

14th World Congress on

Infection Prevention and Control

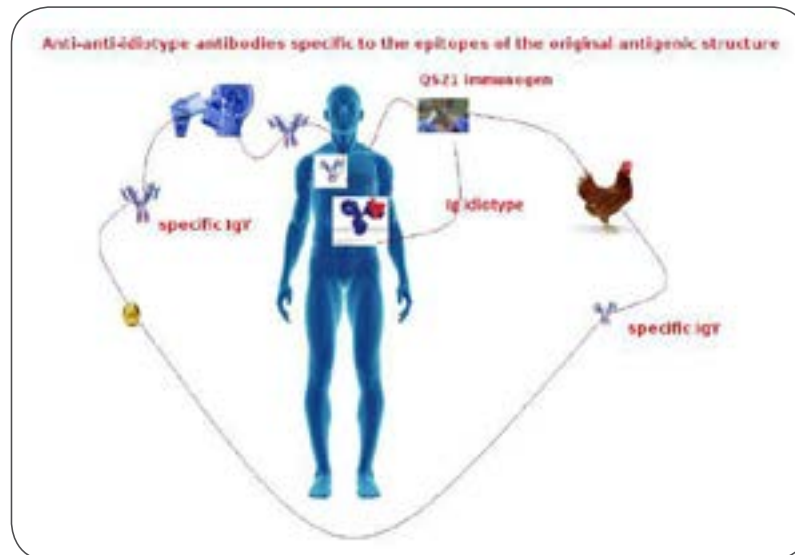
December 06-07, 2018 | Valencia, Spain

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Chicken immunological active protein (CIAP). The immunoVIP (IVIP)group of products from an integrated perspective: Applicative research, transfer of technology, productions, clinical use

Activeimmunity specialists, due to having extensive experience in the field of antibiotic resistance, have produced different generations of antimicrobial biologicals using hen as the immunized organism and the hyperimmune egg as the source of immunologically active proteins. The first generation of products were prepared using the I-PC-2 immunogens and the following generations using the I-SPGA and I-Gary immunogens. The “standard” biological products obtained from hyperimmune eggs contain up to 24 types of antibodies originating from immunization of hens with hospital-collected germs and are used in medical programs for the prevention and treatment of infections with susceptible or antibiotic resistant bacteria. The second category of biological products, the “personalized” ones, are prepared from samples of pathological material harvested from individual patients. The idiotype (Id) of an antimicrobial resistant bacterium (ARB) is a unique collection of antibodies produced by the immunized organism against the bacterial antigenic determinants called idiotopes. An idiotype is specific to a particular ARB strain that immunized the organism. Despite being proteins of the humoral immune system, the idiotypes (Ids) can be immunogenic. For this reason ARB-specific Ids have been exploited as therapeutic immunogens in the treatment of specific ARB infected patients. The authors are not aware of documented studies describing the use of hyperimmune eggs targeting antibiotic-resistant bacteria as oral anti-idiotypic vaccine in human beings. We supported this hypothesis by demonstrating the capacity of human beings orally fed hyperimmune eggs to induce systemic immune responses against the same idiotype (active immunity by passive immunity). The first set of study was to demonstrate that chicken that were immunized with the inactivated antimicrobial-resistant bacteria (ARB) produced specific anti-ARB antibodies; the second set of study was to demonstrate that ARB-infected patients presenting clinical symptoms, after being fed anti-ARB hyperimmune eggs developed antibodies that were able to inhibit the binding of egg yolk anti-ARB antibodies to the ARB (original antigen), showing that the anti-ARB antibodies raised in human beings after feeding, were anti-anti-idiotypic antibodies [1,2]. The samples of bacterial strains and cells were collected as skin-scrapings, prostate, urine or sputum samples from clinically affected subjects. Moreover, nasal swabs were taken to determine the nasal colonization with *Staphylococcus aureus*. These samples were processed in the laboratory and used for immunization of specially bred chickens for this program. The immune response of the immunized chickens was controlled by blood and egg samples. The chicken immunologically active proteins (CIP) were isolated from the hyperimmune eggs and were then used for the treatment of the particular patients from which the pathological materials originated. These technologies have been carried out for the first time in the world and they prove that personalized biologic products may act specifically and efficiently in case of infections with specific pathogenic germs sensitive or resistant to antibiotics. These new personalized biological products may replace antibiotics which have been proved inefficient in each patient. The treatment with the hyperimmune egg and with the products extracted from it was well tolerated by patients for a long period of time (at least 12 months). Activeimmunity has a telephone call center and a group of specialists who are available for information, a clinic and laboratories specifically designed for this program, in order to prepare the described personalized biological products.



Recent Publications

1. Angel Alberto Justiz Vaillant, Patrick Eberechi Akpaka, Norma McFarlane-Anderson, Monica P. Smikle and Wisdom Brian. The Chicken and Egg System for the Development of Anti-Idiotypic Vaccines. *J Vaccines Vaccin* 2012; 3:137; doi: 10.4172/2157-7560.1000137
2. JustizVaillant AA, Akpaka PE, Smikle M, McFarlane-Anderson N. In vitro Inhibition of Staphylococcus aureus Isolates by Anti-Anti-Idiotypic Antibodies to Staphylococcal Protein (SpA). *J Vaccines Vaccin*, 2012; 3: 127; doi: 10.4172/2157-7560.1000127
3. Pătrașcu Ionel Victor, MVD, PhD. Active immunity by passive immunity. I-spga as a new Immunogen. A Modest Contribution to the Fight Against the Antimicrobial Resistance. SDG Lab, Davos, January 24, 2018; World Economic Forum Annual Meeting 23-26 January 2018, Davos-Klosters, Switzerland
4. Pătrașcu I.V., Chiurciu C., E. Ceausu, Viorica Chiurciu, Iuliana Mihai, Lazar S., Maria Nica, Sima Lucica
5. Andriea Dinu, Badica I., Georgiana Radu. Oral immunotherapy with personalized chicken immunoglobulins- the first method for treatment of human patients infected with antibiotic resistance bacteria. Davos, 24 January 2018:47

Biography

Ionel Victor Pătrașcu MVD, PhD president of Activeimmunity, born on February 7, 1937. Graduated in Veterinary Medicine in Bucharest in 1963. Researcher in the field of virology at Pasteur Institute in Bucharest. Made different specializations in the field of avian and human oncogenic viruses at Houghton Poultry Research Station, Huntington, England, at Friedrich-Loeffler- Institut, Celle, Institute of Animal Pathology in Rotherdam, Netherlands, Cornell University Ithaca NY and Athens University, Athens, GA. USA. In 1971 discovered to extract Fc 126 cell associated as cell free in SPGA and allowed to freeze-dry vaccine anti Marek disease lymphoma. He made the first research Center in the world at Voluntari, Romania, called Avian Tumor Viruses Lab, where specialists from England, U.S., France, Bulgaria, the German Democratic Republic, Hungary, the USSR, and China came to do studies in the period of the Iron Curtain and communist politics from Moscow. In 1989 discovered the largest outbreak in the world of HIV infection and AIDS in children in Romania. Studied antibiotic resistance of microorganisms and made first immunogen I-PC2 used biological preclinical and clinical human studies and the second generation of immunogen I-spga that was managed to prepare IMUNOVIP able to react specifically with superbugs infection by oral treatment of antibiotic-resistant urinary tract infections in women. During 1965-2017 he dealt with the training of specialists who are now valuable researchers, professors and academics.

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