



CSL Seqirus

CSL Seqirus

Our role in the vaccination of older people

08 May 2026

Disclaimers

The speaker is an employee of CSL Seqirus and is compensated for time and expertise.

Although CSL Seqirus has used reasonable efforts to provide a comprehensive presentation, CSL Seqirus does not represent or warrant that the information presented comprises the entire evidence base that may be available, or that the information contained will remain accurate and current into the future.

CSL Seqirus abides by the Medicines Australia Code of Conduct. The information presented today may include preclinical and/or unpublished data. CSL Seqirus does not promote the use of unregistered products.

CSL Seqirus does not recommend the use of any of products other than as described in the Approved Product Information as available on the TGA website.

Uniquely Australian Ownership and Manufacturing



CSL is a global biotechnology company that develops and delivers innovative medicines that save lives, protect public health and help people with life-threatening medical conditions.

CSL employs more than 30,000 people in over 40 countries and invests over US\$1.16 billion in R&D. Over 90% of CSL's total revenue comes from outside of Australia.

CSL Seqirus focused on continuous innovation to reduce the burden of influenza



Flu Vaccination in Older Adults:

Immune Ageing, Vaccine Science and Ongoing Research

Age-related changes in immune response can impact vaccine effectiveness

IMMUNOSENESCENCE

Innate immune cell[†] function

- Decreased phagocytosis / antigen-processing & presentation



Adaptive immune cell function

- Decreased naïve B & T cells
- Decreased antibody production, diversity and affinity



