

| Market data | |
|--------------|-------|
| EPIC/TKR | AVCT |
| Price (p) | 86.1 |
| 12m High (p) | 109.0 |
| 12m Low (p) | 61.0 |
| Shares (m) | 68.4 |
| Mkt Cap (£m) | 58.9 |
| EV (£m) | 42.8 |
| Free Float* | 57% |
| Market | AIM |

*As defined by AIM Rule 26

Description

Avacta is a pre-clinical stage biotechnology company developing biotherapeutics based on its proprietary Affimer protein technology which benefits from near-term revenues from research and diagnostic reagents

Company information

CEO Alastair Smith
 CFO Tony Gardiner
 Chairman Trevor Nicholls

+44 1904 217 046
www.avacta.com

Key shareholders

| | |
|-----------------|-------|
| Directors | 4.2% |
| IP Group | 24.8% |
| Lombard Odier | 11.5% |
| Aviva | 9.7% |
| Baillie Gifford | 7.2% |
| Ruffer LLP | 7.1% |

Next event

| | |
|--------|--------------|
| 3Q-17 | Affimer data |
| Oct-17 | Finals |
| Jan-18 | AGM |

Analysts

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Avacta

Bringing forward the Affimer technology

Avacta is the proprietary owner of Affimer technology for the development of bio-therapeutics, diagnostic tests and research reagents. Affimers represent a radical alternative to established antibody technology which dominates the drug industry despite its limitations. Avacta is continuing progress towards its strategic goal of having a first-in-man trials of Affimer therapeutics by the end of 2019. In two years, management has hit several key milestones, moving Affimers from being an 'interesting concept' to one of 'real opportunity' and de-risking the technology as the next platform of biopharmaceutical drugs.

- **Strategy:** To commercialise its Affimer technology through licensing of Affimer research and diagnostic reagents, and by identifying and developing its own proprietary therapeutic Affimer leads which it will also ultimately license. The company has sufficient cash resource to take its first Affimer lead through to IND submission (end 2018) and into Phase I trials (2019).
- **Affimers:** They are small and stable engineered proteins that may represent a realistic alternative to antibodies in diagnostics, reagents and as therapeutics. Affimer constructs based on a human protein, were shown to have very low immunogenicity, hitting an important drug development milestone.
- **Commercial opportunity:** Antibody technology is the accepted 'gold standard' in terms of research, diagnostic and therapeutic tools and has combined commercial markets in excess of \$90bn per annum. Affimers may represent an additional option in the arsenal, especially where antibodies have limitations.
- **Risks:** Affimers represent a new disruptive technology and the potential customer base might take time to recognise their advantages. While all new drug development carries a high risk, Avacta has hit a number of important milestones over the last years which have considerably altered the risk profile.
- **Investment summary:** Avacta has made considerable progress towards its goal of having its own proprietary Affimer-based drugs. In just 18 months, it has completed a number of *in vitro* and *in vivo* pre-clinical tests. The next step will be to select its immuno-oncology lead candidate and file an Investigational New Drug (IND) in late 2018, as a prelude to beginning clinical testing in 2019. The market is now waking up to this interesting *de novo* technology platform.

