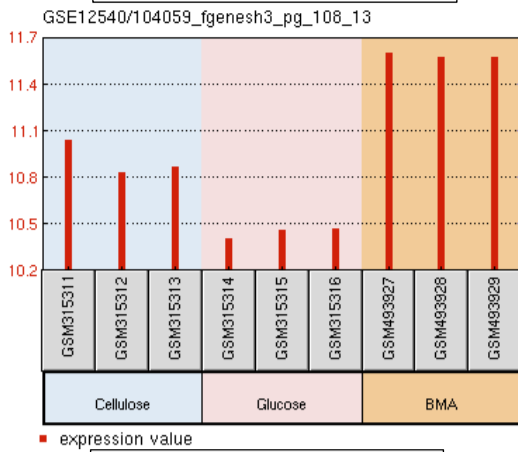
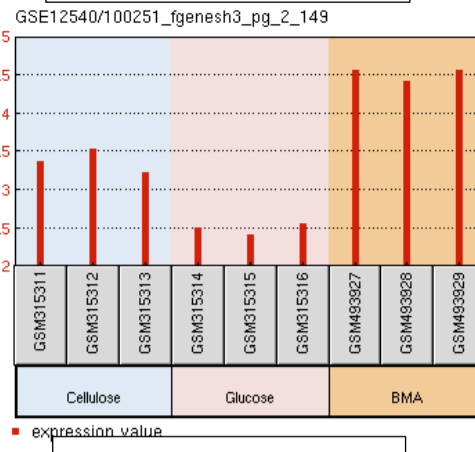
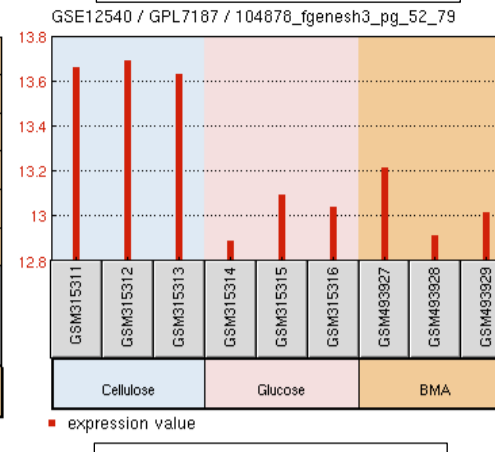
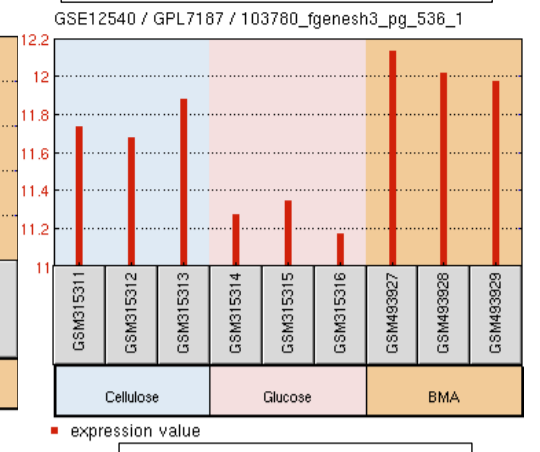
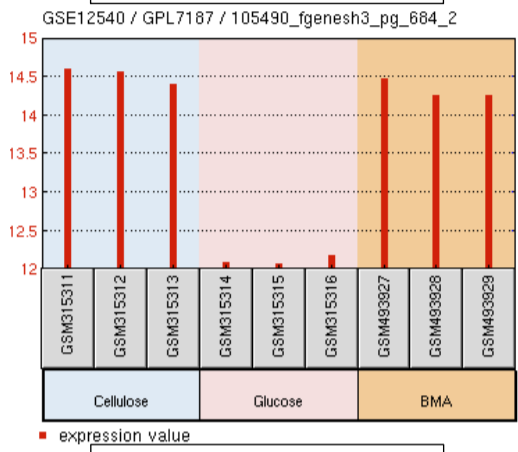
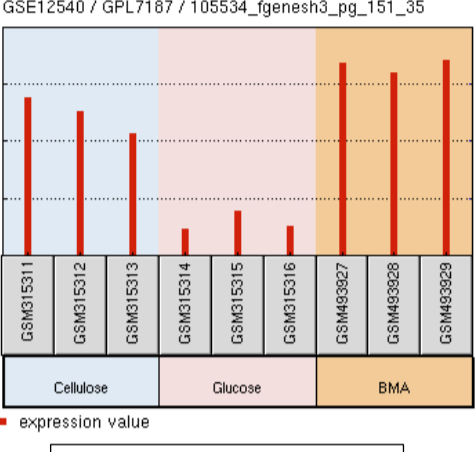
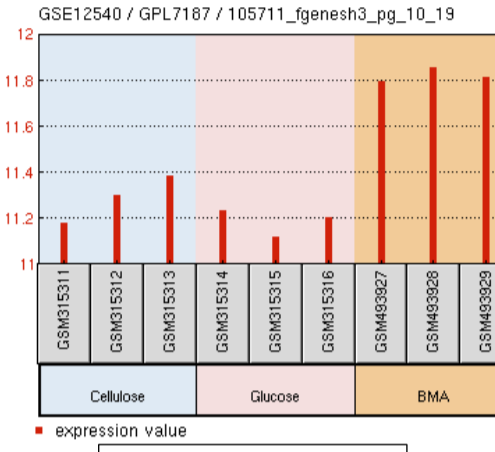
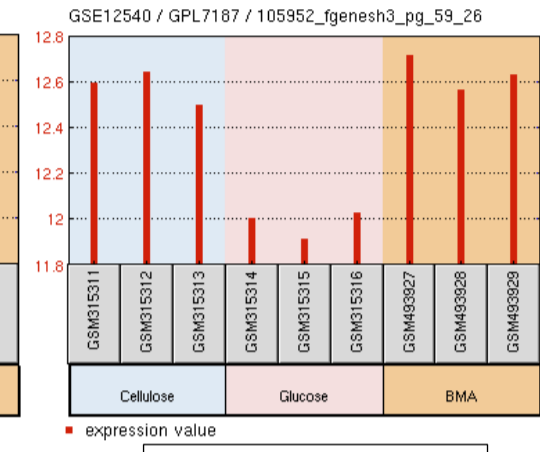
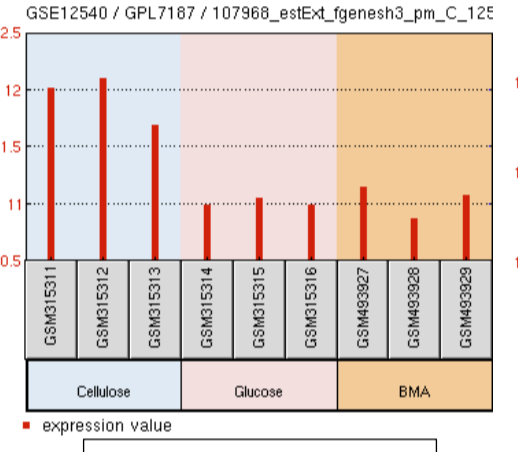
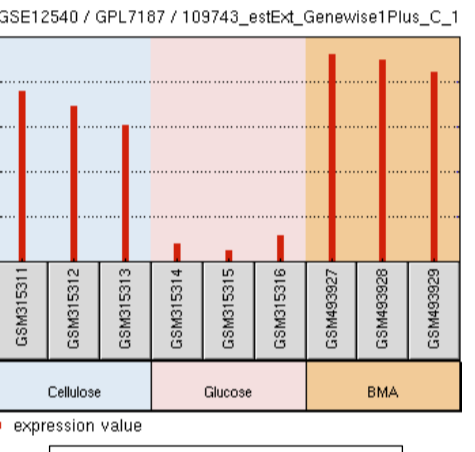
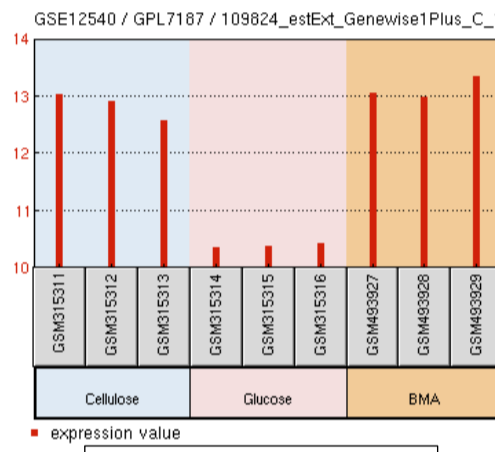
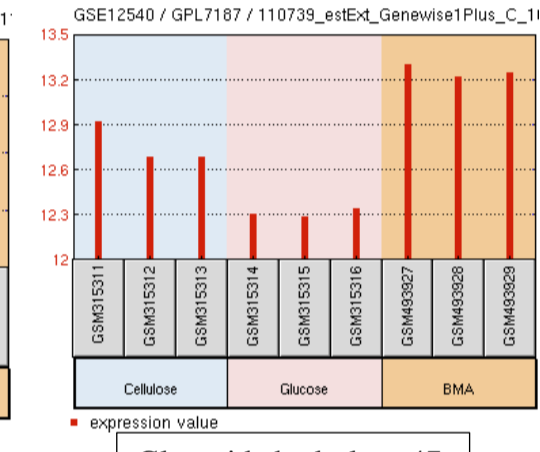
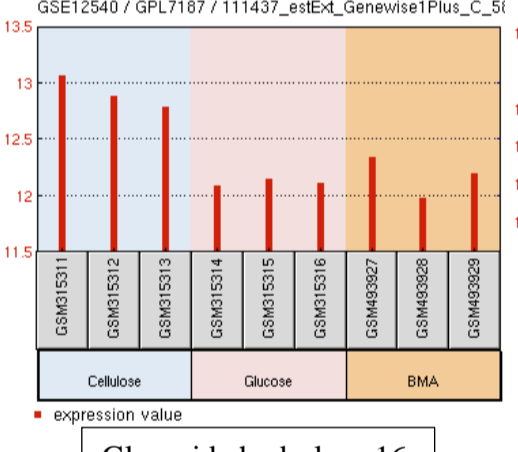
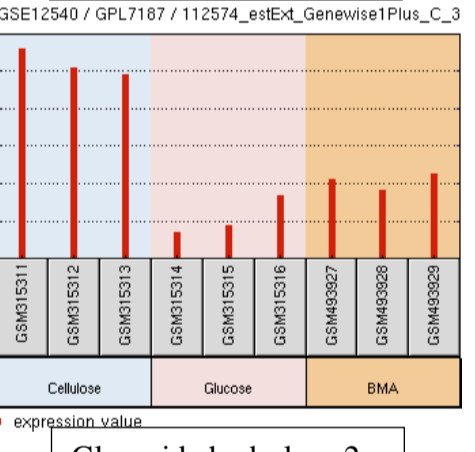
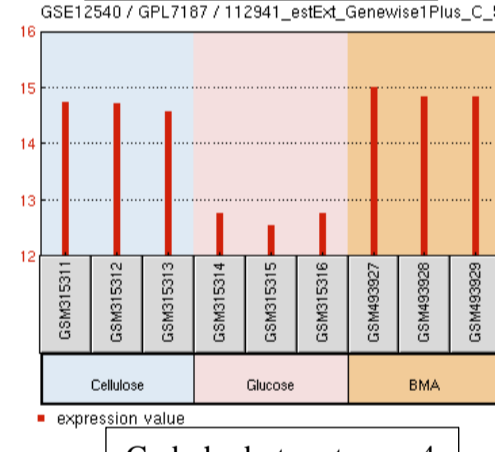
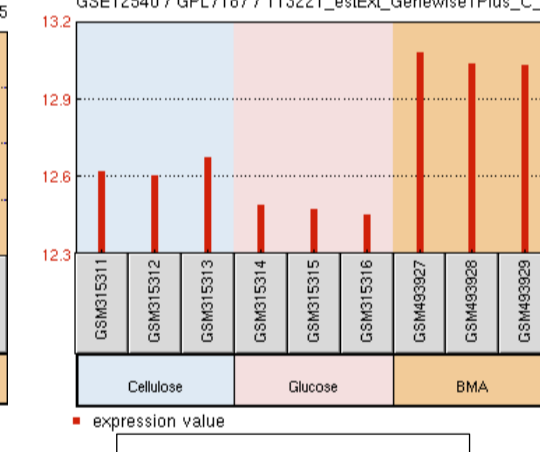
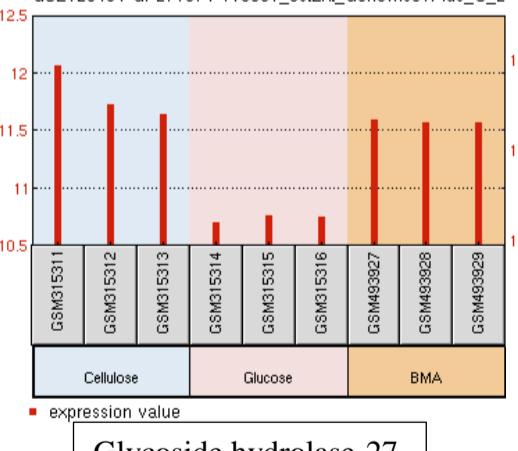
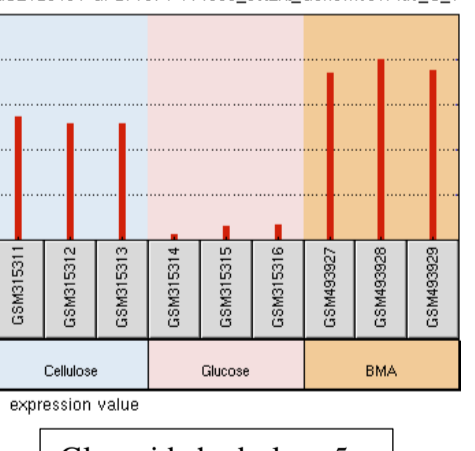
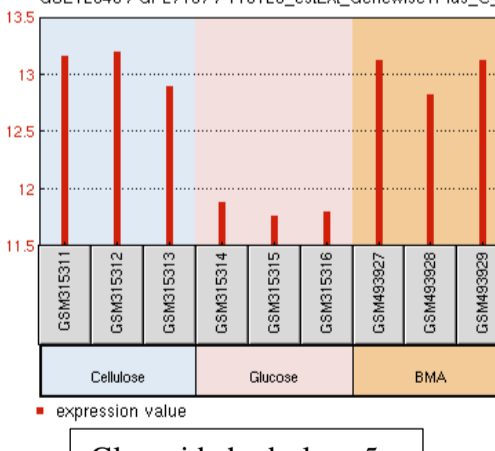
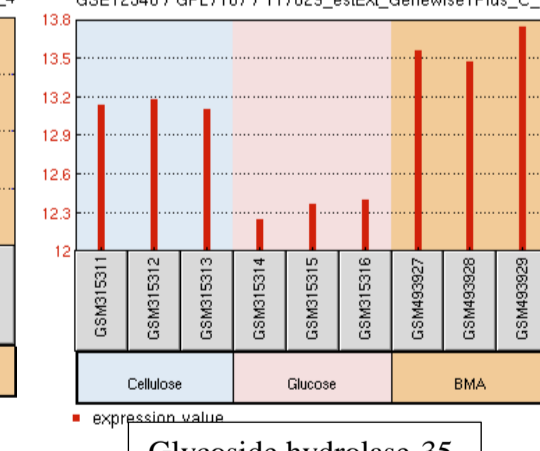
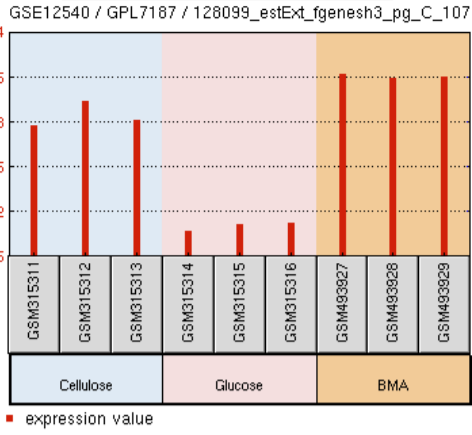


