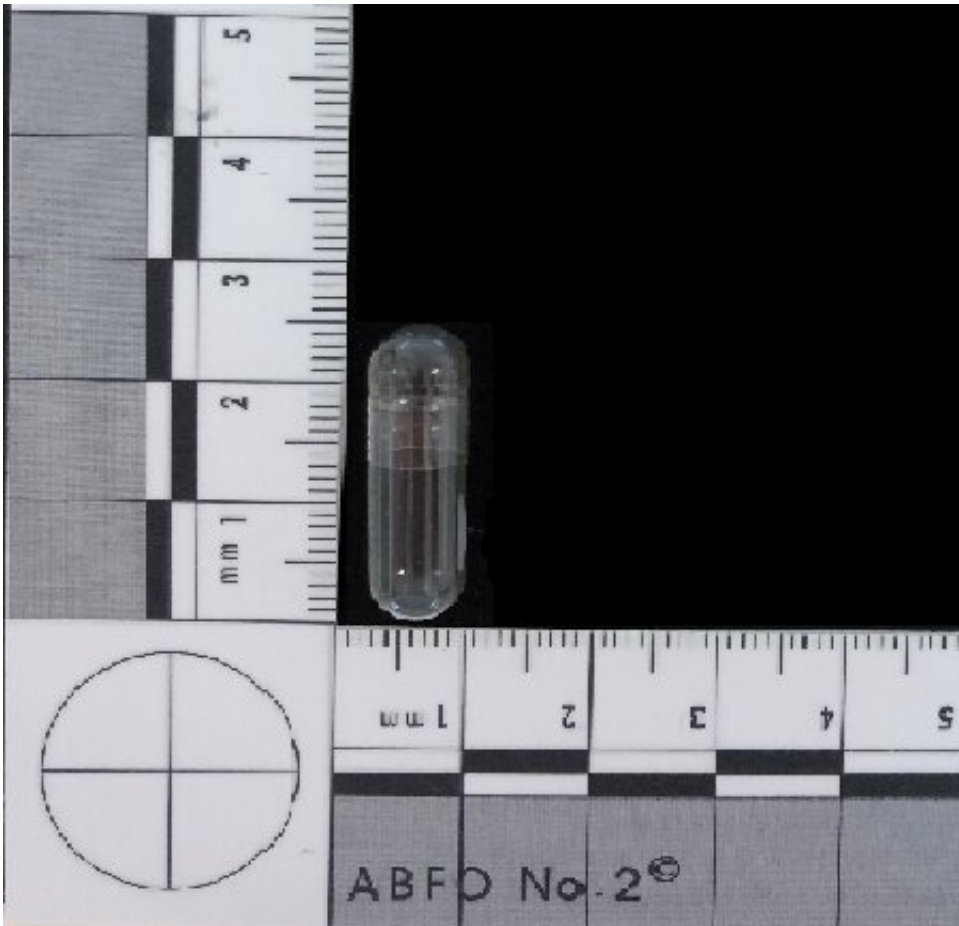


# How DNA recovered from pill surfaces could snare drug syndicates

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Credit: Flinders University

Forensic scientists have for the first time shown that DNA can be recovered from the surface of capsules after just 15 seconds of contact

by drug manufacturers and dealers—making it possible for law enforcement agencies to track down criminal syndicates around the world.

In a new study published in *Forensic Science International: Genetics*, Flinders University researchers have demonstrated that DNA from criminals who may have handled the capsules during production, assembly and distribution of illegal drugs can be identified if matched to a profile of a suspect, or one already on a DNA database.

Ph.D. candidate Amy Griffin from the College of Science and Engineering says the DNA profiles can also be compared to those found on other capsules to potentially link various drug seizures around the world.

"This [pilot study](#) demonstrates the potential for laboratories to recover human DNA from the exterior surface of capsules which are commonly used to encase [illicit drugs](#) such as MDMA, enabling both biological and chemical profiling methods to contribute to the investigation of clandestine drug production."

"The ability to generate profiles from 82% of capsules highlights how valuable it could be for operational forensic laboratories to sample the exterior of pill capsules."

"Our methodology is compatible with systems already implemented in DNA laboratories, which easily facilitates the examination of illicit drug capsules for DNA. With the baseline of DNA transfer established, further research is underway by us to investigate this application when capsules are handled in a more realistic scenario encountered in police work."

The quantities of DNA recovered from the capsules ranged from 0.006

to 3.700 ng, with an average of 0.267 ng. DNA quantities varied within and between each volunteer and capsule type, however overall there was no significant difference between the quantities of DNA collected with the three types of capsules used.

Chair in Forensic DNA Technology, Professor Adrian Linacre, says the results will also highlight the potential to generate DNA profiles to upload to a criminal database to help identify other persons of interest in criminal syndicates.

"If an unidentifiable DNA profile is obtained, it may still be useful for intelligence-led policing as a 'biological profile' to potentially link or exclude various drug seizures as originating from the same source to complement and corroborate the findings of the chemical profile."

The paper in *Forensics Science International: Genetics* is titled "DNA on drugs! A preliminary investigation of DNA deposition during the handling of illicit drug capsules."

**More information:** Amy Griffin et al, DNA on drugs! A preliminary investigation of DNA deposition during the handling of illicit drug capsules, *Forensic Science International: Genetics* (2021). [DOI: 10.1016/j.fsigen.2021.102559](https://doi.org/10.1016/j.fsigen.2021.102559)

Provided by Flinders University

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