Financial summary and valuation

| Year end July (£m) | 2014 | 2015 | 2016 | 2017E | 2018E | 2019E |
|--------------------|-------|-------|-------|--------|--------|--------|
| Sales | 3.18 | 1.81 | 2.17 | 2.85 | 3.40 | 3.80 |
| R&D spend | 0.00 | -0.03 | -0.86 | -1.98 | -2.43 | -2.88 |
| EBITDA | -1.16 | -2.28 | -4.15 | -5.94 | -6.48 | -7.00 |
| Underlying EBIT | -1.69 | -2.85 | -4.75 | -6.94 | -7.48 | -8.00 |
| Reported EBIT | -2.07 | -5.57 | -5.66 | -7.81 | -8.44 | -9.05 |
| Underlying PBT | -1.66 | -2.83 | -4.65 | -6.86 | -7.44 | -8.00 |
| Statutory PBT | -2.04 | -5.54 | -5.57 | -7.73 | -8.40 | -9.05 |
| Underlying EPS (p) | -2.66 | -4.38 | -5.51 | -8.75 | -9.42 | -10.05 |
| Statutory EPS (p) | -3.57 | -9.84 | -6.86 | -10.02 | -10.82 | -11.57 |
| Net (debt)/cash | 11.48 | 7.33 | 19.52 | 12.26 | 4.01 | -4.86 |
| Capital increases | 14.54 | 0.02 | 21.05 | 0.00 | 0.00 | 0.00 |
| EV/sales (x) | 27.1 | 47.5 | 39.8 | 30.2 | 25.3 | 22.6 |

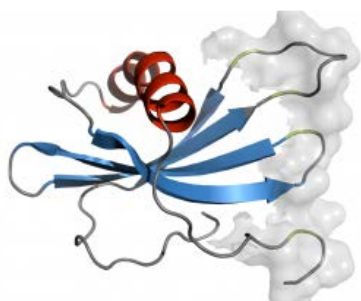
Source: Hardman & Co Life Sciences Research

Investment case

Focused on commercialising its proprietary Affimer technology...

...through reagents and developing its own drug pipeline

Structure of an affimer



Source: Avacta

Background

Avacta is a biopharmaceutical company focused on commercialising its proprietary Affimer platform as an alternative to the antibody technology. The company is developing Affimers for a wide range of applications as reagents, diagnostic platforms and in the therapeutic field. Avacta is able to provide a custom service to create novel bespoke reagents, and is also aiming to develop its own drug pipeline in the same way that many major drugs based on antibodies have been developed and marketed.

Affimers

An Affimer is a relatively small (10x smaller than an antibody) and highly stable protein that has been engineered to form loops that provide high affinity binding surfaces for a specific target protein in the same way that an antibody does. One type of Affimer molecule that is based on a human protein have been shown to be efficacious in an animal cancer model, and the recent immunogenicity data have proven Affimers to be biologically neutral, generating no immune response in human samples. These activities have demonstrated to customers that the theoretical advantages of Affimers over antibodies are genuine and that they have the potential to provide solutions to problems in a way that antibodies cannot.

Key advantages of Affimers

- ▶ Speed of development – 7-8 weeks versus many months for an antibody
- ▶ High degree of affinity and specificity, which can be controlled
- ▶ Easy and reproducible manufacturing
- ▶ No reliance on an animal's immune system and are non-immunogenic in human
- ▶ Relatively small, robust and stable

Source: Company reports; Hardman & Co Life Sciences Research

Reflecting the increasing awareness and potential of Affimer technology, Avacta's Life Sciences order book for customised Affimers and evaluations is 70% higher than it was a year ago.

Affimers as Reagents & Diagnostics

Avacta is developing affimers for a wide variety of research and diagnostic applications. Due to its rapid development timeline, Affimers provide an adaptable solution in finding the right reagent(s) in a variety of applications with high growth markets. Avacta has selected three such applications/markets on which to focus initially:

- ▶ **Affinity separation:** Protein purification
- ▶ **Immunoassays:** Lab kit (ELISA assays) and diagnostics
- ▶ **Lateral flow diagnostic:** Point of care diagnostic kits

Avacta has adopted a licensing business model for its Affimer technology. For example, Avacta entered recently into an agreement with one of the top three global diagnostic developers for the exclusive rights to several Affimer reagents for an undisclosed sum. This is an important commercial step and a validation of the significant potential of the licensing business model.

