

BIOACTIVE COMPOUNDS FROM MEDICINAL PLANTS

Morad Ahmad Abbass

Damascus University, Syria | Sapienza University of Rome, Italy

Prof. Mohammad Jamal Khatib • Prof. Jihad Harbala • Prof. Manuel Sergi

BACKGROUND

Medicinal plants are a rich source of natural compounds with potential biological and pharmaceutical relevance. Their chemical composition may vary according to plant type, geographical location, soil, climate, and other environmental conditions.

AIM AND METHODS

- Highlight the diversity of bioactive natural compounds.
- Examine environmental effects on plant chemical profiles.
- Analyze Syrian *Polygonum aviculare* samples from different environments.
- Compare extracts using HPLC and LC–MS-based profiling.

RESULTS

- Preliminary analysis revealed differences in chemical profiles between samples from different environments.
- Several compounds with potential biological relevance were detected.
- Some compounds remain under identification and structural verification.

DISCUSSION AND CONCLUSION

- Environmental conditions may influence the chemical diversity and relative distribution of natural compounds.
- Chromatographic and mass-spectrometric techniques support the separation and characterization of complex plant extracts.
- The findings provide a basis for subsequent studies of biological activity and pharmaceutical potential.
- Combining natural-product extraction with modern chemical analysis can support drug-discovery research.

This work supports the transition from chemical characterization to biological evaluation and future pharmaceutical applications.

IMPACT AND NEXT STEPS

- Natural-products chemistry
- Drug discovery
- Pharmaceutical research
- Chemical diversity
- Future bioactivity studies