

herba polonica

From Botanical to Medical Research

Volume 62

No. 4

2016

p-ISSN 0018-0599

e-ISSN 2449-8343

.....



SCIENTIFIC BOARD

Dea Baričević (Ljubljana, Slovenia)
Waldemar Buchwald (Editor-in-Chief) (Poznań, Poland)
Jaromir Budzianowski (Poznań, Poland)
Peter Butko (Nagoya, Japan)
Ewa Capecka (Krakow, Poland)
Lyle E. Craker (Amherst, USA)
Bogusław Czerny (Poznań, Szczecin, Poland)
Alexandru Dascalu (Chisinau, Moldova)
Karol Wojciech Duczmal (Poznań, Poland)
Włodzimierz Grajek (Poznań, Poland)
Edmund Grześkowiak (Poznań, Poland)
Jerzy Jambor (Klęka, Poland)
Bogdan Kędzia (Poznań, Poland)
Wanda Kisiel (Kraków, Poland)
Eckhard Leistner (Bonn, Germany)
Frank Marthe (Quedlinburg, Germany)
Ákos Máthé (Mosonmagyaróvár, Hungary)
Henry O. Meissner (Elanora-Gold Coast, Australia)
Przemysław Ł. Mikołajczak (Poznań, Poland)
Éva Németh (Budapest, Hungary)
Johannes Novak (Vienna, Austria)
Renata Ochocka (Gdańsk, Poland)
R.R. Rao (Bangalore, India)
Ivar Roots (Berlin, Germany)
Jan Jarosław Rybczyński (Warsaw, Poland)
Hartwig Schulz (Quedlinburg, Germany)
Katarzyna Seidler-Łożykowska (Poznań, Poland)
Ahmed El-Sayed Shalaby (Cairo, Egypt)
Agnieszka Seremak-Mrozikiewicz (Poznań, Poland)
V. Sivaram (Bangalore, India)
Ryszard Słomski (Poznań, Poland)
Barbara Steinhoff (Bonn, Germany)
Eva Szóke (Budapest, Hungary)
Zenon Węglarz (Warsaw, Poland)
Halina Wysokińska (Łódź, Poland)
Vincente Castell Zeising (Valencia, Spain)
Jordan Zjawiony (Jackson, USA)

EDITORIAL COMMITTEE

Waldemar Buchwald (Editor-in-Chief)
Institute of Natural Fibres and Medicinal Plants,
Kolejowa 2, 62-064 Plewiska, Poland
tel. 48(61)665-95-50, fax 48(61)665-95-51,
e-mail: waldemar.buchwald@iwnirz.pl

Anna Krajewska-Patan (Secretary of the Editorial Committee)
Institute of Natural Fibres and Medicinal Plants,
Kolejowa 2, 62-064 Plewiska, Poland
tel. 48(61)665-95-50, fax 48(61)665-95-51,
e-mail: anna.patan@iwnirz.pl

Artur Adamczak
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland

Katarzyna Bączek
Department of Vegetable and Medicinal Plants,
Warsaw University of Life Sciences - SGGW
Warsaw, Poland

Bogusław Czerny
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland
Department of General Pharmacology and Pharmacoeconomics,
Pomeranian Medical Academy
Szczecin, Poland

Andrzej Członkowski (Editor in Medical Sciences)
Department of Experimental and Clinical Pharmacology
Medical University of Warsaw,
Warsaw, Poland

Anna Geszprych
Department of Vegetables and Medicinal Plants,
Warsaw University of Life Sciences - SGGW
Warsaw, Poland

Małgorzata Górska-Paukszta
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland

Tomasz M. Karpiński
Department of Medical Microbiology
Poznań University of Medical Sciences, Poznań, Poland

Bogdan Kędzia
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland

Przemysław Ł. Mikołajczak
Department of Pharmacology
Poznań University of Medical Sciences,
Poznań, Poland
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland

Agnieszka Seremak-Mrozikiewicz
Division of Perinatology and Women's Diseases
Poznań University of Medical Sciences
Poznań, Poland
Institute of Natural Fibres and Medicinal Plants,
Poznań, Poland

Ryszard Słomski
Department of Biochemistry and Biotechnology,
Poznań University of Life Sciences
Poznań, Poland
Institute of Human Genetics of the Polish Academy of Sciences,
Poznań, Poland

Zenon Węglarz (Editor in Agricultural Sciences)
Department of Vegetable and Medicinal Plants,
Warsaw University of Life Sciences - SGGW
Warsaw, Poland

