

## Triggers for Fermented Papaya Preparation Use for Flu Prevention

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### Introduction :

Every year Influenza viruses spread all over the world and are responsible of deaths, mainly by people with low immune system capacity like elderly, pregnant women, young children or people suffering of diseases which lowered immune system efficacy.

In order to prevent flu , vaccination is the most frequent tool used. But vaccination viruses strains are not always well adapted to the annual epidemic virus.

It is more important when some viruses are very contagious and responsible of pandemic flu (International epidemy) like virus responsible of recent avian or swine flu.

These viruses could became dangerous if mutations will reinforce their virulence. Some antiviral therapy ( Tamiflu) could be used but their real efficacy is controversial.

That's why Professor Luc Montagnier recommend prevention by vaccination (essentially for young people), hygienic precautions ( only one use handkerchief, antiseptic soap use for hands...) but also to use natural products able to **reinforce immune system**.

### Luc Montagnier advice :

“Each of us is concerned – rightly – by the highly contagious transmission of the new strain of influenza virus H1 N1.

Before an efficient vaccine will be available and besides the usual hygiene precautions, I would like to share with you my own experience and that of my colleagues to prevent this infection.

Our mucus membranes of mouth, pharynx, throat, nose, are fragile, especially in a cold season. They are partly protected from invaders – viruses and bacteria – by the mucus produced and also by that of saliva. It is therefore necessary to salivate, especially during long lasting flights, in order to keep the mucus membranes wet. But in addition, I noticed myself that some products of natural origin were preserving me from respiratory infections.

The first one is a fermented preparation of Papaya fruit extract, FPP, know in Europe under the name of Immunage.

A number of laboratory studies have shown that FPP is a complex mixture of natural carbohydrates and other compounds resulting of long term yeast fermentation; it has 3 main actions. It is:

- anti-inflammatory
- immunostimulatory, particularly at the level of mucus membranes
- inducer of anti-oxydative enzymes.

FPP is distributed as a powder in sachet of 3 gr. or 4.5 gr. The powder is placed under the tongue for several minutes, in order to allow dissolution by saliva, which will activate

some of its active compounds and also permit perlingual absorption. It can then be swallowed, eventually with a sip of water.

Its use is very simple. If one is potentially exposed to the virus, or if mild symptoms appear (swelling of mucus membranes, tickling of throat, nose), take immediately one sachet, a second one 6 hours later, and a third one before going to bed, all between meals.

Symptoms will disappear very rapidly. However, it is advised to continue the same regimen at least for one week.

There is no toxic effect and FPP can also be taken by diabetic persons.

### Scientific support :

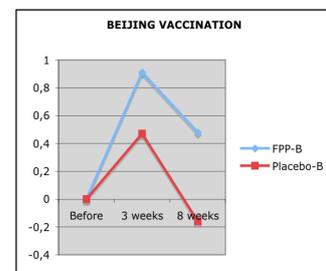
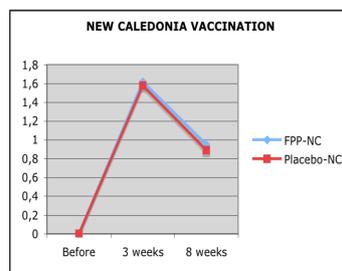
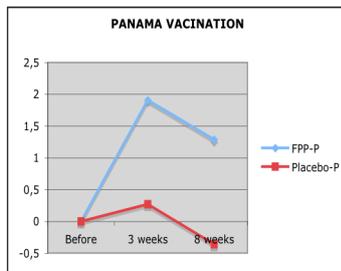
Fermented Papaya Preparation could be use in two different ways for flu prevention. Use as co-adjutant during influenza vaccination (enhancement of antibodies level) or use as prevention by enhancement of immune system capacity (enhancement of macrophages activity) .

