

# Next generation drug detection for roadside and workplace testing

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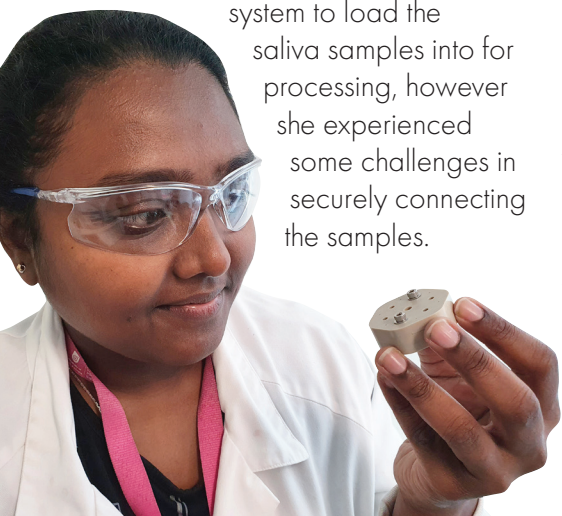
**University of South Australia (UniSA) PhD candidate Pratishtah Sobrun, is helping transform screening technologies for roadside and workplace drug detection.**

Current drug detection technologies only test for a few illegal substances however there are many different classes of illegal drugs which can affect a person's ability to drive safely or operate heavy machinery in a workplace.

Pratishtah's project is focused on finding a way to collect saliva and test it in a non-selective device so all different classes of illegal drugs can be detected quickly, and crucially, with high accuracy for potential prosecutions.

Developing a porous material to collect, trap and release illegal, synthetic, and new psychoactive substances, Pratishtah has also designed a portable detection

system to load the saliva samples into for processing, however she experienced some challenges in securely connecting the samples.



"I was using my self-constructed detection system to conduct experiments, but quickly realised I needed to enhance the equipment's measuring processes to control different criteria as part of my testing," said Pratishtah.

"The system is being designed to run six onsite drug testing samples at a time, so it needs to be accurate for prosecutions."

Seeking expertise to improve her system's design, she visited the South Australian node of the Australian National Fabrication Facility (ANFF-SA) which is co-located at UniSA's Mawson Lakes campus.

“ With ANFF-SA's help, everything came together in terms of a proper solution for me to load my samples into my detection equipment.

**Pratishtah Sobrun, PhD Candidate, University of South Australia** ”

"Mark and the ANFF-SA team have significantly contributed to the improvement of my initial design, and I can now calibrate the detection system to the microlitre to achieve highly accurate results," said Pratishtah.

"ANFF-SA also considered all the safety aspects of the system design, in terms of what I require now, and those that I want to introduce to my experiments in the future, including high voltage."

Despite taking a little longer than she



anticipated, Pratishtah says working with ANFF-SA was a smooth process, enabling her to provide her industry partner with thorough progress reports that not only identified their challenges but also delivered well-thought-out solutions to prevent future problems.

"With ANFF-SA's help, everything came together in terms of a proper solution for me to load my samples into my detection equipment and if this works my whole PhD will be quite good!" said Pratishtah.

With a focus on optimising device performance and

design-to-prototype time, ANFF-SA has the technical expertise, state-of-the-art facilities and cutting-edge equipment to support or collaborate on innovative R&D projects with universities, government, business, industry and end-users, locally, nationally and internationally.

For more information on how ANFF-SA can support your next research-to-product development please contact Simon Doe on 8302 5226 or visit [anff-sa.com](http://anff-sa.com).

**South Australian Node of the Australian National Fabrication Facility**

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