

Schwember, A.R. and Bradford, K.J. (2010) Quantitative trait loci associated with longevity of lettuce seeds under conventional and controlled deterioration storage conditions. *Journal of Experimental Botany*.

Supplemental Table S1. Candidate genes mapped near two longevity-associated QTLs on chromosome 4 in a *Lactuca sativa* cv Salinas x *L. serriola* UC96US23 RIL population. EST marker identifications are from the Compositae Genome Project database (http://compgenomics.ucdavis.edu/compositae_index.php). Named candidate genes refer to homologues in Arabidopsis.

a) *Slg4.1*

EST Identification	Gene	Description	Position (cM)
CLS_S3_Contig10071	<i>AtHSF4</i>	Heat shock transcription factor 4	23.9
CLSS2458.b1_D15.ab1		Phosphoglycerate/bisphosphoglycerate mutase family protein	24.0
CLSX3763-1		Disease resistance protein (CC-NBS-LRR class)	24.3
CLS_S3_Contig9524	<i>AtIRX14</i>	Glycosyltransferase family 43	26.2
CLS_S3_Contig1303		Protein kinase family	28.2
CLS_S3_Contig5097-1	<i>AtMAT3</i>	Methionine adenosyltransferase 3	32.5
QGC1c12.yg.ab1		Expressed protein (unknown function)	33.2
CLSS12954.b1_C24.ab1		Octicosapeptide/Phox/Bem1p (PB1) domain-containing protein	34.6
CLS_S3_Contig2638		Eukaryotic initiation factor 5 (eIF-5) - related	36.4
CLSX586-2		Disease resistance protein (TIR-NBS-LRR class)	39.8
CLSY6760.b1_O10.ab1		No homologs found	41.5
CLS_S3_Contig3327		Expressed protein (unknown function)	41.9
CLSX3212.b1_H11.ab1	<i>AtUBC16</i>	Ubiquitin-conjugating enzyme 16	42.0
CLSX8292.b1_G10.ab1		pfkB type carbohydrate kinase protein family	42.5

b) *Slg4.2*

EST Identification	Gene	Description	Position (cM)
CLS_S3_Contig7460		AMP-dependent synthetase and ligase family	98.2
CLSY7511.b1_M06.ab1	<i>AtPAP2</i>	Phytochrome-associated protein 2, AUX/IAA family	99.8
CLS_S3_Contig10550		Zinc finger (GATA type) family protein	102.3
QGD6M21.yg.ab1		ABC transporter family protein	105.5
CLSM10124.b1_H11.ab1		Expressed protein (unknown function)	108.3
Contig7346-1		DNA replication factor complex-related	108.4
CLS_S3_Contig5035		Phosphoribosylaminoimidazolecarboxamide formyltransferase-related	108.9
CLS_S3_Contig1412		Expressed protein (unknown function)	109.0
CLSY4564.b1_H14.ab1		Hypothetical protein	109.7
QGD7P09.yg.ab1		Lipoxygenase (LOX), putative	114.4
CLR4689.b1_A21.ab1		Hypothetical protein	118.0

Supplemental Table S2. Candidate genes mapped near two longevity-associated QTLs on chromosome 1 in a *Lactuca sativa* cv Salinas x *L. serriola* UC96US23 RIL population. EST identifications are from the Compositae Genome Project database (http://compgenomics.ucdavis.edu/compositae_index.php). Named candidate genes refer to homologues in Arabidopsis.

SlgPCD1.2 (75-88 cM) and *SlgCD1.2* (84-116 cM)

