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Supplementary Material

The effect of hyper-osmotic salinity on protein pattern and enzyme activities of halophytes

Hans-Werner Koyro^A, Christian Zörb^B, Ahmed Debez^{C,D} and Bernhard Huchzermeyer^{C,E}

^AInstitute of Plant Ecology, Justus-Liebig-University Giessen, Heinrich-Buff-Ring 26-32, D-35392 Giessen, Germany.

^BInstitute of Biology, Botany, University Leipzig, Johannisallee 21–23, D-04103 Leipzig, Germany.

^CInstitut of Botany, Leibniz Universitaet Hannover, Herrenhaeuser-Str. 2, D-30419 Hannover, Germany.

^DLaboratoire des Plantes Extrêmophiles (LPE), Centre de Biotechnologie à la Technopole de Borj-Cedria (CBBC), BP 901, Hammam-Lif 2050, Tunisia.

^ECorresponding author. Email: huchzermeyer@botanik.uni-hannover.de

Table S1. Identified protein spots

No.	Name	No.	Name	No.	Name
1	Os01g0233000 (DREPP)	71	6-P-gluconate dehydrogenase	141	Myosin heavy chain
2	Anion channel, voltage dependent	72	ATPase family protein	142	DNA Topo-isomerase II
3	K ⁺ channel, voltage gated	73	PPase	143	Annexin (Ca-binding)
4	V-ATPase	74	Os12g0230100	144	Golgi associated proteinse-wap41
5	V-ATPase subunit A	75	Sucrose synthase	145	Glycerophosphodiesterase
6	V-ATPase subunit B	76	Pyruvate dehydrogenase E1-β	146	Peptidyl-prolyl cis-trans isomerase
7	Chaperonin	77	Pyruvate kinase	147	Protein disulfide-isomerase
8	HSP-20	78	Glucose-6-P isomerase	148	Proteasome domain
9	60 kDa chaperonin alpha	79	β-glucosidase I	149	Adenosine kinase
10	60 kDa chaperonin alpha	80	Lipoamide DH I, mitochondrial	150	Ferredoxin-thioredoxin kinase
11	HSP-70	81	Phosphate translocator, mitochond.	151	Thioredoxin M
12	HSP-70, chloroplast	82	Fatty acid CoA ligase	152	dTDP-glucose dehydratase
13	HSP-70 cognate prot1	83	Phospho-gluco mutase	153	V-ATPase, subunit d
14	Choline mono-oxygenase (CMO)	84	Aspartate amino-transferase	154	Chloroplast 30kDa precursor
15	SAM synthase (SAMS)	85	Methionine synthase	155	Mitochondrial porin
16	Shepherd, ATP-binding	86	Alanine aminotransferase	156	ABC transporter 1
17	Rubisco large subunit	87	NADH dehydrogenase	157	Ion channel DMI1, chloroplast
18	Rubisco activase	88	Transketolase	158	Ion channels
19	Rubisco activase precursor	89	Glutamine synthetase	159	ATPase
20	Phospho-ribulo kinase	90	Succinyl-CoA ligase, mitochondrial	160	Semialdehyde DH
21	SBPase	91	Threonine synthase	161	Aconitate hydratase
22	Carbonic anhydrase	92	ATP sulfurylase	162	Complex I, mitochondrial
23	Orthophosphate dikinase	93	Thio-glucosidase	163	FtsH like protein
24	PEP carboxylase	94	Adenylate kinase, chloroplast	164	Cyclophilin A-2
25	Serine-hydroxymethyl transferase 1	95	PS _{II} subunit O-2	165	Chloroplast clathrin
26	Glycine decarboxylase	96	Glucan exohydrolase	166	S-adenosyl-homocysteine hydrolase
27	Glyoxylase 1	97	UDP-sulfoquinovose synthase	167	Spermidin synthase
28	Phosphoribulokinase	98	Formate-tetrahydrofolate ligase	168	Cysteine synthase

