation of 2-4 palindromic (p-) sequences in L and H chains of Ig gene after 1st rearrangement; unexplainable "Hyper-mutation" phenomenon; localization of "Hyper-mutation" in the 3 CDRs (Complementarity-determining regions) of V chains; wasting of enormous quantity of new Lymphoid cells in B-Cell development is also evolutionary and scientifically unbelievable and allowed us to propose a New Conception about synthesis of Ig in B Lymphocytes as follows: 1. The 1st rearrangement of V segments of H and L chains in Pro-B and Pre-B lymphocytes in bone marrow is not a random, but a pattern rearrangement which is undergoing under toll-like receptor signaling through MSC to Pro- and Pre-B cells which are developing on the MSC. Choosing of particular V exon also isn't a random event, but pattern rearrangement under particular toll-like receptor signaling. 2. Affinity maturation of naïve B-cells is not a random event, but undergo by undiscovered yet Reverse Pathway mechanism, which passes exact genetic information about the best matching amino-acids (aa) chain to given antigen on MHC-2, through synthesis of short RNA in a special vesicle of cytoplasm of B-cells. 3. This nascent RNA which is carrying exact genetic information about high affine short amino-acid chain to given antigen, after connection with 2 steroid nuclear receptors moves to nucleus of B cell and connect with 2 palindromic sequences of V-(D)-J section of Ig gene, which are already formed after 1st pattern rearrangement and substitutes all of N nucleotides. And that way Ig gene is getting exact genetic information about the best matching (aa) to given antigen and transcribes high affinity m-RNA and consequently high affinity Ig. It is obvious that our new conception will change the central dogma of molecular biology and will create a novel, very effective and fast Super-Antibody (SAb) Technology for treatment and cure of all infectious diseases and cancer.

Recent Publications

1. Richard A Goldsby, Tomas J Kindt, Barbara A Osborne, Janis Kuby (2003) Immunology, Fifth Edition. W H Freeman. Chapter 5, pp.105-132, Chapter 11, pp.247-273. ISBN. 9780716749479.
2. Heise N, Klein U (2017) Somatic hypermutation and affinity maturation analysis using the 4-hydroxy-3-nitrophenyl-acetyl (NP) system. Methods Mol. Biol. 1623:191-208.
3. Feng Wang, Shiladitya Sen C, Yong Zhang, Insha Ahmad, Xueyong Zhu et al. (2017) Somatic hypermutation maintains antibody thermodynamic stability during affinity maturation. Proc. Natl. Acad. Sci. 114(37): E7855.
4. Richard Sever, Christopher K (2013) Signaling by nuclear receptors. Cold Spring Harb. Perspect. Biol. 5(3)a016709.
5. Marek Sinkora, Jana Sinkorova, Katerina Stepanova (2017) Ig light chain precedes heavy chain gene rearrangement during development of B cells in swine. J Immunol. 198(4):1543-1552.

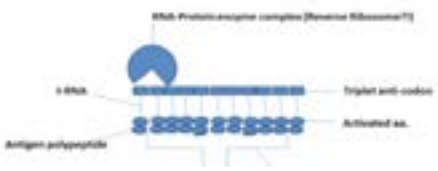

Figure 1: Possible Reverse Pathway mechanism, which transfer a genetic information about the best matching affine amino-acids to antigen peptide on MHC-2 to Short RNA using Anti-codons of t-RNA.

Biography

Victor Alexander is MD, PhD in Medicine. He finished his high school with Gold Medal (1969). He graduated in State Medical University of Azerbaijan in 1976. He pursued MD degree and obtained License in Prophylactics and Treatment of Internal Diseases and worked as MD in hospital for 3 years. He completed his Postgraduation in embryonic, pre- and postnatal Pharmacology area. In 1984 he got his PhD in Embryonic, pre- & post-natal Pharmacology area of Medicine, which has been recognized in USA. He worked as an Academic PhD Research Scientist in Pharmacology Department of State Medical University and as an Assistant Professor for 12 years. He has been trained in Stem Cell and Molecular Biology area in UC Davis, CA, USA. He was the Owner and PI of Capital Stem Cell Research Inc. in Sacramento, CA, USA (2008-2012). He is the author of 23 publications (3 in USA), 1 Patent Certificate (1989), 1 Invention (2008) in Stem Cell area registered by UC Davis, CA, participated and published in 3 World Congresses in Molecular Biology and Stem Cells areas (2008; 2011; 2013). He is retired, but actively promotes his new Concept about Ig synthesis in B-cells and novel SAb Technology projects.

vja@surewest.net