Abstract

During the last 10 years more than 800 new drug molecules have emerged across the world. Routine forensic drug laboratories have found it impossible to keep up with the changing nature of recreational drug use mainly due to a lack of certified reference materials. Only a handful of National forensic laboratories across the world have access to NMR and high resolution mass spectrometers allowing them to undertake the structural elucidation of these new substances. The National Measurement Institute (NMI) receives Australian Border Seizures of new designer drugs and employs 1D and 2D NMR and multi-nuclear NMR techniques to identify synthetic cannabinoids, cathinone derivatives and phenethylamine derivatives. The NMI also employs quantitative NMR to do purity determination of conventional illicit substances such as methylamphetamine and MDMA.

Biography

Dr Michael Collins is the Director of Australian Forensic Drug Laboratory at the National Measurement Institute, Department of Industry, Innovation and Science. For more information on the National Measurement Institute, go to:
https://www.measurement.gov.au/Pages/default.aspx