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## MEDIA RELEASE

### Do I know you? QBI researchers identify woman's struggle to recognise new faces

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A young woman – who is by every other measure healthy and intelligent but struggles to recognise new faces – has presented [Queensland Brain Institute](#) (QBI) scientists with fascinating new insights into learning and memory.

The woman's condition, known as prosopamnesia, is extremely rare and has only been found in a handful of people around the world, according to University of Queensland cognitive neuroscientist Professor Jason Mattingley.

"For many years, scientists have been interested in how people learn to recognise new faces, and people who have difficulty with faces often have trouble interacting in social settings," he said.

The woman – whose identity remains protected – presented herself to researchers after experiencing social embarrassment when she found she was unable to recognise colleagues, people to whom she had already been introduced.

The research, in collaboration with colleagues at Macquarie and La Trobe universities, is published in this month's edition of *Current Biology*. The work suggests the woman's "disability" might lie in her inability to encode or recognise new faces, rather than her ability to perceive them.

"She reports relying heavily on featural cues such as hair colour and style, eyeglasses, and eyebrows to recognise new acquaintances," Professor Mattingley said.

On a battery of standard face-recognition tests, the woman consistently registered scores that indicated her ability to recognise new faces was severely impaired.

The woman experiences a similar difficulty in recognising characters on television, but after months of repeated viewing could slowly learn to identify key individuals.

For example, when the woman was shown 42 images of pre-nominated movie celebrities, she correctly identified nine-out-of-10 of the faces.

The researchers also noted that it was only after six months of testing that the woman was able to recognise the faces.

The group's findings were backed up by brain-imaging investigations, which indicated that the woman's exposure to an unfamiliar face, even over 'multiple encoding episodes', was not enough to leave a lasting memory.

"It may be that enduring face representations are slow to form or are degraded in quality, or they may decay rapidly following normal encoding," Professor Mattingley said.

While face recognition is currently thought to be an innate capacity that human babies have at birth, aspects of this ability are probably shaped by experience.

Prosopamnesia is probably a condition linked to an irregularity during neural development, Professor Mattingley said.

To add to the researchers' intrigue, the young woman has reported that some of her family members experience similar problems with face memory.

"If this is true, this woman's condition might present us with tantalising evidence for a genetic link as well," Professor Mattingley said.

While more studies are planned, the woman has placed any additional investigations on hold until she establishes her career.

**Media: More information:**

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**Scientific paper: Williams et al., Abnormal fMRI Adaptation to Unfamiliar Faces in a Case of Developmental Prosopamnesia, *Current Biology* (2007),**

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