**Figure S2:- Individual gene expression profiles of various differentially expressed genes among the datasets A) GSE12540 B) GSE29656 and C) GSE69004 datasets.**

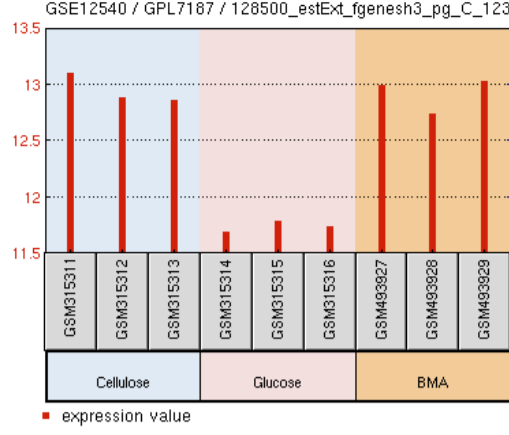
**Commonly expressed genes encoding for CAZymes in GSE12540 dataset:**

**Glycoside hydrolase-28****Glycoside hydrolase-51****Glycoside hydrolase-128****GMC-Oxidoreductase AA3-2****Glycoside hydrolase-55****Glycoside hydrolase-10****Glycoside hydrolase-28****Glycoside hydrolase-95****Glycoside hydrolase-18****Glycoside hydrolase-1****Ferroxidase-AA1-2****Glycoside hydrolase-3****Glycoside hydrolase-71****Glycoside hydrolase-88****Glycoside hydrolase-16****Glycoside hydrolase-47****Glycoside hydrolase-16****Glycoside hydrolase-2****Carbohydrate esterase-4****Glycoside hydrolase-31**

