Glutathione half-cell reduction potential: a universal stress marker and modulator of programmed cell death?

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#	Paper	IF	Citations
261	Response to copper stress in aposymbiotically grown lichen mycobiont Cladonia cristatella: uptake, viability, ergosterol and production of non-protein thiols. **2006**, 110, 994-9		28
260	Two-hundred-year seed survival of Leucospermum and two other woody species from the Cape Floristic region, South Africa. *Seed Science Research*, **2007**, 17, 73-79	1.3	32
259	Antioxidant gene responses to ROS-generating xenobiotics in developing and germinated scutella of maize. *Journal of Experimental Botany*, **2007**, 58, 1301-12	7	46
258	Ascorbate and glutathione metabolism during development and desiccation of orthodox and recalcitrant seeds of the genus Acer. **2007**, 34, 601-613		40
257	Conditional oxidative stress responses in the Arabidopsis photorespiratory mutant cat2 demonstrate that redox state is a key modulator of daylength-dependent gene expression, and define photoperiod as a crucial factor in the regulation of H2O2-induced cell death. *Plant Journal*, **2007**, 52, 640-57	6.9	327
256	Redox-sensitive GFP in Arabidopsis thaliana is a quantitative biosensor for the redox potential of the cellular glutathione redox buffer. *Plant Journal*, **2007**, 52, 973-86	6.9	350
255	Butenolide from plant-derived smoke enhances germination and seedling growth of arable weed species. **2007**, 51, 73-82		102
254	H2O2 production and antioxidant responses in seeds and early seedlings of two different rice varieties exposed to aluminum. **2007**, 52, 91-100		50
253	Desiccation tolerance in red and green gametophytes of Jamesoniella colorata in relation to photoprotection. *Planta*, **2008**, 227, 1301-10	4.7	9
252	Desiccation-Tolerance in Lichens: A Review. **2008**, 111, 576-593		227
251	An oxidative burst of superoxide in embryonic axes of recalcitrant sweet chestnut seeds as induced by excision and desiccation. *Physiologia Plantarum*, **2008**, 133, 131-9	4.6	62
250	Oxidative signaling in seed germination and dormancy. **2008**, 3, 175-82		240
249	Assessment of variation in seed longevity within rye, wheat and the intergeneric hybrid triticale. *Seed Science Research*, **2009**, 19, 213-224	1.3	26
248	Redox regulation in photosynthetic organisms: signaling, acclimation, and practical implications. **2009**, 11, 861-905		1030
247	Smoke-derived butenolide: Towards understanding its biological effects. **2009**, 75, 1-7		91
246	Glutathione as an Antioxidant and Regulatory Molecule in Plants Under Abiotic Stress Conditions. **2009**, 28, 66-80		282
245	Extracellular superoxide production, viability and redox poise in response to desiccation in recalcitrant Castanea sativa seeds. *Plant, Cell and Environment*, **2010**, 33, 59-75	8.4	72

244	The mechanisms involved in seed dormancy alleviation by hydrogen cyanide unravel the role of reactive oxygen species as key factors of cellular signaling during germination. *Plant Physiology*, **2009**, 150, 494-505	6.6	216
243	Differential rates of glutathione oxidation for assessment of cellular redox status and antioxidant capacity by capillary electrophoresis-mass spectrometry: an elusive biomarker of oxidative stress. **2009**, 81, 7047-56		45
242	The science and economics of ex situ plant conservation. **2009**, 14, 614-21		305
241	Phytic acid prevents oxidative stress in seeds: evidence from a maize (Zea mays L.) low phytic acid mutant. *Journal of Experimental Botany*, **2009**, 60, 967-78	7	99
240	Regulatory Role of Components of Ascorbate□Glutathione Pathway in Plant Stress Tolerance. **2010**, 1-53		9
239	Redox buffer capacity of the cell: theoretical and experimental approach. **2010**, 58, 75-83		16
238	Arsenic accumulation and thiol status in lichens exposed to As(V) in controlled conditions. **2010**, 23, 207-19		9
237	Changes in H2O2 content and antioxidant enzyme gene expression during the somatic embryogenesis of Larix leptolepis. **2010**, 100, 21-29		56
236	Desiccation tolerant plants as model systems to study redox regulation of protein thiols. **2010**, 62, 241-255		77
235	Ascorbate and glutathione metabolism during development and desiccation of beech (Fagus sylvatica L.) seeds. **2010**, 62, 77-83		6
234	The use of aeroponics to investigate antioxidant activity in the roots of Xerophyta viscosa. **2010**, 62, 203-211		8
233	Oxidative stress responses and lipid peroxidation damage are induced during dehydration in the production of dry active wine yeasts. **2010**, 136, 295-303		62
232	Glutathione half-cell reduction potential as a seed viability marker of the potential oilseed crop Vernonia galamensis. **2010**, 32, 687-691		13
231	The cellular redox state in plant stress biology--a charging concept. *Plant Physiology and Biochemistry*, **2010**, 48, 292-300	5.4	170
230	Proteomics reveal tissue-specific features of the cress (Lepidium sativum L.) endosperm cap proteome and its hormone-induced changes during seed germination. **2010**, 10, 406-16		41
229	What is stress? Concepts, definitions and applications in seed science. **2010**, 188, 655-73		287
228	Tocochromanols: rancid lipids, seed longevity, and beyond. **2010**, 107, 17857-8		13
227	Noninvasive diagnosis of seed viability using infrared thermography. **2010**, 107, 3912-7		51

