

**Flublok<sup>®</sup>**  
*Influenza vaccine*  
QUADRIVALENT ❖❖

## Flublok Update 2017-18



**Protein Sciences**  
CORPORATION

Influenza Summit  
Beverly McKee, MSW, LCSW  
May 18, 2017

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*Influenza vaccine*  
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### Protein Sciences Manufacturing Sites

Meriden, CT



Pearl River, NY



Gifu, Japan (UNIGEN)  
cGMP facility: 2x21,000L; plus 2 underway  
*Approved by Japanese Authorities*  
*FDA Inspection pending*



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**Flublok Specifics**

- First recombinant influenza vaccine.
- FDA licensed for 18 years and above.
- Pediatric age expansion underway.
- Panblok: The pandemic solution.

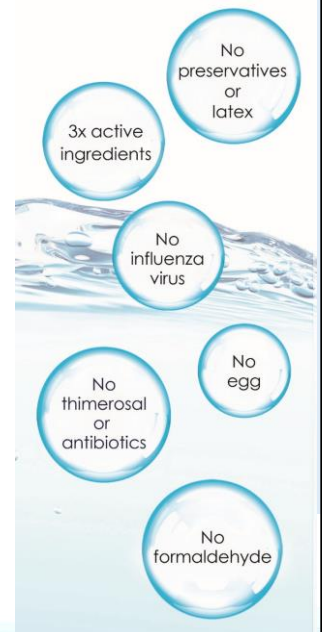
Only pandemic vaccine that can be quickly manufactured and/or transferred to in other countries.



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*Influenza vaccine*  
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**Flublok Features**

- Pure protein vaccine – unique.
- Exact match to the predicted influenza virus.
- 3X the antigen content of conventional flu vaccines.
- Made with a modern cell culture technology so it is PURE...does not contain:
  - egg protein
  - influenza virus
  - thimerosal (mercury)
  - antibiotics
  - formaldehyde
  - latex
  - gelatin
  - gluten
  - endotoxins



## Efficacy Data Now in the Package Insert of Flublok

Table 5: Relative Vaccine Efficacy (rVE) of Flublok Quadrivalent versus Comparator against Laboratory-Confirmed Influenza, Regardless of Antigenic Similarity to Vaccine Antigens, Adults 50 Years of Age and Older, Study 6 (Efficacy Population)<sup>1,2</sup>

|   | Flublok Quadrivalent (N=4303) |                     | Comparator (N=4301) |                     | RR   | rVE % (95% CI) |
|---|-------------------------------|---------------------|---------------------|---------------------|------|----------------|
|   | n                             | Attack Rate % (n/N) | n                   | Attack Rate % (n/N) |      |                |
| All rtPCR-positive Influenza <sup>3</sup>                 | 96                            | 2.2                 | 138                 | 3.2                 | 0.70 | 30 (10, 47)    |
| All rtPCR-positive Influenza A <sup>4</sup>               | 73                            | 1.7                 | 114                 | 2.7                 | 0.64 | 36 (14, 53)    |
| All rtPCR-positive Influenza B <sup>4</sup>               | 23                            | 0.5                 | 24                  | 0.6                 | 0.96 | 4 (-72, 46)    |
| All Culture-confirmed Protocol-defined ILI <sup>4,5</sup> | 58                            | 1.3                 | 101                 | 2.3                 | 0.57 | 43 (21, 59)    |

People who received Flublok were 43% less likely to get culture-confirmed influenza

## Availability for 2017-18

- Quadrivalent Vaccine – prefilled syringes
  - We are committed to 600,000 doses so far but we can manufacture more as needed.
- Trivalent Vaccine - single dose vials  
Available in limited amounts (~100K doses).



## Issues we would like to see addressed by the Summit.

1. How can we reach those who have traditionally refused a flu vaccine?
2. How can we address perceived low vaccine efficacy?
3. How can we reassure those who are mandated to receive an influenza vaccine that that it is safe and effective?



## Groups who have traditionally refused an influenza vaccine:

- Vegans.
- Egg/Latex allergic.
- People who are “healthy” and unaware of the risks/exposure for unprotected loved ones.
- Those opposed to egg consumption due to religious beliefs.
- Holistic individuals opposed to formaldehyde, preservatives or antibiotics.
- People who experienced negative reactions to the influenza vaccine.
- People who received a flu shot but still contracted the flu.





## Summit may consider the following:

- Develop specific messaging for targeted groups:  
“You have a choice in flu vaccines”.
- Develop messaging that encourages everyone to get a flu shot to protect their loved ones.
- Explore ways manufacturers can work together to achieve maximum protection against the flu through increased vaccination.



## Flublok Education

We would love to answer your questions about Flublok:

- Visit our website: [www.Flublok.com](http://www.Flublok.com)
- Contact Beverly McKee:
  - (314) 607-2181
  - [bmckee@ProteinSciences.com](mailto:bmckee@ProteinSciences.com)