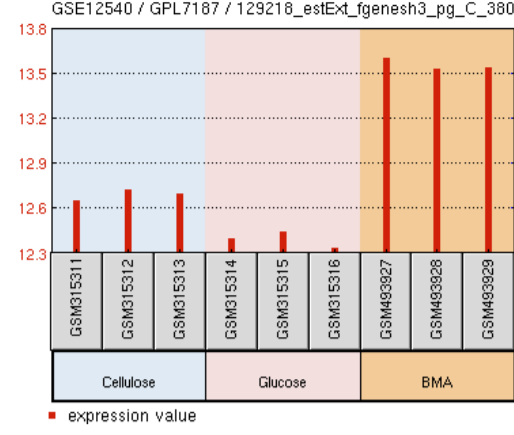
### Glycoside hydrolase-2



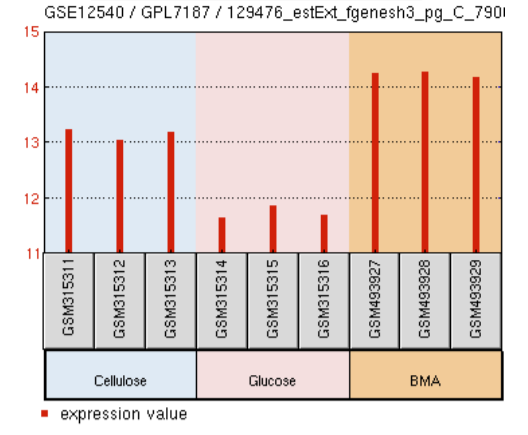
### Glycoside hydrolase-3



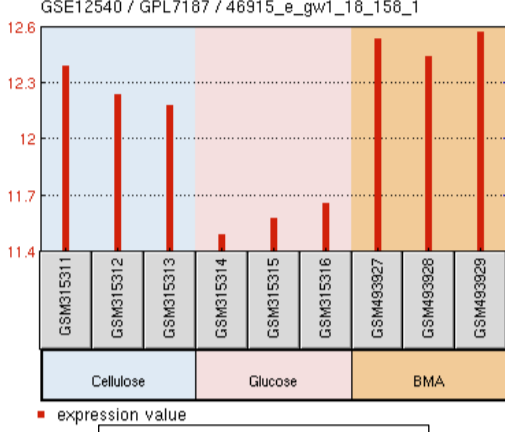
### GMC Oxidoreductase



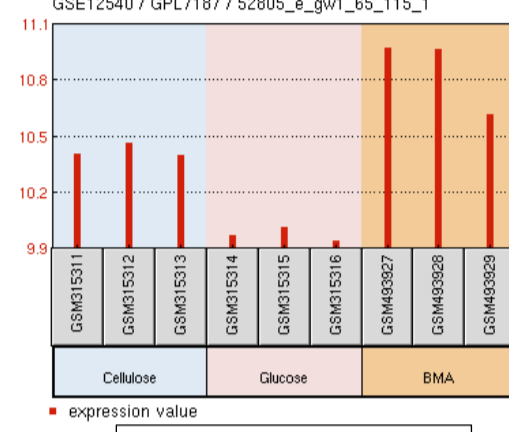
### Glycoside hydrolase-2



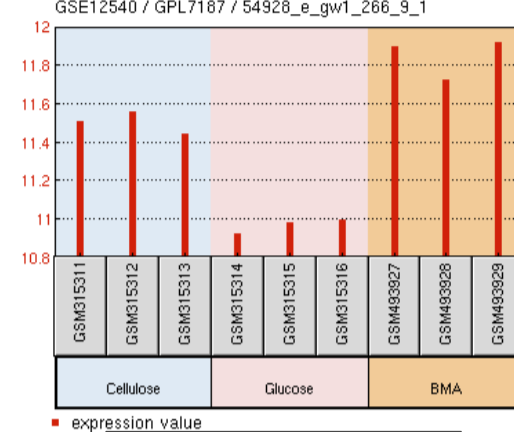
### Glycoside hydrolase-3



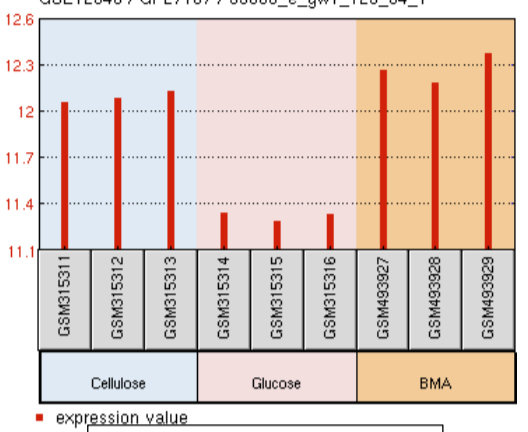
### Glycoside hydrolase-12



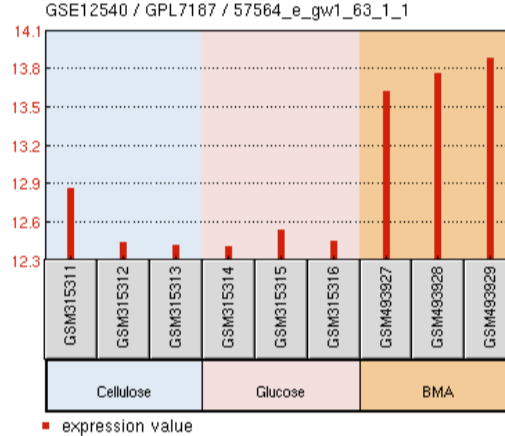
### Carbohydrate esterase-8



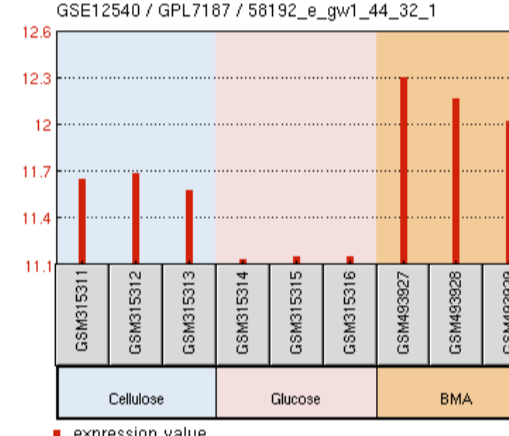
### Glycoside hydrolase-31



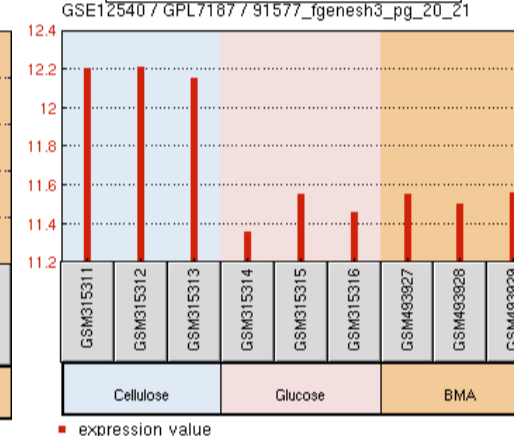
### Glycoside hydrolase-2



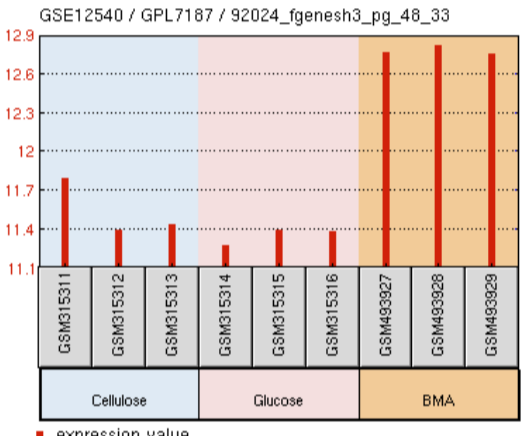
### Glycoside hydrolase-28



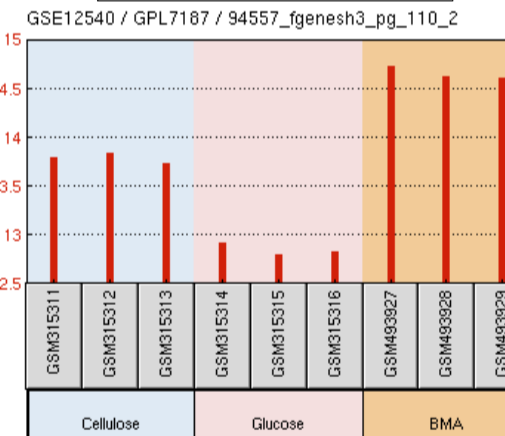
### Glycoside hydrolase-37



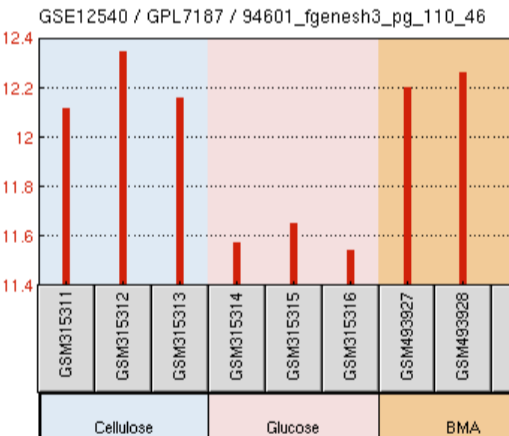
### GMC-Oxidoreductases



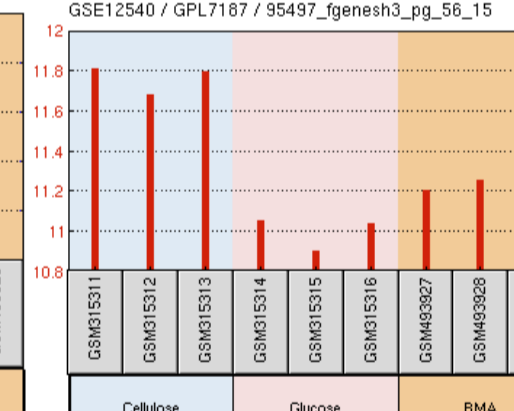
### Glycoside hydrolase-51



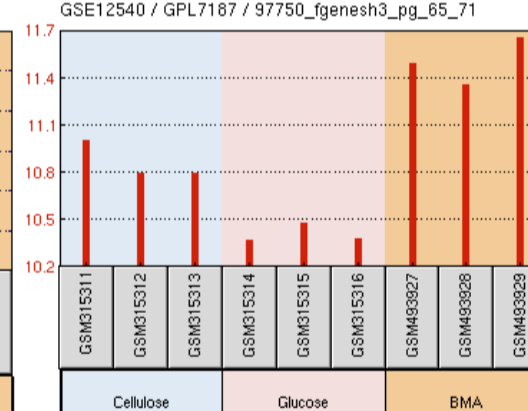
### Glycoside hydrolase-16



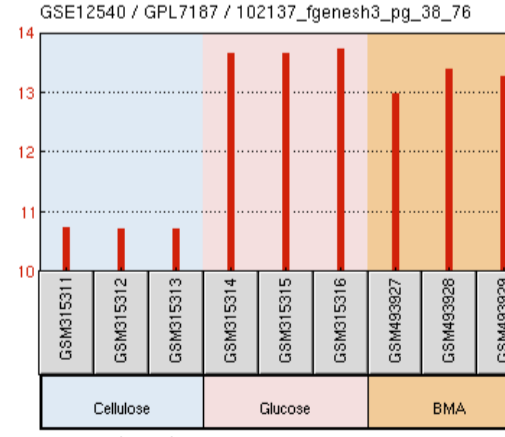
