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近日,由我校农学院院长王化俊教授科研团队于2016年发表在《Frontiers in Plant Science》杂志的研究论文"Comparative Proteomic Analysis of Cultured Suspension Cells of the Halophyte Halogeton glomeratus by iTRAQ Provides Insights into Response Mechanisms to Salt Stress"被Frontiers in Plant Science出版的"PLANTS, STRESS & PROTEINS"(ISBN 978-2-88945-267-5)一书收录并出版。农学院在读博士研究生汪军成、姚立蓉为该论文第一作者。

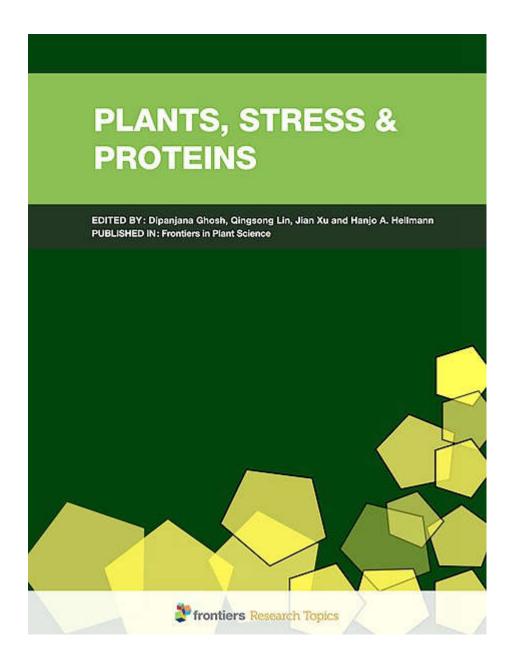
该书由新加坡国立大学Dipanjana Ghosh教授等担任编委,收录了近年来在《Frontiers in Plant Science》杂志发表的从蛋白质组学角度解析植物应对各种非生物胁迫的精选论文共24篇。

非生物胁迫包括高盐、干旱、低温、重金属等,严重影响农作物的生长发育、产量和质量,是当前全球农作物减产的重要因素。因此,如何提高作物在非生物胁迫下的产量水平已成为解决粮食安全问题的热点和难点。蛋白质作为生命活动的重要物质基础,植物在逆境 胁迫适应过程中蛋白质的改变最终调控生理、生化和发育等方面的适应特征。随着现代组学技术迅速发展,通过蛋白质组学手段解析植物 非生物胁迫逆境适应机制已得到广泛应用。

该论文采用iTRAQ定量蛋白质组学技术对我国西北旱区特色耐盐植物盐生草(Halogeton glomeratus)叶片悬浮细胞系的耐盐特性进行了全面分析,并从蛋白质水平解释了其耐盐机理,对后续盐生草耐盐基因发掘与耐盐作物培育提供了理论依据。该研究受到国家973前期研究专项"农业动植物增产调控及抗病机制研究"、国家大麦青稞产业技术体系、甘肃农业大学优博论文培育计划等项目资助。

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