

Bionomics

A novel method of treating anxiety disorders

Bionomics' lead programme is BNC210 for the treatment of anxiety-related disorders. The drug is an orally bioavailable small molecule targeting the $\alpha 7$ nicotinic acetylcholine receptor, which has been implicated in the brain's response to anxiety. It is currently being tested in a randomized, double-blind Phase IIb clinical study of 192 post-traumatic stress disorder (PTSD) patients, with top-line results expected in H218.

BNC210 reduces anxiety-associated brain activation

In an exploratory Phase IIa trial of 24 patients with generalized anxiety disorder (GAD), BNC210 significantly reduced several MRI-based markers of anxiety at a 300mg dose (not significant at 2,000mg). It reduced the activation of amygdala ($p=0.027$) and connectivity to the anterior cingulate cortex ($p=0.04$) compared to placebo. Classic anxiolytics such as benzodiazepines also inhibit these pathways.

BNC210 improves symptoms of fear and panic

In the same Phase IIa study, the drug significantly reduced threat avoidance (300mg, $p=0.007$) in GAD patients in the Joystick Operated Runway Task (JORT), a clinical model for fear. Additionally, an earlier pilot study showed that 2,000mg of the drug significantly reduced the intensity ($p=0.041$, $n=15$) and number of symptoms ($p=0.048$) of panic attack induced by CCK-4 (a severe anxiety and panic-associated hormone) compared to placebo.

Merck collaboration: A mystery but a validation

In 2014, Bionomics signed a collaboration agreement with Merck & Co for the development of a small molecule from the company's ionX development platform for the treatment of a cognition-related indication. Bionomics received a US\$20m upfront payment, additional research payments as part of the collaboration, US\$10m as a milestone with the initiation of a Phase I for the drug in February 2017, and is entitled to US\$476m in additional milestone payments and royalties. Further validation was received when Merck took 4.5% ownership of Bionomics in 2015. There is little other public information.

Valuation: EV of A\$168m

The company ended FY17 with a cash balance of A\$43m and A\$18m in debt (mostly at 8.9%). There is near-term revenue potential from Merck milestones, the divestment of its non-priority assets (BNC101, BNC105), as well as future platform licensing. These options enhance the core value of the BNC210 programme.

Consensus estimates

Year end	Revenue* (A\$m)	PBT (A\$m)	EPS (A\$)	DPS (A\$)	P/E (x)	Yield (%)
06/16	8.1	(17.3)	(0.03)	0.0	N/A	N/A
06/17	18.6	(6.2)	(0.01)	0.0	N/A	N/A
06/18e**	14.4	(19.9)	(0.04)	0.0	N/A	N/A

Source: Bloomberg. Note:*Revenue excludes other income. **Consensus estimates adjusted to exclude an outlier.

Pharma & biotech

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Price **A\$0.40**

Market cap **A\$193m**

A\$1.33/US\$

Share price graph



Share details

Code	BNO
Listing	ASX
Shares in issue	481.5m

Business description

Bionomics is a clinical-stage pharmaceutical company with two small molecule discovery platforms: ionX for ion channel targets and MultiCore chemistry for rapid candidate identification. The company is testing BNC210 in Phase IIb for post-traumatic stress disorder (PTSD) and had a programme licensed to Merck in Phase I for royalties and US\$506 in upfronts and milestones.

Bull

- BNC210 has a novel anxiolytic mechanism.
- Company has cash through Phase IIb readout.
- There is additional upside from the Merck collaboration.

Bear

- PTSD is historically a hard to treat disorder.
- BNC210 clinical data have largely been exploratory to date.
- There are few details on Merck collaboration.

Analysts

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