### EXPN Distantly related to Plant



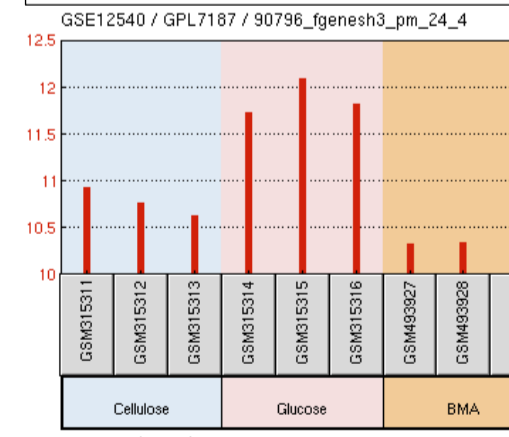
### Glycosyl Transferase-8



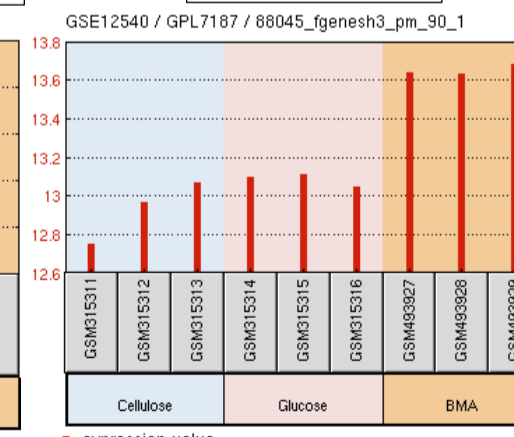
### 2OG-Fe(II) oxygenase superfamily



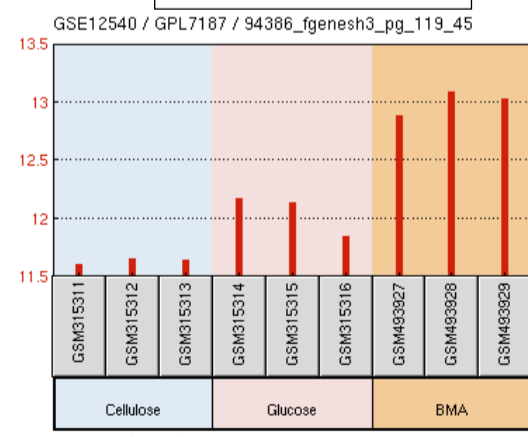
### 3-beta hydroxysteroid dehydrogenase



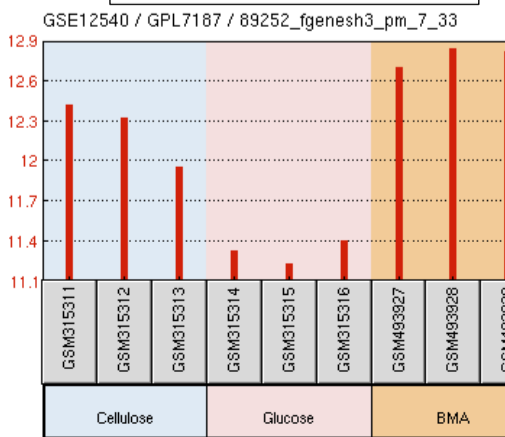
### AAA ATPase



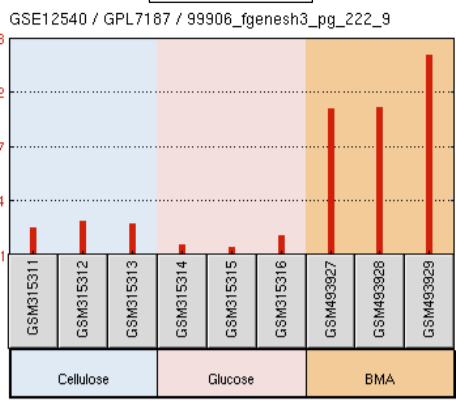
### ABC Transporters



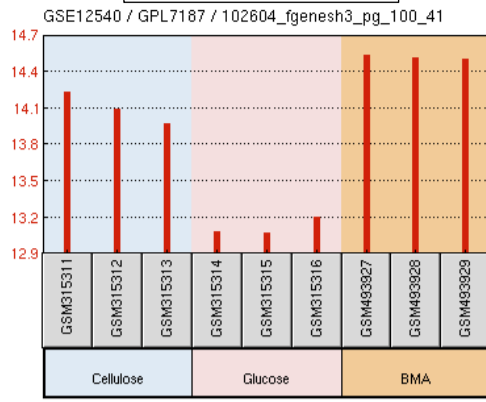
### Aldehyde dehydrogenase



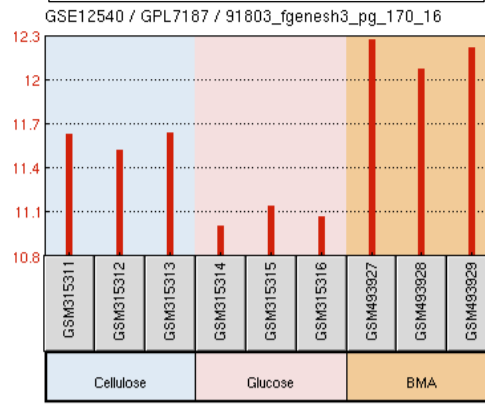
### Amidase



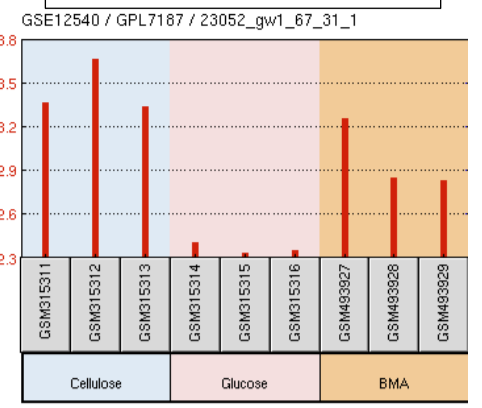
### Amidohydrolase



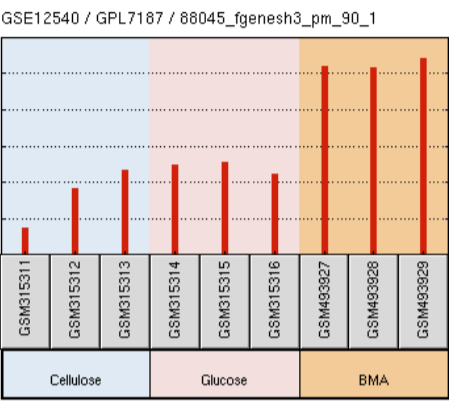
### Argonaut and Dicer Complex



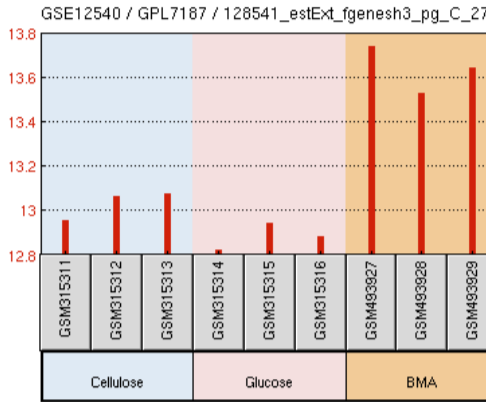
### Aromatic ring hydroxylase



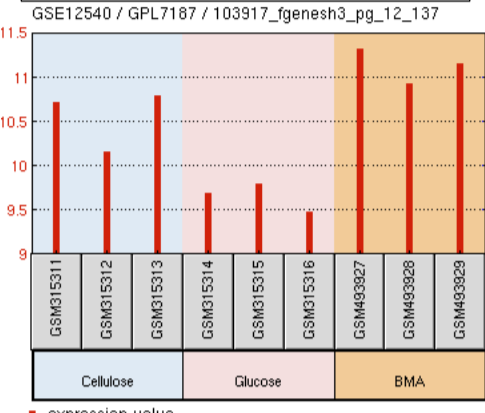
### ATP/GTP binding motif



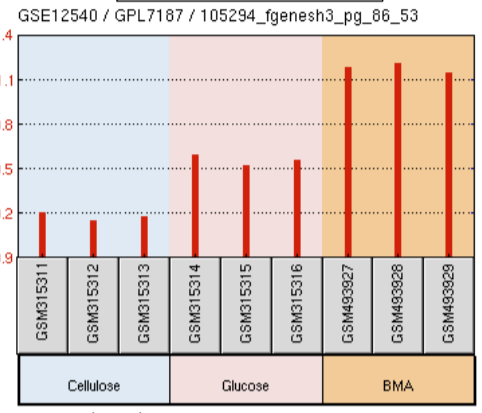
### ATP binding region, ATPase



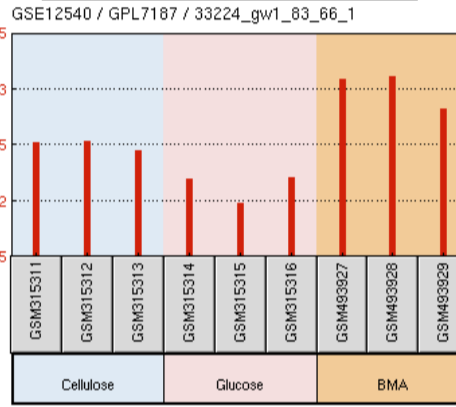
### Basic helix loop helix (BHLH)