29	Serine-hydroxymethyl transferase	99	Myoinositol synthase	169	Tocopherol cyclase
30	Aminomethyl transferase	100	Aspartate kinase / homoserine DH	170	Proteindisulfide isomerase
31	Chlorophyll a/b binding	101	Luminal binding protein	171	Aminopeptidase
32	LHCP	102	Ferritin	172	Initiation factor subunit 4Fp28
33	LHCI	103	Homocysteine-methyltransferase	173	FtsH protease, ATP dependent
34	PS _{II} D1	104	Isocitrat DH	174	14-3-3 protein
35	PS _{II} D2	105	Catalase	175	GDP dissociation inhibitor
36	PSII 47 kDa subunit	106	Ascorbate peroxidase	176	Ribosome recycling factor, chloropl.
37	Thylakoid luminal protein	107	Monodehydro-ascorbate reductase	177	Actin depolymerizing factor
38	PS _{II} D	108	Caffeic O-methyltransferase	178	Calmodulin
39	Cyt f	109	Peroxidase	179	CRT/DRE-binding protein
40	PSII PsbP	110	Gltathione peroxidase like	180	Cellulose synthase
41	Oxygen evolving complex 33kDa subunit	111	Superoxide dismutase	181	Salt tolerance protein 5
42	OEE1	112	Glutathione peroxidase	182	Nucleoside diphosphate kinase1
43	OEE2	113	Glutathione S-transferase	183	Ca binding protein CML14
44	Cp47 core complex	114	Alcohol DH	184	GTP binding protein
45	PS _I subunit N	115	Peroxiredoxin	185	2 component sensor histidin kinase
46	PSI reaction center subunit IV	116	Quinone oxido-reductase	186	Serine/threonine protein kinase NAK
47	Rieske	117	Cyanase	187	Serine peptidase
48	PSI core subunit A1	118	Pheophorbide a oxygenase	188	Clp protease P4 (CLPP4)
49	PS _I subunit II	119	Semialdehyde DH	189	MAP kinase 4 MPK4
50	PS _I subunit Psad	120	Aldehyde DH	190	Tubulin alpha & β-Tubulin
51	PS _{II} oxygen evolving protein 1	121	RNA recognition motive	191	Annexin
52	Oxygen evolving complex precursor	122	Ribosomal protein S1	192	Clp protease
53	Ferredoxin NADP reductase	123	Ribosomal protein S3	193	Histone H2B
54	ATPase subunit α	124	30S ribosomal protein S1, chloropl.	194	40S ribosomal protein
55	ATPase subunit β	125	60S ribosomal protein L5	195	Ribosomal protein S2
56	ATPase subunit	126	60S ribosomal protein L13A	196	50S ribosomal protein L3
57	ATPase subunit	127	50S ribosomal protein L5	197	50S ribosomal protein L29
58	ATPase subunit	128	40S ribosomal protein S12	198	Pyrroline carboxylase synthetase

59	CF ₀ subunit I	129	Initiation factor 4A	199	Proto-chlorophyllids oxido-reductase
60	ATPase β precursor, mitochondrial	130	Germin like protein	200	DNA binding protein
61	Phosphate translocator, chloroplast	131	Maturase	201	Mitochondrial processing peptidase
62	Fructikinese	132	DNA Topo-isomerase II	202	Proteasome endopeptidase
63	Fructose-bisphosphate aldolase	133	GTP binding nuclear protein Ran1	203	Rab GTPase
64	Aldolase, cytoplasmic	134	Heat shock transcription factor A7A	204	Translation initiation factor
65	Triose-P-isomerase, cytoplasmic	135	Transcription factor APFI	205	Ribosomal protein S15AA
66	GAP-Dh, cytosol	136	Elongation factor 1A	206	Clathrin heavy chain
67	GAP-Dh, chloroplast	137	Elongation factor EF-2	207	tRNA ala-synthetase
68	Phosphoglycerate kinase	138	Elongation factor alpha	208	Glycero-phospho-diesterase
69	Enolase 2	139	Elongation factor TU	209	HSP 90
70	Malat dehydrogenase	140	Plant adhesion molecule	210	Oligopeptidase

