

## Preface (English edition)

Peter M. Schneider<sup>1</sup>, one of the co-authors of this booklet, was very keen in the summer of 2022 to finish the work as soon as possible. Shortly after the completion he died at the age of 67 years after a long suffering in September 2022. Since he had a great community of followers in the field of DNA typing and MHC research as well as many readers worldwide who could not read German, I decided to edit an English version of the “75 years of the Institute of Legal Medicine in Mainz/ Germany.”

Behind the wall of service posts in the DNA fingerprinting societies, so president and secretary of ISFG and others (i.e. of the German Society of Paternity Testing), it may be overseen that Peter was an eminent investigator of the Major Histocompatibility Complex (MHC). Beginning with his work – doctoral thesis in 1984 at Harvard Medical School with Harvey Colten on the genetic variants of the fourth component of complement he became a member of the Schwerpunktprogramm ( Main Research Program) on the Major Histocompatibility Complex of the German Research Society as well in the Sonderforschungsbereich Immunopathogenesis of the Fachbereich Medicine in Mainz. In 2000 he definitely left his successful work in immunogenetics for becoming an outstanding DNA investigator of family relationships and its forensic application, as well as identification of stain material. In 2004 he became a professor of the forensic molecular genetics at the University of Cologne/Germany.

Peter as head of the membership of Mainz in the European DNA Profiling Group (EDNAP) has made important contributions

<sup>1</sup> † 2022

to DNA profiling, nevertheless other publications of the Institute have also been of great interest. In 1948 Professor Wagner, the Director of the Institute in that time, detected the first murder case with the plant protection chemical E605. In 1988, Professor Rittner and his team were involved in the identification of the victims of the Ramstein disaster. Again, in 1989 one of the first murder cases, a sexual attack with letal outcome was clarified with the multilocus probe MZ1.3. The great variety of cases and methods in Legal Medicine is illustrated in this booklet.

Christian Rittner

# Foreword

If one takes into account the media presence, then forensic medical science is a beacon in the canon of medical disciplines. On the other hand, taking into account the number of experts (there are only about 350 specialists in Germany), this subject is the smallest specialist discipline. In Mainz, forensic medicine at the Johannes Gutenberg University, has since the founding of the institute in 1946 always played a prominent role. There are a number of good reasons why: Excellent personalities have been active here in the institute's leadership (Wagner, Leithoff, Rittner, Urban, Germerott). This is true from a professional point of view, but also with regard to their importance for the further development of the medical faculty at the level of the dean's office and the board of directors.

From a scientific point of view, important initiatives for the further development of the subject of forensic medicine came from Mainz: For example, toxicological analysis in general, and in particular hair analysis for drugs and the accompanying compounds analysis of alcohol. Furthermore, with regard to traffic medicine and traffic accident reconstruction, molecular genetics, genetic fingerprinting and forensic DNA analysis, disaster medicine as well as international operations in large-scale incidents, postmortem imaging, clinical forensic medicine, forensic geriatric diagnostics, and medical ethics.

The spacious new institute building "Am Pulverturm" under Leithoff set standards for later new buildings throughout Germany in 1981.

In 2004, the Mainz Institute of Forensic Medicine was the first in Germany to be accredited for the entire range of forensic medicine. This marked the beginning of a new era of methodologically secure evidence.

Mainz was one of the institutes that, on the one hand, had a certain pacemaker function in Germany, and were very well networked internationally. Examples of this are the international congresses of the ISFG (International Society for Forensic Genetics, 1991) as well as the International Symposium on Advances in Legal Medicine (ISALM, 1999).