- Increased memory T cells

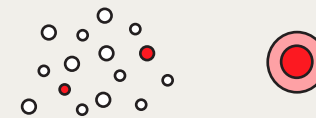
INFLAMMAGING

- Increased impairment of immune system regulation



- Increased pro-inflammatory cytokines

- Increased chronic inflammation / Metainflammation



Poor vaccination outcomes & increased susceptibility to infection^{1,2}

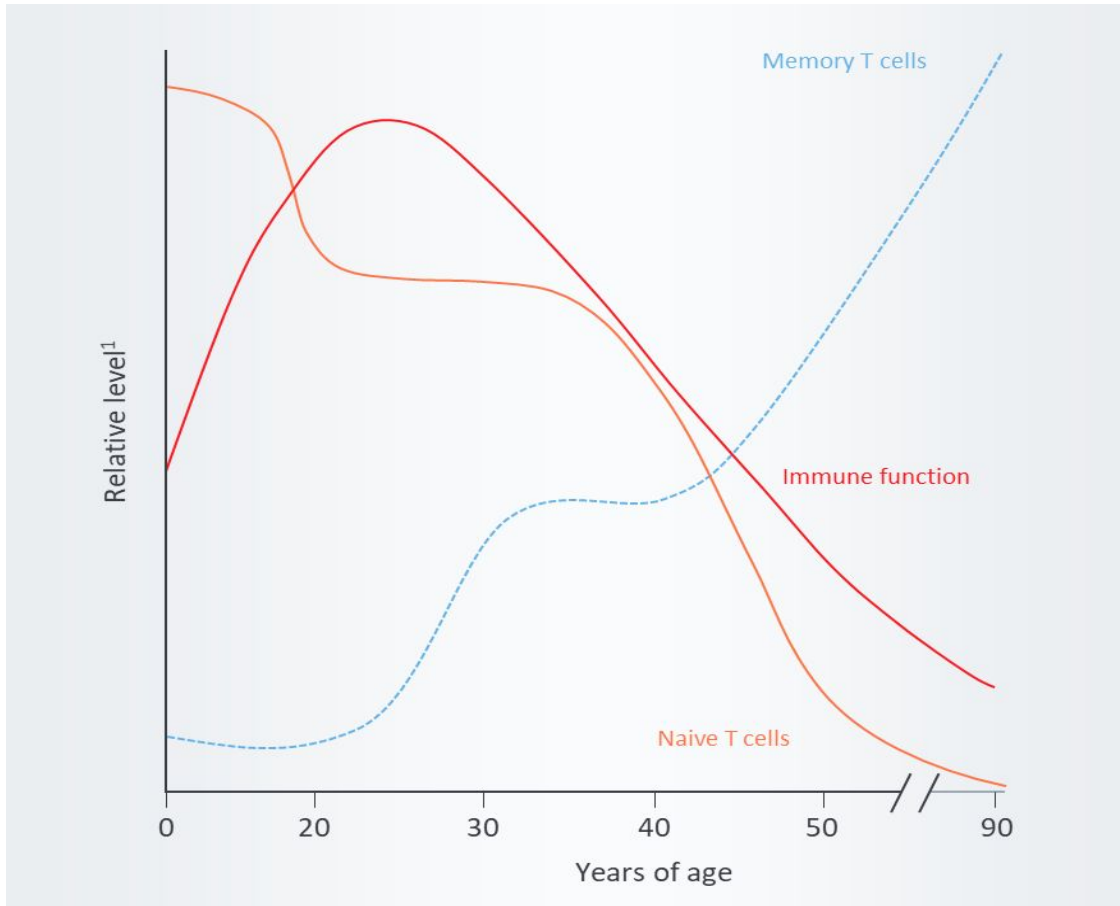
VE, vaccine effectiveness

Figure adapted from Santoro A, et al. *Ageing Res Rev.* 2021;71:101422. [†]Cells include neutrophils, natural killer cells, macrophages and dendritic cells.

1. Santoro A, et al. *Ageing Res Rev.* 2021;71:101422. 2. Crooke SN, et al. *Immun Ageing.* 2019;16:25;

CSL Seqirus

Immune function and response to vaccination decline as age increases



Systematic review and meta-analysis of test-negative design case-control studies²

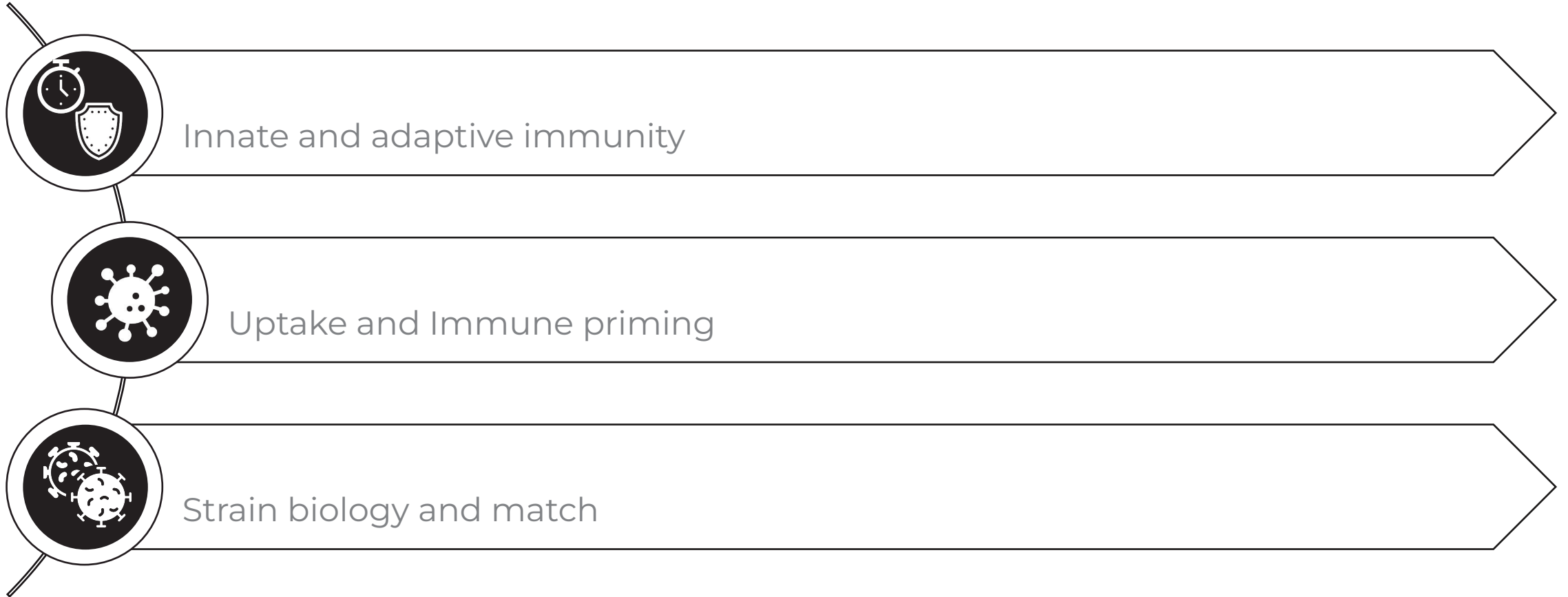
| | Vaccine Effectiveness* (95%CI) |
|------------|-----------------------------------|
| < 65 years | 51% (44;58) |
| ≥ 65 years | 37% (30;44) |

*pooled estimate 'any strain'

Adapted from Experimental Gerontology, Vol. 40, Abedin S, Michel JJ, Lemster B, Vallejo AN. Dissemination of increased Risk of Influenza in the Elderly Across the United States, 537-548, 2005, with permission from Elsevier.

