



New properties of DNA used to help fight infectious diseases.

Many diseases are caused by infectious agents such as bacteria, viruses and fungi. During the last century, drugs such as antibiotics have been developed to combat these infectious agents. Unfortunately, some of the most pathogenic of these infectious agents have now become resistant to many antibiotics and drugs.

Alternative approaches to fighting infectious diseases, other than by the use of antibiotics and other pharmacological interventions are needed. The sequence specific homeopathic DNA remedy system has been developed to help in this regard.

The human body has developed a number of different mechanisms to protect against and resolve infectious diseases. The body's first line of defence is the defensin system. The master defensin has been referred to as the "Restless Warrior". The master defensin is synthesised by a gene called DEFB1.

All external and internal body surfaces are continuously exposed to a wide range of infectious agents. The DEFB1 gene produces a very important microbicidal protein or peptide that forms the body's first line of defence against infectious agents that other parts of the immune system cannot reach. This anti-bacterial peptide is produced on the surface of all body tissues including skin and reproductive organs to protect against infections. It is also found in breast milk to provide another layer of protection for infants.

Reduced activity of DEFB1 leads to increased susceptibility to many different types of infection.

The body has two basic types of adaptive immunity, referred to as B cell mediated and T cell mediated immunity. On exposure to an infectious agent, B cells make soluble antibodies that circulate in the blood and body fluids to help kill bacteria and neutralise viruses and toxins. Cytotoxic T cells play an important role in limiting the infectivity of viruses by killing the body's cells that have been infected by them. Both T cells and B cells are produced in the bone marrow from similar precursor cells.

The gene IL-7 produces a protein that has the ability to stimulate the production of new immuno-competent cells, both T cells and B cells by the bone marrow. Thus, IL-7 boosts immunity by making more B cells and T cells so that the body has a greater number of immuno-competent cells to fight different types of infectious agents. It may also be of help to boost the production of new immune cells in those that suffer from immune deficiency as a consequence of infection by the AIDS virus. It is also helpful for increasing the benefits of immunisation.

A few days after infection, a type of T cell called a T-helper cell, an important cell that promotes immunity against the invading infectious agent, begins to die more quickly. As a result, the immune response is diminished. Also, as part of the immune response a type of T cell called a memory T cell is formed. Memory T cells can fight the infectious agent much more quickly when it is next encountered. The gene OX40 plays an important role in enhancement of immunity by extending the life of T-helper cells as well as supporting the production of a greater number of memory T-cells. Reduced OX40 activity leads to impaired anti-viral activity.

There are many fungal infective agents such as Candida, the thrush causing fungus, that cause a wide range of chronic forms of ill-health. One type of white blood cell, the neutrophil, plays a vital role in engulfing and the killing of Candida and many

bacteria. Candida for example, exists in a number of different forms. Neutrophils are able to capture and kill all of these different forms.

Recently, scientists have found that a protein encoded by the CARD 9 gene enables neutrophils to eradicate fungal infective agents most effectively. CARD9 also helps other immuno-competent cells to mount a more effective immune response against fungi and many other infectious agents. They have also shown that reduced levels of the CARD 9 gene product impair the ability of neutrophils to kill fungi such as Candida and other infectious agents.

Drs. P.H. Kay and S. Rashid of Homeovitality Co. Ltd. have taken advantage of newly discovered telepathic properties of DNA to develop the sequence specific homeopathic DNA remedy system to help fight infections by targeting the genes DEFB1, IL-7, OX40 and CARD9. For more information about the sequence specific homeopathic DNA remedy system and new properties of DNA, please see www.homeovitality.com

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