EDITORIAL OFFICE

Contact person: Anna Krajewska-Patan
Institute of Natural Fibres and Medicinal Plants,
Kolejowa 2, 62-064 Plewiska, Poland
tel. 48(61)665-95-50, fax 48(61)665-95-51
e-mail: anna.patan@iwnirz.pl or herba.polonica@iwnirz.pl
www.herbapolonica.pl

herba polonica is indexed/abstracted in
AGRO database, AMED (Allied and Complementary Medi-
cine), Arianta, Baidu Scholar, CAB Abstracts, CABI databases,
Case, Celdes, CNKI Scholar (China National Knowledge Infra-
structure), CNPIEC, DOAJ, EBSCO Discovery Service, Genomics
JournalSeek, Global Health Database, Google Scholar, Herbalia,
Index Copernicus, J-Gate, JournalTOCs, Kudos, Medicinal and
Aromatic Plants Abstracts, Naviga (Softweco), POL-index, Polish
Medical Bibliography/Polish Medical Library, Primo Central (Ex-
Libris), ProQuest International Pharmaceutical Abstracts, Read-
Cube, ResearchGate, Review of Aromatic and Medicinal Plants,
Sherpa/RoMEO, Summon (Serials Solutions/ProQuest), TDOne
(TDNet), WorldCat (OCLC).

The on-line version is available on www.herbapolonica.pl
and www.degruyter.com

PUBLISHED
by the Institute of Natural Fibres and Medicinal Plants,
Wojska Polskiego 71B, 60-630 Poznań (Poland)

EDITED
by the Institute of Natural Fibres and Medicinal Plants,
Kolejowa 2, 62-064 Plewiska, Poland
Tel. 48(61)665-95-50, fax 48(61)665-95-51,
e-mail: herba.polonica@iwnirz.pl,
www.herbapolonica.pl
www.iwnirz.pl

The edition is supported by The Ministry of Science
and Higher Education

The on-line version is published before the version in
the paper

CONTACT PERSON
Waldemar Buchwald (Editor-in-Chief)

Print-run 150 copies

Copyright 2016
by the Institute of Natural Fibres and Medicinal Plants
p-ISSN 0018-0599 e-ISSN 2449-8343

Printed in Poland by Esus

Content

LIST OF REVIEWERS IN 2016	7
EXPERIMENTAL PAPERS	11
ANNA FORYCKA, ARTUR ADAMCZAK, BOGNA OPALA, AGNIESZKA GRYSZCZYŃSKA, WALDEMAR BUCHWALD Yield and level of phenolic compounds in the inflorescence of yellow everlasting <i>Helichrysum arenarium</i> (L.) Moench collected from natural sites	11
MARCIN OŻAROWSKI, RADOSŁAW KUJAWSKI, PRZEMYSŁAW MIKOŁAJCZAK, AGNIESZKA GRYSZ- CZYŃSKA, AURELIA PIETROWIAK, WOJCIECH BIAŁAS, JUSTYNA BARANIAK, MAŁGORZATA GÓRSKA-PAUKSZTA, WALDEMAR BUCHWALD, BOGDAN KĘDZIA, ANNA KRAJEWSKA-PATAN, AGNIESZKA SEREMAK-MROZIKIEWICZ Comparison of antioxidant activities of fractionated extracts from seedlings and herb of <i>Chelidonium</i> <i>majus</i> L. using DPPH, ABTS and FRAP methods	22
MOHADDESE MAHBOUBI, MOHSEN TAGHIZADEH The antimicrobial and antioxidant activity of <i>Muscari neglectum</i> flower ethanol extract.	39
ZBIGNIEW MARCZYŃSKI, SŁAWOMIRA NOWAK, JERZY JAMBOR, MARIAN MIKOŁAJ ZGODA Solubility and solubilizing capabilities of aqueous solutions of <i>Extractum Taraxaci e radix cum herba aqu.</i> <i>siccum</i> in light of selected values of general Hildebrand-Scatchard-Fedors theory of solubility	49
ZBIGNIEW MARCZYŃSKI, MARIA ELŻBIETA FORNAL, JERZY JAMBOR, MARIAN MIKOŁAJ ZGODA Formulation and profile of pharmaceutical availability from a model oral solid form of a drug of phyto- chemicals contained in dry <i>Taraxacum officinale</i> extract	66
SHORT COMMUNICATIONS	82
GHALEB TAYOUB, MALIK ALORFI, HALA ISMAIL Fumigant toxicities of essential oils and two monoterpenes against potato tuber moth (<i>Phthorimaea</i> <i>operculella</i> Zeller)	82
REVIEW PAPERS	97
JUSTYNA BARANIAK, RADOSŁAW KUJAWSKI, MARCIN OŻAROWSKI Law regulations concerning food supplements, dietetic food and novel food containing herbal sub- stances.	97
INSTRUCTIONS TO AUTHORS	107

