



# Biotech Daily

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*Daily news on ASX-listed biotechnology companies*

## Dr Boreham's Crucible: Painchek

**By TIM BOREHAM**

**ASX code:** PCK

**Share price:** 7.8 cents

**Market cap:** \$64.8 million

**Shares on issue:** 831,134,587 (254,156,156 in ASX escrow)

**Chief executive officer:** Philip Daffas

**Board:** John Murray (chairman), Philip Daffas, Adam Davey, Ross Harricks

**Financials (December half):** revenue \$27,481\*, loss of \$3.4 million (previously \$6.98 million), cash of \$4.7 million (June 30, 2017: \$2.6 million)

\* Includes sales of \$12,900

**Identifiable major holders:** Russell David Stewart/Lennard Anthony Lefroy 12.4%, Peters Investments 8.4%, Dr Kreshnik Hoti 4.5%, Mustafa Atee 4.5%, Nviso SA 3.8%.

When your columnist hits his thumb with a misdirected hammer, his neighbors are made well aware of his self-inflicted pain.

Sadly though, many people are unable to indicate clearly that they're in agony, including dementia sufferers and kids who can't yet speak.

Enter Painchek, formerly Epat Technologies, which has developed the world's first software application, or "app" as younger people call it these days, to detect facial expressions that are "indicative of the presence of pain".

A 10-second video can recognise nine facial expressions indicative of pain.

Overall, Painchek assesses 42 checkpoints across six domains including facial expression, behavior, body movement and, when possible, vocalization. Nine checks relate to the face, while the other 33 are assessed by way of a binary 'yes-no' checklist.

The pain is assessed on a 42-point scale, zero to seven being no pain and anything over 16 being ... aaarggh!

"Face is the best way of working out pain, but trying to do it visually is difficult," says CEO Philip Daffas. Facial measures are subjective and skewed by "user bias", he adds.

Painchek estimates there are 47 million people with dementia globally, 7.5 million in Western Europe, six million in North America and at least 400,000 here.

That's literally a world of pain. There are also 400 million children aged up to three years, who might scream and shriek like stuck pigs but can't vocalize specific pain.

## **From PhD to ASX**

Painchek emerged from an in-house research project at Curtin University, led by Prof Jeff Hughes, with Dr Kreshnik Hoti and PhD student Mustafa Atee.

The duo founded Epat Pty Ltd (as in Electronic Pain Assessment Technologies) as an in-house venture, with Epat eventually back-door listing on the ASX in September 2016.

In early 2017 Painchek acquired the global pain assessment rights to the pertinent facial recognition from Swiss artificial intelligence leader Nviso.

The deal was satisfied by Epat paying cash of \$392,500 and issuing 31.25 million of its shares to Nviso.

Nviso's key activity was - and remains - facial research for clients such as advertising agencies, consumer goods companies and even insurance investigators.

In July, the local Therapeutic Goods Administration approved Painchek as a class-one medical device, as did the European regulator.

The company has also been "engaged" with the US Food and Drug Administration.

"We have designed the app taking into consideration the US geriatric pain assessment guidelines and are confident we can obtain FDA approval by the end of 2018," Mr Daffas says.

After a shareholder vote, Epat became Painchek on January 22 this year.

Prof Hughes remains Painchek's chief scientific officer, while Mr Atee is a senior clinical research officer.

## **In the clinic**

Clinical trials to date have involved 753 pain assessments across 74 patients suffering dementia, Alzheimer's or other cognitive shortcomings, and recruited from five Western Australia aged-care facilities.

The studies showed "excellent" validity and reliability compared to the Abbey Pain Scale, the current standard measure for pain assessment.

The results showed Painchek was able to distinguish the presence of pain in various clinical test conditions "reflective of rest and movement, such as sitting and walking respectively".

## **Commercial progress**

Since October last year Painchek has been selling its enterprize version of the tool to aged care facilities, with two contracts in the bag. Mr Daffas says the bigger market lies in home care, because most dementia patients aren't hospitalized.

In August, the company finalized an agreement with Hammond Care's Dementia Services Australia, which has 150 consultants using the tool to test 5,000 residential aged care patients across 1,500 nursing homes.

In October, an Apple internet operating system (IOS) app was launched at the Australian National Alzheimer's Conference, aimed at care facilities.

Painchek says: "Two new customers have since purchased licences for their facilities and the company now has a strong pipeline of residential aged care clients of various sizes."

The company is in discussions with a leading residential aged-care facility, to integrate Painchek into its management systems.

So far, this program has been rolled out in Western Australia and South Australia.

Painchek is due to release an android version of the app, which will extend its reach to 80 percent of the residential aged care market and to 99 percent of the overall smart-phone market. The company also plans to launch a specialist app for kids' pain by the end of calendar 2018.

## **Singing Spotify's revenue tune**

Painchek's revenue model emulates the 'all you can eat' model of the music streaming giant Spotify: a subscription equating to about \$10 per month per resident.

The carers can carry out an unlimited number of tests on an agreed number of patients.

"We are in the early stages of negotiating the larger contracts," Mr Daffas says.

He estimates there are 200,000 relevant people in residential care, but double that number at home. That's why a consumer version, slated for release by the end of June, is all important.

These customers can expect to pay \$120 annually for the software.

The company then plans to launch in Europe by the end of 2018, but only after the product gains traction here.

Painchek is reasonably well-placed in terms of the folding stuff, having raised \$3.75 million in September 2017.

### **Dr Boreham's diagnosis:**

Should punters take a raincheck on Painchek?

Your columnist is a tad wary of local medical app developers, given the experience of remote respiratory diagnosis company Resapp which reported miserable trial results and is currently re-running the trial.

The heavily-backed Isona (formerly Karmelsonics and now Respiro) foundered with its asthma diagnosis app, after overestimating the willingness of parents to pay for what they can work out for themselves (their kid is having an asthma attack).

Commercially, it's too early to tell if Painchek is on a winner. But its strategy has been well thought-out to date and we're encouraged by the buy-in of the residential aged-care suppliers.

Mr Daffas is a key element in the story, having been vice prez for global marketing at the hugely successful Cochlear.

If Painchek expands its sales globally, it will benefit from a predominantly fixed cost base.

"Because it's software we don't have [cost of goods sold] or expenses," Mr Daffas says.

"It's a really nice, simple business model."

We'll be 'appy' if Painchek is showing real revenue traction within the next six to 12 months.

***Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He swears that the only time he cusses is during DIY mishaps.***