

qualitative antimicrobial assay indicated that the recombinant XvIPR10 could inhibit growth of the plant pathogen, *Pseudomonas syringae*. Differential expression of XvIPR10 during dehydration stress was assessed at the transcriptional level by quantitative real time polymerase chain reaction. It was found that the gene transcript increases by up to 14 fold in relation to non-stressed, hydrated *X. viscosa*. Transient expression of XvIPR10 in onion epidermal cells using a yellow fluorescent protein fusion construct suggested that XvIPR10 localises to the cytoplasm and nucleus. The functional role of the protein during abiotic stress is unknown but the protein could have a role in endogenous RNA breakdown during drought and/or protect the plant from pathogen infection.

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In vitro* propagation of *Dierama erectum

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Dierama erectum Hilliard (*Iridaceae*) is a species with horticultural potential and medicinal value. Its corms are used as a remedy for venereal diseases and its long tough leaves are used as cordage. Seeds collected from the wild are however frequently attacked by bruchid beetles (*Urodon lili*) thus creating a problem with cultivation. Micropropagation techniques were thus investigated with the intention of rapidly propagating this species. Seeds were decontaminated and germinated on one-tenth strength Murashige and Skoog (MS) medium devoid of hormones and sucrose. The highest percentage decontamination was obtained when 0.2% HgCl₂ was used for 20 min. Leaves, hypocotyls and roots were cultured with various concentrations of α -naphthaleneacetic acid (NAA) and N⁶-benzylaminopurine (BA). Shoot induction from hypocotyl explants was achieved in the presence of a cytokinin (BA) with or without auxin (NAA). Root explants only continued elongating. Leaf explants showed no response at all hormone concentrations used. Effects of different types and concentrations of cytokinins (kinetin, zeatin, BA and *meta*-topolin) with or without NAA and varied sucrose levels are being tested on organogenesis of *D. erectum*.

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Floristic links between the West Coast and South Coast (South Africa) - is the Breede River Valley a migration route?

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The Breede River Valley (BRV) (characterized by remarkably heterogenic landscapes) comprises several distinct vegetation types which support highly diverse floras. Moreover, this unique river valley forms a lowland link between the western and southern coastal lowland regions of Greater Capensis. Several affinities of this valley with the bordering coastal regions induced the hypothesis that the BRV might have functioned as a migration corridor for plants between the West Coast and South Coast. The main aim of this research is to characterize the patterns of floristic and vegetation diversity in the BRV through a large scale diversity assessment. In particular, vegetation types that are shared between the BRV, West and South coasts (Shale Renosterveld, Sand Fynbos and Saline vegetation units) are being investigated and compared in terms of alpha diversity, beta diversity, species composition overlap and endemism. These should enable the identification of specific habitat corridors that specific plants could have utilized for migrations. To assist in the identification of a migration corridor, and migration directionality, the spatial distribution of genetic variation for populations of plant taxa with known distribution ranges that spans the BRV and both the particular coastal regions have been assessed. These include *Oxalis pardalis*, typical of Shale Renosterveld, *Brunsvigia orientalis*, typical of Sand Fynbos and *Sarcocornia pillansii*, a typical species occurring in saline vegetation.

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Prioritising areas for the management of invasive alien plants in the CFR: different strategies, different priorities?

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The spatial prioritisation, i.e. the selection of areas which should be cleared and managed first, is one of the central problems in managing invasive alien plants (IAPs) in a situation with limited financial and human resources. We developed, together with managers and other scientists, a prioritisation scheme for management of IAPs, which is presented in the poster "Identifying priority areas for the management of invasive alien plants in the Cape Floristic Region". Although the principal approach of selecting factors which have to be considered when prioritising areas for IAP management, as well as assigning weights to them is widely accepted, the factor weights have to be seen as a compromise and strong diverging opinions exist on their validity. Therefore, we need to investigate how robust these spatial priorities are and how strong they are influenced by changes in these weights. To address this important question, we developed, based on our base scenario which is described in the poster, several alternative prioritisation scenarios, which differ in the respective weights of the factors, plus a null model which consists of random priorities. For each