Healthcare and Quality of Life

## **AbCellera**

## Antibody discovery

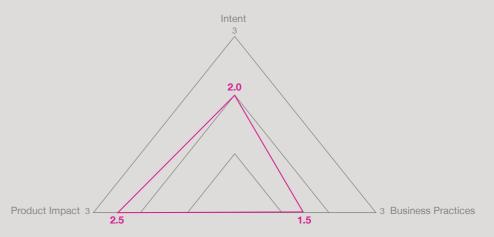


AbCellera is a Canadian business that provides antibody discovery services, including antibody sourcing, data analytics, and antibody engineering. By combining those technologies, and importantly improving the process, AbCellera is able to shorten the time required to discover antibody candidates and find rare antibodies for more difficult targets. AbCellera provides outsourced antibody discovery services for pharmaceutical and biotech companies and research organsiations.

### **Investment Case**

What societal challenge is the company tackling?	Antibody therapeutics leverage the body's immune system to fight diseases, but they are expensive and there are targets that are difficult to access. AbCellera aims to tackle those challenges by improving antibody discovery through single cell screening, one part of the development process for antibody therapeutics. The company claims that it can shorten the time for discovering antibodies from 3–12 months to 4–6 weeks, find higher quality antibodies (which should have higher probabilities of success), and find more diverse antibodies for previously difficult to address targets.
Is the company's offering sufficiently different to, and better than, the status quo?	The biggest difference between AbCellera and its peers is not one of technology, but business model. AbCellera keeps the equipment in-house and provides antibody discovery as a service to pharma and biotech companies. In doing so, AbCellera can continue to invest in and improve the process over time, can learn from across all its projects and spread the cost of investment. The company also benefits from the data set collected from all its projects which may form a long-term competitive advantage and its business model enables it to maintain a focus on research. Finding a balance between research and commercialisation can be a challenge for many companies in the healthcare industry, but for AbCellera, it can focus entirely on research as commercialisation is done by the drug companies.
Is there a committed management team?	The Chief Executive Officer Carl Hansen is deeply knowledgeable and thoughtful. He received his PhD in Applied Physics and Biotechnology from Caltech and subsequently went on the publish over 65 papers in the fields of microfluidics, immunology, genomics, and nanotechnology. Other members of the founding team include Veronique Lecault (Chief Operating Officer), Kevin Heyries (Head of Business Development) and Kathleen Lisaingo (Group Leader, Cell Screening). The fact that four co-founders (two of whom are women) are still involved is a good sign, and there is significant inside ownership.
How does the company treat its stakeholders?	AbCellera looks like a great place to work with a focus on collaboration and its location in Vancouver has been cited as an edge when it comes to competing for talent. The company was named 29th in Fast Company's '100 best places to work for innovators' and the HR department is pleasantly named 'People & Culture'. It has a Code of Ethics which contains measures for scenarios which are considered particularly important among biotech's: whistleblowing, anti-bribery and insider training guidelines. In terms of customers, AbCellera are having success attracting repeat customers which is a strong endorsement that the company is a trusted partner.
Is there a strong likelihood of creating a profitable and defendable business?	As AbCellera increases the number of antibody discovery programmes, it will have a greater ability to invest across its technology, thereby enabling more data and insight and ultimately faster and higher quality antibody discovery. This will attract more partners in time who provide revenues from three sources: upfront research fees, milestone payments and royalties. In the long-run, royalties should account for the majority of economic value, assuming that the antibodies AbCellera helps to discover are successfully commercialised. It will likely take some time for AbCellera to achieve a high level of profitability given the company's commitment to investing for the long term.
Is the business attractively valued?	The future economic value of the business can be thought of as a function of 1) revenues from drugs based on AbCellera's antibodies, 2) the royalty rate, 3) profit margin, and 4) how much the market is willing to pay for the cash flow. Valuation is demanding, but with a couple of blockbuster discoveries or a number of successful therapies over 10 years market share could equate to 15–20%. It is also a possibility that AbCellera may expand beyond antibodies by 2030, and success in other areas would increase the upside.

## **Impact Analysis**



#### **Product Impact**

AbCellera's technology should help drive discovery and its model could help drive accessibility; unlocking the potential benefits of antibody therapies for millions. AbCellera is an enabler and its primary function is to further the discovery of new drugs for some of the most common diseases, including those, like cancer, which are increasing in incidence. It's score is based on this future impact on patient populations through furthering the field of antibody therapeutic research.

#### Intent

AbCellera's strategy shows a commitment to creating real change with patients as the ultimate goal. Its mission is 'to improve health with technologies that transform the way that antibody-based therapies are discovered'. The company has evidenced this mission by increasing the number of significant partners, its research focused business model and maintaining a high spend (90% of revenues) on research and development.

#### **Business Practices**

As an early stage company there is little disclosure and we would like to see this improve over time, especially on remuneration and pricing strategies. On the positive side, inside ownership is high, there is strong alignment, employees ('AbCellerites') are well looked after and the company's Code of Ethics is thoughtful and relevant for a biotech company.

# Relevant Targets 3 GOODHEALTH Target 3.3 By 203 malaria and pegle

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**Target 3.3** By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.

**Target 3.4** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being (Candidates for the future: 3.8 and 3.b).

#### Relevant Products

AbCellera will use its single cell analysis technology to help biopharmaceutical and biotechnology companies overcome the challenges of antibody discovery, hopefully leading to better and cheaper antibody therapeutics becoming available to a broader range of patients more quickly. Abcellera should help to unlock the huge promise of monoclonal antibody therapeutics (mAbs) which show great promise to help treat, prevent and diagnose some of the world's most common diseases, particularly cancers. Abcellera plans to expand into cell line development and manufacturing of antibody therapeutics, as well as synthetic biology and cell therapy, so we expect its impact to expand and broaden over time.

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