#### 1) Enhancement of antibodies level

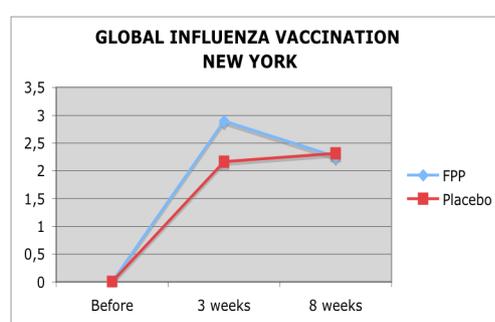
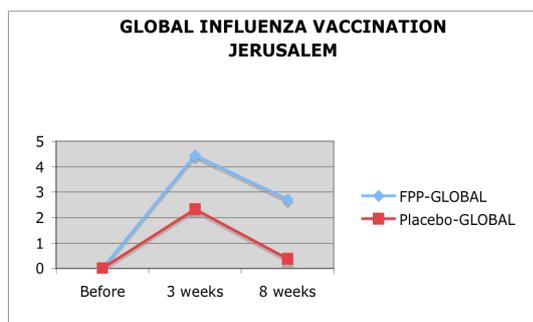
Two studies of Pr Marc Weksler, Weill Medical College of Cornell University, New-York, NY, in 2001 and 2005 had shown that immunity confer by influenza vaccination was enhanced by use of FPP. Studies realized in double blind fashion against placebo (sucrose).

The first one (2001) takes place in two sites, one in Jerusalem and the other in New-York. Influenza vaccination use Panama, New Caledonia and Benjing influenza strains. The following schemas (established on figures given by Pr Marc Weksler in his administrative report) show some differences between the different strains of influenza viruses and between the two locations.

Significative differences between FPP and Placebo was higher for Panama strain and for Jerusalem site.