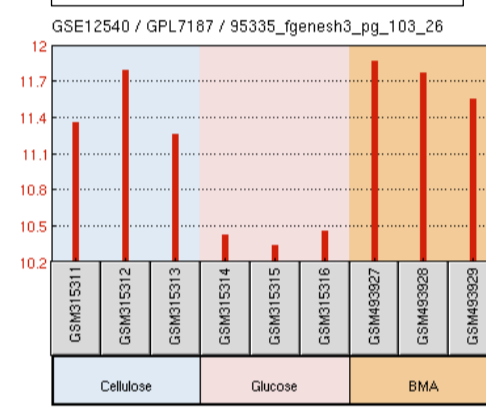
### Beta-lactamase



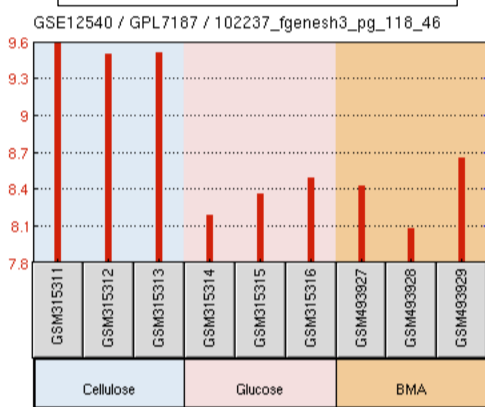
### Calcium/proton exchange



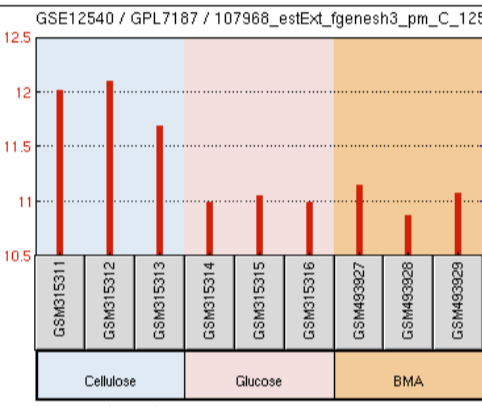
### Carbohydrate kinase FGGY



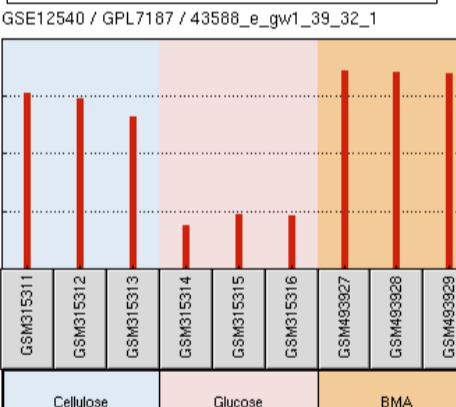
### Carbohydrate kinase PfkB



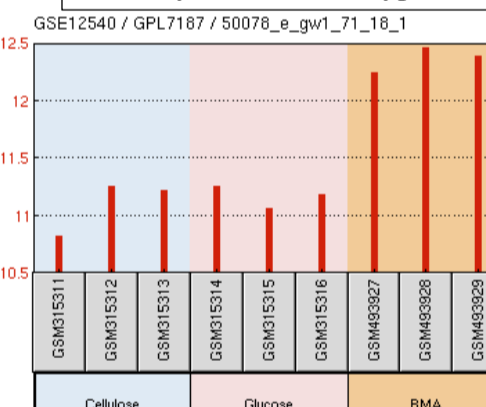
### Carbohydrate binding module V/XII



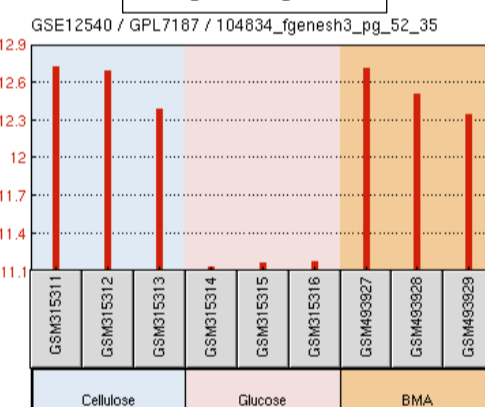
### Carbohydrate esterase type B



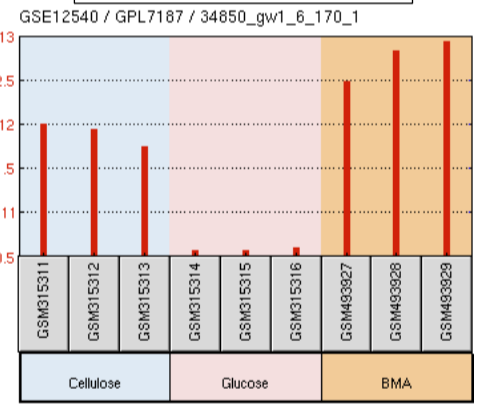
### Carbohydrate esterase type B



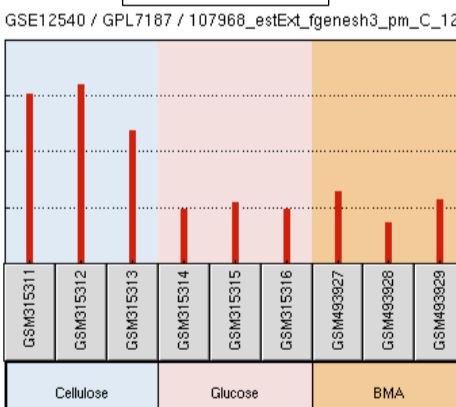
### Caspase 1-p20



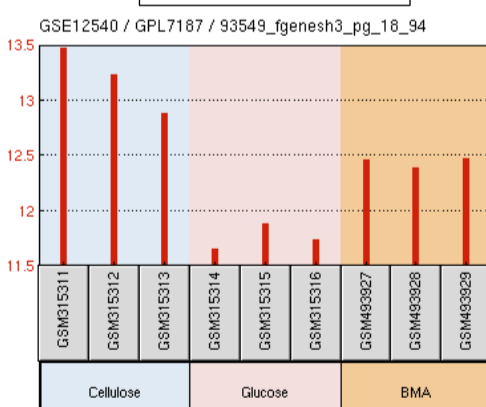
### Catechol dioxygenase



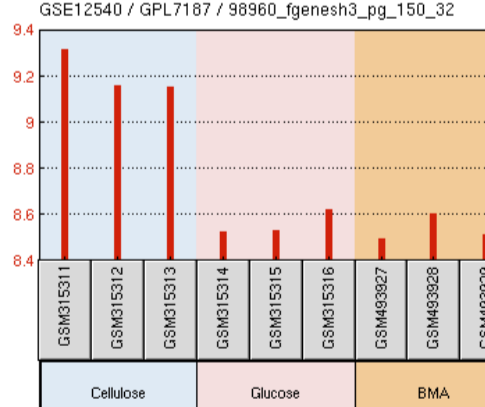
### Chitinase II



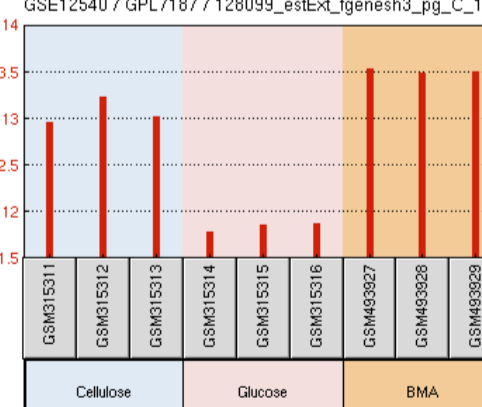
### Chloroperoxidase



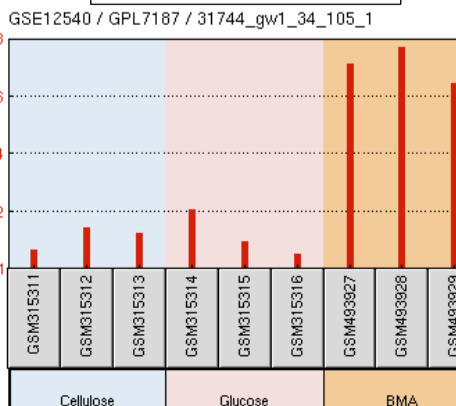
### Citrate Synthase



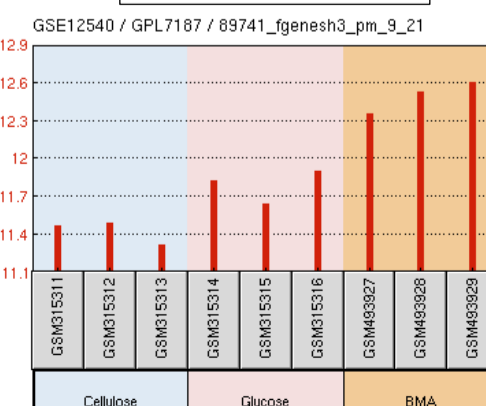
### Cytochrome b/b6



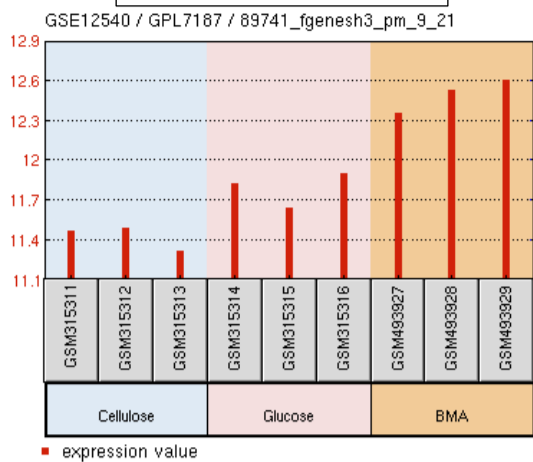
### Cytochrome P450



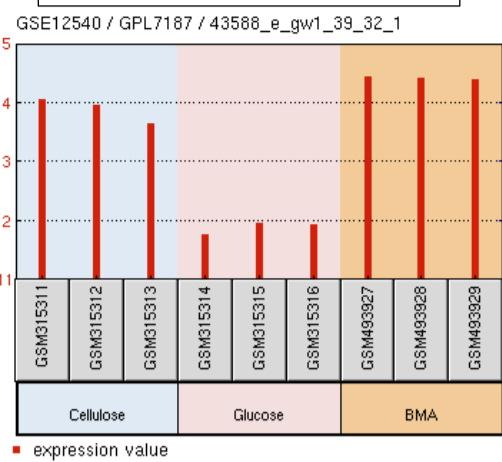
### Cytochrome P450



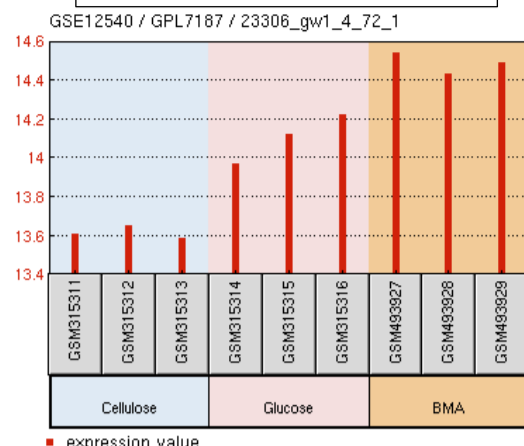
### E-class, P-450 group-I



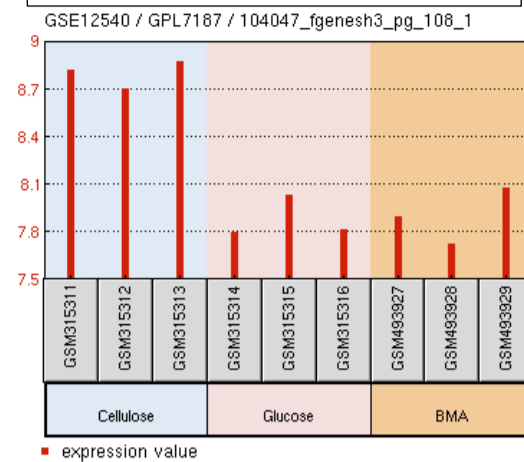
### Esterase/Lipase/Thioesterase



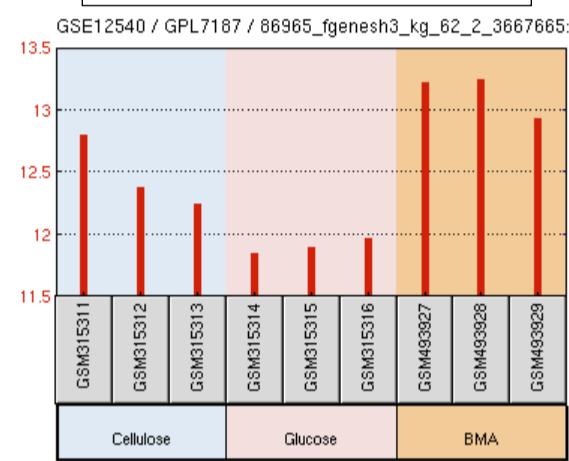
### Flavin monooxygenase (FMO)



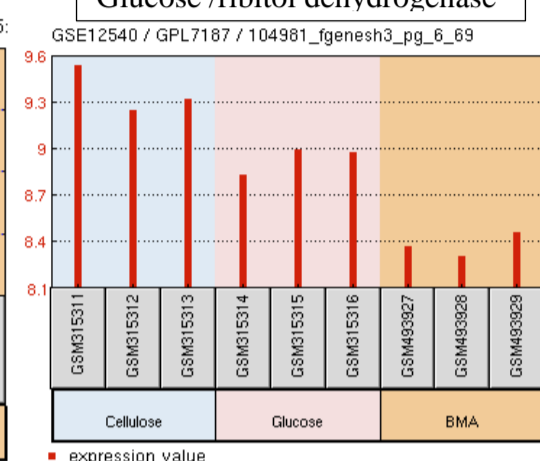
### Fungal specific transcription factor



