

**September 2009**

## **New strategies needed to fight the new flu pandemic by Dr Paul Clayton**

*The current public health strategies of using vaccines against the rapidly developing H1N1 flu pandemic are likely to be sub-optimal, warns British expert Dr. Paul Clayton. The problems with inadequate vaccine supply and anti-viral resistance means that using natural compounds called 1,3/1,6 betaglucans to strengthen the innate immune system will most likely be more effective.*

The next great flu pandemic has arrived. Variant H1N1 (swine) influenza has been designated a Phase 6 pandemic by the WHO. Symptoms include high fever, headache, eye pain, shortness of breath and extreme fatigue with, in some cases, rapid progression of symptoms to severe respiratory distress and death. Up to one in four will be affected when the pandemic establishes itself, and although H1N1 is not particularly virulent, the real concern is that it will mutate into a more dangerous form.

Many governments have stockpiled anti-viral drugs and vaccines. But that is highly unlikely to be an effective way of dealing with the coming pandemic, warns Dr Paul Clayton, Fellow of The Royal Society of Medicine and immediate past Chair of the Royal Society's Forum on Food and Health. He is a former Senior Scientific Advisor to the UK government's Committee on the Safety of Medicines.

### **Questionable strategies**

"The current strategies were based on two assumptions: firstly, that the emergency could be managed, and secondly that the drugs and vaccines will be reasonably effective. Both assumptions are questionable. Our ability to deal with a contagious and highly lethal viral epidemic is, realistically, inadequate," says Dr. Clayton

According to Dr. Clayton, there is another option: A natural ingredient derived from baker's yeast called 1,3/1,6 betaglucans. These ingredients up-regulate the function of the innate immune system. Strengthening the innate immune system can be a critically important element in patient management and public health during the pandemic. Simply trusting vaccines and anti-viral drugs alone would be extremely unwise.

### **Resistance to anti-viral drugs**

"The efficacy of the anti-virals, which was never very high to begin with, is undermined by the fact that resistance to anti-viral drugs develops very rapidly, as occurred with the recent H5N1 (bird) flu. This problem is worsened by the fact that Tamiflu passes through sewage plants intact, leaching low concentrations of the drug into the waterways where wildfowl, a major flu virus host, live. This is a tried and tested way of developing drug resistance," Dr. Clayton explains.

Vaccines are compromised by the genetic instability of the flu virus: its rapid mutation rates mean that the right vaccines are unlikely to be ready as each new wave of the pandemic, each one driven by a new viral mutant, cuts through our communities. There are also questions about the safety of these rushed developmental programmes.

### **The innate immune system is the best defence**

An extensive body of evidence shows that the best defence against viral infection is to enhance

the effectiveness of the innate immune system, the body's first line of defence against invasion by bacteria and viruses.

"The innate immune system specifically recognises 1,3/1,6 betaglucans, natural compounds found in the cell walls of fungi such as yeast. When it recognises betaglucans it increases the responses of macrophages and neutrophil granulocyte cells - key components of the innate immune system - and moves to peak effectiveness. In this state published research demonstrates higher levels of protection against numerous infectious agents, from flu viruses to the feared biological weapon anthrax. This improved resistance to infection occurs in animals and in humans," says Dr. Clayton

### **Betaglucans boost immune response**

The Canadian Department of Defence has been taking careful note. Starting in the early '90's they ran a test program to measure the immuno-protective effects of 1,3/1,6 betaglucans and nearly 300 other compounds thought to act on the immune system, and in 2004 reported that the betaglucans were the most effective of them all. Not only did they protect against infection with bacteria, viruses and fungi, they also conferred protection against radiation injury.

"These valuable ingredients are too useful and too important to ignore. As the new flu advances, I have started to give a purified, high-potency brand of betaglucans to my children, at a dose of 250 mg per day; armed with the knowledge that they are safe and effective prophylactic agents. I believe this protective strategy should be considered by all front-line medical staff – and indeed their families," Dr. Clayton concludes.

### **Fact box**

#### **How to choose the right betaglucans**

Betaglucans derived from yeast are far more effective than the differently structured beta glucans derived from mushrooms. This is because the immune system evolved to recognize yeast infections, whereas we were never threatened by infection by mushrooms!

The actual amount of betaglucan per capsule is critical - some yeast products contain very little of the key compounds. Another criterion is purity, generally expressed as a low protein content. As there are some shoddy materials on the market, a reasonable option is to work with betaglucans from companies with a strong research background and an established track record.

The betaglucan raw material with the best record is Wellmune WGP, which contains high and standardised levels of 1,3/1,6 betaglucans (also known as beta glucan 3-6), a highly purified extract from baker's yeast. It may be used by people with yeast allergy, since the allergy-provoking compounds in yeast (mannoproteins) have been removed.

Wellmune WGP is protected by more than 40 patents, has been thoroughly tested in regards to both safety and effectiveness and can be used continuously or during high-risk periods. It has been proven to enhance the immune system. Scientifically, the research demonstrates that Wellmune WGP mobilises immune cells to move faster to viral or bacterial challenges and destroy them more effectively.

Wellmune WGP is available in the dietary supplement **Bio-Glucan** by Pharma Nord UK.