EST Identification	Gene	Description	Position (cM)
LSS_S3_Contig5884	<i>AtCPN60A</i>	RuBisCO subunit binding-protein alpha subunit/60 kDa chaperonin alpha subunit	74.7
LSS_S3_Contig10041	<i>AtCKS1</i>	Cyclin-dependent kinase-subunit 1	75.6
CLSS8049.b1_B22.ab1	<i>AtMTN2</i>	Methylthioadenosine nucleosidase	76.1
CLS_S3_Contig926		Expressed protein (unknown function)	76.7
CLVX8701.b1_I16.ab1		No homologs found	77.2
CLS_S3_Contig8241		Glycosyl hydrolase family 17 protein	78.0
CLS_S3_Contig165		Phosphatidic acid phosphatase (PAP2) family protein	78.2
CLS_S3_Contig2475	<i>AtABA2</i>	ABA2 (Abscisic acid deficient 2); alcohol dehydrogenase/ oxidoreductase/ xanthoxin dehydrogenase	78.8
CLS_S3_Contig4179		Expressed protein (unknown function)	80.8
CLSY1170.b1_C05.ab1		Expressed protein (unknown function)	81.2
CLS_S3_Contig11259	<i>AtCYSA</i>	Cysteine-type endopeptidase inhibitor	82.1
CLS_S3_Contig8809		Expressed protein (unknown function)	83.1
QGD10G01.yg.ab1	<i>AtEIN2</i>	Ethylene-insensitive 2; transporter (EIN2) mRNA	84.4
CLSS4149.b1_J06.ab1		Hypothetical protein	84.9
CLS_S3_Contig7478		Disease resistance protein-related / LRR protein-related	85.3
CLS_S3_Contig4595		Expressed protein (unknown function)	86.0
CLR_S1_Contig138		Hydroxyproline-rich glycoprotein family protein	86.5
CLS_S3_Contig6970		Polyprotein of LTR transposon -related	87.4
CLS_S3_Contig4405	<i>AtBGL2</i>	Cellulase/glucan 1,3-beta-glucosidase/ hydrolase, hydrolyzing O-glycosyl compounds (BGL2)	87.5
QGC9D21.yg.ab1		Expressed protein (unknown function)	88.7
CLS_S3_Contig1555		Galactosyltransferase family	89.7
CLSS11446.b1_L06.ab1		No homologs found	89.8
CLSM2828.b1_H11.ab1		Hypothetical protein	90.0
CLS_S3_Contig1840		Expressed protein (unknown function)	90.5

CLVX2506.b1_C04.ab1		Expressed protein (unknown function)	91.4
CLS_S3_Contig6529		Expressed protein (unknown function)	92.9
CLR_S1_Contig4002		Expressed protein (unknown function)	93.6
CLSM19359.b1_N15.ab1		Expressed protein (unknown function)	94.6
CLSM6591.b1_M15.ab1		Hypothetical protein	95.9
CLSM17699.b1_E09.ab1	<i>RPT1A</i>	26S proteasome AAA-ATPase subunit RPT1a	97.6
QGC20G02.yg.ab1		Leucine-rich repeat protein family	97.8
CLS_S3_Contig2081		Glycoside hydrolase family 28 protein / polygalacturonase (pectinase) family protein	98.3
QGG26D14.yg.ab1		Pentatricopeptide (PPR) repeat-containing protein	99.7
QGG9J14.yg.ab1		Hypothetical protein	100.3
CLS_S3_Contig9730		Aspartyl aminopeptidase	100.9
CLSS11512.b1_P22.ab1		Copine-related protein	101.9
QGC17L08.yg.ab1		Cytosolic factor -related	102.6
QGC16I05.yg.ab1		Disease resistance protein family	103.0
CLSS11111.b1_N18.ab1	<i>AtHSD5</i>	Hydroxysteroid dehydrogenase 5; binding / catalytic/ oxidoreductase	103.3
CLRY2543.b1_M12.ab1		Ubiquitin-associated (UBA) / Octicosapeptide/Phox/Bemp1 (PB1) domain-containing protein	104.0
CLS_S3_Contig3192		Expressed protein (unknown function)	108.1
CLS_S3_Contig6689		Cytochrome P450, putative	108.5
CLS_S3_Contig6990		ATP binding, protein kinase activity, protein serine/threonine kinase activity	111.6
CLLY699.b1_F08.ab1		Expressed protein (unknown function)	112.1
CLSY4364.b1_H11.ab1		Dehydration-induced protein-related	114.9
CLS_S3_Contig6064		Cytochrome p450, putative	116.0