

While scientists show the world as it is, artists show the world as it should be, but what if we could convince this pair of age-old rivals to meet somewhere in the middle? Like the most colourful collision of worlds, the coming together of science and art is a strange and unpredictable journey through reality and fantasy as intricate patterns, meticulous structures and astonishing expressions are revealed. This cross-disciplinary farewell to arms truly is the ultimate romance.

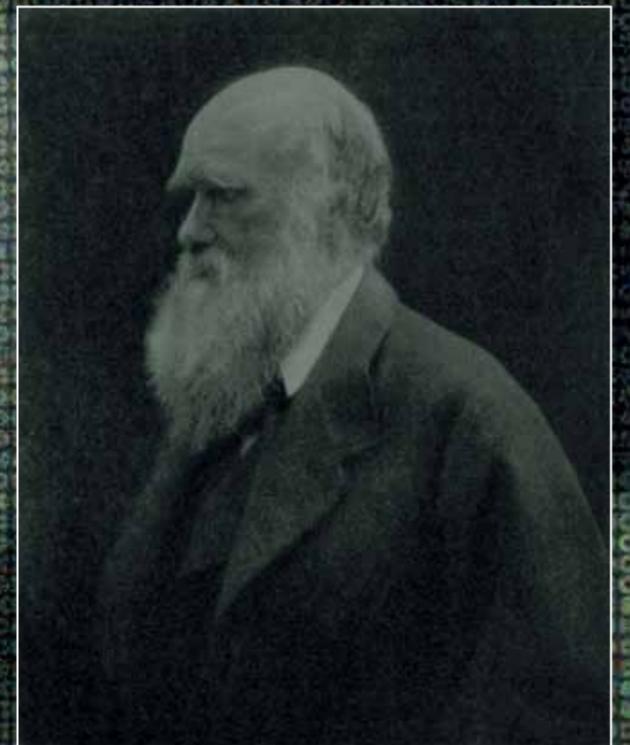
Story Becky Crew

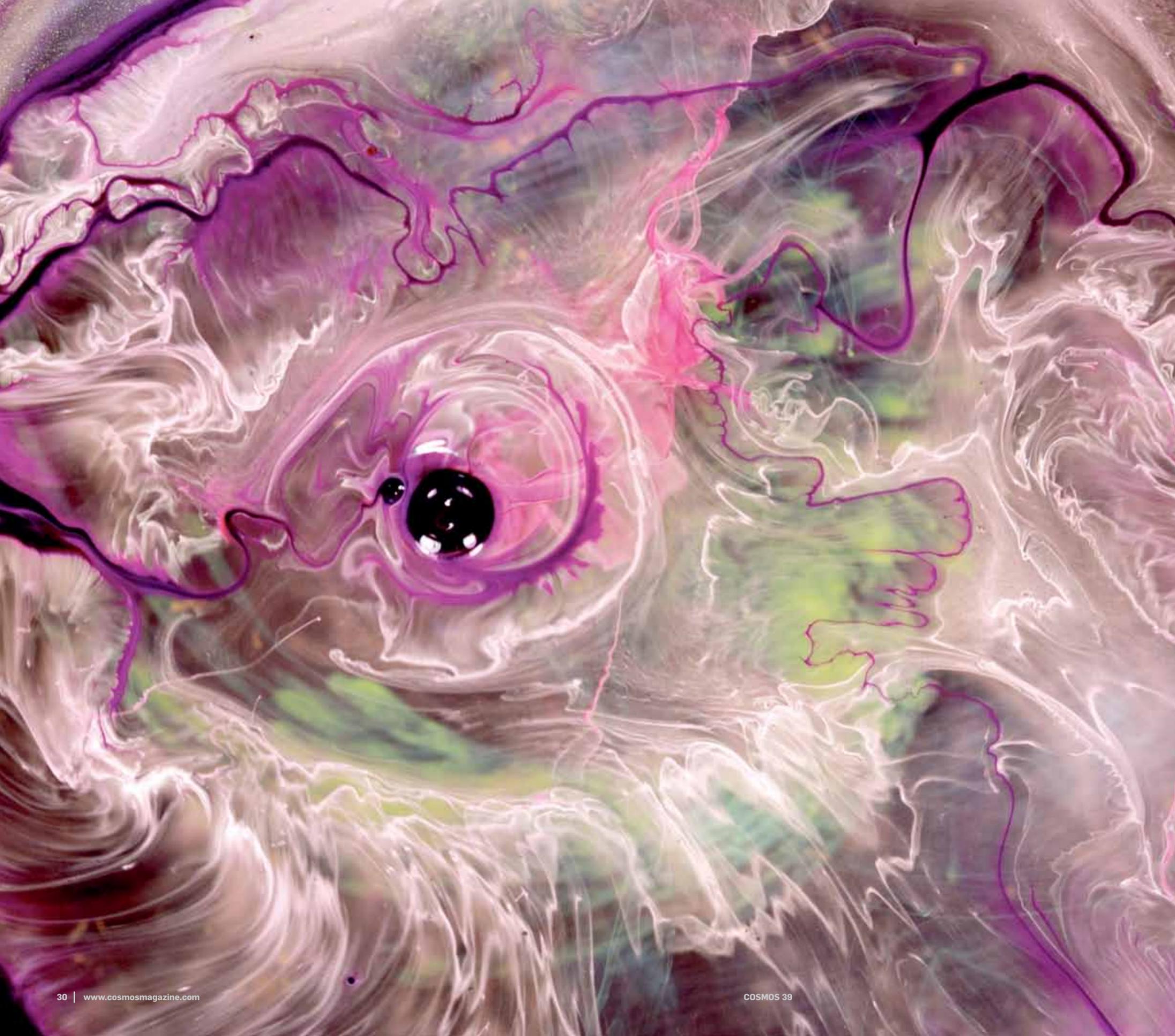
# Lateral selection

## ◀ Darwin evolved

A mosaic constructed from a pool of 19,000 distinct protein structures represents the entire contents of the Protein Data Bank. Pieced together by a photomosaic generating program, Darwin's favourite photograph of himself is rejuvenated with the fruits of 40 years of collaborative science. Each multicoloured snowflake represents proteins, nucleic acids and other complex structures cultivated from solution and imaged using X-rays and nuclear magnetic resonance.

*"Darwin in Protein Space" by Tim Nugent from the Department of Computer Science, University College London, UK.*





### ◀ Dis-turbulence

Like a storm seething silently in a jar, a drop of gold paint and ink into turbulent water gives rise to a swirling vortex of colour. Governed by the speed of the water flow and chemistry of the inks, pigments pull away from each other in radial spreads of dark purple ribbons, subtle green spirals and bright white flashes; with the fastest combinations creating a three-dimensional image running on, in and even above the water level.

*"Disturbulences"* by UK artist Pery Burge, shown at the Picturing Science exhibition at Orleans House Gallery in the UK, curated by Mark De Novellis.

