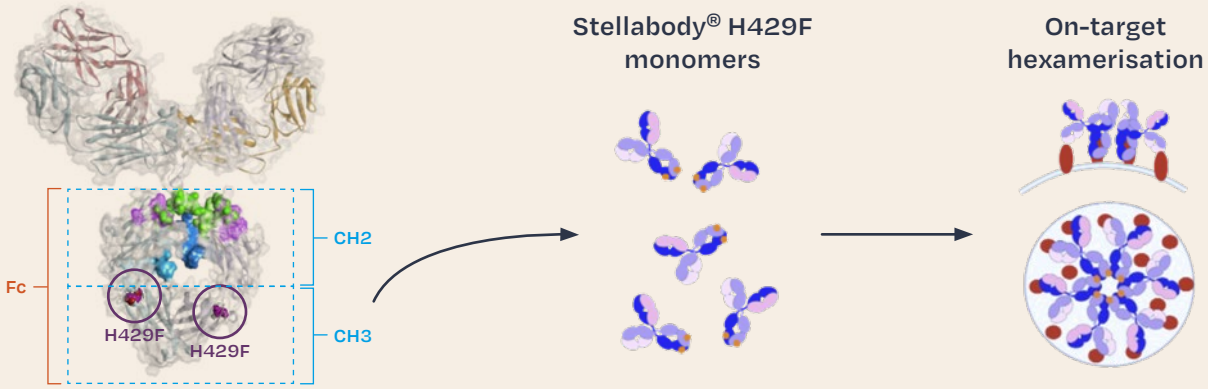
Immune Therapies Group – Stellabody® Capabilities

Burnet
reach for the many

Stellabody® technology exploits a natural antibody behaviour to facilitate the formation of hexamers. This transforms and enhances the action of antibodies and related biologics, converting ineffective therapeutic biologics into highly potent complement killing therapeutic entities or improving the activation of agonistic cell surface receptors.



Stellabody® is a **proprietary** point mutation of the buried residue H429 in the CH3 domain

Stellabody® strengthens Fc:Fc interactions to induce on-target antibody hexamers **boosting Ab performance by up to 100-fold**

Capabilities

Burnet's Immune Therapies Group has amassed significant expertise and unique resources, and is ready to work with you to transform your antibody asset into a potent and efficacious therapeutic for the treatment of **cancer**, **autoimmune disease** and **infection**.

Partnership opportunities

- Licensing
- Research collaboration
- Fee for service

The Immune Therapies Group at Burnet Institute is an internationally recognised laboratory in antibody immune function.

Is your asset underperforming? Could it be a Stellabody®?

Burnet Institute provides quality core laboratory facilities in Melbourne, Australia.

Formats of antibodies and antibody-based proteins we have worked with

- IgG (all subclasses)
- IgA
- Bispecific antibodies
- Fc-fusion proteins
- Recombinant proteins
- Glycoengineered proteins

Production/purification

- Production: Expi293 expression system
- Purification: Protein A, Size Exclusion Chromatography (SEC) and IEX

Molecular characterisation

- Analytical SEC
- Analytical SEC-MALS
- Thermo stability/melting temperature™

***In vitro* functional characterisation**

- Target binding
  - Flow cytometry using target cells: direct binding or competitive binding
  - ELISA
  - Bio-Layer Interferometry (BLI) using the Octet®
- Complement dependent cytotoxicity (CDC) of cells
  - Flow cytometry using target cells
- C1q binding
  - Flow cytometry: C1q binding to opsonised target cells
  - ELISA: using recombinant proteins
- Live virus neutralisation assays (BDI – Burnet)
- Fc receptor binding
- Fc receptor signalling – luciferase reporter assays
  - for induction of ADCP
  - FcγRIIIa signalling – reporter assay for induction of ADCP
  - FcR binding methods

Burnet uses the services of contractors for:

- collaborative clinical analysis of haematological disorders in haemostasis and Stellabody® potency blood cancers
- mass spectroscopy analysis of biologics
- virus neutralisation assays
- half-life evaluation of biologics.

Ex vivo functional characterisation (Perth Blood Institute)

In vivo functional characterisation (Jackson Labs)

In vivo efficacy studies (Charles River)

Ex vivo functional characterisation (Perth Blood Institute)

Research licence agreement with argenx – validation studies completed

Work with us

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