This thesis covers the establishment of an essential analytical method (BiFC) which was used to study protein-protein interactions in normal growing *Nicotiana tabacum* pollen tubes and the functional characterization of two Nt-Rac5 interactors, Nt-Risap and Nt-Ric. The results suggest that both Nt-Risap and Nt-Ric are act as effector of Nt-Rac5 in a signaling pathway with an important function in the regulation of pollen tube tip growth.

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ISSN 1652-6880

ISBN (print version) 978-91-576-8412-7

ISBN (electronic version) 978-91-576-8413-4