

Table S15 Function of target genes involved in seed traits in tea oil camellia in this study.

Target genes of identified miRNAs (gene annotation)	Function	References
Lipid metabolism		
<i>ACCl</i> (Acetyl CoA Carboxylase 1)	The expressions of ACCase genes are significant to fatty acid and lipid biosynthesis	Wang, 2012
<i>KASI</i> (3-ketoacyl-ACP synthase I)	<i>KASI</i> is involved in the formation of C16 or C18 saturated fatty acids catalyzed by the fatty acid synthase complex	Yasuno <i>et al.</i> , 2004
<i>S-ACP-DES6</i> (Secretory acid phosphatase desaturase 6)	S-ACP DES is an archetypical member of a family of soluble fatty acid (FA) desaturases; one or more S-ACP-DES isozymes contribute to the 18:1 pool	Kachroo <i>et al.</i> , 2007
<i>KAS3B</i> (3-ketoacyl-ACP synthase IIIB)	The 3-ketoacyl- <i>ACP</i> synthase II proteins are one of the most abundant enzymes in nature, as they are involved in the biosynthesis of fatty acids and natural products	Nofiani <i>et al.</i> , 2019
<i>fabG</i> (3-ketoacyl-acyl carrier protein reductase)	FabG is a member of the ketoacyl reductase family of proteins and is an essential enzyme for type II fatty acid biosynthesis	Lai and Cronan, 2004
<i>Mcat</i> ([acyl-carrier-protein] S-malonyltransferase)	[acyl-carrier-protein] S-malonyltransferase involved in lipid metabolism	Sang <i>et al.</i> , 2013
<i>FATB1</i> (fatty acyl-ACP thioesterase B)	<i>FATB</i> is a key enzyme gene that mainly controls the conversion of the 16-carbon palmitoyl-ACP to the palmitic acid.	Dörmann <i>et al.</i> , 2000
<i>MOD1</i> (enoyl-[acyl-carrier protein] reductase I)	It is a key enzyme in type II fatty-acid synthases that catalyzes the last step in each elongation cycle.	Heath <i>et al.</i> , 2000
<i>Δ9D</i> (acyl-[acyl-carrier-protein] desaturase)	Increased <i>ACP-Δ9D</i> and <i>CoA-Δ9D</i> levels coupled with decreased <i>KASII</i> and <i>FAEI</i> activity is a critical event for high C16:1n7 accumulation in sea buckthorn berry	Ding <i>et al.</i> , 2018
<i>GAPN</i> (glyceraldehyde-3-phosphate dehydrogenase)	Effects of overexpression of glyceraldehyde-3-phosphate dehydrogenase on growth and lipid accumulation in <i>Chlamydomonas reinhardtii</i>	Lee <i>et al.</i> , 2013
Seed size		
<i>ARF1</i> (auxin response factor 1)	MiR172 plays highly important roles in seed development by modulating ARF targeting in yellowhorn	Wang <i>et al.</i> , 2021
<i>ARF11</i> (auxin response factor 11)	ARFs are potentially involved in the seed size in seeds of sea buckthorn	Ding <i>et al.</i> , 2019
<i>ARF12</i> (auxin response factor 12)	MiR160 negatively regulates ARFs that significantly affect seed development in <i>A. thaliana</i>	Liu <i>et al.</i> , 2010

<i>ARF19</i> (auxin response factor 19)	Transcription factors of <i>SPL</i> , <i>MYB</i> and <i>ARF</i> involved in seed size/weight determination	Gupta <i>et al.</i> , 2016
<i>ARF22</i> (auxin response factor 22)		Khemka <i>et al.</i> , 2021
<i>ARF6</i> (auxin response factor 6)		
<i>CNR2</i> (cell number regulator 2)	CNR genes control plant fruit and organ size	Guo and Simmons, 2011
<i>MED14</i> (Mediator of RNA polymerase II transcription subunit 14)	Mediator subunit OsMED14_1 plays an important role in rice development	Malik <i>et al.</i> , 2020
<i>MED18</i> (Mediator of RNA polymerase II transcription subunit 18)	MED18 interaction with distinct transcription factors regulates multiple plant functions	Lai <i>et al.</i> , 2014
<i>MED27</i> (Mediator of RNA polymerase II transcription subunit 27)	MED27 Variants Cause Developmental Delay, Dystonia, and Cerebellar Hypoplasia	Meng <i>et al.</i> , 2021
<i>MED28</i> (Mediator of RNA polymerase II transcription subunit 28)	MED28 Regulates Cell Growth through HMG Box-Containing Protein 1 (HBP1) in Human Breast Cancer Cells	Hsieh <i>et al.</i> , 2013
<i>MYB3</i> (Transcription factor MYB3)	Transcription factors of <i>SPL</i> , <i>MYB</i> and <i>ARF</i> involved in seed size/weight determination in chickpea	Khemka <i>et al.</i> , 2021
<i>MYB44</i> (Transcription factor MYB44)	The function of SIMYB as a candidate gene involved in fruit set process in tomato	Abdalla <i>et al.</i> , 2013
<i>MYB82</i> (Transcription factor MYB82)	Transcription factors of <i>SPL</i> , <i>MYB</i> and <i>ARF</i> involved in seed size/weight determination in chickpea	Khemka <i>et al.</i> , 2021
Growth and development		
<i>ACS1</i> (1-aminocyclopropane-1-carboxylate synthase)	Lc-ACS1 gene might be the key gene involved in fruit let abscission in litch	Wu <i>et al.</i> , 2017
<i>AFB2</i> (Protein AUXIN SIGNALING F-BOX 2)	The <i>AFB2</i> gene is one of auxin receptor genes, which is involved in hormone regulation and signal transduction in plants	Schwab <i>et al.</i> , 2005
<i>COL13</i> (Zinc finger protein CONSTANS-LIKE 13)	AtCOL13 inhibits hypocotyl elongation of Arabidopsis under red light	Zhang, 2012
<i>ERF115</i> (EREBP-like factor)	The ERF115–PAT1 complex plays an important role in full stem cell niche recovery	Heyman <i>et al.</i> , 2016
<i>SBP1</i> (Squamosa promoter-binding protein 1)	SBP1 is an important component of the atypical SCF complex, playing an unique role in the selfcompatibility system of gametes	Yu <i>et al.</i> , 2019
<i>SBP2</i> (Squamosa promoter-binding protein 2)	An SBP2-GFP fusion protein under the control of the GmSBP2 promoter accumulates in the vascular tissues of vegetative organs, which is consistent with the proposed involvement of SBP in sucrose transport-dependent physiological processes.	Freitas <i>et al.</i> , 2007
<i>SCL16</i> (Scarecrow-like protein 6)	SCL transcription factor family members in <i>Arabidopsis</i> involved in the growth and development of flowers, roots and stems	Sunkar <i>et al.</i> , 2004