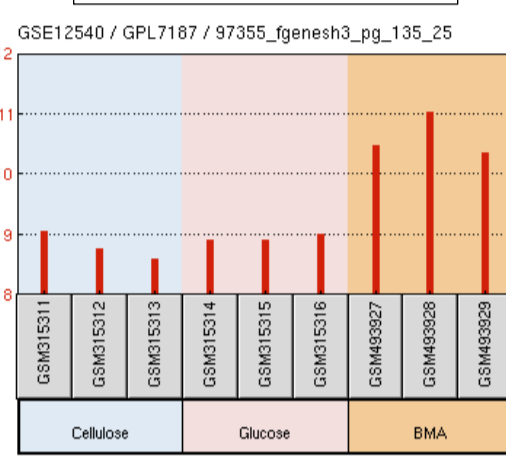
### Glucose /ribitol dehydrogenase



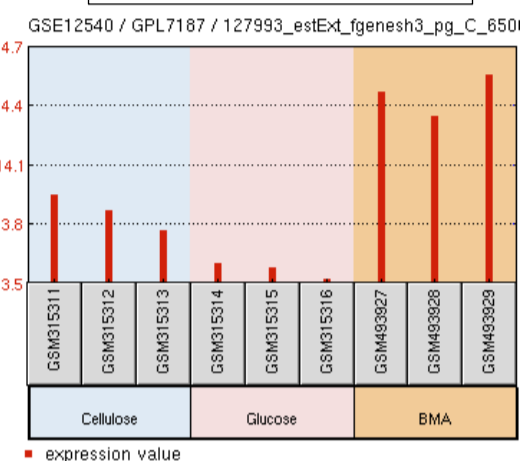
### Glucose /ribitol dehydrogenase



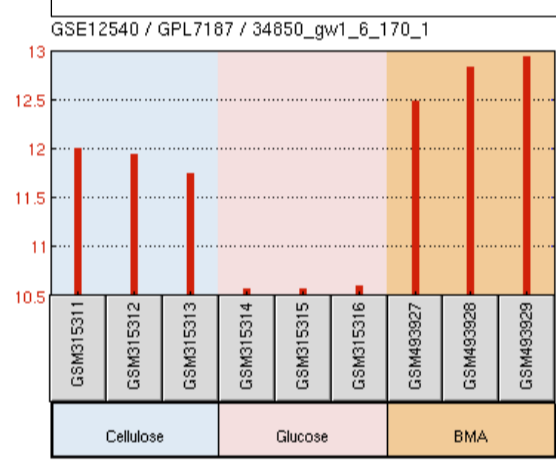
### Glutathione-S-Transferase



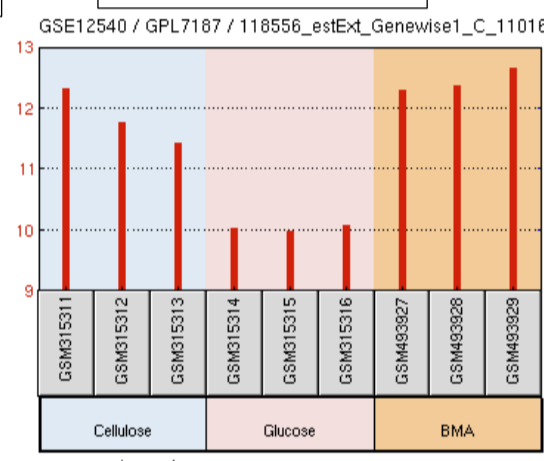
### G-Protein beta WD-40



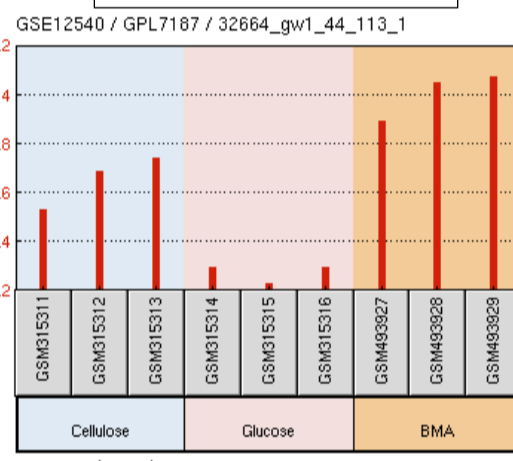
### Intradiol ring cleavage dioxygenase



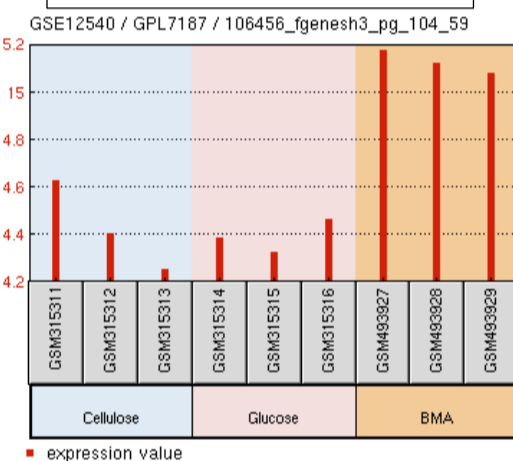
### Iron Permease FTR1



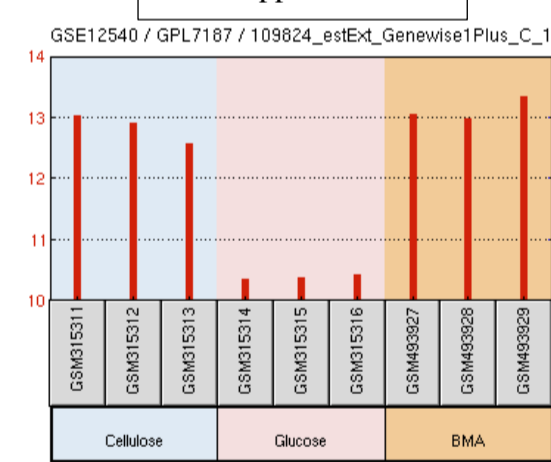
### Major Facilitator Protein



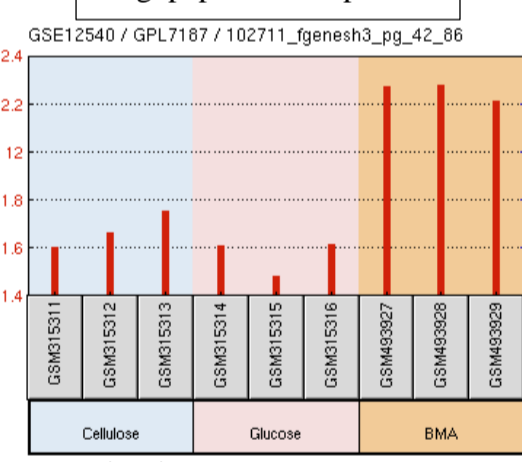
### Monoxygenase, FAD binding



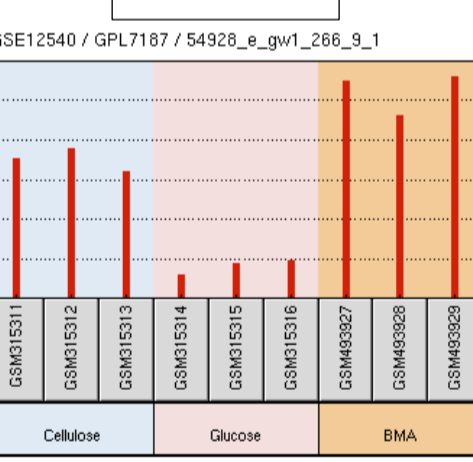
### Multicopper oxidase



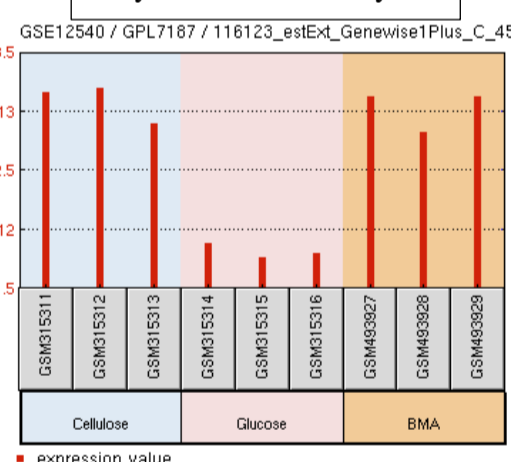
### Oligopeptide Transporter



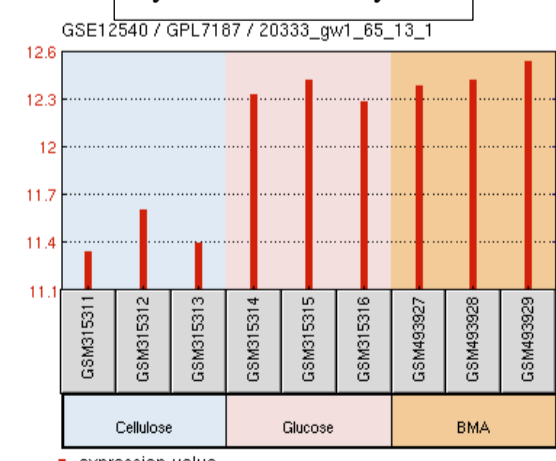
### Pectinesterase



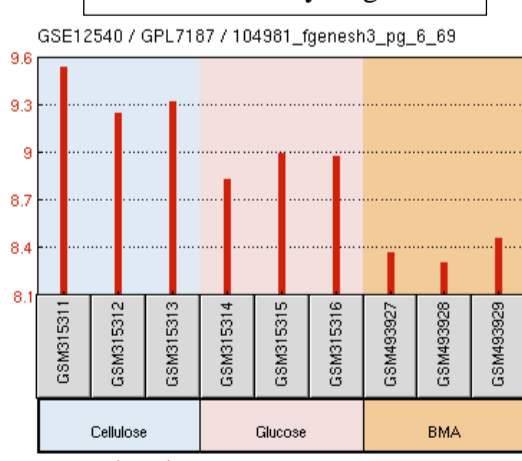
### Polysaccharide deacetylase



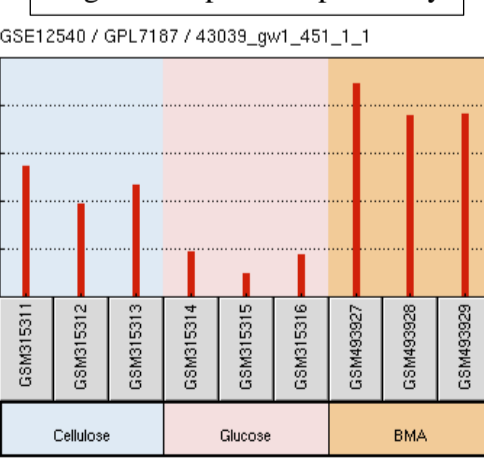
### Pyruvate decarboxylase



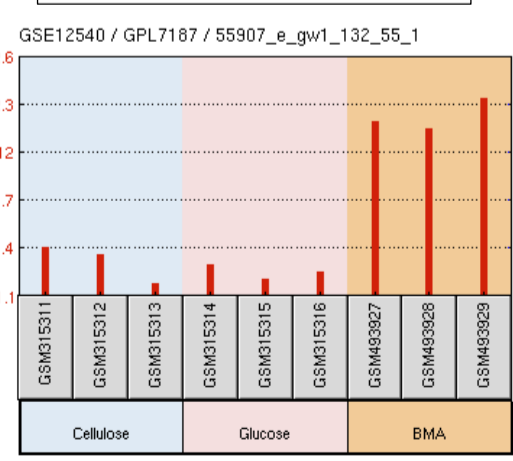
### Short chain dehydrogenase

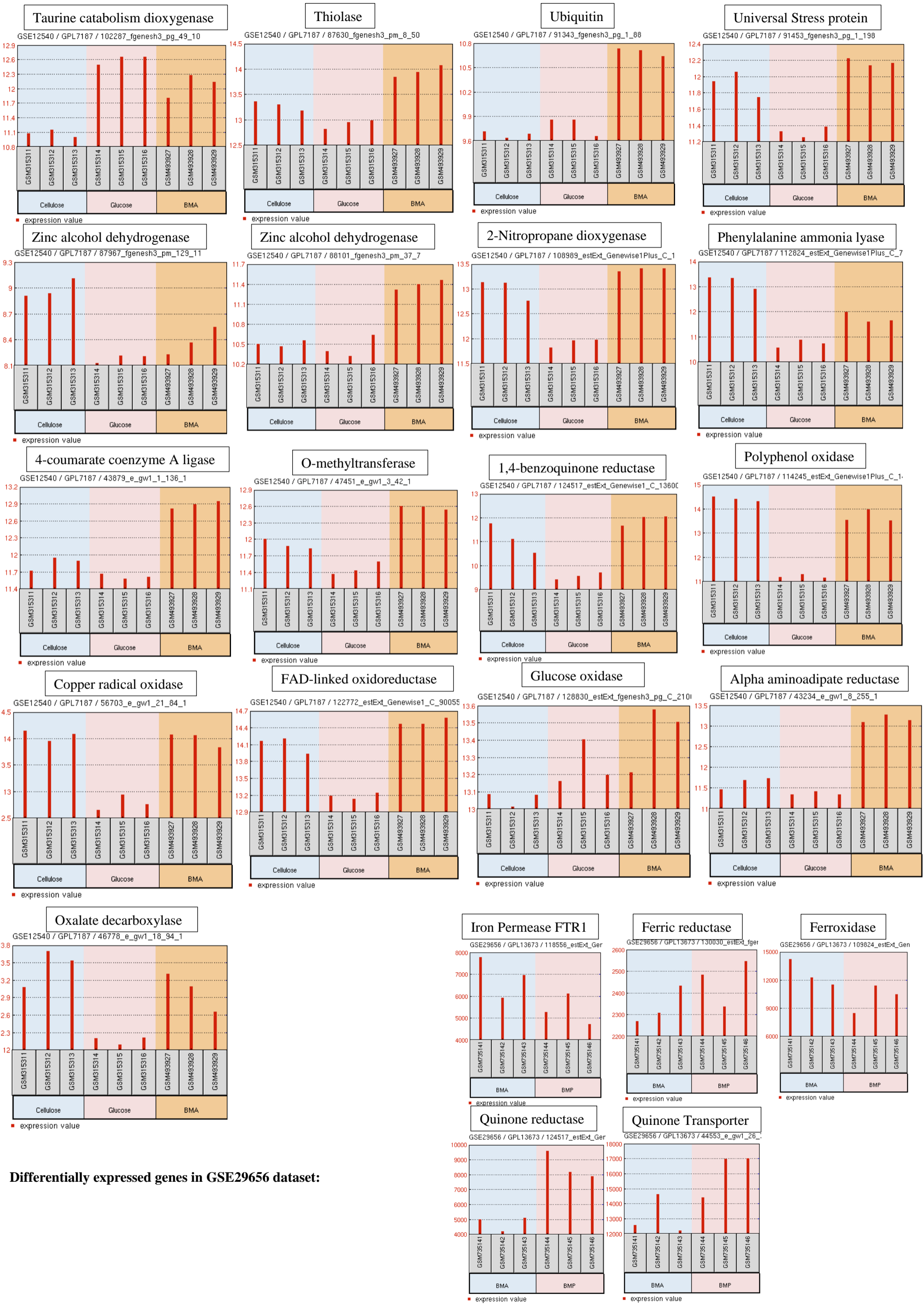


### Sugar Transporter superfamily

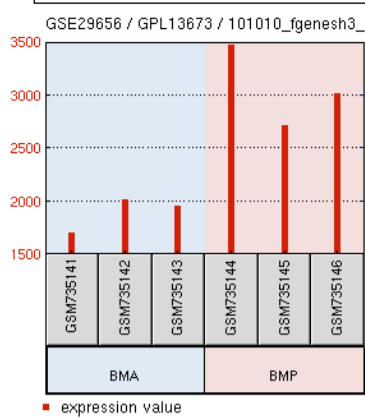


### Tannase and Feruloyl esterase

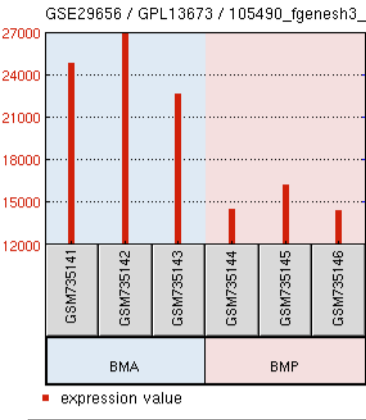




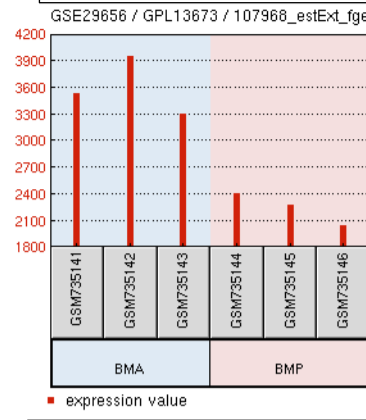
### Glycosyl Transferase-1



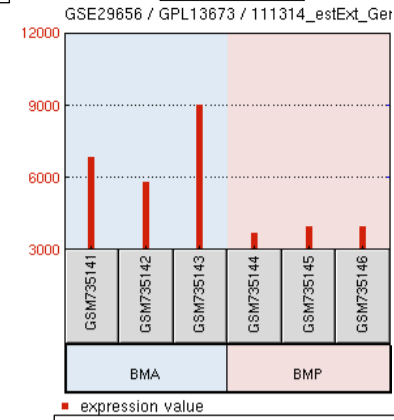
### Glycoside hydrolase-55



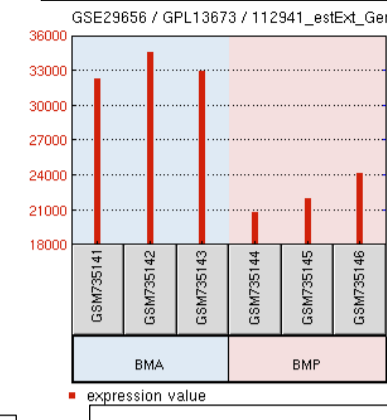
### Glycoside hydrolase-18



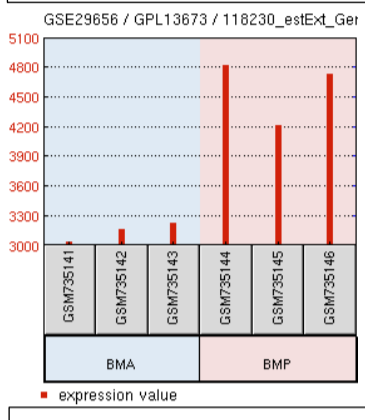
