

Instytut Ekspertyz Sądowych im. Prof. dra Jana Sehna w Krakowie  
Institute of Forensic Research, Kraków, Poland

# **PROBLEMS OF FORENSIC SCIENCES**

**Z ZAGADNIENÍ NAUK  
SĄDOWYCH**

ISSN 1230-7483, e-ISSN 2720-5983

**Vol. 130, 131**

---

## EDITORIAL BOARD

Assoc. Prof. Dariusz Zuba	Kraków, Poland (Chairperson)
Assoc. Prof. Ricky Ansell	Linköping, Sweden
Prof. Maciej J. Bogusz	Sinsheim, Germany
Prof. Bernd Brinkmann	Münster, Germany
Prof. Michael D. Cole	Cambridge, United Kingdom
Prof. Jim Fraser	Glasgow, United Kingdom
Prof. Kimmo Himberg	Vantaa, Finland
Prof. Ingvar Kopp	Linköping, Sweden
Prof. Friedrich Lösel	Erlangen-Nürnberg, Germany
Prof. Pierre Margot	Lausanne, Switzerland
Prof. Roman Mądro	Lublin, Poland
Prof. Manfred Möller	Homburg/Saar, Germany
Prof. Mirosław Owoc	Poznań, Poland
Prof. Walther Parson	Innsbruck, Austria
Prof. Derrick J. Pounder	Dundee, United Kingdom
Prof. Hermann Steffan	Graz, Austria
Prof. Stanisław Waltoś	Kraków, Poland

## EDITORIAL COMMITTEE

Prof. Józef K. Gierowski	Editor-in-Chief
Assoc. Prof. Dariusz Zuba	Assistant to the Editor-in-Chief
Dr. Agnieszka Haś	Associate Editor
Dr. Tomasz Kupiec	Associate Editor
Prof. Grzegorz Zadora	Associate and Statistical Editor
Kinga Techmańska	Editorial Secretary
Anna Sałatarow	Editorial Secretary

© Copyright by the Prof. Dr Jan Sehn Institute of Forensic Research in Kraków, Kraków 2022

Abstracted in: Chemical Abstracts Selects Plus; Forensic Chemistry; EMBASE/Excerpta Medica: Section 49 Forensic Science Abstracts; Bulletin of TIAFT; FORSight: The Forensic Abstracts Journal; Index Copernicus International.

The Journal is indexed in Polish Medical Bibliography.

Editing	Kinga Techmańska, Anna Sałatarow
Page layout and typesetting	Krzysztof Adamski
Cover design	Piotr K. Holinej



**Wydawnictwo Instytutu Ekspertyz Sądowych**  
**Institute of Forensic Research Publishers**

PL 31-033 Kraków, ul. Westerplatte 9  
tel. +48 12 422 87 55, fax +48 12 422 38 50, e-mail: [wydawnictwo@ies.gov.pl](mailto:wydawnictwo@ies.gov.pl)  
<https://www.ejournals.eu/PFS/>

**ISSN 1230-7483, e-ISSN 2720-5983**

Circulation of 170 copies