Research and Reports in Forensic Medical Science

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Editorial

EDITORIAL

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Correspondence: Henrik Druid Forensic Medicine, Department of Oncology-Pathology, Retzius v. 3, Karolinska Institutet, 171 77 Stockholm, Sweden Tel +46 703 44 75 44 Fax +46 13 36 42 70 Email henrik.druid@ki.se Forensic science is a subject that encompasses a wide variety of disciplines, but they all share a common goal: to deliver scientific evidence to criminal investigations. In certain fields, additional tasks are performed to meet the demands of other functions in the community, such as the contribution to the death registry and insurance matters. However, despite long-term research efforts in forensic science, several classical questions have not been resolved satisfactorily and, hence, there are a number of "white" areas that need careful investigation. In addition, developments in society also create new challenges for forensic investigators. The illicit and licit development of new drugs, for instance, necessitates the adjustment or development of analytical methods, and the rapid developments in the digital world require a great deal of new professional competence so that fraud or unauthorized data trespassing can be proven.

The good news is that there is currently a high level of research activity in lessexplored fields, as well in areas where previous seminal papers have paved the way. The latter is exemplified by an increasing number of reports on the use of radiological techniques such as computer tomography and magnetic resonance imaging in death investigations, popularly called "virtopsy," and on DNA analyses of both living and dead subjects for identification and paternity or other relationships, where new analytical methods and advanced statistical models are used to estimate the likelihood of matches. During the past 20 years, investigators in toxicology have increasingly appreciated the importance of confounding factors that may affect the test results and have also identified certain means of avoiding these errors. In forensic psychiatry and criminology, the possibility of being able to perform genetic tests that may disclose an association between various genes and the propensity for criminal and violent behavior has created a new and exciting research area.

Even though these and other developments in forensic fields are encouraging, there are a number of areas where progress remains slow. For example, age estimation of bruises in the living and in the postmortem setting remains problematic for investigators. Handwriting analysis and surveillance-camera recording analysis need to be improved to help solve serious crimes. The growing number of new drugs of abuse that in particular are used by teenagers and young adults necessitates the development of new analytical methods to be applied to seized powders and tablets, as well as to biological samples, such as blood and urine.

Today in the forensic fields much effort is put into the development of quality assurance systems to make sure that methods and results are reliable. However, all such work is dependent on a firm scientific foundation and it is therefore paramount that the methods do produce reliable and useful results and that they are carefully validated. Accordingly, efforts to make a histologic laboratory accredited for a number of stainings, for example, can seem meaningless if the interpretation of the staining patterns is not generally recognized. It is crucial, then, that the methods and procedures included can repeatedly show the same results, and that they have factual value for routine casework. Whenever a method or procedure is included in such a program, it is important that it does not reduce efforts to develop and evaluate alternative techniques.

This journal was inaugurated in response to the increasing number of studies in the various fields of forensic science. One advantage of submitting a paper to *Research and Reports in Forensic Medical Science* is that it is an open access journal, meaning that every publication is freely accessible. Another advantage is that space is not limited, which can often be a problem when submitting to a subscription-based, printed journal. However, for authors who are not native English speakers, perhaps the most appealing feature of the journal is that the publisher offers substantial help with language editing. Dove Medical Press has a large number of highly qualified reviewers who make sure that the manuscripts accepted for publication meet reasonable scientific standards, implying fair chances of citations when included among journals in *Thomson Reuters (ISI) Web of Knowledge*. Finally, the high processing speed that Dove Medical Press offers is another factor that a submitting author should appreciate if and when research results require urgent publication.

It is my sincerest hope that *Research and Reports in Forensic Medical Science* will become a respected journal in the field of forensic science, and I encourage all forms of submission – for example, original articles, reviews, case reports, or letters to the editor. The rapid development in several fields of forensic science continuously generates research results that are important to make available to professionals and, with the excellent support of Dove Medical Press, I trust that choosing to submit to *Research and Reports in Forensic Medical Science* is an excellent decision to make.

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