226	Characterization of volatile production during storage of lettuce (Lactuca sativa) seed. *Journal of Experimental Botany*, **2010**, 61, 3915-24	7	40
225	Peroxidases identified in a subtractive cDNA library approach show tissue-specific transcript abundance and enzyme activity during seed germination of Lepidium sativum. *Journal of Experimental Botany*, **2010**, 61, 491-502	7	26
224	Glutathione half-cell reduction potential and □-tocopherol as viability markers during the prolonged storage of Suaeda maritima seeds. *Seed Science Research*, **2010**, 20, 47-53	1.3	32
223	Seed Development and Germination in an Arabidopsis thaliana Line Antisense to Glutathione Reductase 2. **2010**, 11, 104-126		4
222	Antioxidant defence and inflammatory response in professional road cyclists during a 4-day competition. **2010**, 28, 1047-56		22
221	Glutathione and Herbicide Resistance in Plants. **2010**, 191-207		6
220	Homoglutathione synthetase and glutathione synthetase in drought-stressed cowpea leaves: expression patterns and accumulation of low-molecular-weight thiols. *Journal of Plant Physiology*, **2010**, 167, 480-7	3.6	16
219	Structural mechanics of seed deterioration: Standing the test of time. **2010**, 179, 565-573		98
218	Differential metabolomics for quantitative assessment of oxidative stress with strenuous exercise and nutritional intervention: thiol-specific regulation of cellular metabolism with N-acetyl-L-cysteine pretreatment. **2010**, 82, 2959-68		68
217	Catalase function in plants: a focus on Arabidopsis mutants as stress-mimic models. *Journal of Experimental Botany*, **2010**, 61, 4197-220	7	525
216	Ascorbate-Glutathione Pathway and Stress Tolerance in Plants. **2010**,		50
215	Arabidopsis GLUTATHIONE REDUCTASE1 plays a crucial role in leaf responses to intracellular hydrogen peroxide and in ensuring appropriate gene expression through both salicylic acid and jasmonic acid signaling pathways. *Plant Physiology*, **2010**, 153, 1144-60	6.6	271
214	First off the mark: early seed germination. *Journal of Experimental Botany*, **2011**, 62, 3289-309	7	443
213	Analyses of reactive oxygen species and antioxidants in relation to seed longevity and germination. **2011**, 773, 343-67		41
212	Mathematically combined half-cell reduction potentials of low-molecular-weight thiols as markers of seed ageing. **2011**, 45, 1093-102		33
211	Catalase is a key enzyme in seed recovery from ageing during priming. **2011**, 181, 309-15		116
210	Glutathione. **2011**, 9, e0142		160
209	Proteome analysis of maize seeds: the effect of artificial ageing. *Physiologia Plantarum*, **2011**, 143, 126-38	4.6	51

208	Increased intracellular H□ availability preferentially drives glutathione accumulation in vacuoles and chloroplasts. *Plant, Cell and Environment*, **2011**, 34, 21-32	8.4	124
207	Crosstalk between reactive oxygen species and hormonal signalling pathways regulates grain dormancy in barley. *Plant, Cell and Environment*, **2011**, 34, 980-993	8.4	126
206	Differential drying rates of recalcitrant Trichilia dregeana embryonic axes: a study of survival and oxidative stress metabolism. *Physiologia Plantarum*, **2011**, 142, 326-38	4.6	24
205	Ascorbate and glutathione: the heart of the redox hub. *Plant Physiology*, **2011**, 155, 2-18	6.6	1526
204	Inter-nucleosomal DNA fragmentation and loss of RNA integrity during seed ageing. **2011**, 63, 63-72		53
203	Wet-dry cycling extends seed persistence by re-instating antioxidant capacity. **2011**, 338, 511-519		25
202	Glutathione synthesis is essential for pollen germination in vitro. **2011**, 11, 54		50
201	An Overview of the Current Understanding of Desiccation Tolerance in the Vegetative Tissues of Higher Plants. *Advances in Botanical Research*, **2011**, 319-347	2.2	19
200	Oxidative stress induces distinct physiological responses in the two Trebouxia phycobionts of the lichen Ramalina farinacea. **2011**, 107, 109-18		48
199	The reduction of seed-specific dehydrins reduces seed longevity in Arabidopsis thaliana. *Seed Science Research*, **2011**, 21, 165-173	1.3	67
198	DNA alteration and programmed cell death during ageing of sunflower seed. *Journal of Experimental Botany*, **2011**, 62, 5003-11	7	66
197	Volatile fingerprints of seeds of four species indicate the involvement of alcoholic fermentation, lipid peroxidation, and Maillard reactions in seed deterioration during ageing and desiccation stress. *Journal of Experimental Botany*, **2012**, 63, 6519-30	7	45
196	The soluble proteome of tobacco Bright Yellow-2 cells undergoing H□-induced programmed cell death. *Journal of Experimental Botany*, **2012**, 63, 3137-55	7	14
195	Glutathione is a key player in metal-induced oxidative stress defenses. *International Journal of Molecular Sciences*, **2012**, 13, 3145-75	6.3	486
194	Antioxidants in Festuca rubra L. seeds affected by the fungal symbiont Epichlo□ festucae. **2012**, 58, 73-80		13
193	Redox state of low-molecular-weight thiols and disulphides during somatic embryogenesis of salt-treated suspension cultures of Dactylis glomerata L. **2012**, 46, 656-64		22
192	Oxidative stress-induced autophagy in plants: the role of mitochondria. *Plant Physiology and Biochemistry*, **2012**, 59, 11-9	5.4	83
191	Seed storage in polyethylene bags of a recalcitrant species (Quercus ilex): analysis of some bio-energetic and oxidative parameters. **2012**, 34, 1963-1974		11

