

## The antibody in real life

B-cells are specific white blood cells that produce antibodies (antibodies are long chain protein molecules) and these antibodies are able to attach to foreign elements within the blood, in classical immunology this attachment is often described as a lock and key mechanism. The foreign element (the key) attracts an antibody (the lock) that is able to wrap around a portion of the foreign object (the part that the antibody binds to is called the antigen) this newly shaped antibody then instructs other B cells to produce exact copies of these antibodies so that they can quickly attach to other similar foreign elements getting in the blood.

A simple and true story may help to focus our understanding on the issues here; a father, tired of his children continually leaving their pet dog poo in the garden, decides to put flags around the garden indicating the places where they need to clean up. Like antibodies these flags guide where the clean-up operation needs to occur, but they do no cleaning themselves and the more efficient the clean-up operation the less flags we see. This is why we find people that are immune to illnesses and yet have no antibodies for the microbes that are classically associated with those illnesses.

So we see that antibodies themselves are **not** able to carry out the function of detoxification, breakdown and elimination, antibodies seem to function by identifying certain components, flagging them and enabling the other leukocytes (immune cells) to notice them, it is these other immune cells that detoxify and eliminate the flagged foreign elements from the body.

However it is also worth noting that many kinds of white blood cells do not need these antibodies in order to carry out efficient immune clean-up, it has been demonstrated that successful immune responses involving these leukocytes (granulocytes, macrophages and other immune cells such as natural killer cells) are able to detoxify and eliminate toxins and damaged cells without the formation of antibodies.

Prior to the work of immunologist Dr. Merrill W. Chase in 1940's, scientists believed that the body mounted its attacks against pathogens primarily through antibodies circulating in the blood stream, known as humoral immunity.

The research of Dr Chase on white blood cells helped undermine the longstanding belief that antibodies alone protected the body from disease and micro-organisms, Dr. Chase made his landmark discovery in the early 1940's while working with Dr. Karl Landsteiner, a Nobel laureate recognized for his work identifying the human blood groups.

**"This was a major discovery because everyone now thinks of the immune response in two parts...in many instances it's the cellular components that are more important than antibodies,"**

Dr. Michel Nussenzweig, professor of immunology at Rockefeller.

Many leukocytes are capable of recognition, learning and memory, many of which do not need antibodies to function in destruction and elimination of toxins, viruses and affected cells. This is one reason why one can perform efficient immune activity without the production of antibodies.

## **Antibody stimulation involved in allergies and asthma**

Antibodies are produced by specialised immune cells called 'B-Cells' and there is evidence to suggest that individuals with poor immune function seem to produce a high B-cell/antibody responses and low cellular responses. The New England Journal of Medicine, (Jan 30, 1992; 326: 298-304) reports that people with allergies, asthma, and diseases of an autoimmune origin show this bias towards antibody production.

Mario Clerci of the National Cancer Institute in the US suggests for example, that by looking at HIV positive patients i.e. the ones that are producing antibodies, we're looking at the immune failures.

### **1.1.1 Autoimmune disease related to B cells and antibodies**

It was generally thought that autoimmune diseases, where the body appears to be attacking itself, was a misguided immune assault on our own cells brought about by a mal-function or misrecognition by the active T-cells. However it is now increasingly apparent from recent research that anti-bodies to our own cellular components are produced before symptoms appear, as discovered in Lupus and Type 1 diabetes. We know that vaccines have been shown to contribute to both of these conditions and now there are therapeutic approaches to dampen the activity of B-cells, the immune cells involved in antibody production.

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So it appears we are going full circle creating more and more vaccines to stimulate the immune system to produce anti-bodies via B-cell stimulation and now with the formation of autoimmune disorders researchers are desperately trying to dampen down the B-cell responses.

So the pre-occupation of vaccine promoters in trying to stimulate B-cells in the blood to produce high antibody responses without any regard to cellular immune function, is based on a pre-1940 theory of immunology that has since been proved wrong. It is likely that the £billion vaccine industry is entirely misguided and has yet to acknowledge what we have known about the immune system for some time. Over stimulating one arm of the immune system with vaccines creates illnesses that require a compensatory dampening using yet more pharmaceutical intervention.