Affimers as Therapeutics

The strategy is to build a pipeline of Affimer drug candidates in immuno-oncology for partnering/licensing to major pharma, with the aim to generate highly

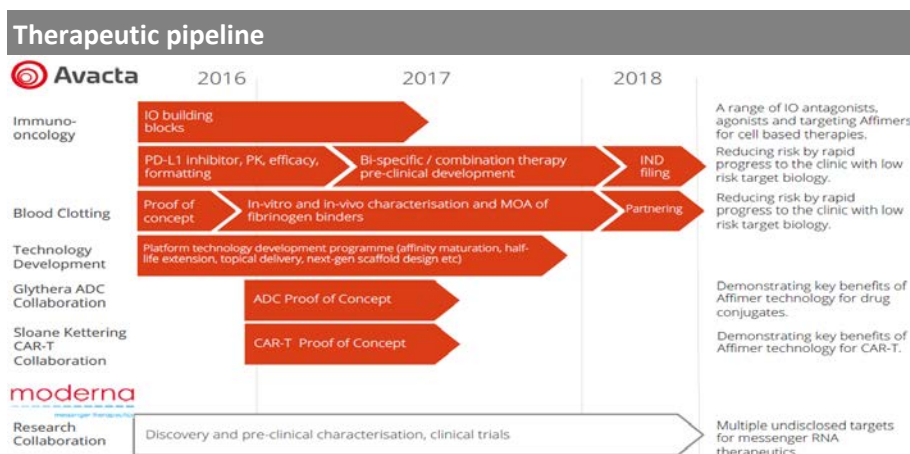
Affimers can be discovered and validated in 7-8 weeks...

...which, along with other performance advantages...

...makes them a very attractive alternative to antibodies

Key objective is to have a therapeutic drug candidate ready for clinical trials during 2019

differentiated medicines that build on the key benefits of Affimers. Like many antibody therapeutic developers, but with the advantages of Affimers, Avacta's in-house programmes are focused on the development of drugs that aim to stimulate the immune system to fight cancers, such as T-cell recruiters, checkpoint inhibitors (PD-L1) and agonists. Avacta is working with partners in other areas, including Affimer drug conjugates, gene delivery (DNA or RNA delivery where it has research collaboration with Moderna) and CAR-T therapies. Each step adds to the de-risking of the technology and strengthens Affimers as the next generation biotherapeutic platform. A key strategic objective for the company is to have a therapeutic drug candidate ready for early clinical trials during 2019.

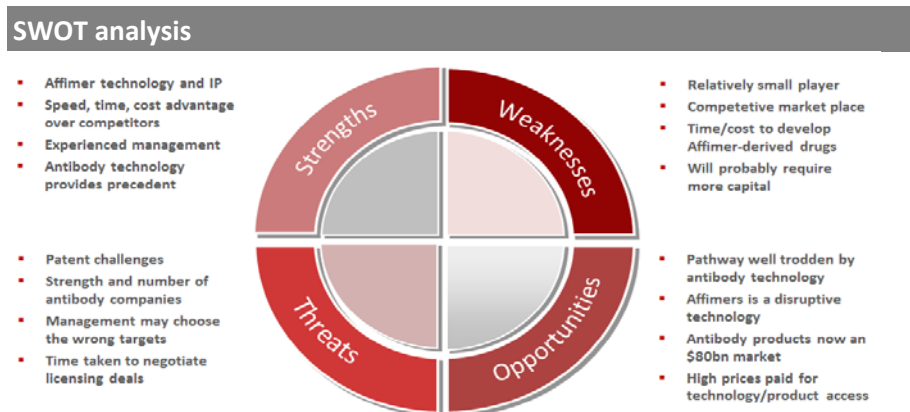


Source: Avacta

Each of Avacta's markets is an attractive \$bn commercial opportunity

Investment conclusion

Avacta has developed the concept of Affimers as the new generation technology platform, spanning both diagnostics and therapeutics. Affimers provide a real alternative to the global multi-billion antibody market, estimated at \$90bn for 2016, that includes therapeutics, diagnostics and research tools.



