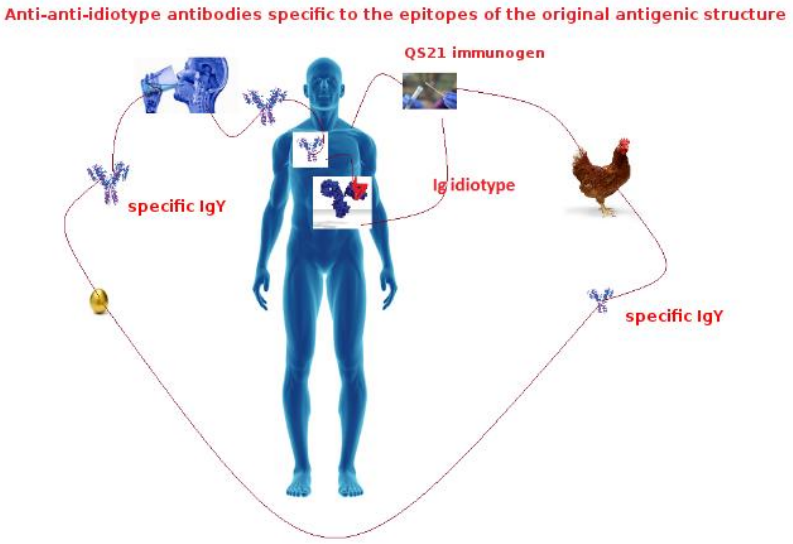
SUPPORTIVE CUSTOMIZED SOLUTION AS AN EFFORT IN SETTLING THE ANTIBIOTIC RESISTANT BACTERIAL INFECTIONS, USING IMMUNO-CIP AND IMMUNO-VIP

Activeimmunity specialists, due to having extensive experience in the field of antibiotic resistance, have produced immunologically active proteins using the hen as the immunized organism and the hyperimmune egg as the source of said proteins.

The "standard" biological products obtained from the immune eggs contain up to 24 types of antibodies (as the hen response to the hospital-collected germs). Such supporting products may be used in medical programs in synergy with pharmaceuticals for the prevention and treatment of the infections that are susceptible to antibiotic resistance.

The second category of biological products, the "personalized" ones, are custom products prepared from the biological material /antigens harvested from that individual patient.



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 idiotypes (an idiotype is specific to a particular ARB strain). 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 immune eggs targeting antibiotic-resistant bacteria as oral anti-idiotypic vaccine in human beings.

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We supported this hypothesis by demonstrating the capacity to induce systemic immune responses against the same idiotype (active immunity by passive immunity) of human beings orally fed with immune eggs.

The first set of study was to demonstrate that the chickens immunized with the inactivated ARB produced specific anti-ARB antibodies; the second set of study was to demonstrate that the ARB-infected patients (with clinical symptoms) fed with anti-ARB immune 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 titer raised in human beings after the feeding (developing 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 (CIAP) were harvested from the immune eggs and used to support the particular patients from which the pathological materials originated (ailment solving).

These technologies have been carried out for the first time in Romania and they prove that personalized biologic products may be used as an effective support for the infections caused by specific pathogenic germs sensitive or not to antibiotics (antibiotic resistant). These new personalized biological products may sustain the body's effort to recover in cases when antibiotics alone have been proved inefficient.

The use of immune eggs and the products made with the CIAP harvested from those were well tolerated by subjects for a long period of time (at least 14 months, tested so far).

In order to prepare the described personalized biological products, Activeimmunity has a clinic and custom-designed laboratories specifically endowed for this program.

References

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