Supporting Table S1: Sources of biochemistry integrated into PlantSEED

Database/Model	Species	Owner/Reference	Date / Version	Number of Compounds	Number of Reactions
KEGG	N/A	KEGG (1, 2)	12/03/18	17,793	14,039
MetaCyc	N/A	PathwayTools (3)	22.5	19,172	27,414
EcoCyc	*Escherichia coli*	PathwayTools (3)	16.1	3,355	2,411
PlantCyc	N/A	PMN (4, 5)	7.0	3,919	4,436
AraCyc	*Arabidopsis thaliana*	PMN (5)	10.0	4,229	4,008
PoplarCyc	*Populus trichocarpa*	PMN (4)	4.0	2,318	2,301
SoyCyc	*Glycine max*	PMN	2.0	2,796	2,657
ChlamyCyc	*Chlamydomonas reinhardtii*	PMN	03/03/10	1,718	1,875
BrachyCyc	*Brachypodium distachyon*	Gramene (6, 7)	2.0	2,348	3,104
MaizeCyc	*Zea mays*	Gramene (8)	2.0	2,219	2,358
RiceCyc	*Oryza sativa*	Gramene (9)	2.0.1	1,859	1,955
SorghumCyc	*Sorghum bicolor*	Gramene (6, 7)	1.0.1	1,773	1,873
iAF1260	*Escherichia coli*	Feist *et al.* (2007) (10)		1,041	2,064
iAF692	*Methanosarcina barkeri*	Feist *et al.* (2006) (11)		562	613
iIN800	*Saccharomyces cereivisae*	Nookaew *et al.* (2008) (12)		683	1,053
iJR904	*Escherichia coli*	Reed *et al.* (2003) (13)		629	921
iMA945	*Salmonella spp.*	AbuOun *et al.* (2009) (14)		1,032	1,960
iMM904	*Saccharomyces cerevisiae*	Mo *et al.* (2009) (15)		712	1,401
iRR1083	*Salmonella typhimurium* LT2	Raghunathan *et al.* (2009) (16)		759	1,086
iSB619	*Staphylococcus aureus* N315	Becker *et al.* (2005) (17)		614	639
iSO783	*Shewanella oneidensis* MR-1	Pinchuk *et al.* (2010) (18)		634	774
iAbaylyiv4	*Acinetobacter baylyi* ADP1	Durot *et al.* (2008) (19)		699	867
*	*Bacillus subtilis*	Goelzer *et al.* (2008) (20)		475	504
iGT196	*Buchnera aphidicola*	Thomas *et al.* (2009) (21)		740	210
iIT341	*Helicobacter pylori*	Thiele *et al.* (2005) (22)		411	473
iJN746	*Pseudomonas putida* KT2440	Nogales *et al.* (2008) (23)		706	915
iMO1056	*Pseudomonas aeruginosa* PAO1	Oberhardt *et al.* (2008) (24)		750	864
iND750	*Saccharomyces cerevisiae*	Duarte *et al.* (2004) (25)		650	1,038

iNJ661	*Mycobacterium tuberculosis* H37Rv	Jamshidi & Palsson (2007) (26)		761	951
iPS189	*Mycoplasma genitalium*	Suthers *et al.* (2009) (27)		277	262
iRS1563	*Zea mays*	Saha *et al.* (2011) (28)		1,812	1,949
iRS1597	*Arabidopsis thaliana*	Saha *et al.* (2011) (28)		1,759	1,837
iYO844	*Bacillus subtilis*	Oh *et al.* (2007) (29)		776	1,016
*	*Chlamydomonas reinhardtii*	Boyle & Morgan (2009) (30)		266	485
*	*Chlamydomonas reinhardtii*	Manichaikul *et al.* (2009) (31)		124	238
*	*Chlamydomonas reinhardtii*	Chang *et al.* (2011) (32)		1,164	2,084
C4GEM	*Zea mays*	D'al Molin *et al.* (2010) (33)		1,207	1,227
*	*Arabidopsis thaliana*	Mintz-Oron *et al.* (2012) (34)		1,181	3,382
*	*Arabidopsis thaliana*	Poolman *et al.* (2009) (35)		1,224	1,354
AraGEM	*Arabidopsis thaliana*	D'al Molin *et al.* (2010) (36)		1,546	1,590
AlgaGEM	*Chlamydomonas reinhardtii*	D'al Molin *et al.* (2011) (37)		1,662	1,713

The numbers of compounds and reactions are listed for each source *after* integration, and may not reflect the numbers seen in the literature. In addition, the number of reactions includes compartmentalized reactions, which may be duplicates. *No unique identifier for these models was described in the literature.

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