190	A Systems-Based Molecular Biology Analysis of Resurrection Plants for Crop and Forage Improvement in Arid Environments. **2012**, 399-418		6
189	Is there an important role for reactive oxygen species and redox regulation during floral senescence?. *Plant, Cell and Environment*, **2012**, 35, 217-33	8.4	56
188	Redox regulation in plant programmed cell death. *Plant, Cell and Environment*, **2012**, 35, 234-44	8.4	163
187	Glutathione in plants: an integrated overview. *Plant, Cell and Environment*, **2012**, 35, 454-84	8.4	931
186	Spatial and temporal nature of reactive oxygen species production and programmed cell death in elm (Ulmus pumila L.) seeds during controlled deterioration. *Plant, Cell and Environment*, **2012**, 35, 2045-59	8.4	58
185	Galactone-□actone-dependent ascorbate biosynthesis alters wheat kernel maturation. **2012**, 14, 652-8		26
184	Nitric oxide and hydrogen cyanide as regulating factors of enzymatic antioxidant system in germinating apple embryos. **2012**, 34, 683-692		34
183	Can Biospecimen Science Expedite the Ex Situ Conservation of Plants in Megadiverse Countries? A Focus on the Flora of Brazil. **2013**, 32, 411-444		12
182	Glutathione regulates enzymatic antioxidant defence with differential thiol content in perennial pepperweed and helps adapting to extreme environment. **2013**, 35, 2501-2511		19
181	The effect of combined salinity and waterlogging on the halophyte Suaeda maritima: The role of antioxidants. *Environmental and Experimental Botany*, **2013**, 87, 120-125	5.9	52
180	Redox changes accompanying storage protein mobilization in moist chilled and warm incubated walnut kernels prior to germination. *Journal of Plant Physiology*, **2013**, 170, 6-17	3.6	6
179	From top-down to bottom-up: computational modeling approaches for cellular redoxin networks. **2013**, 18, 2075-86		19
178	The concentration of glutathione in human erythrocytes is a heritable trait. *Free Radical Biology and Medicine*, **2013**, 65, 742-749	7.8	58
177	Biomarkers from Molecules to Ecosystems and Biobanks to Genebanks. **2013**, 121-133		
176	The role of nitric oxide and hemoglobin in plant development and morphogenesis. *Physiologia Plantarum*, **2013**, 148, 457-69	4.6	39
175	A central role for thiols in plant tolerance to abiotic stress. *International Journal of Molecular Sciences*, **2013**, 14, 7405-32	6.3	282
174	Nitric oxide affects salt-induced changes in free amino acid levels in maize. *Journal of Plant Physiology*, **2013**, 170, 1020-7	3.6	14
173	Metabolism of glutathione and ascorbate in lingonberry cultivars during in vitro and ex vitro propagation. **2013**, 57, 603-612		13

