

Final Report

Towards the understanding of longevity of chlorophyllous systems in the dry state: physiology, composition and structural biology

Report about visit and future plans

Dr. Ballesteros gave a talk at the Department of Botany on seed longevity and structural biology on the 06th Dec. Afterwards, we discussed the whole day about funding options for collaboration among UK (Kew-CSB-Dani), Spain (University Basque Country-Bea), Austria (Thomas-Isle group in Innsbruck). Our main interests have some overlapping (highlighted in yellow) but we also have unique approaches:

Dani Ballesteros (RBG Kew, UK)	Seed/propagule physiology	Structural biology/biophysics	Stress biology (e.g. cryopreservation)
Thomas Roach (Innsbruck, Austria)	Seed physiology	Photoprotection	Red-ox biology
Bea (Basque, Spain)	Wide group of plants (some focus on cryptograms)	photochemistry	Stress biology (e.g. environment)

Collaboration can be started through small experiments that could lead to common publications. These publications are needed to strength the relationship among the group when applying to grants. Some publications from previous works between Spain/UK, UK/Austria and Austria/Spain are on their way for 2019 (some in prep). We also discussed about cryopreservation options for [the algae collection hold in vitro in Innsbruck](#). Dani will contact John Day and other colleagues in the UK to find options that could lead to some funding. We would need funding for the cryopreservation process but also for the sequencing work needed to characterize and classify most of the collection. It is discussed if students (MSc?) could be used for part of this work. This is maybe something that could be covered in The Kew Cryosphere umbrella.

As group, our best options are the Horizon 2020 program, mainly through ITN (January 2019) or RISE (April 2019). For the ITN we need to build a multidisciplinary and multisector group (we need private sector!). RISE is not ideal as it is just for staff mobility. Regarding ITN, we briefly discussed about this area:

