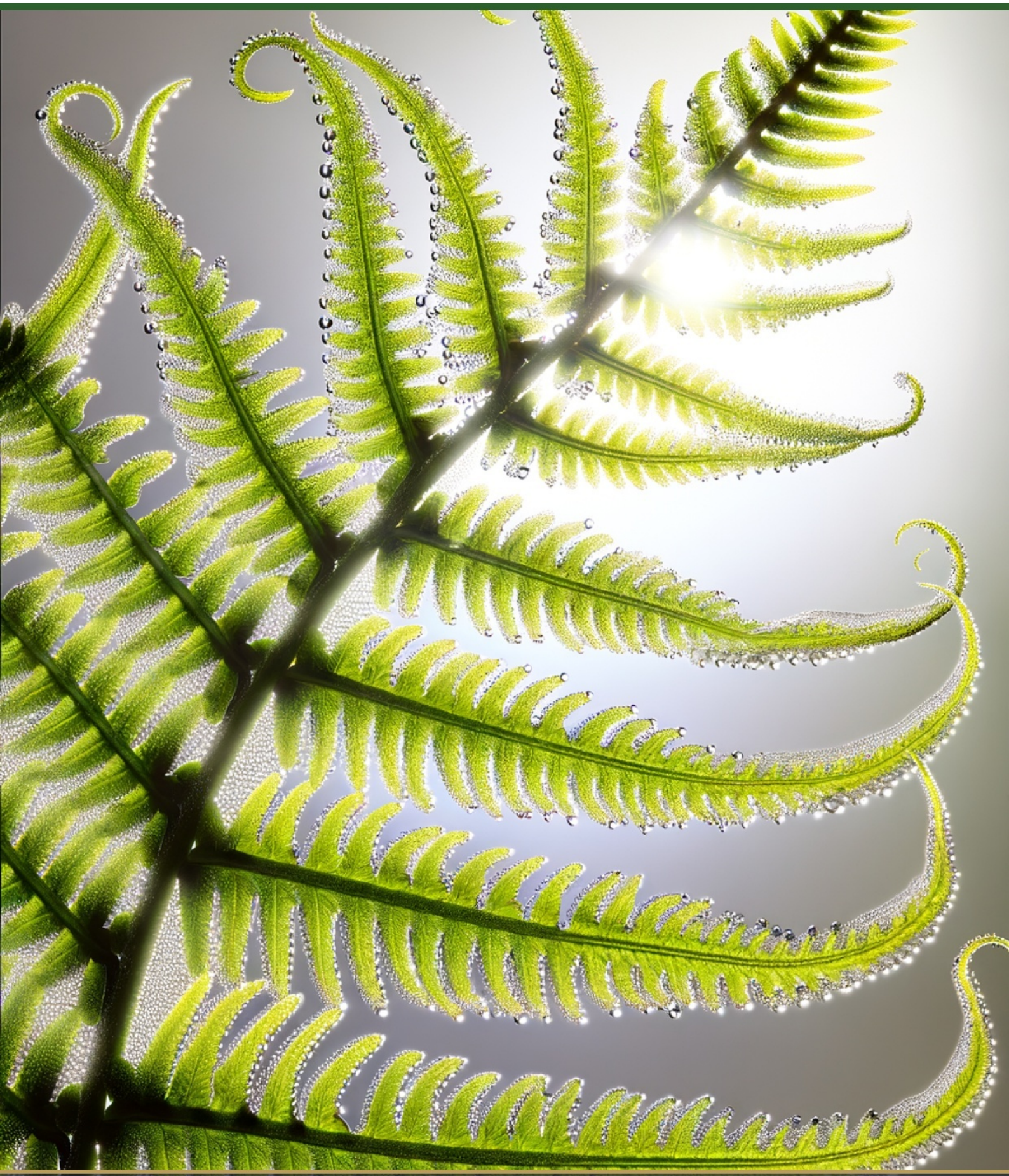
WULFENIA

International Journal of Multidisciplinary Research

ISSN: 1561-882X



Volume 33 · Issue 5

May 2026

multidisciplinarywulfenia.org

WULFENIA
JOURNAL
KLAGENFURT, AUSTRIA
ISSN:1561-882X

Table of Contents

Volume 33, Issue 5 — May 2026

Research Articles

1.

Exploring Dark Matter Interactions Through Gravitational Lensing in Galactic Clusters

Luca Bianchi, Kumiko Tanaka, Ayesha Al-Mansouri

Keywords: dark matter, gravitational lensing, galactic clusters, mass distribution, velocity dispersion, dark matter interactions

2.