172	Drought induced programmed cell death and associated changes in antioxidants, proteases, and lipid peroxidation in wheat leaves. **2013**, 57, 370-374		51
171	A regulatory network-based approach dissects late maturation processes related to the acquisition of desiccation tolerance and longevity of Medicago truncatula seeds. *Plant Physiology*, **2013**, 163, 757-74	6.6	119
170	Transcriptome-wide mapping of pea seed ageing reveals a pivotal role for genes related to oxidative stress and programmed cell death. *PLoS ONE*, **2013**, 8, e78471	3.7	48
169	The Effect of Seed Priming and Accelerated Aging on Germination and Physiochemical Changes in Milk Thistle (Silybum marianum). **2013**, 5, 204-211		5
168	Re-induction of desiccation tolerance after germination of Cedrela fissilis Vell. seeds. **2014**, 86, 1273-86		6
167	Antioxidant defense parameters as predictive biomarkers for fermentative capacity of active dried wine yeast. **2014**, 9, 1055-64		21
166	Side-effects of domestication: cultivated legume seeds contain similar tocopherols and fatty acids but less carotenoids than their wild counterparts. **2014**, 14, 1599		39
165	Metabolomic analysis on the toxicological effects of TiO_2 nanoparticles in mouse fibroblast cells: from the perspective of perturbations in amino acid metabolism. **2014**, 24, 461-9		42
164	Changes in protein thiols in response to salt stress in embryogenic suspension cultures of L. **2014**, 28, 616-621		4
163	Prolonged exposure to elevated temperature induces floral transition via up-regulation of cytosolic ascorbate peroxidase 1 and subsequent reduction of the ascorbate redox ratio in Oncidium hybrid orchid. **2014**, 55, 2164-76		13
162	Involvement of the electrophilic isothiocyanate sulforaphane in Arabidopsis local defense responses. *Plant Physiology*, **2015**, 167, 251-61	6.6	33
161	Factors influencing the storability of Fagus sylvatica L. seeds after release from dormancy. **2014**, 72, 17-27		7
160	Innovative approaches to the preservation of forest trees. **2014**, 333, 88-98		62
159	Role of Glutathione in Abiotic Stress Tolerance. **2014**, 149-181		9
158	The fluxes of H2O2 and O2 can be used to evaluate seed germination and vigor of Caragana korshinskii. *Planta*, **2014**, 239, 1363-73	4.7	12
157	Central role of the flowering repressor ZCCT2 in the redox control of freezing tolerance and the initial development of flower primordia in wheat. **2014**, 14, 91		19
156	Hydrogen sulfide delays GA-triggered programmed cell death in wheat aleurone layers by the modulation of glutathione homeostasis and heme oxygenase-1 expression. *Journal of Plant Physiology*, **2014**, 171, 53-62	3.6	97
155	Campomanesia adamantium (Cambess.) O. Berg seed desiccation: influence on vigor and nucleic acids. **2015**, 87, 2217-28		11

154	Identification of Leaf Proteins Differentially Accumulated between Wheat Cultivars Distinct in Their Levels of Drought Tolerance. *PLoS ONE*, **2015**, 10, e0125302	3.7	49
153	Early perturbation in mitochondria redox homeostasis in response to environmental stress predicts cell fate in diatoms. **2015**, 9, 385-95		47
152	Metabolomic and transcriptomic insights into how cotton fiber transitions to secondary wall synthesis, represses lignification, and prolongs elongation. **2015**, 16, 477		54
151	Involvement of thiol-based mechanisms in plant development. **2015**, 1850, 1479-96		67
150	The production, localization and spreading of reactive oxygen species contributes to the low vitality of long-term stored common beech (Fagus sylvatica L.) seeds. *Journal of Plant Physiology*, **2015**, 174, 147-56	3.6	40
149	Impact of ozone on the viability and antioxidant content of grass seeds is affected by a vertically transmitted symbiotic fungus. *Environmental and Experimental Botany*, **2015**, 113, 40-46	5.9	15
148	Die or survive? Redox changes as seed viability markers. *Plant, Cell and Environment*, **2015**, 38, 1008-10	8.4	14
147	Towards a better monitoring of seed ageing under ex situ seed conservation. **2015**, 3, cov026		58
146	Inference of Longevity-Related Genes from a Robust Coexpression Network of Seed Maturation Identifies Regulators Linking Seed Storability to Biotic Defense-Related Pathways. **2015**, 27, 2692-708		80
145	ROS-induced oxidative stress and apoptosis-like event directly affect the cell viability of cryopreserved embryogenic callus in Agapanthus praecox. **2015**, 34, 1499-513		62
144	Redox Regulation and Antioxidant Defence During Abiotic Stress: What Have We Learned from Arabidopsis and Its Relatives?. **2015**, 83-113		7
143	Glutathione redox state, tocochromanols, fatty acids, antioxidant enzymes and protein carbonylation in sunflower seed embryos associated with after-ripening and ageing. **2015**, 116, 669-78		41
142	The role of oxidative stress in determining the level of viability of black poplar (Populus nigra) seeds stored at different temperatures. **2015**, 42, 630-642		13
141	Reactive oxygen species-provoked mitochondria-dependent cell death during ageing of elm (Ulmus pumila L.) seeds. *Plant Journal*, **2015**, 81, 438-52	6.9	50
140	The ecophysiology of seed persistence: a mechanistic view of the journey to germination or demise. **2015**, 90, 31-59		237
139	Genome-wide association mapping and biochemical markers reveal that seed ageing and longevity are intricately affected by genetic background and developmental and environmental conditions in barley. *Plant, Cell and Environment*, **2015**, 38, 1011-22	8.4	68
138	Nitric Oxide and Reactive Oxygen Species Mediate Metabolic Changes in Barley Seed Embryo during Germination. *Frontiers in Plant Science*, **2016**, 7, 138	6.2	46
137	The Associative Changes in Scutellum Nuclear Content and Morphology with Viability Loss of Naturally Aged and Accelerated Aging Wheat () Seeds. *Frontiers in Plant Science*, **2016**, 7, 1474	6.2	9

