

Supplementary Table 3. Metabolic pathway enrichment scores (PES) for discriminating metabolites between rice bran varieties

Rice Cultivar		Kenya – Basmati 217	Kenya – Basmati 370	Mali – Gambiaka	Mali – Shwetasoke	Mali – DM-16	Mali – Khao Gaew	Nicaragua – Dorado	Nepal – Sawa Mahsuli	India – Chennai	India – Njavara	USA – Calrose	USA – RBT 300	USA – Jasmine 85	USA – IAC 600	USA – LTH	USA – SHZ-2	Cambodia – Rang Jey
Chemical class	Metabolic Pathway																	
Amino acid	Aromatic amino acid metabolism (PEP derived)	1.0	1.0	1.0	1.0	24.8	1.0	1.0	1.0	1.0	1.7	1.0	1.0	1.0	1.0	1.0	1.0	2.4
	Aspartate family (OAA derived)	1.0	1.0	1.0	1.0	1.0	1.6	1.0	1.2	3.9	1.1	1.0	1.0	1.0	1.5	1.0	1.0	1.0
	Glutamate family (alpha-ketoglutarate derived)	1.0	1.0	6.9	1.0	1.0	1.0	1.0	1.0	0.9	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Serine family (phosphoglycerate derived)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.0	1.0	2.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Carbohydrate	Amino sugar and nucleotide sugar	2.9	1.0	1.0	1.0	1.0	20.3	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	TCA cycle	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.9	7.4	1.0	1.0	6.8	1.0	1.0	1.2
Cofactors & vitamins	Tocopherol metabolism	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lipids	Free fatty acid	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.0	1.0	3.1	1.0	1.0	1.0	1.0	1.0
	Glycerolipids (diacyl)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.0	1.0	12.8	4.1	1.0	1.0	1.0	2.1
	Glycerolipids (monoacyl)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.6	1.0	1.0	5.7	1.0	1.0	1.0	1.0	1.0
	Lyso-phospholipids	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.6
	Oxylipins	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	6.5	1.0	1.0	1.0	1.0	1.0
	Phospholipid Metabolism	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Nucleotide	Purine metabolism	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.4	1.0	1.0	1.0	1.0	2.7
Secondary metabolism	Benzenoids	1.0	1.0	1.0	1.0	1.0	3.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	4.3

PES greater or less than 1.0 is notable (bolded) and it indicates that the metabolic pathway contains at least 1 metabolite with significant Z-score (Z-score > |2.0|), i.e., level of expression for that metabolite is different from the rest of cultivars for the same metabolites across the metabolic pathway.