**Title**

Microclimatic variation regulates seed germination phenology in alpine plant communities.

**Author list**

Espinosa del Alba, C.1, Fernández-Pascual, E1. & Jiménez-Alfaro, B1.

Clara Espinosa Del Alba. Biodiversity Research Institute, IMIB (Univ. Oviedo-CSIC-Princ. Asturias), 33600 Mieres, Spain. Email: [espinosaclara@uniovi.es](mailto:espinosaclara@uniovi.es)

Eduardo Fernández-Pascual. Biodiversity Research Institute, IMIB (Univ. Oviedo-CSIC-Princ. Asturias), 33600 Mieres, Spain. Email: fernandezpeduardo@uniovi.es

Borja Jiménez-Alfaro. Biodiversity Research Institute, IMIB (Univ. Oviedo-CSIC-Princ. Asturias), 33600 Mieres, Spain. Email: jimenezalfaro@uniovi.es

**Correspondence author**

Clara Espinosa Del Alba. Email: [espinosaclara@uniovi.es](mailto:espinosaclara@uniovi.es)

**Acknowledgements**

We are grateful to Sara Alberdi and Víctor González for their help in laboratory work. We also thank Lars Goetzenberger for commenting an earlier version of the manuscript, and the Picos de Europa National Park for support in field sampling. This research was funded by the Spanish Research Agency (AEI/10.13039/501100011033), SEEDALP: Seed ecological spectrum of alpine plant communities (MCI-20-PID2019-108636GA-I00) and MCI-21-PRE2020-092874.

**Author contributions**

BJA designed the research project. CEA, BJA and EFP did the fieldwork. CEA conducted the germination experiments in the laboratory and in the field. CEA and EFP analysed the data. CEA wrote the first draft of the manuscript. All authors revised the manuscript and agreed on the final version.

**Data availability statement**

The data that support the findings of this study is available in the Supporting Information of this article and raw data and R script for analysis are available in GitHub, once the manuscript is accepted GitHub repository will be public and stored in Zenodo.

**Conflict of interest statement**

None declared.