136	Organelle redox autonomy during environmental stress. *Plant, Cell and Environment*, **2016**, 39, 1909-19	8.4	31
135	Metabolic Responses of Pesticides in Plants and Their Ameliorative Processes. **2016**, 57-95		3
134	Ascorbate Glutathione Cycle: Controlling the Redox Environment for Drought Tolerance. **2016**, 187-226		5
133	Compartment-specific investigations of antioxidants and hydrogen peroxide in leaves of during dark-induced senescence. **2016**, 38, 133		20
132	The role of reactive oxygen species and antioxidants during precooling stages of axis cryopreservation in recalcitrantTrichilia dregeana. **2016**, 94, 391-403		4
131	Volatile emission in dry seeds as a way to probe chemical reactions during initial asymptomatic deterioration. *Journal of Experimental Botany*, **2016**, 67, 1783-93	7	25
130	Glyoxylate cycle and metabolism of organic acids in the scutellum of barley seeds during germination. **2016**, 248, 37-44		23
129	Germination associated ROS production and glutathione redox capacity in two recalcitrant-seeded species differing in seed longevity. **2016**, 94, 1103-1114		15
128	Proteomic analysis of S-nitrosylated and S-glutathionylated proteins in wheat seedlings with different dehydration tolerances. *Plant Physiology and Biochemistry*, **2016**, 108, 507-518	5.4	18
127	Glutathione-Related Enzyme System: Glutathione Reductase (GR), Glutathione Transferases (GSTs) and Glutathione Peroxidases (GPXs). **2016**, 137-158		8
126	ABI5 Is a Regulator of Seed Maturation and Longevity in Legumes. **2016**, 28, 2735-2754		62
125	Modulation of host ROS metabolism is essential for viral infection of a bloom-forming coccolithophore in the ocean. **2016**, 10, 1742-54		58
124	Changes in the reduction state of ascorbate and glutathione, protein oxidation and hydrolysis leading to the development of dehydration intolerance in Triticum aestivum L. seedlings. **2016**, 79, 287-297		25
123	Analyses of several seed viability markers in individual recalcitrant seeds of Eugenia stipitata McVaugh with totipotent germination. **2017**, 19, 6-13		11
122	Heat stress induces ferroptosis-like cell death in plants. **2017**, 216, 463-476		94
121	Variation of desiccation tolerance and longevity in fern spores. *Journal of Plant Physiology*, **2017**, 211, 53-62	3.6	18
120	Exceptional flooding tolerance in the totipotent recalcitrant seeds of Eugenia stipitata. *Seed Science Research*, **2017**, 27, 121-130	1.3	5
119	Changes in low-molecular-weight thiol-disulphide redox couples are part of bread wheat seed germination and early seedling growth. **2017**, 51, 568-581		19

118	Acanthus ilicifolius L. a promising candidate for phytostabilization of zinc. **2017**, 189, 282		19
117	Implications of the fatty acids and carbohydrate variation during maturation upon Poincianella pluviosa (sibipiruna) seeds storability. **2017**, 40, 93-101		4
116	Monitoring of oxidative status in three native Australian species during cold acclimation and cryopreservation. **2017**, 36, 1903-1916		7
115	Dead or Alive? Using Membrane Failure and Chlorophyll Fluorescence to Predict Plant Mortality from Drought. *Plant Physiology*, **2017**, 175, 223-234	6.6	39
114	Active oxygen species metabolism in neem (Azadirachta indica) seeds exposed to natural ageing and controlled deterioration. **2017**, 39, 1		5
113	Chemistry, Biosynthesis, and Antioxidative Function of Glutathione in Plants. **2017**, 1-27		3
112	Glutathione Reductase and Abiotic Stress Tolerance in Plants. **2017**, 265-286		10
111	Involvement of Thiol-Based Mechanisms in Plant Growth, Development, and Stress Tolerance. **2017**, 59-98		1
110	Plant Glutathione Peroxidases: Structural and Functional Characterization, Their Roles in Plant Development. **2017**, 99-111		
109	Adaptive Mechanisms of Desiccation Tolerance in Resurrection Plants. **2017**, 29-75		2
108	Biology of Seed Vigor in the Light of -omics Tools. **2017**,		2
107	Seed Carotenoid and Tocochromanol Composition of Wild Fabaceae Species Is Shaped by Phylogeny and Ecological Factors. *Frontiers in Plant Science*, **2017**, 8, 1428	6.2	17
106	A Proteomic Approach to Investigate the Drought Response in the Orphan Crop Eragrostis tef. **2017**, 5,		14
105	Uncovering the basis of viability loss in desiccation sensitive Trichilia dregeana seeds using differential quantitative protein expression profiling by iTRAQ. *Journal of Plant Physiology*, **2018**, 221, 119-131	3.6	5
104	A comparison of partial dehydration and hydrated storage-induced changes in viability, reactive oxygen species production, and glutathione metabolism in two contrasting recalcitrant-seeded species. **2018**, 40, 1		0
103	The effect of a doubled glutathione level on parameters affecting the germinability of recalcitrant Acer saccharinum seeds during drying. *Journal of Plant Physiology*, **2018**, 223, 72-83	3.6	18
102	Comprehensive analysis of antioxidant mechanisms in Arabidopsis glutathione peroxidase-like mutants under salt- and osmotic stress reveals organ-specific significance of the AtGPXL8 activities. *Environmental and Experimental Botany*, **2018**, 150, 127-140	5.9	18
101	Aluminium Induced Glutathione is Essential for Developing Resistance Against Fusarium Infection in Wheat. **2018**, 88, 721-728		2

