Biotech Daily

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Daily news on ASX-listed biotechnology companies

Dr Boreham's Crucible: Radiopharm Theranostics

By TIM BOREHAM

ASX code: RAD; **NASDAQ code (proposed):** RADX

Share price: 15 cents

Market cap: $50.8 million

Shares on issue: 238,947,639 (100,000,000 more in ASX escrow)

Chief executive officer: Riccardo Canevari

Board: Paul Hopper (executive chair), Mr Canevari, Ian Turner, Dr Michael Baker, Hester Larkin, Dr Leila Alland

Financials (December 2022 quarter): receipts $1.55 million, cash burn $6.01 million, cash balance $24.25 million, quarters of available funding: four

Identifiable major holders: Paul Hopper 28.68% Nanomab Technology 8.6%

Can the youthful nuclear medicine house succeed where so many ASX-listed life sciences outfits have foundered?

We're not talking about the underlying science, but Radiopharm's plans to pursue a secondary listing on the 'tech-friendly' US Nasdaq exchange.

The rationale is sound enough: to make the stock more accessible to US investors who ascribe higher valuations to biotechs than Aussie punters. Supposedly.

The Nasdaq gambit might have worked for tech hero Atlassian, but ASX bio-stocks including Mesoblast, Immutep, Kazia and Biota didn't achieve the expected valuation uplift. Pharmaxis discontinued its Nasdaq listing in 2009, citing the unjustifiable cost.

Radiopharm founder, chair and major shareholder Paul Hopper is adamant it's the right approach. He says the company has been approached by a conga line of US bankers, brokers and fund managers, but many are unable to invest in a non-US listed company.

He adds the proposed listing won't include a fund raising.

"It will be a non-event at the start but it is really is a way of trying to raise our visibility," he says.

Perhaps the rationale is more a case of 'well, we might as well give it a go': unappreciative local investors have shaved three-quarters off the value of the company since it listed on the ASX in late 2021, at 60 cents apiece -and on listing fell to 39 cents before closing the day down 33.3 percent at 40 cents.

Of course, the biotech market has been gnarly generally, but …

Radiopharm's youthful glow

If there's a glow emanating from Radiopharm's HQ it's not because of the isotopes but on account of its youth.

Radiopharm listed in late 2021, on the back of assets corralled by Mr Hopper from parties including Imperial College London, New York's Sloan Kettering Memorial Hospital and the Technical University of Munich.

Known as RAD-101, Radiopharm's most advanced program is developing an imaging tool for brain metastases. The company reports positive results from a small phase II trial and plans to seek US Food and Drug Administration approval for a larger phase IIb/III trial.

A newly acquired program (see below) seeks to overcome patient resistance to therapies that target the prostate-specific membrane antigen (PSMA).

The company also has FDA 'orphan device' status for an imaging tool for the deadly and hard-to-detect pancreatic cancer, with the first patient in a phase I trial planned to be enrolled this month.

What's the problem?

The 'theranostics' in the company's name refers to developing both diagnostic and therapeutic radiopharmaceuticals for cancer.

The diagnostic leg involves the use of low-energy radio-isotopes to allow physicians to ‘see’ and measure distance in the body.

The treatment bit involves high-energy particles. The process involves attaching a radioactive isotope to a targeting agent, such as a small molecule or antibody.

The targeting molecule goes to where the tumor is located and the low-energy isotope then ‘sees’ the growth.

“It’s like a torch,” CEO Riccardo Canevari says.

But what problem is the company trying to solve?

In the case of brain cancer, the current method of positron emission tomography (PET) is limited because of the risk of inflammation and unintended cell death. Magnetic resonance imaging (MRI) is OK for detecting tumors, but no so good for ascertaining whether they are growing or shrinking over time.

Get with the program(s)

Radiopharm has programs covering the use of several different isotopes with targeting agents covering peptides, fatty acids and antibodies.

Brain cancer

Radiopharm’s most advanced program, RAD-101 aims to develop an imaging tool for brain metastases. It involves using the isotope F18 (not the fighter jet) and combining it with a radio-tracer called pivalate.

In October last year, the company reported positive results of a phase II imaging trial involving 17 patients (11 of them treatment naïve). The gist was that the injected radio-tracers migrated to the tumors effectively.

After a planned follow-up trial, Mr Canevari hopes the FDA will allow the company to go directly to a phase III trial, which would enrol 150 patients and be done and dusted in a year.

He says even launching a phase III trial would be a “game changer” for Radiopharm, given the company didn’t exist 16 months ago.

Pancreatic cancer

The company has FDA orphan device indication for Trivehexin, which deploys the gallium-68 isotope and a targeting peptide.

In late December 2022, the company received FDA assent for a phase I trial, with the first patient to be enrolled this month.

“We know a lot about the agent, because it was used in Germany on 66 patients before we licenced it,” Mr Canevari says.

He adds the company has identified a site in New York for the planned nine-patient trial.

But location is crucial, given there’s only a 60-minute window to get the isotope from the radio-pharmacy to the hospital.

“You don’t want your products to be stuck in a traffic jam.”

Lung cancer and the rest

Radiopharm plans a 22-patient, phase I, small-cell lung cancer trial in Australia, pitched at an imaging and treatment product.

The first patient is expected to be enrolled in May 2023.

This program centres on genetically-engineered antibodies called nano-mabs (mono-clonal antibodies), which – believe it or not - derive from a specific breed of camel.

Should management get the hump with that one, the company is also in cahoots with the MD Anderson Cancer at Texas University. This tie-up involves dabbling in four other pre-clinical candidates, targeting multiple tumors including colorectal cancer.

Getting acquisitive

Last month, Radiopharm said it would pay $US4 million ($A5.9 million) in cash and scrip for the New York-based Pharma15 Corporation, which is seeking to overcome patient resistance to existing prostate cancer treatments.

Pharma15 was founded by radio-pharmaceutical scientists Prof David Ulmert and former investment banker Suzanne Dance.

The deal sees Prof Ulmert and nuclear science expert Prof Ken Herrmann join Radiopharm’s scientific advisory board.

Also last month, the company unveiled a two-year research tie up with local mob Genesiscare to develop therapies for “complex, hard-to-treat cancers”.

The parties plan phase I trials that revolve around the nano-mabs platform, targeting non-small cell lung cancer, brain tumors and prostate cancers.

Finances and performances

Radiopharm recorded cash outflows of a tad over $6 million in the second (December quarter), leaving cash on hand of $24.2 million.

To date, the company has raised $80 million, including $40 million in the IPO and $10 million by way of an under-subscribed - but underwritten - rights offer late last year.

The terms of the offer were one share for every 3.55 held, at 14 cents apiece. One option was also thrown into the deal as a sweetener, exercisable at 20 cents.

With the Pharma15 deal, half of the cash component was paid immediately, with the remainder in one year's time. The shares are in two equal instalments, with the initial 10.4 million shares priced at 14.31 cents each.

As a contingent consideration, Pharma15's vendors receive a further $US2.3 million in Radiopharm shares, if the FDA approves an investigational new drug application for a Pharma15 product.

This milestone is "unlikely to be achieved" before the end of 2025.

Since listing on November 23, 2021, Radiopharm shares have traded between 10 cents (late December 2022) and 38 cents (late December 2021).

Deals, deals, deals

There's been no shortage of merger and acquisition activity in the sector, with 48 deals in 2022 (four more than in 2021).

In a $US2 billion-plus deal, in November last year US medical imaging giant Lantheus bought two radiotherapy assets from fellow Nasdaq listee Point Biopharma, covering prostate and gastro enteric cancers.

Novartis has bought a peptide-targeted radionuclide therapy candidate from Clovis Oncology, which has filed for bankruptcy. The deal involves $US50 million upfront and up to $US630 million more if the drug - like - works.

Meanwhile, Mr Canevari cites eight listed global competitors ranging from the $US4.1 billion market cap Lantheus to the $US12 million Plus Therapeutics.

Two of them are Australian: Telix Pharmaceuticals (market capitalization $2.25 billion) and the less successful Clarity Pharmaceuticals ($125 million).

Clarity Pharmaceuticals listed in August 2021 after raising $92 million at $1.40 a share in the biggest IPO in ASX biotech history, but it's yet to fire share price wise.

Follow the money

With RAD101, the company notes there are 390,000 new brain cancer cases annually in the US. Of these patients, the company assesses an eligible population of 265,000 and a cost per dose of $US4,730, which implies an addressable market of $US1.25 billion.

Mr Canevari adds that Italian company Bracco Imaging is also developing a brain imaging product, with a different mechanism of action.

“Which one is better? Time will tell,” he says. “But with prostate cancer there are three imaging agents [including Telix’s] and there’s enough for all in a $US1 billion-a-year market.”

In the case of pancreatic cancer, there are around 62,000 new cases in the US per year, with 43,000 eligible new patients. The expected cost per dose of $US4,730 to $US9,460 which implies an addressable market of $US200 million to $US400 million per annum.

There are also 236,000 new lung cancer cases in the US every year-– a “blockbuster opportunity”.

Dr Boreham’s diagnosis:

Radiopharm is a minnow in a red-hot sector attracting the big boys’ interest on both the imaging and therapeutic side.

“We are talking about a potentially huge new field of oncology beyond the traditional approach of surgery, chemotherapy or - more recently - cell gene therapy,” Mr Canevari says.

It doesn’t take a brain surgeon to see that if Radiopharm wins FDA approval for its brain cancer agent, it should be radically re-rated by investors - either here or on the Nasdaq. The same applies if it can get the pancreatic cancer to market, although that one is a longer-term proposition.

Unless your columnist has missed something - and that’s quite possible - Radiopharm hasn’t done much wrong. Hopefully the upcoming Nasdaq listing won’t blot the copy book but - as we said - the precedents aren’t promising.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He’s not listed on Nasdaq but his copy book might contain the odd blot or two.