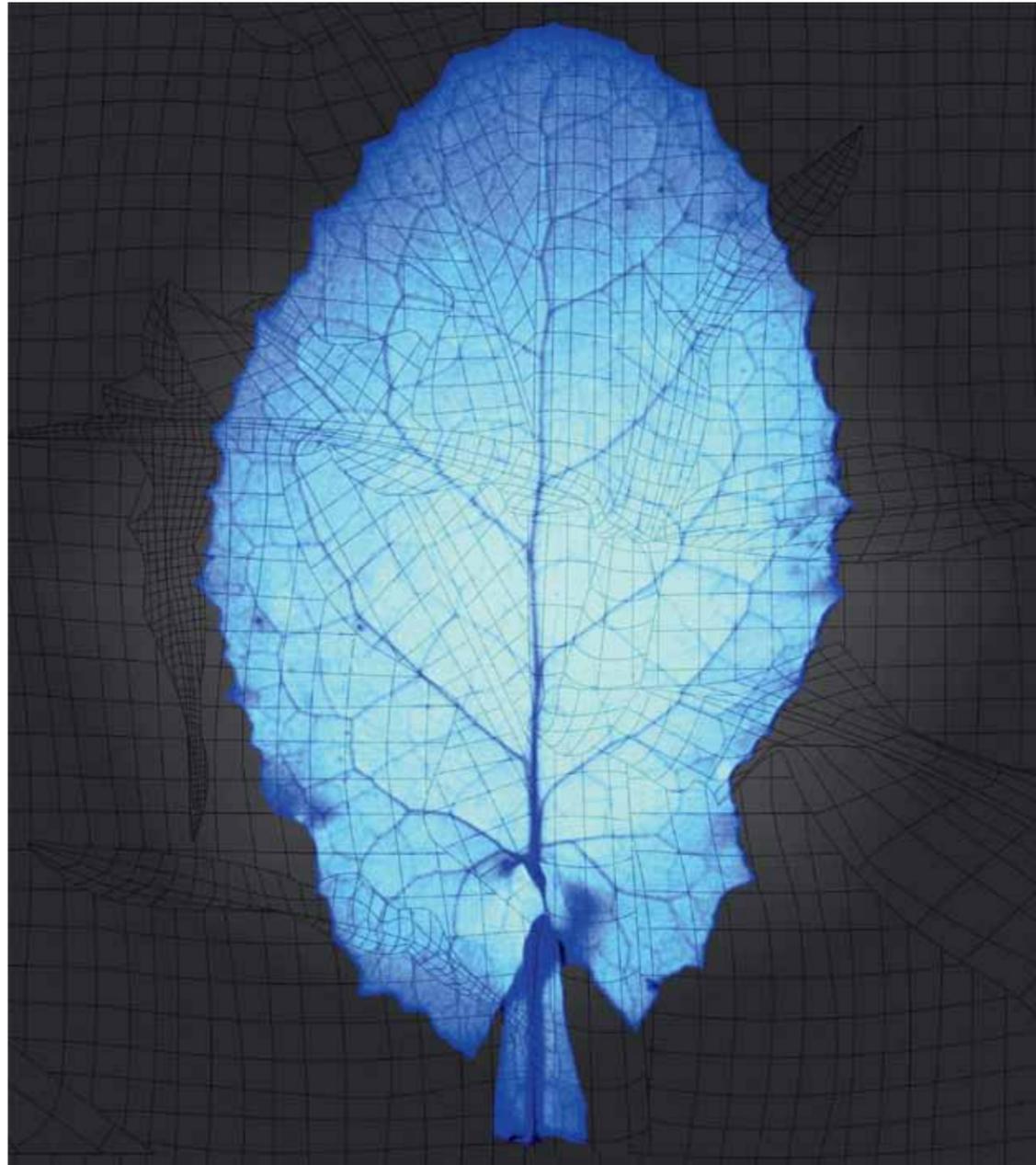
### ▲ License to kill

It might look like a microscopic flower caught mid-blossom, but this image has exposed a phenomenon that is just a little more sinister. Coloured red in this scanning electron micrograph, human white blood cells put their killer instinct into action, banding together to enclose a hapless tuberculosis bacteria (coloured yellow), and disarm it from within.

*"Immune System in Action"* by Volker Brinkmann, Max Planck Institute for Infection Biology in Germany, was awarded second prize in the Fascination of Research category of German magazine Focus's Images of Research competition in 2009. >>



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### ▲ Photosynthesis in action

It takes an army of robotic, imaging and computing technologies to delve so deep into the structure of a plant that its metabolic secrets and physiological processes are revealed. Printed onto a Perspex panel, the image, which was taken during the artist's residence at the CSIRO High Resolution Plant Phenomics Centre, is met with an iridescent mesh backdrop, hand-screenprinted on the reverse side to create a transparent cobalt blue window. FluorCam images like this allow scientists to view photosynthesis in action and assess a plant's stress resistance levels.

"Radiance" by Australian artist Erica Seccombe was captured at the CSIRO High Resolution Plant Phenomics Centre.

### ► Electric ascension

Drawing inspiration from Buddhist traditions, Japanese aesthetics, minimalism and conceptual art, the artist uses a series of lightboxes to showcase his photographs of static electricity on large-format film. The static is generated using a metal ball, which is then brought close to a sheet of photographic film on a metal table to record the high-voltage electrical discharge. Spectators ascend platforms flanked by the glowing images, met at the top by a 13th century Japanese sculpture of Raijin, the God of Thunder.