100	Ozone and desiccation tolerance in chlorolichens are intimately connected: a case study based on two species with different ecology. **2018**, 25, 8089-8103		8
99	Redox poise and metabolite changes in bread wheat seeds are advanced by priming with hot steam. **2018**, 475, 3725-3743		10
98	TUNEL Assay and DAPI Staining Revealed Few Alterations of Cellular Morphology in Naturally and Artificially Aged Seeds of Cultivated Flax. *Plants*, **2018**, 7,	4.5	4
97	Circadian Rhythms and Redox State in Plants: Till Stress Do Us Part. *Frontiers in Plant Science*, **2018**, 9, 247	6.2	19
96	Analyzing the Function of Catalase and the Ascorbate-Glutathione Pathway in HO Processing: Insights from an Experimentally Constrained Kinetic Model. **2019**, 30, 1238-1268		21
95	The Occurrence of Peroxiredoxins and Changes in Redox State in Acer platanoides and Acer pseudoplatanus During Seed Development. **2019**, 38, 298-314		10
94	Loss of genetic integrity in artificially aged seed lots of rice (Oryza sativa L.) and common bean (Phaseolus vulgaris L.). **2019**, 846, 403080		7
93	Oxidative Stress and Antioxidant Defense in Germinating Seeds. **2019**, 267-289		1
92	Oxidative Stress and Antioxidant Defense Under Combined Waterlogging and Salinity Stresses. **2019**, 113-142		0
91	Overexpression of the Arabidopsis glutathione peroxidase-like 5 gene (AtGPXL5) resulted in altered plant development and redox status. *Environmental and Experimental Botany*, **2019**, 167, 103849	5.9	8
90	Plant Glutathione Transferases and Light. *Frontiers in Plant Science*, **2018**, 9, 1944	6.2	30
89	Reactive Oxygen Species as Potential Drivers of the Seed Aging Process. *Plants*, **2019**, 8,	4.5	52
88	Characterization of physiochemical and anatomical features associated with enhanced phytostabilization of copper in (L.) Blume. **2019**, 21, 1423-1441		18
87	Wheat seed ageing viewed through the cellular redox environment and changes in pH. **2019**, 53, 641-654		12
86	Regulation of thiol metabolism as a factor that influences the development and storage capacity of beech seeds. *Journal of Plant Physiology*, **2019**, 239, 61-70	3.6	6
85	Dormancy removal by cold stratification increases glutathione and S-nitrosoglutathione content in apple seeds. *Plant Physiology and Biochemistry*, **2019**, 138, 112-120	5.4	7
84	Abscisic acid-determined seed vigour differences do not influence redox regulation during ageing. **2019**, 476, 965-974		11
83	The Arabidopsis glutathione transferases, AtGSTF8 and AtGSTU19 are involved in the maintenance of root redox homeostasis affecting meristem size and salt stress sensitivity. **2019**, 283, 366-374		14

82	Redox Systemic Signaling and Induced Tolerance Responses During Soybean- Interaction: Involvement of Nod Factor Receptor and Autoregulation of Nodulation. *Frontiers in Plant Science*, **2019**, 10, 141	6.2	12
81	Dynamic hydrolase labelling as a marker for seed quality in Arabidopsis seeds. **2019**, 476, 843-857		2
80	Profiling of advanced glycation end products uncovers abiotic stress-specific target proteins in Arabidopsis. *Journal of Experimental Botany*, **2019**, 70, 653-670	7	10
79	Comparative physiological and leaf proteomic analyses revealed the tolerant and sensitive traits to drought stress in two wheat parental lines and their F6 progenies. *Environmental and Experimental Botany*, **2019**, 158, 223-237	5.9	13
78	Electrophiles modulate glutathione reductase activity via alkylation and upregulation of glutathione biosynthesis. **2019**, 21, 101050		19
77	A role for auxin signaling in the acquisition of longevity during seed maturation. **2020**, 225, 284-296		17
76	Detection of active cell death markers in rehydrated lichen thalli and the involvement of nitrogen monoxide (NO).. **2020**, 82, 59-67		2
75	Fingerprinting of volatile organic compounds for quick assessment of vigour status of seeds. *Seed Science Research*, **2020**, 30, 112-121	1.3	3
74	Carbonylation of proteins-an element of plant ageing. *Planta*, **2020**, 252, 12	4.7	15
73	Effect of Nitrogen Reactive Compounds on Aging in Seed. *Frontiers in Plant Science*, **2020**, 11, 1011	6.2	4
72	Dry architecture: towards the understanding of the variation of longevity in desiccation-tolerant germplasm. *Seed Science Research*, **2020**, 30, 142-155	1.3	22
71	Analysis of Stored mRNA Degradation in Acceleratedly Aged Seeds of Wheat and Canola in Comparison to Arabidopsis. *Plants*, **2020**, 9,	4.5	0
70	Adaptation to Aquatic and Terrestrial Environments in (Chlorophyta). **2020**, 11, 585836		8
69	Identification of novel seed longevity genes related to oxidative stress and seed coat by genome-wide association studies and reverse genetics. *Plant, Cell and Environment*, **2020**, 43, 2523-2539	8.4	9
68	Oxidation processes related to seed storage and seedling growth of Malus sylvestris, Prunus avium and Prunus padus. *PLoS ONE*, **2020**, 15, e0234510	3.7	3
67	Ascorbate glutathione-dependent H2O2 scavenging is an important process in axillary bud outgrowth in rosebush. **2020**, 126, 1049-1062		12
66	Molecular aspects of seed priming as a means of progress in crop improvement. **2020**, 89-100		0
65	Ternary Co(II), Ni(II) and Cu(II) complexes containing dipyridophenazine and saccharin: Structures, reactivity, binding interactions with biomolecules and DNA damage activity. **2020**, 506, 119532		11