Table S2. Publications on salt stress response using a proteomic approach analysed in this manuscript

Ref.	Authors	Plant species	Family	Common name	Monocot/ dicot	Photosynth.	Halophyte/ glycophyte
A	Abbasi and Komatsu (2004)	<i>Oryza sativa</i>	<i>Poaceae</i>	Rice	monocot	C ₃	glyc.
B	Caruso <i>et al.</i> (2008)	<i>Triticum durum</i>	<i>Poaceae</i>	Durum wheat	monocot	C ₃	glyc.
C	Chen <i>et al.</i> (2009)	<i>Solanum lycopersicum</i>	<i>Solanaceae</i>	Tomato	dicot	C ₃	glyc.
D	Dani <i>et al.</i> (2005)	<i>Nicotiana tabaccum</i>	<i>Solanaceae</i>	Tobacco	dicot.	C ₃	glyc.
E	Jacoby <i>et al.</i> (2010)	<i>Triticum aestivum</i>	<i>Poaceae</i>	Wheat mitochondria	monocot	C ₃	glyc.
F	Manaa <i>et al.</i> (2011)	<i>Solanum lycopersicum</i>	<i>Solanaceae</i>	Tomato root	dicot	C ₃	glyc.
G	Nam <i>et al.</i> (2012)	<i>Oryza sativa</i> SnRK2	<i>Poaceae</i>	Rice root	monocot	C ₃	glyc.
H	Nouri <i>et al.</i> (2011)	<i>Glycine max</i>	<i>Fabaceae</i>	Soybean	dicot	C ₃	glyc.
I	Parker <i>et al.</i> (2006)	<i>Oryza sativa</i>	<i>Poaceae</i>	Rice	monocot	C ₃	glyc.
J	Chitteti and Peng (2007)	<i>Oryza sativa</i>	<i>Poaceae</i>	Rice	monocot	C ₃	glyc.
K	Veeranagamallaiiah <i>et al.</i> (2008)	<i>Setaria italica</i>	<i>Poaceae</i>	Foxtail millet seedlings	monocot	C ₄	glyc.
L	Wakeel <i>et al.</i> (2011)	<i>Beta vulgaris</i>	<i>Amaranthaceae</i>	Sugar beet	dicot	C ₃	glyc.
M	Wang <i>et al.</i> (2008)	<i>Triticum aestivum</i> / <i>Thinpyrum ponticum</i>	<i>Poaceae</i>	Wheat introgression strain	monocot	C ₃	glyc.
N	Wen <i>et al.</i> (2010)	<i>Oryza sativa</i>	<i>Poaceae</i>	Rice	monocot	C ₃	glyc.
O	Wetson <i>et al.</i> (2012)	<i>Sueda maritima</i> , roots	<i>Amaranthaceae</i>	Annual seablite	dicot	C ₃	halo
P	Witzel <i>et al.</i> (2009)	<i>Hordeum vulgare</i>	<i>Poaceae</i>	Barley	monocot	C ₃	glyc.
Q	Xu <i>et al.</i> (2011)	<i>Glycine max</i>	<i>Fabaceae</i>	Soybean	dicot	C ₃	glyc.
R	Yu <i>et al.</i> (2013)	<i>Puccinellia tenuiflora</i>	<i>Poaceae</i>	- Alkali stress - !	monocot	C ₃	halo.
S	Yan <i>et al.</i> (2005)	<i>Oryza sativa</i>	<i>Poaceae</i>	Rice root	monocot	C ₃	glyc.
T	Zhou <i>et al.</i> (2010)	<i>Thellungiella halophila</i>	<i>Brassicaceae</i>	Salt crest root	dicot	C ₃	halo.
U	Zybailov <i>et al.</i> (2009)	<i>Arabidopsis thaliana</i> <i>clpr2-1</i>	<i>Brassicaceae</i>	Mouse ear crest	dicot	C ₃	glyc.

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