<i>SPL4</i> (Squamosa promoter-binding-like protein 4)	Transcription factors of <i>SPL</i> , <i>MYB</i> and <i>ARF</i> involved in seed size/weight determination in chickpea	Khemka <i>et al.</i> , 2021
<i>TIR1</i> (transport inhibitor response 1)	The <i>TIR1</i> gene is one of auxin receptor genes, which is involved in hormone regulation and signal transduction in plants	Schwab <i>et al.</i> , 2005
<i>TCP24</i> (Transcription factor TCP24)	<i>TCP24</i> modulates secondary cell wall thickening and anther endothecium development	Han <i>et al.</i> , 2015
Resistance, yield and quality		
<i>APUM5</i> (Pumilio homolog 5)	APUM5 suppresses <i>Cucumber mosaic virus</i> infection via direct binding of viral RNAs	Huh <i>et al.</i> , 2013
<i>BAG7</i> (BAG family molecular chaperone regulator 7)	BAG protein family is an evolutionarily conserved kind of co-chaperone from yeast to animals and plants. The family members can perform several of cellular functions including stress response, growth, and programmed cell death	Wei <i>et al.</i> 2016
<i>BAM1</i> (leucine-rich repeat receptor-like serine/threonine-protein kinase BAM1)	BAM1/2 receptor kinase signaling drives CLE peptide-mediated formative cell divisions in <i>Arabidopsis</i> roots	Crook <i>et al.</i> , 2020
<i>CPR30</i> (F-box protein CPR30)	The <i>CPR30</i> gene is a negative regulator of the defense response in <i>Arabidopsis</i>	Gou <i>et al.</i> , 2010
<i>ERF106</i> (EREBP-like factor)	This gene might have role in eliciting responses to combat stress and attribute the strong stress tolerant property associated with the plant	Tripathi <i>et al.</i> , 2020
<i>MYB4</i> (Myb-related protein Myb4)	<i>MYB4</i> gene is involved in drought stress response, and the regulation mechanism may be related to stomata	Ouyang, 2019
<i>NRT1.7</i> (proton-dependent oligopeptide transporter, POT family)	The <i>Arabidopsis NLP7</i> gene regulates nitrate signaling via <i>NRT1.1</i> –dependent pathway in the presence of ammonium	Zhao <i>et al.</i> , 2018
<i>Os03g0214200</i> (Ninja-family protein Os03g0214200)	<i>Os03g0214200</i> is one of important candidate genes for <i>qLTGR3-1</i> of major QTL for germination ability of rice seeds at low temperature	Pan, 2018
<i>PAB2</i> (20S proteasome subunit alpha 2)	Conserved expression of <i>Arabidopsis thaliana</i> poly (A) binding protein 2 (PAB2) in distinct vegetative and reproductive tissues	Palanivelu <i>et al.</i> , 2010
<i>PYL1</i> (Absciscic acid receptor PYL1)	This gene might be involved in the dormancy process of gladiolus corms regulated by ABA	Luo <i>et al.</i> , 2019
<i>SGS3</i> (Protein SUPPRESSOR OF GENE SILENCING 3)	BnSGS3 gene conferred moderate resistance to CMV; SGS3 and SGS2/SDE1/RDR6 are required for juvenile development and the production of trans-acting siRNAs in <i>Arabidopsis</i>	Peragine <i>et al.</i> , 2004; Chen <i>et al.</i> , 2015
<i>SPL16</i> (Squamosa promoter-binding-like protein 16)	The <i>OsSPL16-GW7</i> regulatory module determines grain shape and simultaneously improves rice yield and grain quality	Wang <i>et al.</i> , 2014
<i>XDH1</i> (xanthine dehydrogenase/oxidas)	Antisense inhibition of xylitol dehydrogenase gene, <i>xdh1</i> from <i>Trichoderma reesei</i>	Wang <i>et al.</i> , 2010

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