64	Desiccation Tolerance: Avoiding Cellular Damage During Drying and Rehydration. **2020**, 71, 435-460		52
63	Differential Sensitivity of Two Endothelial Cell Lines to Hydrogen Peroxide Toxicity: Relevance for In Vitro Studies of the Blood-Brain Barrier. **2020**, 9,		6
62	DNA methylation and integrity in aged seeds and regenerated plants. *Seed Science Research*, **2020**, 30, 92-100	1.3	11
61	The negative effect of a vertically-transmitted fungal endophyte on seed longevity is stronger than that of ozone transgenerational effect. *Environmental and Experimental Botany*, **2020**, 175, 104037	5.9	5
60	Deterioration of orthodox seeds during ageing: Influencing factors, physiological alterations and the role of reactive oxygen species. *Plant Physiology and Biochemistry*, **2021**, 158, 475-485	5.4	12
59	Nicotinamide adenine dinucleotides are associated with distinct redox control of germination in Acer seeds with contrasting physiology. *PLoS ONE*, **2021**, 16, e0245635	3.7	2
58	Climate change affects seed aging? Initiation mechanism and consequences of loss of forest tree seed viability. *Trees - Structure and Function*, **2021**, 35, 1099-1108	2.6	2
57	Lipid Remodeling Confers Osmotic Stress Tolerance to Embryogenic Cells during Cryopreservation. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
56	AtFAHD1a: A New Player Influencing Seed Longevity and Dormancy in Arabidopsis?. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	3
55	Too little, too late: transcription during imbibition of lethally aged soybean seeds is weak and delayed, but not aberrant.		
54	Sensing stress responses in potato with whole-plant redox imaging. *Plant Physiology*, **2021**, 187, 618-631	6.6	9
53	Gaseous environment modulates volatile emission and viability loss during seed artificial ageing. *Planta*, **2021**, 253, 106	4.7	3
52	Cadmium stress alleviation potential of Bruguiera cylindrica (L.) Blume enhances in combination with NaCl. *Bioremediation Journal*, 1-24	2.3	2
51	Volatile signature indicates viability of dormant orthodox seeds. *Physiologia Plantarum*, **2021**, 173, 788-804	4.6	2
50	Implications of reactive oxygen and nitrogen species in seed physiology for sustainable crop productivity under changing climate conditions. *Current Plant Biology*, **2021**, 26, 100197	3.3	13
49	Desiccation-driven senescence and its repression in Xerophyta schlechteri are regulated at extremely low water contents.		0
48	The d-mannose/l-galactose pathway is the dominant ascorbate biosynthetic route in the moss Physcomitrium patens. *Plant Journal*, **2021**, 107, 1724-1738	6.9	2
47	Comparative analysis of wild type accessions reveals novel determinants of Arabidopsis seed longevity.		

