

1. Record Nr.	UNINA9910743229803321
Titolo	Ferns : Biotechnology, Propagation, Medicinal Uses and Environmental Regulation // edited by Johnson Marimuthu, Helena Fernández, Ashwani Kumar, Shibila Thangaiah
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-16-6170-7 981-16-6169-3
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (714 pages)
Collana	Biomedical and Life Sciences Series
Disciplina	587.3
Soggetti	Plant anatomy Plant biotechnology Plants - Development Physiology Plant genetics Plant Anatomy and Morphology Plant Biotechnology Plant Development Plant Genetics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. GENOME EVOLUTION IN FERNS: Molecular Phylogenomics: A Review -- Chapter 2. A REVIEW ON MOLECULAR PHYLOGENY OF PTERIDOPHYTES USING DNA BARCODING -- Chapter 3. PLASTOGENOMICS PROVIDES A TOOL TO STUDY PHYLOGENETIC INTERRELATIONSHIPS OF MONILOPHYTES: A REVIEW -- Chapter 4. MOLECULAR MARKERS IN PTERIDOPHYTES -- Chapter 5. The Crucial Role of Ceratopteris richardii in Understanding the Evolution of the WOX Gene Family -- Chapter 6. Domestication of the floating fern symbiosis Azolla -- Chapter 7. Ferns a source of phytoecdysones and their applications in pestiferous insect management -- Chapter 8. Micropropagation of Pteridophytes -- Chapter 9. In vitro propagation of Histopteris incisa (Thunb.) J. Sm. - an ornamental fern -- Chapter

10. IN VITRO PROPAGATION OF TWO EPIPHYTIC FERNS -- Chapter 11. In vitro Gametophyte development, Reproductive biology and Nitric oxide signaling in Ferns -- Chapter 12. Apogamy, Apospory, Somatic embryogenesis and vegetative propagation in Ferns: A Review -- Chapter 13. Antagonistic Action of Yucasine and DMSO on Apogamy in the Fern *Dryopteris affinis* ssp. *Affinis* -- Chapter 14. The effect of phytohormones and inhibitors on apogamous gametophytes of *Dryopteris affinis* ssp. *Affinis* -- Chapter 15. Ferns: a potential source of medicine and future prospects -- Chapter 16. PTERIDOPHYTES USED BY PEOPLES OF INDIAN HIMALAYAN REGION AND NORTHERN INDIA - AN OVERVIEW -- Chapter 17. ETHNOBOTANICAL USES OF FERNS AND LYCOPHYTES OF KERALA -- Chapter 18. Phytochemistry of Indian Pteridophytes: A Review -- Chapter 19. Biopotency of Pteridophytes: A Review -- Chapter 20. Omega-3 and Omega-6 Fatty Acids Distribution in Pteridophytes and its Significance in Nutraceutical, Pharmacology and Cosmetic Industry -- Chapter 21. In-vitro antiproliferative effect of *Angiopteris evecta* (G. Forst.) Hoffmextracts against cultured Ht-29 Colon cancer Cells -- Chapter 22. *Adiantum* L.: Overview on Taxonomy, Distribution, Conservation status Ethnomedicinal uses, Phytochemistry and Pharmacognosy from India -- Chapter 23. Phytochemical composition, in vitro antioxidant and antidiabetic activities of *Nephrolepis auriculata* (L.) Trimen, an unexplored ethnomedicinal fern -- Chapter 24. Ferns as ecological indicators -- Chapter 25. Diversity of ferns and lycophytes at different spatial scales, along environmental gradients and in the anthropogenic landscape -- Chapter 26. PTERIDOPHYTES: EFFECTIVE AGENTS OF PHYTOREMEDIATION -- Chapter 27. Pteridophytes as Effective Biosorption Agents of Heavy Metals -- Chapter 28. *Azolla*'s use as a biofertilizer and livestock feed -- Chapter 29. *Pteridium aquilinum*: a threat for biodiversity, and human and animal health.

Sommario/riassunto

Ferns are representative of genetic inheritance of great value as they include species of ancient vascular plants, which have direct connection with the evolution of plant life on Earth. This volume brings a selection of chapters covering a range of themes on fern biology, its development and growth, useful protocols for propagation and conservation purposes, genetic diversity, as well as medicinal and environmental applications. The content is organized into four parts: Biotechnology of Ferns Propagation of Ferns Ferns in Medicines Environmental Regulation This wide spectrum of the contributions provides quick access to information on the enormous potential of this plant group. This book brings together most recent research work and novel techniques, which is far from the traditional perspective usually followed. It is of interest to teachers, researchers, and botanists. Also the book serves as additional reading material for undergraduate and graduate students of agriculture, botany, forestry, and ecology. .
