

TALEN and CRISPR strategies for targeted editing of the plant genome

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CORESTA AP2015 - ABSTRACT FORM

Please provide the following information. Title: TALEN and CRISPR strategies for targeted editing of the plant genome Author(s): Principal Marianne Mazier (1) and Fabien Nogué (2). author's name first Author(s) Affiliation(s): (1) INRA-UR1052-GAFL Génétique et Amélioration des Fruits et Légumes. Domaine St Company Maurice. 67 Allée des chênes. CS 60094. 84143 MONTFAVET Cedex. name(s) and (2) INRA UMR1318 IJPB Institut Jean-Pierre Bourgin address(es) Abstract Body (180-300 words): Despite certain political concerns in some countries, transgenesis is already an indispensable technology for seed companies and public scientists to remain competitive at the international level. Recent scientific advances in the field of transgenesis now provide answers to certain reserves of citizens and blur the border between breeding and transgenesis. The advent of nuclease technology opens the way to extremely precise modifications of plant genomes at pre-determined sites. Among the nucleases used until now, transcription activatorlike effector nucleases (TALENs), as well as the clustered regularly interspaced short palindromic repeats/Cas9 (CRISPR/Cas9) system, have proved to be particularly promising, driving to innovative applications near to revolutionise basic research and plant breeding. In this talk, recent developments in the field of targeted genome editing technologies in plant will be covered. **Key Words:** | Targeted plant genome editing; CRISPR, TALEN