46	Elemental localisation and a reduced glutathione redox state protect seeds of the halophyte Suaeda maritima from salinity during over-wintering and germination. *Environmental and Experimental Botany*, **2021**, 190, 104569	5.9	1
45	Pretreatment of seeds with hydrogen peroxide improves deep-sowing tolerance of wheat seedlings. *Plant Physiology and Biochemistry*, **2021**, 167, 321-336	5.4	2
44	Relationship between mitochondrial changes and seed aging as a limitation of viability for the storage of beech seed (L.). *PeerJ*, **2021**, 9, e10569	3.1	1
43	Sensing stress responses in potato with whole-plant redox imaging.		1
42	Cytoplasmic physical state governs the influence of oxygen on Pinus densiflora seed ageing.		1
41	What Do We Know About the Genetic Basis of Seed Desiccation Tolerance and Longevity?. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	12
40	Desiccation Tolerance as the Basis of Long-Term Seed Viability. *International Journal of Molecular Sciences*, **2020**, 22,	6.3	9
39	The Cellular Thiolstat as an Emerging Potential Target of Some Plant Secondary Metabolites. **2014**, 235-262		
38	Analysis of the genetic integrity of rice (Oryza sativa L.) and bean (Phaseolus vulgaris L.) accessions stored in gene banks. *Genetic Resources and Crop Evolution*, **2020**, 67, 1999-2007	2	0
37	Molecular genetic bases of seed resistance to oxidative stress during storage. *Vavilovskii Zhurnal Genetiki I Selektsii*, **2020**, 24, 451-458	0.9	1
36	Differences in stress defence mechanisms in germinating seeds of Pinus sylvestris exposed to various lead chemical forms. *PLoS ONE*, **2020**, 15, e0238448	3.7	2
35	Combined and modular approaches for multicomponent monitoring of indoor air pollutants. *Applied Spectroscopy Reviews*, 1-37	4.5	3
34	A Label-Free Proteomic and Complementary Metabolomic Analysis of Leaves of the Resurrection Plant during Dehydration. *Life*, **2021**, 11,	3	0
33	Crosstalk between the redox signalling and the detoxification: GSTs under redox control?. *Plant Physiology and Biochemistry*, **2021**, 169, 149-159	5.4	0
32	Does oxygen affect ageing mechanisms of Pinus densiflora seeds? A matter of cytoplasmic physical state.. *Journal of Experimental Botany*, **2022**,	7	3
31	A Comprehensive Evaluation of Salt Tolerance in Tomato (Var. Ailsa Craig): Responses of Physiological and Transcriptional Changes in RBOH's and ABA Biosynthesis and Signalling Genes.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	1
30	The Seed and the Metabolism Regulation.. *Biology*, **2022**, 11,	4.9	2
29	Redox metabolism in soybean and its significance in nitrogen-fixing nodules. *Advances in Botanical Research*, **2022**,	2.2	0

28	Longevity of Weed Seeds in Seedbanks. **2022**, 106-124		
27	NAD(P)H Drives the Ascorbate-Glutathione Cycle and Abundance of Catalase in Developing Beech Seeds Differently in Embryonic Axes and Cotyledons.. *Antioxidants*, **2021**, 10,	7.1	0
26	TMT-Based Quantitative Proteomic Analysis Reveals the Physiological Regulatory Networks of Embryo Dehydration Protection in Lotus ().. *Frontiers in Plant Science*, **2021**, 12, 792057	6.2	0
25	The Orthodox Dry Seeds Are Alive: A Clear Example of Desiccation Tolerance.. *Plants*, **2021**, 11,	4.5	3
24	Acquisition of desiccation tolerance in Haematococcus pluvialis requires photosynthesis and coincides with lipid and astaxanthin accumulation. *Algal Research*, **2022**, 64, 102699	5	2
23	Image_1.TIF. **2020**,		
22	Image_2.TIF. **2020**,		
21	Image_3.TIF. **2020**,		
20	Table_1.XLSX. **2020**,		
19	Table_2.docx. **2020**,		
18	Image_1.TIF. **2019**,		
17	Image_2.tif. **2019**,		
16	Image_3.TIF. **2019**,		
15	Image_4.TIF. **2019**,		
14	Cold stratification-induced dormancy removal in apple (Malus domestica Borkh.) seeds is accompanied by an increased glutathione pool in embryonic axes. *Journal of Plant Physiology*, **2022**, 274, 153736	3.6	2
13	Comparative analysis of wild-type accessions reveals novel determinants of Arabidopsis seed longevity. *Plant, Cell and Environment*,	8.4	0
12	Mitochondrial Peroxiredoxin-IIF (PRXIIF) Activity and Function during Seed Aging. *Antioxidants*, **2022**, 11, 1226	7.1	1
11	Antioxidant depletion during seed storage under ambient conditions. *Seed Science Research*, 1-7	1.3	0

10	Transcription Factor DOF4.1 Regulates Seed Longevity in Arabidopsis via Seed Permeability and Modulation of Seed Storage Protein Accumulation. *Frontiers in Plant Science*, 13,	6.2	
9	The heat-stable protein fraction from Opuntia ficus-indica seeds exhibits an enzyme protective effect against thermal denaturation and an antibacterial activity. *Biotechnology and Applied Biochemistry*,	2.8	
8	Exploring the parameters of central redox hub for screening salinity tolerant rice landraces of coastal Bangladesh. **2022**, 12,		
7	Seed Longevity in Legumes: Deeper Insights Into Mechanisms and Molecular Perspectives. 13,		
6	Aminoadipic acid metabolism is controlled by the glutathione-dependent redox environment in Arabidopsis.		
5	Humidity and Light Modulate Oxygen-Induced Viability Loss in Dehydrated Haematococcus lacustris Cells. **2022**, 2, 503-517		0
4	Comparative Seeds Storage Transcriptome Analysis of Astronium fraxinifolium Schott, a Threatened Tree Species from Brazil. **2022**, 23, 13852		0
3	ROS and RNS Alterations in the Digestive Fluid of Nepenthes ventrata Trap at Different Developmental Stages. **2022**, 11, 3304		1
2	Ethylene and cellular redox management in plants. **2023**, 141-170		0
1	Seed Longevity The Evolution of Knowledge and a Conceptual Framework. **2023**, 12, 471		1