

Electronic supplemental information

**Tapping into the Natural Aromatic Potential:
Microbial Lignin Valorization towards Aromatic
Fine Chemicals**

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Table S1 The information of representative genes discussed in this review

Genes	Corresponding enzyme	Accession Number	Gene origin
<i>4CL</i>	Hydroxycinnamic acid CoA ligase	KF765780.1	<i>Petroselinum crispum</i>
<i>VpVAN</i>	Vanillin synthase	AKG47593.1	<i>V. planifolia</i>
<i>PahapaB</i>	4-Hydroxyphenylacetate 3-monooxygenase	PKG21040.1	<i>P. aeruginosa</i>
<i>EnhapaB</i>	4-Hydroxyphenylacetate 3-monooxygenase	PJG38870.1	<i>Enterobacter cloacae</i>
<i>SehpaC</i>	4-Hydroxyphenylacetate 3-monooxygenase reductase	GAR62209.1	<i>Salmonella enterica</i>
<i>AtCOMT</i>	3'-O-methyltransferase	NM_124796.4	<i>Arabidopsis thaliana</i>
<i>HsCOMT</i>	3'-O-methyltransferase	NP_000745.1	<i>Homo sapiens</i>
<i>NtCOMT</i>	3'-O-methyltransferase	NP_001312531	<i>Nicotiana tabacum</i>
<i>PsVAO</i>	Vanillyl alcohol oxidase	CAA75722.1	<i>Penicillium simplicissimum</i>
<i>Ssfcs</i>	4-Coumarate-CoA ligase	KC847405.1	<i>Streptomyces sp. V-1</i>
<i>Ssech</i>	Enoyl-CoA hydratase/aldolase	KC847406.1	<i>Streptomyces sp. V-1</i>
<i>Ppech</i>	Enoyl-CoA hydratase/aldolase	AAN68962.1	<i>P. putida</i> KT2440
<i>Ppfcs</i>	4-Coumarate-CoA ligase	AAN68960.2	<i>P. putida</i> KT2440
<i>vdh</i>	Vanillin dehydrogenase	AAN68961.1	<i>P. putida</i> KT2440
<i>PobA</i>	<i>p</i> -Hydroxybenzoate hydroxylase	AAN69138.1	<i>P. putida</i> KT2440
<i>PdvanA</i>	Vanillic acid <i>O</i> -demethylase oxygenase subunit A	AAN69332.1	<i>P. putida</i> KT2440
<i>PdvanB</i>	Vanillic acid <i>O</i> -demethylase oxygenase subunit B	AAN69333.1	<i>P. putida</i> KT2440
<i>RjvanA</i>	Vanillic acid <i>O</i> -demethylase oxygenase subunit A	ABG95958.1	<i>R. jostii</i> RHA1
<i>RjvanB</i>	Vanillic acid <i>O</i> -demethylase oxygenase subunit B	ABG95956.1	<i>R. jostii</i> RHA1
<i>ligM</i>	Vanillic acid <i>O</i> -demethylase oxygenase.	BAD61059.1	<i>Sphingobium paucimobilis</i> <i>Klebsiella pneumoniae</i> subsp. <i>pneumoniae</i>
<i>aroY</i>	Protocatechuate decarboxylase	BAH20873	<i>Rhizorhabdus dicambivorans</i>
<i>Rdmetf1</i>	5,10-Methylenetetrahydrofolate reductase	ATE65736.1	<i>Sphingobium</i> sp. SYK-6
<i>Ssmetf1</i>	5,10-Methylenetetrahydrofolate reductase	BAK65950.1	<i>Sphingobium</i> sp. SYK-6
<i>desA</i>	Syringate <i>O</i> -demethylase	BAK67175	<i>Sphingobium</i> sp. SYK-6
<i>ligV</i>	Vanillin dehydrogenase	BAK65381.1	<i>Sphingobium</i> sp. SYK-6
<i>MET6</i>	5-Methyltetrahydropteroyltriglutamate-homocysteine S-methyltransferase	SGD: S000000893	<i>Saccharomyces cerevisiae</i>
<i>MET13</i>	Methylenetetrahydrofolate reductase	SGD: S000003093	<i>Saccharomyces cerevisiae</i>

<i>ADH6</i>	Alcohol dehydrogenase	SGD: S000004937	<i>Saccharomyces cerevisiae</i>
<i>ADH7</i>	Alcohol dehydrogenase	SGD: S000000702	<i>Saccharomyces cerevisiae</i>
<i>FDC1</i>	Ferulic acid decarboxylase	SGD: S000002947	<i>Saccharomyces cerevisiae</i>

The above information is sourced from: <https://www.ncbi.nlm.nih.gov/>, <https://www.yeastgenome.org/>.