Spis treści

LISTA RECENZENTÓW 2016	7
PRACE EKSPERYMENTALNE	11
ANNA FORYCKA, ARTUR ADAMCZAK, BOGNA OPALA, AGNIESZKA GRYSZCZYŃSKA, WALDEMAR BUCHWALD Plon i zawartość związków fenolowych w kwiatostanach kocanek piaskowych <i>Helichrysum arenarium</i> (L.) Moench zbieranych ze stanu naturalnego	11
MARCIN OŻAROWSKI, RADOŚLAW KUJAWSKI, PRZEMYSŁAW MIKOŁAJCZAK, AGNIESZKA GRYSZCZYŃSKA, AURELIA PIETROWIAK, WOJCIECH BIAŁAS, JUSTYNA BARANIAK, MAŁGORZATA GÓRSKA-PAUKSZTA, WALDEMAR BUCHWALD, BOGDAN KĘDZIA, ANNA KRAJEWSKA-PATAN, AGNIESZKA SEREMAK-MROZIKIEWICZ Porównanie działania antyoksydacyjnego frakcjonowanych wyciągów z siewek i ziela <i>Chelidonium majus</i> L. przy użyciu metod DPPH, ABTS i FRAP.	22
MOHADDESE MAHBOUBI, MOHSEN TAGHIZADEH Przeciwdrobnoustrojowe i antyoksydacyjne właściwości etanolowego wyciągu z kwiatów <i>Muscari neglectum</i>	39
ZBIGNIEW MARCZYŃSKI, SŁAWOMIRA NOWAK, JERZY JAMBOR, MARIAN MIKOŁAJ ZGODA Rozpuszczalność i zdolności solubilizacyjne wodnych roztworów <i>Extractum Taraxaci e radix cum herba aqu. siccam</i> w świetle wybranych wielkości ogólnej teorii rozpuszczalności Hildebranda - Scatcharda-Fedorsa	49
ZBIGNIEW MARCZYŃSKI, MARIA ELŻBIETA FORNAL, JERZY JAMBOR, MARIAN MIKOŁAJ ZGODA Formulacja i profil dostępności farmaceutycznej z modelowej stałej doustnej postaci leku fitozwiązków zawartych w suchym mianowanym ekstrakcie z mniszka lekarskiego (<i>Taraxacum officinale</i> , F. H. WIGG)	66
DONIESIENIA	82
GHALEB TAYOUB, MALIK ALORFI, HALA ISMAIL Zastosowanie fumigacji za pomocą olejków eterycznych i dwóch monoterpenów do zwalczania skośnika ziemniaczaka (<i>Phthorimaea operculella</i> Zeller)	82
PRACE PRZEGLĄDOWE	97
JUSTYNA BARANIAK, RADOŚLAW KUJAWSKI, MARCIN OŻAROWSKI Regulacje prawne dotyczące suplementów diety, żywności dietetycznej i nowej żywności zawierającej substancje roślinne	97
INSTRUCTIONS TO AUTHORS	107

herba polonica

www.herbapolonica.pl

“Herba Polonica”, edited since 1955, is an Open Access scientific journal devoted to all aspects of medicinal plant science including systematics, ecology, cultivation, breeding, genetics, phytochemistry and ethnobotany as well as clinical and pharmacological research. The quarterly publishes experimental and review articles.

„Herba Polonica” is on Master Journal List Thomson Reuters, Philadelphia, USA.

„Herba Polonica” is indexed/abstracted in AGRO database, AMED (Alliend and Complementary Medicine), Arianta, Baidu Scholar, CAB Abstracts, CABI databases, Case, Celdes, CNKI Scholar (China National Knowledge Infrastructure), CNPIEC, DOAJ, EBSCO Discovery Service, Genomics JournalSeek, Global Health Database, Google Scholar, Herbalia, Index Copernicus, J-Gate, JournalTOCs, Kudos, Medicinal and Aromatic Plants Abstracts, Naviga (Softweco), POL-index, Polish Medical Bibliography/Polish Medical Library, Primo Central (ExLibris), ProQuest International Pharmaceutical Abstracts, ReadCube, ResearchGate, Review of Aromatic and Medicinal Plants, Sherpa/RoMEO, Summon (Serials Solutions/ProQuest), TDOne (TDNet), WorldCat (OCLC).

“Herba Polonica”, kwartalnik wydawany od roku 1955, to czasopismo naukowe dostępne w systemie Open Access. Jest poświęcone wszystkim aspektom badań nad roślinami zielarskimi: systematyce, ekologii, uprawie, hodowli, genetyce, fitochemii, etnobotanice oraz badaniom klinicznym i farmakologicznym. W kwartalniku są drukowane prace eksperymentalne i przeglądowe.