Mainz also stands for the solution of particularly spectacular problem situations in forensic medicine: for example the E605 murders of the "Gifthehe von Worms" Christa Lehmann, who carried out her series of murders in the early 1950s,

The case of the very well-known exceptional athlete (heptathlete) Birgit Dressel, whose case attracted worldwide interest under the question of systematic doping, further the horrible accident during the Italian air force "Frecce Tricolori" at the Ramstein air show. Various other unusual cases are also presented in this "Festschrift". This 75<sup>th</sup> anniversary of the Institute of Forensic Medicine by Rittner et al. describes the development of the subject in the region and in Germany. It is the exciting cases which started in Mainz, all of this from the sewing box of forensic medicine, so to speak, in a way that is easy to understand even for the layman, very instructive and convincing. Absolutely recommendable! One immediately notice that forensic medicine is a very lively subject. For decades, Mainz has stood for convincing analysis and comprehensible evidence in every respect (chain of evidence).

To put it in a somewhat modified form: "MAINZ BLEIBT MAINZ, WIE ES LEHRT UND FORSCHT!" (Mainz remains Mainz, as it teaches and researches!)

Klaus Püschel, Hamburg

## Preface by the editors

*Who would have thought it?*

In 2021, the Institute of Forensic Medicine at Johannes Gutenberg University in Mainz will be 75 years old. That is not an age for the Forensic Medicine that could excite anyone. Many institutes are much older than Mainz, above all Vienna, Berlin, Würzburg, Heidelberg (see Rittner and Urban, 9FM). But rarely are we aware of the rapid development of our discipline from the "Cinderella" of the medical disciplines, which may well be represented by other disciplines, such as the pathologist, because it was so small and insignificant, to become the high-tech institute. What is the reason for this, if one thinks of today's forensic pathologist, who has become an indispensable part of every crime scene and who, by analogy with her Münster colleague Börne/Brinkmann is familiar to every television viewer? We think it is, despite all popularity, it is the lack of public relations work in our field.

The reader will not believe it – or that our subject is still confused with the pathology, because corpses have a special attraction? Whereby it is then overlooked that it has long been a very lively subject, oriented towards the living (see clinical forensic medicine) and can thus also offer medical help. Yes, is it not the subject, on which the Wissenschaftsrat in alliance with state governments – for example in North Rhine-Westphalia, by closing the institutes in Aachen, Marburg, Magdeburg and among others, would have liked to do without? The support provided by the press (legendary and unforgotten is the commitment of the deputy editor-in-chief

of the ZEIT, Sabine Rückert<sup>2</sup>) and the concerned public has never been small. The public, then "little man"? Has he really been moved by the flaming appeal of our colleagues Brinkmann and coworkers in 19672 who statistically have proven that due to inadequate regulation and practice of post-mortem examinations prior to burial thousands of homicides remain undiscovered and thus remain unpunished? ("Murderers have good chances"). Therefore we are grateful that, despite and precisely because of the clarification provided by the virtopsy, the number of autopsies is once again rising inexorably.

*But who would have thought* that especially Mainz, which otherwise only "sings and laughs", would have such a friendly climate for injured parties, the police, the public prosecutor's office and the court who cooperate with the Institute of Forensic Medicine in such a trusting manner?

This small publication at the occasion of the 75th anniversary of the Institute of Forensic Medicine in Mainz is a compilation of the many facets of our subject by a team of co-authors from Mainz. allowing a completely new view of our subject. Each of the co-authors was asked to present his or her field in a style as loosely as possible. We believe that our beautiful subject has weathered in all the storms of this time (see natural catastrophes, airplane crashes, etc.) and that its old forefathers from Mainz Wagner and Leithoff, would agree posthumously. Now a new era has dawned, which poses and has to answer old and new questions. We would like to take this opportunity to express our thanks to all those in the ministries, judicial authorities, research institutions (deutsche research community, etc.), and our university, all colleagues at the Johannes Gutenberg University in Mainz, who have supported our work.

Christian Rittner, Peter M. Schneider, Jörg Röhrich (Editors)

<sup>2</sup> Tote haben keine Lobby (The deceased have no lobby), Hoffmann und Campe 2000