AdAlta
next generation protein therapeutics

AUSTRALIAN TECHNOLOGIES COMPETITION

Describe your business/technology in 50 words or less?
AdAlta's i-body is a next generation therapeutic engineered with a proprietary long loop that can access challenging disease targets. AdAlta has a library of over 20 billion i-bodies, providing great opportunity for large pharmaceutical companies to identify new drugs and unlock new markets.

How did the idea for your business come about?
The i-body takes its inspiration from sharks. It was observed that the shape of the shark antibody, with its long binding loop, could be used to form a library of novel drug compounds with binding loops that could be manipulated to generate billions of compounds. Subsequently, a human-derived library was generated using a human protein with a similar structure to that of the shark. Both the shark and human-derived libraries can be screened against any drug target of interest using a technique called phage display, in which AdAlta Chief Scientific Officer Mick Foley is a world leader.

Who are your customers/target market?
AdAlta's target market is pharmaceutical and biotechnology companies looking to access innovative technologies to bolster their discovery pipelines and unlock disease targets that have been unaddressable with existing drug development technologies. This becomes more important as products come off patent and new products need to be progressed through the pipeline. The research and development spend of pharmaceutical companies on external drug discovery is growing from US$19.2 billion in 2016 to US$43.7 billion in 2026.

What is your company's advantage?
AdAlta's technology is differentiated from other companies with similar platforms. The i-body is the only next-generation therapeutic that is human derived, avoiding the potential for an unwanted immune response. The structure of the i-body means it binds only to the intended target, reducing side effects and a toxic profile (unlike small molecule drugs, such as chemotherapeutics) and the long binding loop means it can access targets that cannot be accessed by first generation biologic drugs.

Describe your current (or future) competition
AdAlta's closest competitor, Ablynx, developed a similar antibody scaffold that is camel-derived, generating over US$500m in revenue through collaborations with Merck & Co, Abbvie and Sanofi. Ablynx was acquired by Sanofi in January 2018 for US$4.8b, removing them from the outsourced drug discovery space. There are several other companies that offer drug discovery services using a next-generation therapeutic platform including ArgenX, Iontas and VHsquared, but AdAlta's offering - a human-derived therapeutic with a long binding loop - is unique.

How do you generate revenue (or intend to if pre-revenue)?
AdAlta's revenue model sees pharmaceutical companies identifying a drug target and paying AdAlta to screen its i-body library to identify a lead candidate that binds to that target. AdAlta partially progresses these candidates into drugs before handing them over to the pharma partner for further development. The pharma partner then completes clinical development, paying AdAlta ongoing milestone and royalty payments for access to the unique intellectual property.

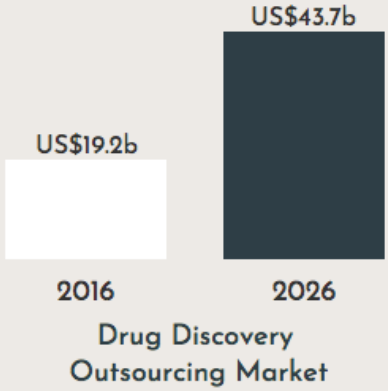
The underlying mission of the Australian Technologies Competition is to spotlight/promote those companies with the greatest global potential. How do you meet these criteria?
AdAlta has developed a technology that provides pharmaceutical companies with an opportunity to identify innovative new therapeutics to fill their pipelines and unlock new markets. AdAlta's business model, which sees a pharma company identifying a target and AdAlta completing the screening and early development to lead candidate, is not restricted geographically. AdAlta is already collaborating with both reputable academic and commercial partners overseas, thus validating the global potential of the i-body platform.

What do you hope to achieve by being part of this Competition?
AdAlta is currently developing its lead i-body candidate, AD-214, for the treatment of the debilitating lung disease Idiopathic Pulmonary Fibrosis and is looking to enter clinical trials in 2020. Alongside in-house development, AdAlta is keen to develop collaborations to screen the i-body platform for external partners. AdAlta is expecting its involvement with the Australian Technologies Competition to increase awareness of both the Company and its i-body technology, while also providing opportunities to meet overseas collaborators and partners that are interested in working with AdAlta.

ADALTA I-BODY DISCOVERY PLATFORM

Helping Big Pharma fill their discovery pipelines with a library of 20 billion novel compounds to unlock new disease targets

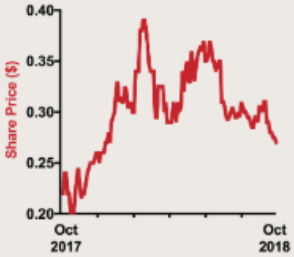
One third of pharma revenue comes from external discoveries



"I have a particular interest in AdAlta because I think they have some fabulous technology"

Prof Carol Pollock, AdAlta Collaborator (University of Sydney)

AdAlta is listed on the ASX with a market cap of AU$34m



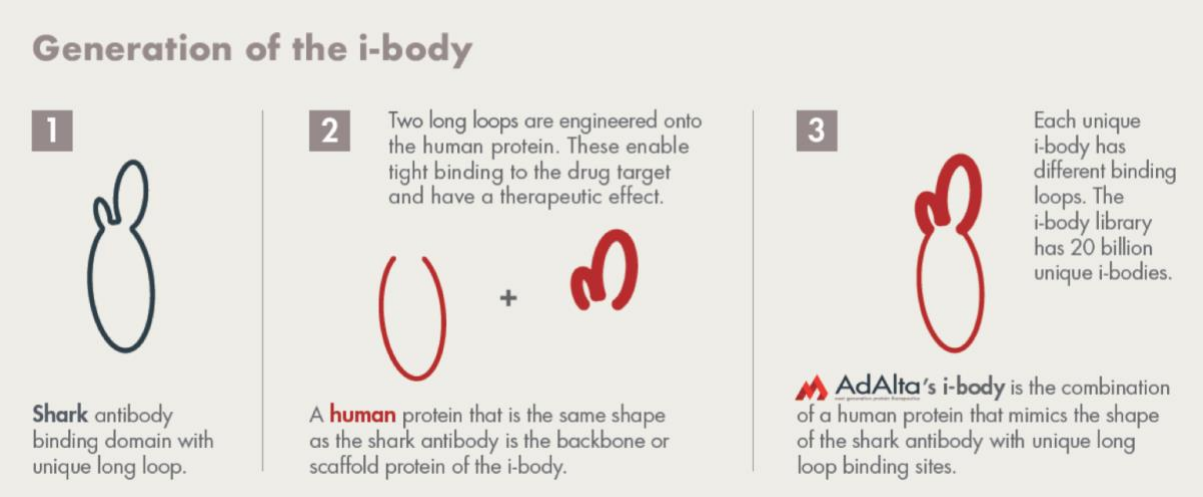
i-body library is patent protected in 11 countries until 2024

Key Publications

- i-body platform: Griffiths et al. *Antibodies* (2013)
- Characterisation of i-body: Griffiths et al. *JBC* (2016)
- Anti-fibrotic effets of i-body: Griffiths et al. *Scientific Reports* (2018)

"I think AdAlta's got some technology that allows undruggable targets now to be drugged"

Robert Peach, AdAlta Non-executive Director (San Diego)



AdAlta Chief Scientific Officer Mick Foley

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