1. Abedin S, et al. Exp Gerontol. 2005;40:537-548. 2. Rondy M et al. J Infect. 2017 November ; 75(5): 381-394

Biological factors influencing immune responses to influenza vaccination



Adjuvant technology

Supporting immune activation in an ageing immune system

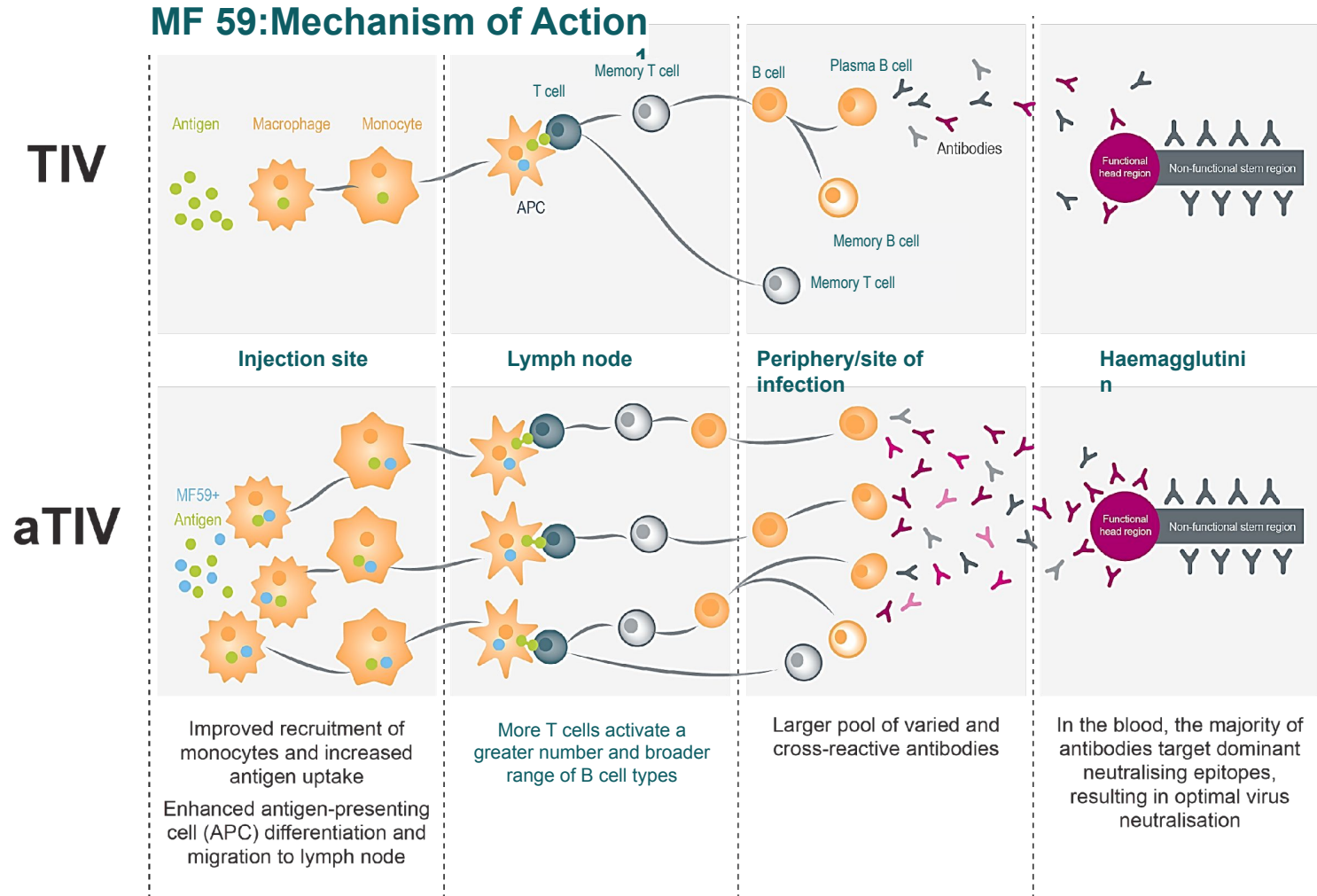


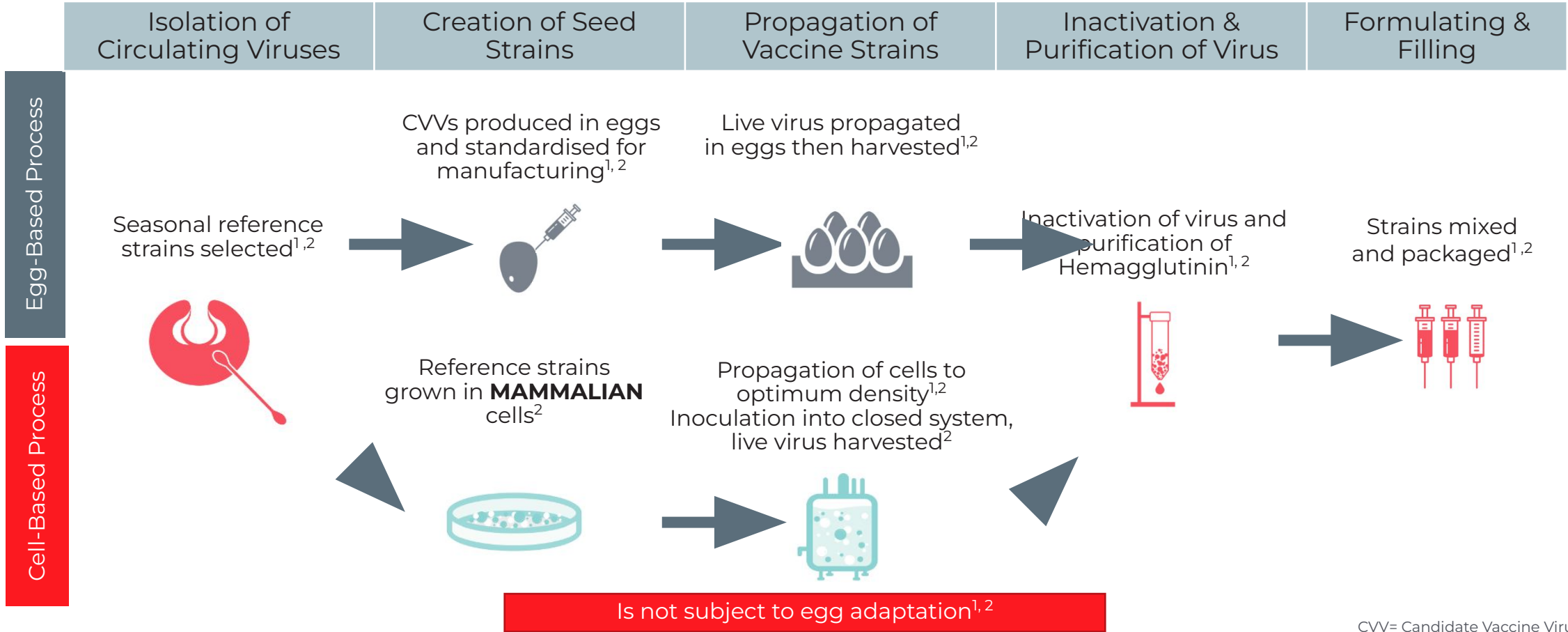
Figure adapted from Schaffner W, et al. 2018.¹

aTIV, adjuvanted trivalent influenza vaccine; TIV, trivalent influenza vaccine.

1. Schaffner W, et al. Int J Clin Pract 2018;72(10):e13249; 2. Frey SE, et al. Vaccine 2014;32:5027-34; 3. Podda A. Vaccine 2001;19:26-80; 4. Essink B, et al. Vaccine 2020;38:242-50; 5. Nicolay U, et al. Int J Infect Dis 2019;85S:S1-S9.

Cell-based manufacturing

Maintaining antigen characteristics



CVV= Candidate Vaccine Virus

* May not predict clinical outcome

1. Milián E et al. *Biomed Res Int.* 2015;2015:504831. 2. Rajaram et al 2020 *Ther. Adv in Vacc and immunoth.*8: 1-10

Influenza Vaccine Portfolio

Whole of life vaccines to reduce the burden of Influenza

MF59[®] Adjuvant

Fluad[®]

Active Immunisation
against Influenza¹

50 years and over¹

Cell-based

Flucelvax[®]

Active Immunisation
against Influenza²

6months and over²

Adjuvant + cell-based

Celldemic[®]