### Laccase



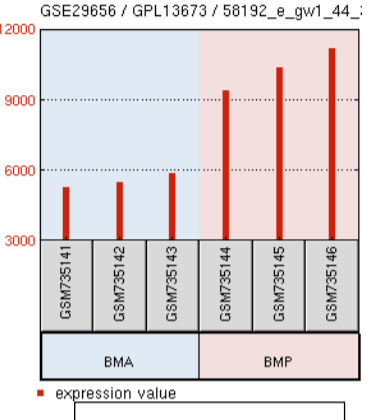
### Glycoside hydrolase-16



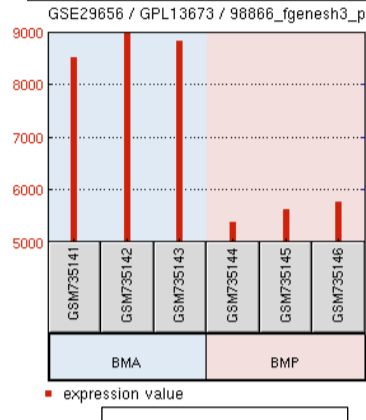
### Glycoside hydrolase-18



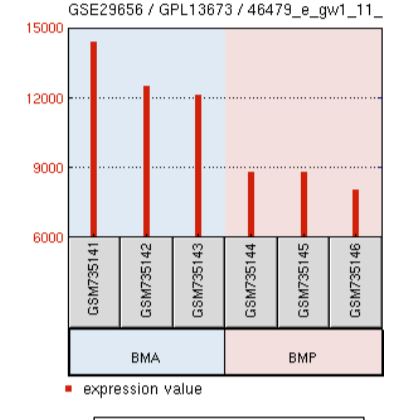
### Glycoside hydrolase-28



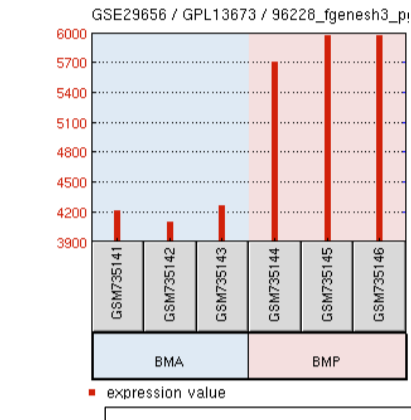
### Glycoside hydrolase-71



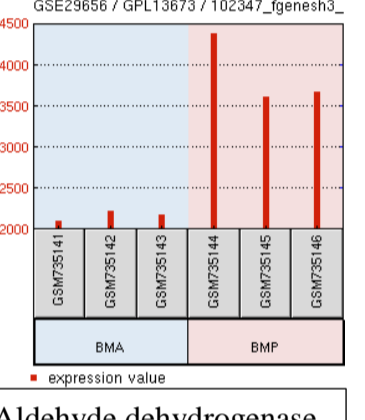
### Carboxylesterase-typeB



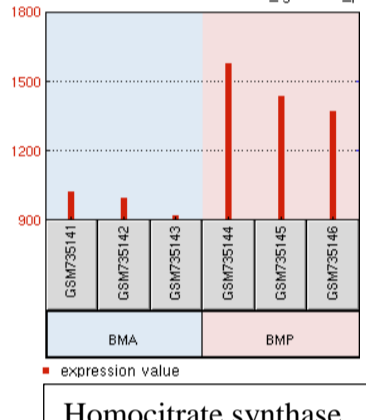
### Acyl-CoA thioesterase



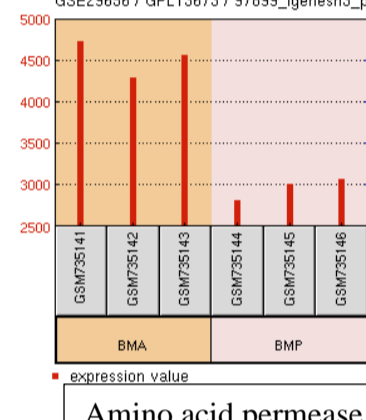
### Aldehyde dehydrogenase



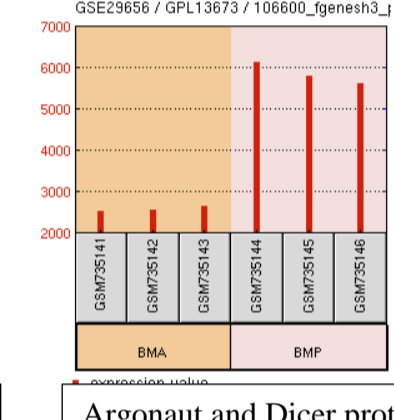
### AIR carboxylase



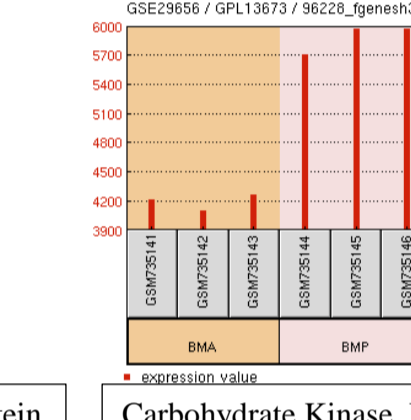
### AAA ATPase



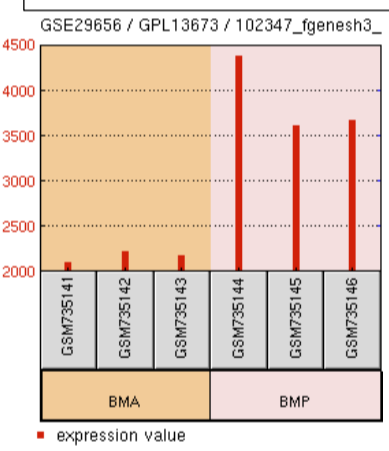
### ABC Transporter



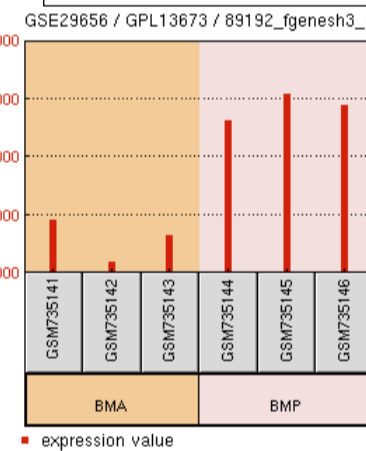
### Acyl-CoA Thioesterase



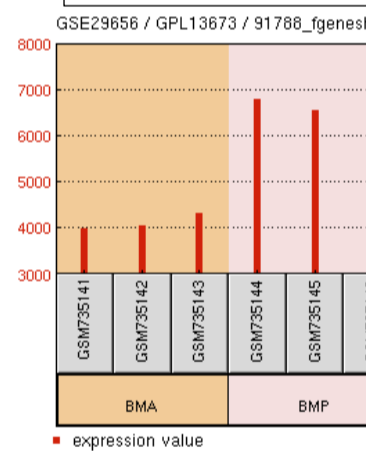
### Aldehyde dehydrogenase



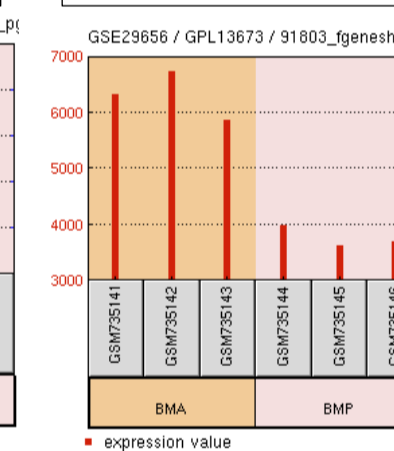
### Homocitrate synthase



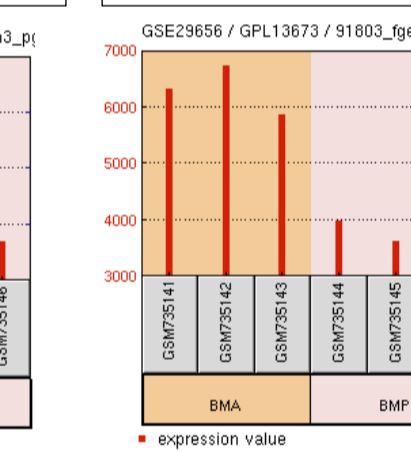
### Amino acid permease



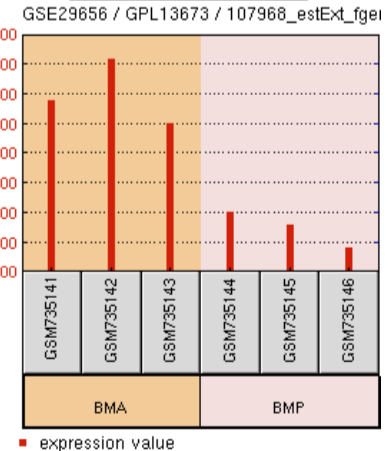
### Argonaut and Dicer protein



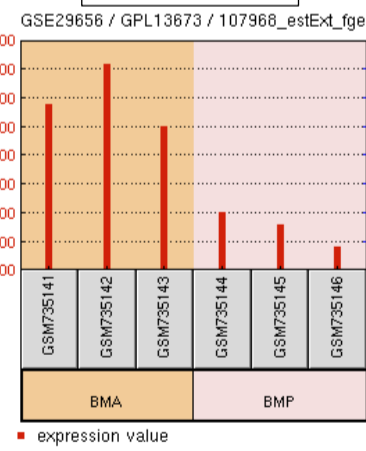
### Carbohydrate Kinase, FGGY



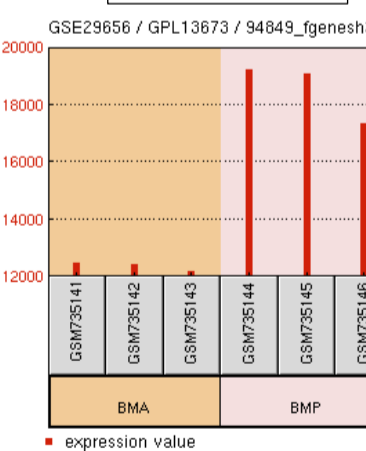
### CBM V/ XII



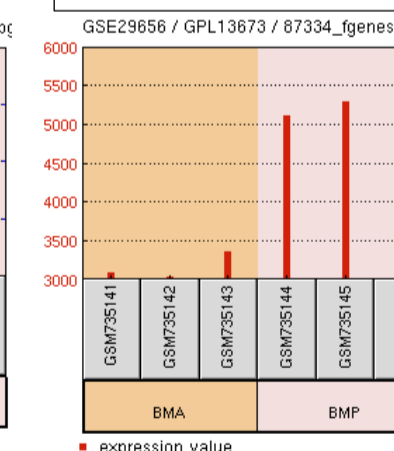
### Chitinase-II



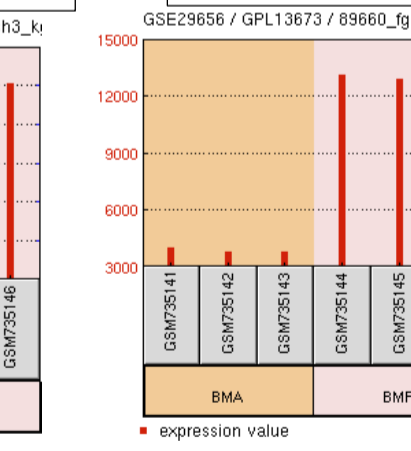
### Cytochrome b5



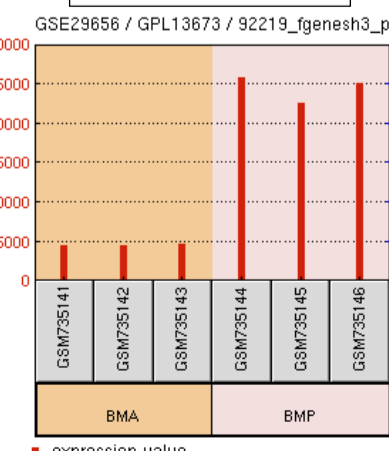
### Cytochrome c heme binding



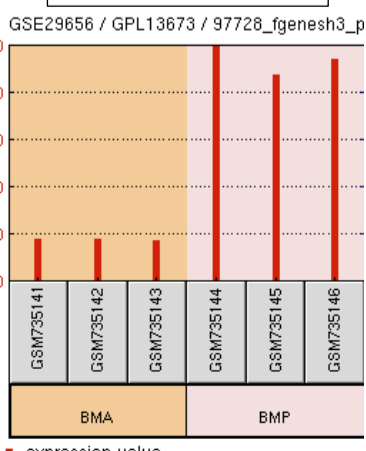
