

Salt-stress Induced Alterations in Protein Profile and Protease Activity in the Mangrove *Bruguiera parviflora*

Asish Kumar Parida^{a,*}, Anath Bandhu Das^{a,b}, Bhabatosh Mittra^c, and Prasanna Mohanty^b

^a National Institute for Plant Biodiversity Conservation and Research, Nayapalli, Bhubaneswar-751015, Orissa, India. Fax: 00-91-674-2550274.
E-mail: asishparida2003@yahoo.com

^b Regional Plant Resource Centre, Nayapalli, Bhubaneswar-751015, Orissa, India

^c Centre for Environmental Management of Degraded Ecosystems, School of Environmental Studies, North Campus, University of Delhi, Delhi 110 007, India

* Author for correspondence and reprint requests

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Two-month-old seedlings of *Bruguiera parviflora* were treated with varying levels of NaCl (100, 200 and 400 mM) under hydroponic culture. Total proteins were extracted from leaves of control and NaCl treated plants after 7, 14, 30 and 45 d of treatment and analysed by SDS-PAGE. As visualized from SDS-PAGE, the intensity of several protein bands of molecular weight 17, 23, 32, 33 and 34 kDa decreased as a result of NaCl treatment. The degree of decrease of these protein bands seemed to be roughly proportional to the external NaCl concentration. The most obvious change concerned a 23 kDa-polypeptide (SSP-23), which disappeared after 45 d treatment in 400 mM NaCl. Moreover, the SSP-23 protein, which disappeared in *B. parviflora* under salinity stress, reappeared when these salinized seedlings were desalinized. These observations suggest the possible involvement of these polypeptides for osmotic adjustment under salt stress. NaCl stress also caused an increase in the activity of both acid and alkaline protease. The increasing activity of proteases functions as a signal of salt stress in *B. parviflora*, which induces the reduction of protein level.

Key words: Hydroponic, Polypeptide, Protease