Pre-pandemic influenza
vaccine (H5N1)³

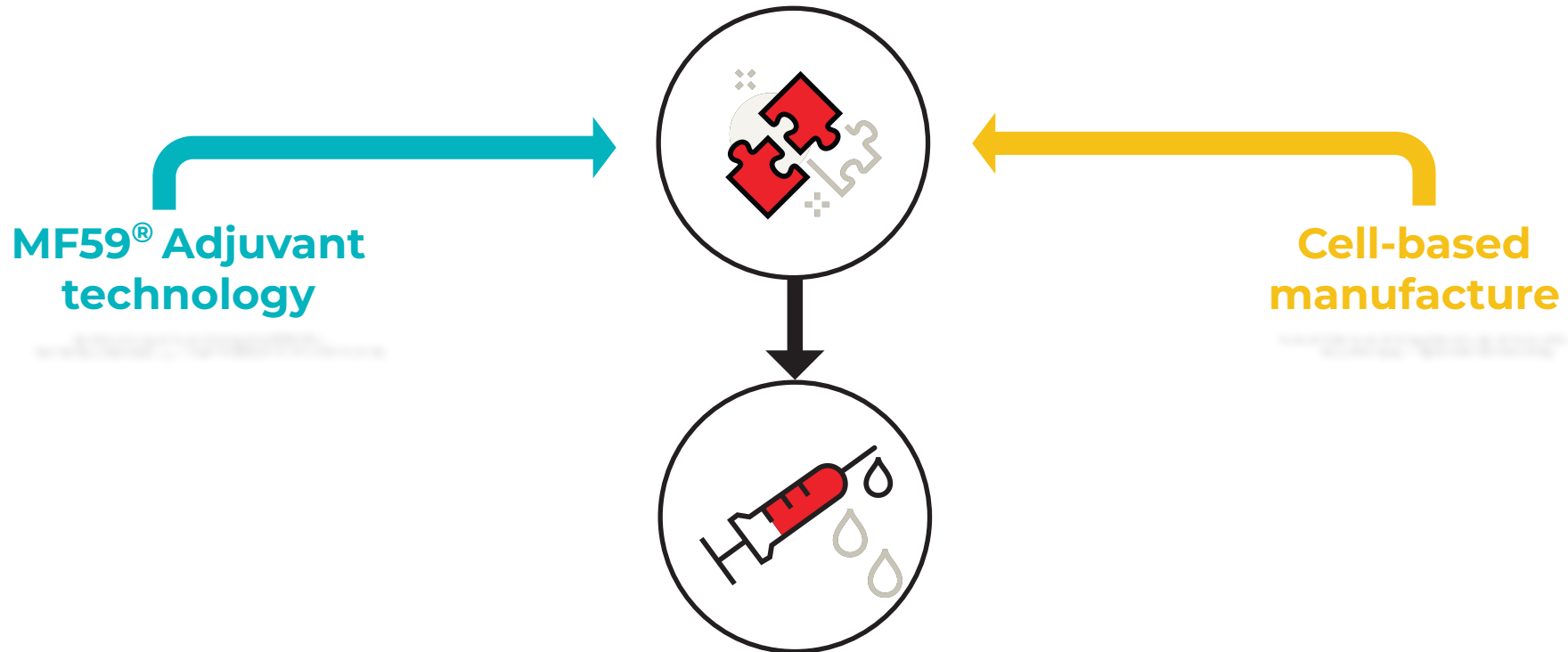
Audenz[®]

Pandemic influenza
vaccine (H5N1)⁴

¹ 1. Fluad Approved Product Information; 2. Flucelvax Approved Product Information; 3. Celldemic Approved Product Information; 4 Audenz Approved Product Information

Introducing aTIVc:

Combining established vaccine technologies offers opportunities to improve effectiveness



Investigational Vaccine. Not registered in Australia. Discussion for Scientific purposes only

1. Li APY, et al. *npj Vaccines* 2021;6:25; 2. Nicolay U, et al. *Int J Infect Dis* 2019;85S:S1-S9; 3. Dugan HL, et al. *Cell Immunol* 2020;348:103998; 4. Rajaram S et al. *Int J Environ Res Public Health* 2020;17(15):5423; 5. Rajaram S, et al. *Ther Adv Vaccines Immunother* 2020;8:2515135520908121; 6. Peck H, et al. *NPJ Vaccines* 2021;6:149.

CSL Seqirus

CSL Seqirus in Australia

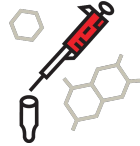
Vaccine Science and Public Health Capability



Seasonal Influenza Vaccines

Differentiated influenza vaccine portfolio

Longstanding National Immunisation Program participation



Pandemic Preparedness

Onshore pandemic preparedness capability

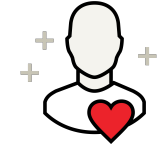
Longstanding Australian Government partnership



Uniquely Australian Health Challenges

Antivenom manufacture and supply

Q-fever vaccine production



Extending Patient Access in Australia

Australian-owned with local decision-making

Partnerships supporting access to vaccines and other medicines

Australian manufacturing and supply resilience

Supporting Australia and the region