Impact of Climate Change on Agricultural Sustainability: Economic Perspectives from Diverse Regions

Li Wei, Amina El-Sayed, Juan Carlos Mendoza

Keywords: climate change, agricultural sustainability, economic adaptation, regional analysis, resource management, policy development

3.

Mechanisms of RNA Processing and Regulatory Implications in Cellular Gene Expression

Katarzyna Nowak, Arun Basnet, Fatima Nalubega

Keywords: RNA processing, splicing, RNA-binding proteins, gene expression, polyadenylation, therapeutic targets

4.

Elucidating the Role of Biofilm Formation in Bacterial Pathogenesis and Antibiotic Resistance

Rajesh Kumar, Layla Al-Khafaji, Carlos Mendes

Keywords: bacterial pathogenesis, biofilm formation, antibiotic resistance, Pseudomonas aeruginosa, Staphylococcus aureus, genetic markers

---

5.

Innovative Strategies for Curriculum Development in Multicultural Educational Contexts

Elena Vasquez, Hiroshi Tanaka, Ahmed Al-Mansoori

Keywords: curriculum development, multicultural education, culturally responsive teaching, global learning, educational collaboration, cross-cultural competencies

---

6.

Assessing the Impact of Climate Change on Biodiversity in Tropical Ecosystems: A Case Study

Dimitrios Theodorou, Niazi Al-Mansoori, Chipo Mwansa

Keywords: biodiversity, climate change, tropical ecosystems, remote sensing, habitat suitability, species distribution

---

7.

Innovations in Thermodynamic Cycles: Boosting Efficiency in Industrial Applications

Rina Wijaya, Luis Felipe Gómez, Amina El-Mahdi

Keywords: thermodynamic cycles, energy efficiency, simulation models, power generation, refrigeration systems, sustainable development

---

8.

Advancements in Polynomial Factorization: Analyzing Computational Methods Across Diverse Algebraic Structures

Eleni Papadopoulos, Liang Wei, Fatima Al-Zahraa, Carlos Ncube

Keywords: polynomial factorization, Berlekamp algorithm, algebraic structures, computational methods, machine learning, hybrid models

---

9.

Efficient Synthesis of Chiral Compounds via Enantioselective Organocatalysis in Green Solvents

Dr. Hans Müller, Dr. Amina Khalil, Dr. Camila Torres

Keywords: enantioselective organocatalysis, chiral compounds, green solvents, sustainable chemistry, catalyst-substrate interactions, reaction efficiency

---

10.

Analyzing Fiscal Policy Impacts on Emerging Markets: A Cross-Continental Study Utilizing Macroeconomic Models

Helena Nováková, Eka Setiawan, Maryam Boulos

Keywords: fiscal policy, emerging markets, macroeconomic models, dynamic stochastic general equilibrium, fiscal multipliers, economic stability

---

11.

Advanced Techniques in Multivariate Analysis: Applications and New Perspectives

Yasmin Al-Mansoori, Ji-woo Park, Luciana Cárdenas, Musa Kamau

Keywords: multivariate analysis, principal component analysis, clustering algorithms, regression models, machine learning, high-dimensional data

---

12.

Traditional Uses and Pharmacological Insights of Indigenous Plants in Rural Mexico and Sudan

Fatima Al-Mansoori, Ryoichi Tanaka, Samuel Nyong'o, Lucia Martinez

Keywords: ethnobotany, pharmacognosy, traditional medicine, biodiversity, indigenous plants, pharmacological potential

---

13.

Integrative Approaches to Biodiversity Preservation: A Case Study in Tropical Ecosystems

Daniela Morales, Joon-Soo Kim, Fatima El-Mansouri

Keywords: biodiversity, conservation strategies, tropical ecosystems, local knowledge, adaptive management, stakeholder collaboration

---

14.

Integrative Approaches in Disease Diagnosis: Enhancing Precision with Molecular Biomarkers

Carlos Mendoza, Xiaoli Zhang, Fatima Al-Mansoori

Keywords: molecular biomarkers, disease diagnosis, genomic sequencing, proteomics, diagnostic accuracy, personalized treatment

---

15.

Innovative Strategies in Curriculum Development: A Cross-Cultural Examination of Pedagogical Approaches

Dr. Hiroshi Tanaka, Dr. María González, Dr. Ahmed El-Sayed

Keywords: curriculum development, pedagogical approaches, multicultural education, educational strategies, technology-enhanced learning, inclusivity, qualitative analysis, cross-cultural study

---

16.

Optimizing Crop Yield: Integrating Traditional and Innovative Practices in Diverse Agroecological Zones

Elena García, Wang Ming, Fatima Habib, John Mwangi

Keywords: crop yield, agroecological zones, precision agriculture, soil quality, climate adaptability, organic composting