Source: Hardman & Co Life Sciences Research

Expected newsflow

| Timing | Event |
|----------|-------------------------------------------------------------------------------|
| Mid-2017 | Continued development of PD-L1 leads, candidate selection, pre-clinical tests |
| Mid-2017 | Details on Affimer Drug Conjugate progress from partner Glythera |
| 3Q 2017 | Details on CAR-T cell therapy progress from partner Sloan Kettering |
| 4Q 2017 | Detailed <i>in vitro</i> data from blood coagulation programme |
| End 2017 | Potential update from Moderna Therapeutics, notwithstanding restrictions |
| 2018 | Selection of immune-oncology lead candidate for pre-clinical development |

Source: Hardman & Co Life Sciences Research

Financial summary

| Summary of financial forecasts | | | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Year end July (£m) | 2014 | 2015 | 2016 | 2017E | 2018E | 2019E |
| Profit & Loss: | | | | | | |
| Sales | 3.18 | 1.81 | 2.17 | 2.85 | 3.40 | 3.80 |
| COGS | -1.14 | -0.53 | -0.90 | -1.00 | -1.10 | -1.20 |
| SG&A | -3.73 | -4.11 | -5.16 | -6.80 | -7.35 | -7.72 |
| R&D | 0.00 | -0.03 | -0.86 | -1.98 | -2.43 | -2.88 |
| Other income | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Underlying EBIT | -1.69 | -2.85 | -4.75 | -6.94 | -7.48 | -8.00 |
| Share based costs | -0.21 | -0.25 | -0.27 | -0.35 | -0.39 | -0.43 |
| Statutory EBIT | -2.07 | -5.57 | -5.66 | -7.81 | -8.44 | -9.05 |
| Net financials | 0.02 | 0.03 | 0.10 | 0.08 | 0.04 | 0.00 |
| U/L Pre-tax profit | -1.66 | -2.83 | -4.65 | -6.86 | -7.44 | -8.00 |
| Tax payable/credit | 0.55 | 0.65 | 0.92 | 0.87 | 0.99 | 1.11 |
| Underlying net income | -0.27 | -0.12 | -0.16 | -0.11 | -0.12 | -0.12 |
| Underlying Basic EPS (p) | -2.66 | -4.38 | -5.51 | -8.75 | -9.42 | -10.05 |
| Statutory Basic EPS (p) | -3.57 | -9.84 | -6.86 | -10.02 | -10.82 | -11.57 |
| Balance sheet: | | | | | | |
| Share capital | 5.05 | 5.06 | 6.92 | 6.92 | 6.92 | 6.92 |
| Reserves | 23.79 | 14.08 | 28.94 | 22.08 | 14.67 | 6.73 |
| Debt | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| less: Cash | 11.48 | 7.33 | 19.52 | 12.26 | 4.01 | -4.86 |
| Invested capital | 18.18 | 12.67 | 16.68 | 17.08 | 17.92 | 18.84 |
| Net cash/(debt) | 11.48 | 7.33 | 19.52 | 12.26 | 4.01 | -4.86 |
| Cashflow: | | | | | | |
| Trading profit | -1.69 | -2.85 | -4.75 | -6.94 | -7.48 | -8.00 |
| Change in working capital | -0.04 | -0.17 | -0.31 | -0.17 | -0.14 | -0.10 |
| Tax & interest | 0.44 | 0.03 | 0.67 | 1.50 | 0.91 | 0.98 |
| Operational cashflow | -0.80 | -2.52 | -4.23 | -4.52 | -5.64 | -6.07 |
| Capital expenditure | -0.92 | -0.81 | -2.86 | -0.94 | -0.76 | -0.87 |
| Capitalised R&D | -1.86 | -3.06 | -1.76 | -1.80 | -1.85 | -1.93 |
| Free cashflow | -3.58 | -6.38 | -8.86 | -7.27 | -8.25 | -8.86 |
| Capital increases | 14.54 | 0.02 | 21.05 | 0.00 | 0.00 | 0.00 |
| Change in net debt | 10.90 | -4.15 | 12.19 | -7.27 | -8.25 | -8.86 |

Source: Hardman & Co Life Sciences Research

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