

### Transcript Details

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Eureka for Influenza Prevention! Cell-Based Vaccines of the Future

### ReachMD Announcer:

Welcome to ReachMD. This medical industry feature, titled “Eureka for Influenza Prevention! Cell-Based Vaccines of the Future,” is sponsored by CSL Seqirus.

### Voiceover:

Attention, traditional egg-based vaccines! A cell-based alternative is ushering in a new era for prevention of seasonal influenza. But how, you may ask? Well, through the many marvels of science, of course! But more specifically, innovations in creating a potentially *more effective differentiated vaccine*.

Since time immemorial, we’ve known that the best way to decrease illnesses, hospitalizations, and deaths due to influenza is to vaccinate.<sup>1</sup> And egg-based influenza vaccines have been a mainstay for more than 60 years.<sup>2</sup>

But there are several *unpredictable* factors that impact vaccine effectiveness from year to year. One of them is the phenomenon of egg adaptation during the egg-based influenza vaccine manufacturing process.<sup>3</sup>

After influenza strains are isolated from humans and chosen for the vaccine, the virus is injected into the egg.<sup>3</sup>

But mutations occur while the virus grows inside that egg, because human flu viruses can’t bind to the receptors of avian cells.<sup>3</sup>

Rather, they must mutate to replicate in eggs. This process is called “egg adaptation.” And part of this learning process can involve changes in the virus’s hemagglutinin protein molecule that allow the influenza strains to become more fit to grow in avian cells.<sup>3</sup>

But some egg-adapted mutations may cause hemagglutinin to be antigenically different from the selected strains. As a result, antibodies developed against egg-based vaccines may not bind well as well to the circulating flu strains.<sup>3,4</sup>

And the potential result of this antigenic change? You guessed it: strain mismatch that can reduce vaccine effectiveness.<sup>1,3,5</sup>

This represents a potential threat to public health where we may see strain mismatch like in the seven out of ten U.S. flu seasons from 2010 to 2020 that were mismatched seasons—of which nearly half were caused by the ol’ egg adaptation.<sup>6-16</sup>

But there’s good news over yonder hill and vale!

Yes, friends, I’m talking about cell-based influenza vaccines, an innovative technology that, well...avoids egg adaptation altogether!<sup>6</sup>

With cell-based vaccines, healthcare professionals can now ask, “*Why put all of our eggs in one basket?*”

Gone are the days of solely relying on eggs to grow influenza virus.<sup>17</sup> Take a holiday, chickens; you’ve earned it!

Influenza vaccines made in mammalian cell lines provide an exact antigenic match to the World Health Organization’s selected influenza strain. How? Through extensive quality control measures and genetic sequencing during the manufacturing process, of course.<sup>2</sup> It’s a high-fidelity manufacturing precision fit for the future...but brought to you today!

Cell-based vaccines use a continuous cell line grown in suspension, supporting high viral yields, and making them well-suited to rapid scalability.<sup>18-20</sup> Why, a viable vaccine could even be made available as early as 10 days.<sup>21</sup> Take *that*, influenza!

So gather your esteemed colleagues from far and wide, and be sure to spread the news with both verve and gusto. Because when it comes to choosing influenza vaccines, the world of tomorrow is available today!

### ReachMD Announcer:

This program was sponsored by CSL Seqirus. If you missed any part of this discussion, visit [ReachMD.com/IndustryFeature](https://ReachMD.com/IndustryFeature). This is ReachMD. Be Part of the Knowledge.

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