

Supplementary Information

Life on the dry side: A roadmap to understanding desiccation tolerance and accelerating translational applications

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Table S1: Essential organismal metadata

Category	Variable
Study organism	species, cell line, accession number (if applicable), ecotype, genotype, sex
Growth conditions	field collections: location, season, habitat description; lab conditions: temperature, relative humidity, vapor pressure deficit, light, soil, growth media
Sampling	tissue type, age, developmental stage, timepoint, water status, relevant physiology (e.g., photosynthesis, metabolism), replicate number, mass
Verification of desiccation recovery or survival	resumption of metabolism, photosynthesis, or growth and reproduction

Table S2: Databases for open access and interoperable data storage

Datatype	Database URL	Notes
Microscopy	https://www.ebi.ac.uk/bioimage-archive/ https://www.ebi.ac.uk/empirar/	Bioimage archive for light microscopy images; Electron microscopy data bank for electron micrograph datasets
Proteomics	https://www.ebi.ac.uk/pride/	Proteomics identification database
Metabolomics	https://www.ebi.ac.uk/metaboligh	MetaboLights recommended

	ts/; http://www.metabolomexchange.org/site/ https://gnps.ucsd.edu/ProteoSAFe/static/gnps-splash.jsp	for data submission; Metabolights and other repositories searchable at MetabolomeXchange; GPNS for mass spectrometry data
Sequencing	https://www.ncbi.nlm.nih.gov/sra	Sequence read archive
Assembled genomes	https://ncbi.nlm.nih.gov/genome	Genome archive
All data	https://zenodo.org/	Repository for all datatypes, useful when more specialized data repositories do not exist but not ideal for findability or interoperability

Table S3: Relevant standards and guidelines for reporting data and metadata

Reporting guidelines topic	URL	Notes
Plant phenotyping experiments	https://www.miappe.org/	Suitable for phenotyping experiments of non-plant anhydrobiotes as well
Image acquisition, analysis, and publishing standards	https://doi.org/10.1038/s41592-023-01987-9	Community-developed checklists for publishing images and image analyses
Proteomics	https://www.psidev.info/miappe	Minimum information about proteomics experiments
Reporting guidelines for mass spectrometry-based metabolomics	https://doi.org/10.1038/s41592-021-01197-1	Includes guidance for annotation and quantification
Reporting guidelines for bulk RNA sequencing	https://www.encodeproject.org/data-standards/rna-seq/long-rnas/	Data standards and processing pipeline
Reporting guidelines for assembled genome submission	https://www.ncbi.nlm.nih.gov/genbank/genomesubmit/	Creation of a BioProject or BioSample is required prior to genome submission.