

AN OVERVIEW ON THE BIOLOGICAL FAMILY AND THE BENEFITS OF LOTUS

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ABSTRACT

Lotus is an aquatic perennial basal eudicot that belongs to a tiny family with just one genus and two species. It is a significant horticultural plant that has been extensively utilized, particularly in Southeast Asia, for decorative, nutritional, and medicinal purposes. The lotus has recently gotten a lot of attention from the scientific community. A growing number of academic articles devoted to it have been published, shedding insight on the species' secrets. We examined the most recent research on the lotus, including phylogeny, genetics, and the molecular processes behind its distinctive characteristics, as well as its economically significant qualities. Meanwhile, existing limits in lotus research were addressed, and possible future directions were suggested. With the production of germplasm suited for laboratory operation and the construction of a regeneration and transformation system, we think the lotus will become an important model plant in horticulture.

KEYWORDS: *Lotus, Genomics, Medicine, Molecular, Phylogeny.*

REFERENCES:

1. B. Bhushan, "Bioinspired structured surfaces," *Langmuir*, 2012, doi: 10.1021/la2043729.
 2. M. A. Samaha, H. V. Tafreshi, and M. Gad-el-Hak, "Superhydrophobic surfaces: From the lotus leaf to the submarine," *Comptes Rendus - Mec.*, 2012, doi: 10.1016/j.crme.2011.11.002.
 3. Lotus Development Corporation, "Lotus , IBM , and Knowledge Management," *Knowl. Manag.*, 1998.
 4. M. Hashiguchi, J. Abe, T. Aoki, T. Anai, A. Suzuki, and R. Akashi, "The national bioresource project (NBRP) Lotus and Glycine in Japan," *Breeding Science*. 2011, doi: 10.1270/jsbbs.61.453.
 5. K. Koch, B. Bhushan, and W. Barthlott, "Multifunctional surface structures of plants: An inspiration for biomimetics," *Progress in Materials Science*. 2009, doi: 10.1016/j.pmatsci.2008.07.003.
 6. M. A. Samaha and M. Gad-el-Hak, "Polymeric slippery coatings: Nature and applications," *Polymers*. 2014, doi: 10.3390/polym6051266.
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7. K.-Z. Ivanić, Z. Tadić, and M. Omazić, “BIOMIMICRY – AN OVERVIEW,” *Holist. Approach to Environ.*, 2015.
8. F. A. Müller, C. Kunz, and S. Gräf, “Bio-inspired functional surfaces based on laser-induced periodic surface structures,” *Materials*. 2016, doi: 10.3390/ma9060476.
9. S. Nishimoto and B. Bhushan, “Bioinspired self-cleaning surfaces with superhydrophobicity, superoleophobicity, and superhydrophilicity,” *RSC Advances*. 2013, doi: 10.1039/c2ra21260a.
10. A. Fihri, E. Bovero, A. Al-Shahrani, A. Al-Ghamdi, and G. Alabedi, “Recent progress in superhydrophobic coatings used for steel protection: A review,” *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2017, doi: 10.1016/j.colsurfa.2016.12.057.