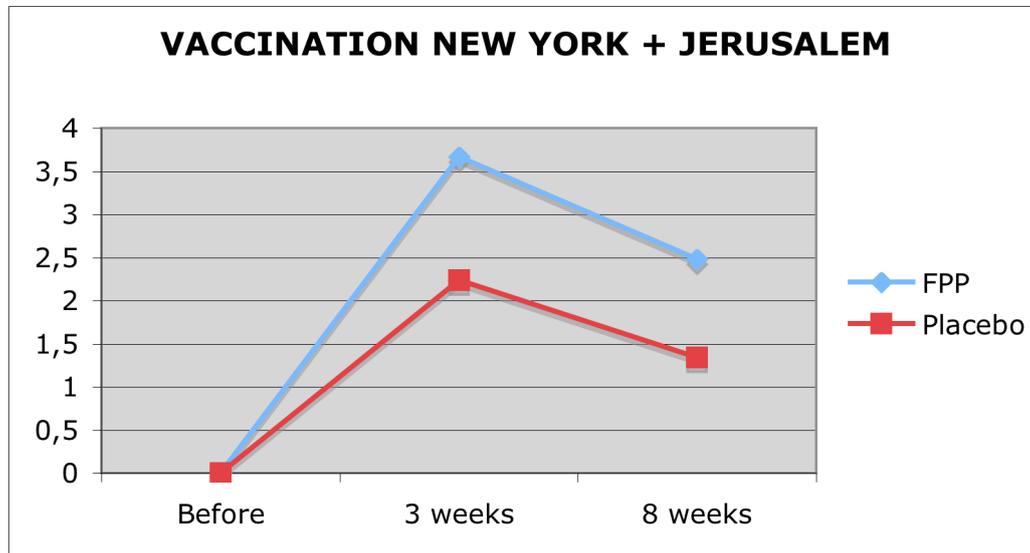


#### Difference between influenza strains



#### Difference between sites

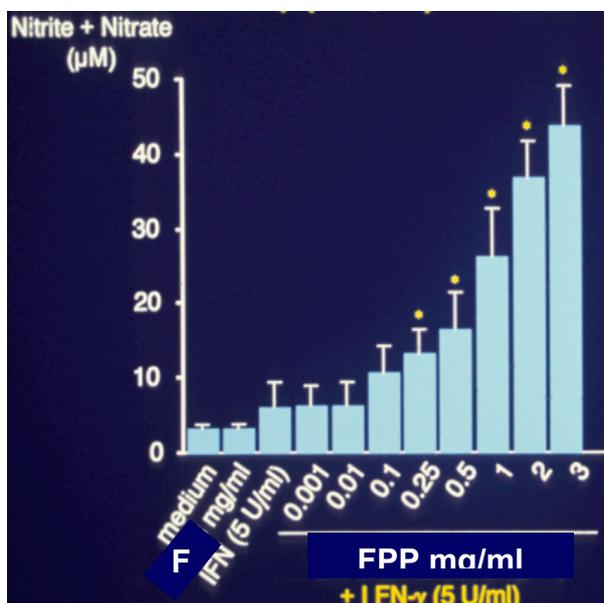
But schemas also shown that in a global way , FPP use was beneficial and enhanced the level of antibodies after vaccination.



The second study of Pr Weksler was done in 2005. Influenza vaccination was adapted to the current strain of 2005. This study has evaluated the titer of antibodies after 5 months. This study shown that immunity conferred by Influenza vaccination plus FPP 3 weeks before vaccination were significantly higher than placebo and will give to people an higher protection.

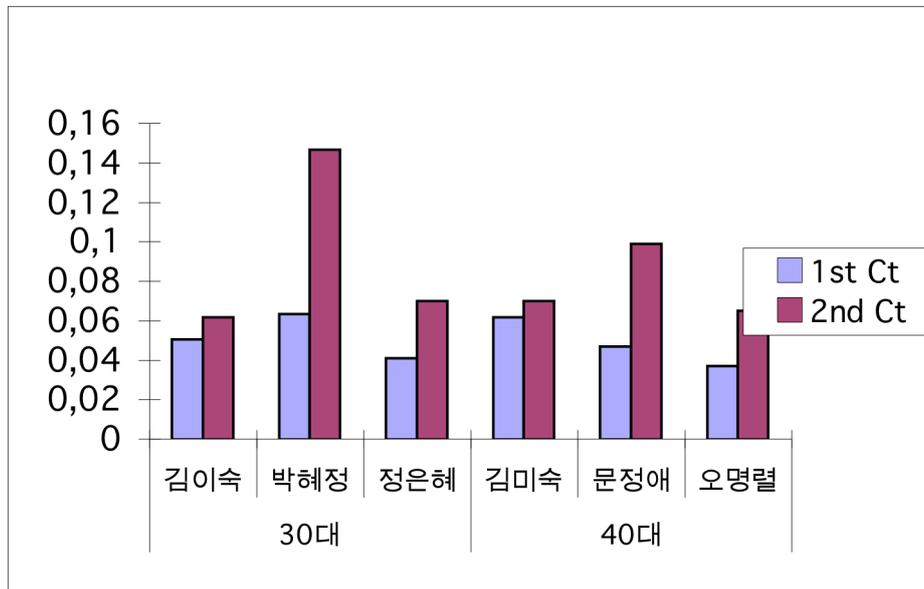
## 2) Enhancement of immune system capacity

Studies carried out by Pr Lester Packer from San Francisco had demonstrated the ability of FPP to enhance macrophages activity. In presence of interferon gamma, FPP increase by 5 fold the level of nitric oxide (NO) production in macrophages.



Kobuchi and L. Packer ISSN : 1039-9712  
 Biochemistry and Molecular Biology Intl:  
 1997 Sep. 43:1, 141-52  
 Réf: Medline 9315292

Genomic study : Dr Fernando Cortizo American Antiaging Genomics USA A5m Australia  
FlyLife Italy Goodgene, Korea December 2007.



**Immune regulating cytokine gene expression change:  
TNF- $\alpha$  before & after**

This study confirm the previous study of Lester Packer which shown that FPP is a macrophage activator by enhancing NO production as well as TNF alpha production .

**Ways of FPP use for flu prevention :**