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A microscope called Anthony

The Pollen Classifynder™ system, a digital microscope and software system from New Zealand's Massey University, was bought by the Atlas of Living Australia to augment CSIRO's efforts in accelerated phenomics through the Transformational Biology, Transformational Capability Platform.

The Pollen Classifynder™ system at work

The Classifynder should alleviate drudgery for palynologists – pollen scientists – who would otherwise, after weeks in the field, spend more weeks squinting down a microscope to count and identify the tiny grains they had collected. With Classifynder, a low-resolution stage locates all grains on the slide so that a high-resolution stage can grab images of each grain across nine focal depths. Fluff and detritus can be recognised and ignored, leaving the palynologist to concentrate on the interesting bits.

As well as acquiring pollen images, the system can be trained to classify its observations. The development of new and improved classifiers for Australian pollens is where CSIRO, Australian National University (ANU) and Massey University are joining forces.

Recently, several key players in this research effort were filmed for a video to be shown during Floriade at an exhibition at CSIRO Discovery called 'Pollen Under the Microscope'. Transformational Biology co-Leader David Lovell, who appears in the video, was thrilled to see Anthony in action for the first time.

'This is a great example of using technology to understand biology', David said.

'It's also a great example of the sort of multi-disciplinary, multi-institution science that CSIRO can foster.

Not only do we have Plant Industry, Ecosystem Sciences, Mathematics, Informatics and Statistics, ICT Centre and Information Management and Technology working on this, the Atlas of Living Australia's investment has helped us forge links with ANU and Massey University all because we share a passion for accelerating our understanding of nature', David said.

Anthony's microscope 'brothers' – Gary, Bob, Greig, Ken and Colin – are located in such far-flung places as Norway and Canada. Some are being used to identify ancient pollen from archaeological sites.

Head to CSIRO Discovery's Industry Link room during Floriade from 7-18 October to check out the Pollen Under the Microscope.

Learn more about Biotech imaging: imaging for research, diagnostics and

FURTHER INFORMATION

- Biotech imaging: imaging for research, diagnostics and drug development
- Pollen Classifynder *[external link]*
- Atlas of Living Australia *[external link]*

CONTACTS

- David Lovell
- Robyn Lawrence

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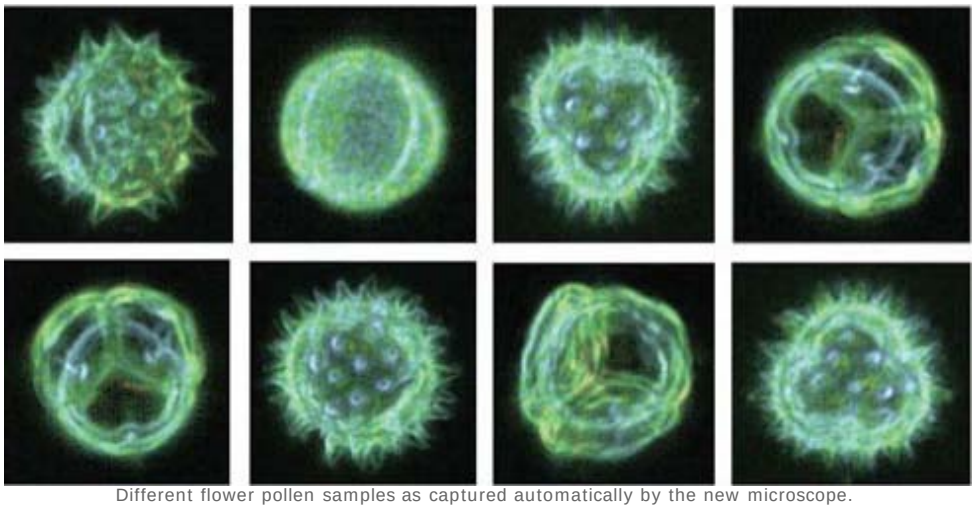
drug development.



Different flower pollen samples as captured automatically by the new microscope.
It's actually a series of images used to show the pollen's 3D structure

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