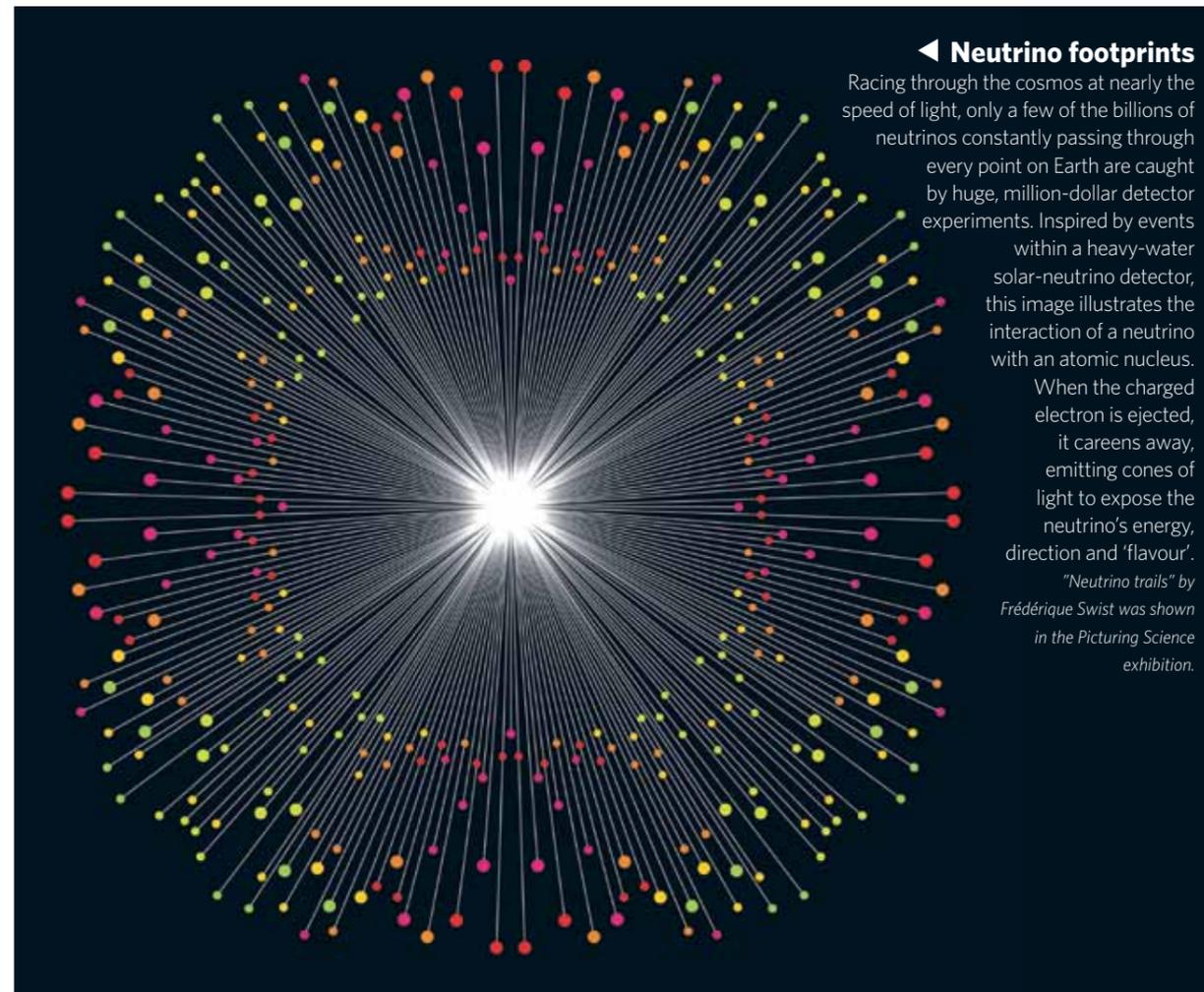
"Faraday Cage" by Japanese photographer Hiroshi Sugimoto was shown at the 17th Biennale of Sydney in 2010. The next Biennale runs from 27 June - 16 September 2012. Photograph by Sebastian Kriete. Image courtesy of the artist and Gallery Koyanagi, Tokyo.





### ▲ Lady in waiting

Just as the human body is more than a sum of its genetic parts, so too is this bacterial Botticelli more than a strategically placed pile of *E. coli* colonies. Applied to a surface of fresh nutrient agar in an incubated petri dish, a series of tiny, fragmented bacterial dots began to grow and combine, the recognisable body parts manifesting only after several days of 37°C heat. This piece from Monash University researcher Peta Clancy's "Visible Human Bodies" series was provided courtesy of the artist and Dominik Mersch Gallery.



### ◀ Neutrino footprints

Racing through the cosmos at nearly the speed of light, only a few of the billions of neutrinos constantly passing through every point on Earth are caught by huge, million-dollar detector experiments. Inspired by events within a heavy-water solar-neutrino detector, this image illustrates the interaction of a neutrino with an atomic nucleus. When the charged electron is ejected, it careens away, emitting cones of light to expose the neutrino's energy, direction and 'flavour'. "Neutrino trails" by Frédérique Swist was shown in the Picturing Science exhibition.

### Texas ghost story ▶

37-year-old Texas murderer Joseph Paul Jernigan was executed by lethal injection at 12:31 am on 5 August 1993. Donated to science, his cadaver was encased and frozen in a gelatin and water mixture before being cut into a set of 1,871 cross-section slices, 1 mm thick. In a dark room, an animation of the entire set of images, part of the Visible Human Project, was played on a swaying laptop and photographed to create ghostly, long-exposure 'light paintings' of the artificially reconstructed body.

An image from the "12:31 project" by U.S. photographer Frank Schott.