„Herba Polonica” znajduje się na liście recenzowanych polskich czasopism naukowych. Według wykazu czasopism punktowanych, ogłoszonego przez Ministerstwo Nauki i Szkolnictwa Wyższego, za umieszczonej w „Herba Polonica” publikację naukową przyznawane jest 14 punktów w ramach oceny parametrycznej. W skład Rady Naukowej czasopisma wchodzi wielu czołowych przedstawicieli nauk rolniczych, farmaceutycznych i chemicznych z kraju oraz z zagranicy.

„Herba Polonica” jest umieszczona w bazie Master Journal List Thomson Reuters, Filadelfia, USA.

„Herba Polonica” jest indeksowana/abstraktowana przez wiele liczących się czasopism przeglądowych i baz: AGRO database, AMED (Alliend and Complementary Medicine), Arianta, Baidu Scholar, CAB Abstracts, CABI databases, Case, Celdes, CNKI Scholar (China National Knowledge Infrastructure), CNPIEC, DOAJ, EBSCO Discovery Service, Genomics JournalSeek, Global Health Database, Google Scholar, Herbalia, Index Copernicus, J-Gate, JournalTOCs, Kudos, Medicinal and Aromatic Plants Abstracts, Naviga (Softweco), POL-index, Polish Medical Bibliography/Polish Medical Library, Primo Central (ExLibris), ProQuest International Pharmaceutical Abstracts, ReadCube, ResearchGate, Review of Aromatic and Medicinal Plants, Sherpa/RoMEO, Summon (Serials Solutions/ProQuest), TDOne (TDNet), WorldCat (OCLC).

LIST OF REVIEWERS IN 2016

The Editors of HERBA POLONICA would like to gratefully acknowledge the invaluable comments and suggestions of following referees who reviewed the papers submitted to our journal in 2016.

Artur Adamczak

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Katarzyna Bączek

Warsaw University of Life Sciences – SGGW, Warsaw, Poland

Stanisław Bielski

University of Warmia and Mazury in Olsztyn, Poland

Anna Bogacz

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Waldemar Buchwald

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Jaromir Budzianowski

Poznań University of Medical Sciences, Poznań, Poland

Wiesława Byłka

Poznań University of Medical Sciences, Poznań, Poland

Jolanta Długaszewska

Poznań University of Medical Sciences, Poznań, Poland

Grzegorz Dworacki

Poznań University of Medical Sciences, Poznań, Poland

Anna Geszprych

Warsaw University of Life Sciences – SGGW, Warsaw, Poland

Anna Goździcka-Józefiak

Adam Mickiewicz University, Poznań, Poland

Romuald Górski

Poznań University of Life Sciences, Poznań, Poland

Małgorzata Grembecka

Medical University of Gdańsk, Gdańsk, Poland

Ewa Ignatowicz

Poznań University of Medical Sciences, Poznań, Poland

Maria Iskra

Poznań University of Medical Sciences, Poznań, Poland

Raisa Ivanova

Institute of Genetics, Physiology and Plant Protection of the Moldovan Academy of Sciences, Chisinau, Republic of Moldova

Danuta Kalemba

Technical University of Lodz, Lodz, Poland

Bogdan Kędzia

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Anna Kiss

Medical University of Warsaw, Warsaw, Poland

László Kursinszki

Semmelweis University, Budapest, Hungary

Irena Matławska

Poznań University of Medical Sciences, Poznań, Poland

Przemysław Ł. Mikołajczak

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Poznań University of Medical Sciences, Poznań, Poland

Gerard Nowak

Poznań University of Medical Sciences, Poznań, Poland

Renata Ochocka

Medical University of Gdańsk, Gdańsk, Poland

Olga Olszowska

Medical University of Warsaw, Warsaw, Poland

Marcin Ożarowski

Institute of Natural Fibres and Medicinal Plants, Poznań, Poland

Poznań University of Medical Sciences, Poznań, Poland

Marek Siwulski

Poznań University of Life Sciences, Poznań, Poland

Kateřina Směkalová

Crop Research Institute. Genetic Resources of Vegetables and Specialty Crops,
Olomouc, Czech Republic

Milan Stanković

University of Kragujevac, Kragujevac, Republic of Serbia

Joanna Stefańska

Medical University of Warsaw, Warsaw, Poland

Katarzyna Stoś

National Food and Nutrition Institute, Warsaw, Poland

Katarzyna Sułkowska-Ziaja

Jagiellonian University Medical College, Cracow, Poland

Katarzyna Sykłowska-Baranek

Medical University of Warsaw, Warsaw, Poland

Barbara Thiem

Poznań University of Medical Sciences, Poznań, Poland

Zenon Węglarz

Warsaw University of Life Sciences – SGGW, Warsaw, Poland

Hanna Winiarska

Poznań University of Medical Sciences, Poznań, Poland

Grażyna Zgórka

Medical University of Lublin, Lublin, Poland

Beata Zimowska

University of Life Sciences in Lublin, Lublin, Poland