### Cytochrome P450



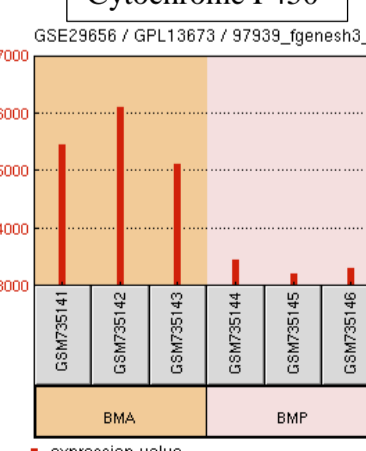
### Cytochrome P450



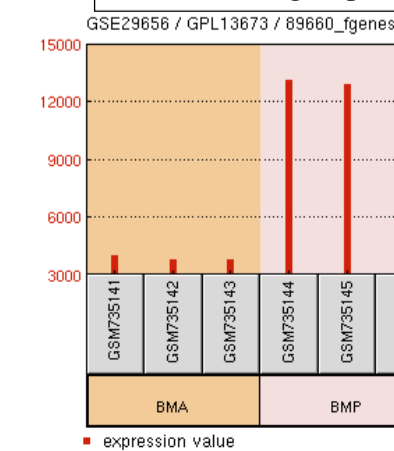
### Cytochrome P450



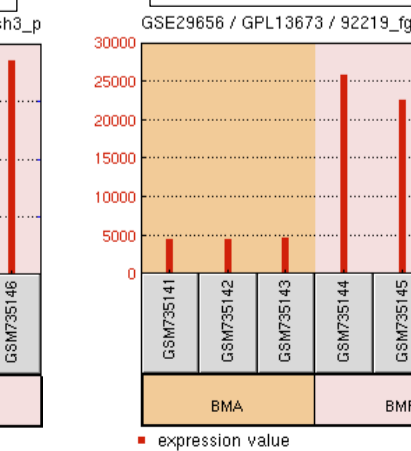
### Cytochrome P450



### E-class P450 group-I

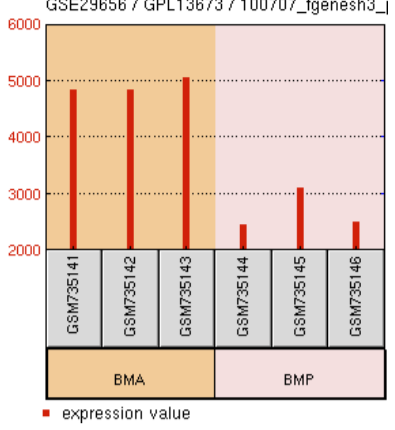


### E-class P450 group-I

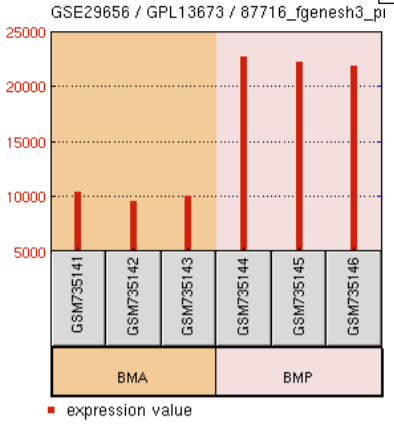




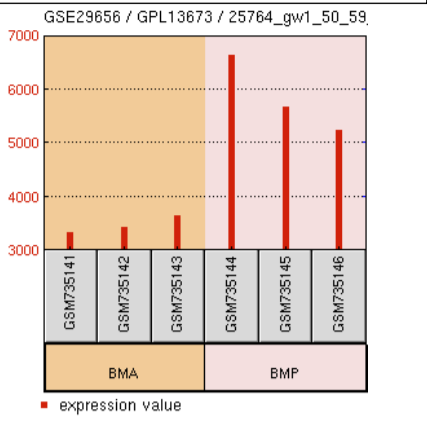
### Esterase/Lipase/Thioesterase



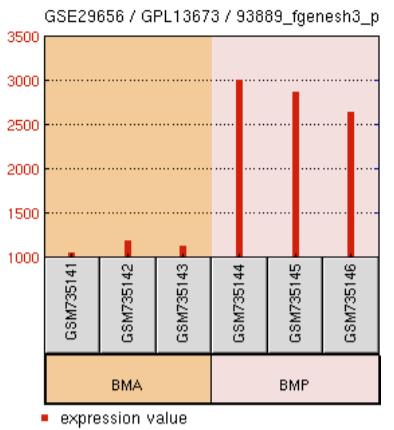
### Flavodoxin (NOS)



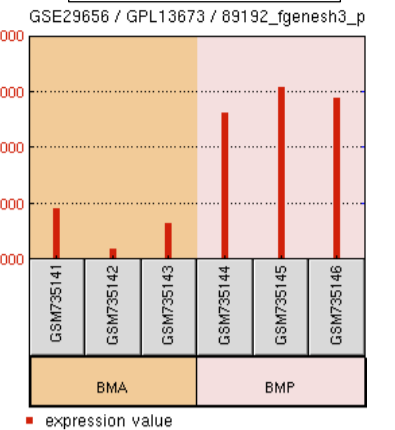
### Glucose/ribitol dehydrogenase



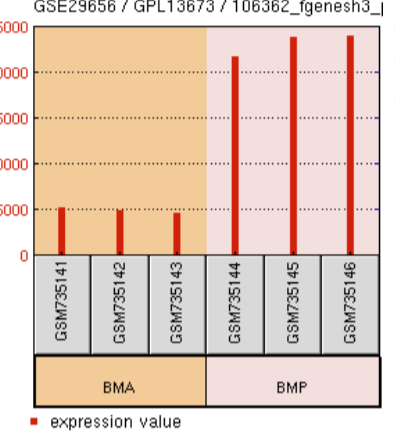
### Epoxide hydrolase



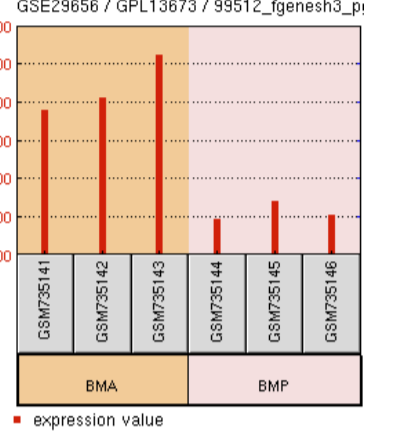
### HMG-CoA Lyase



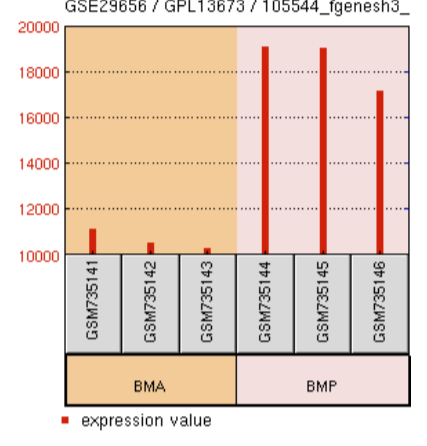
### Isoflavone reductase



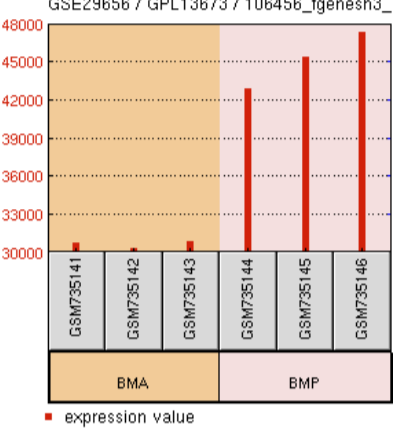
### Major Facilitator Superfamily



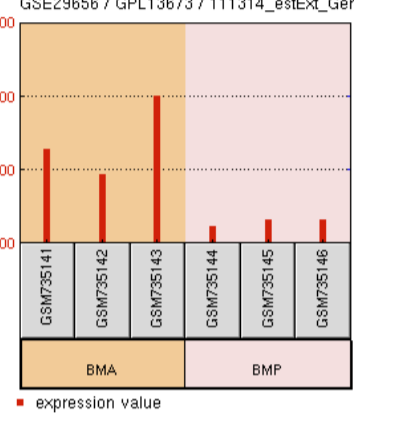
### Mitochondrial carrier protein



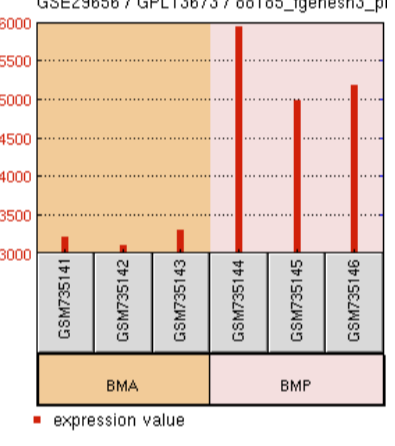
### FAD Monooxygenase



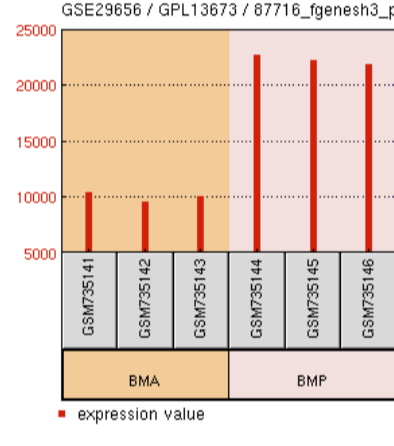
### Multicopper oxidase



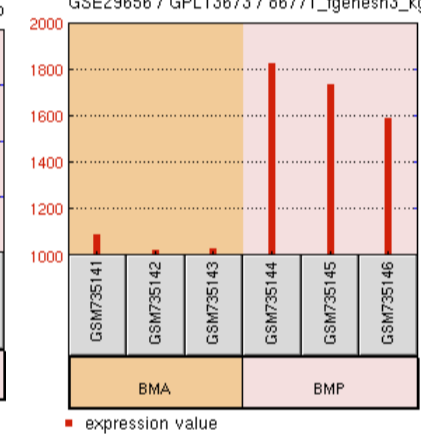
### NADH flavin oxidoreductase



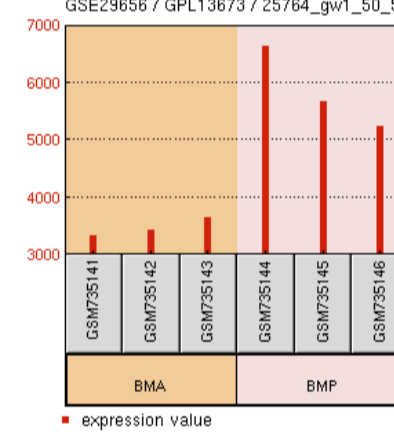
### FAD Oxidoreductase



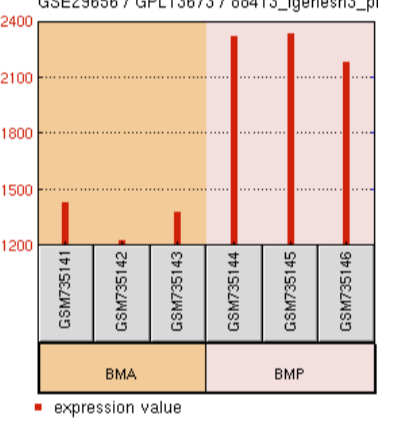
### DAHP synthetase



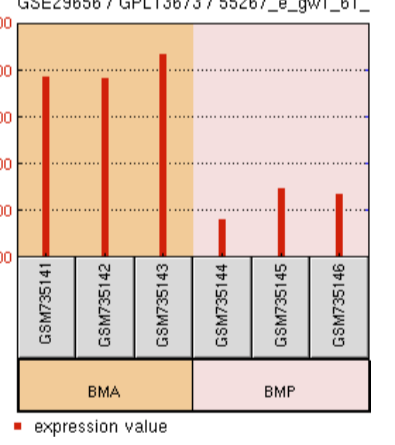
### Short chain dehydrogenase



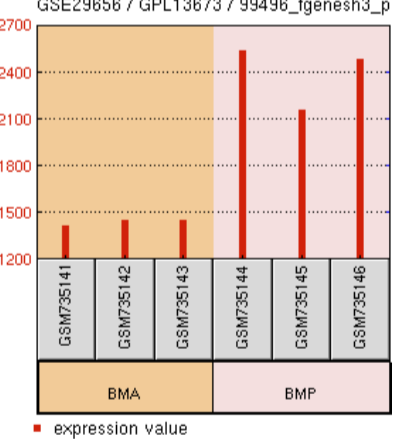
### Sugar Transporter family



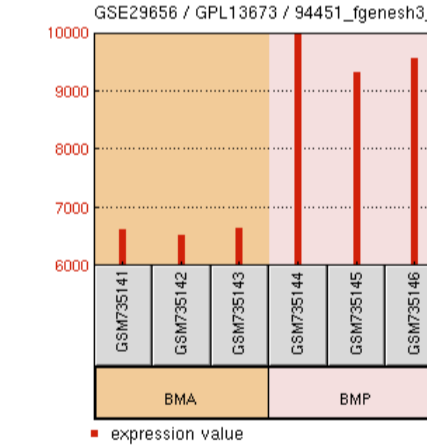
### Tannase/Feruloyl esterase



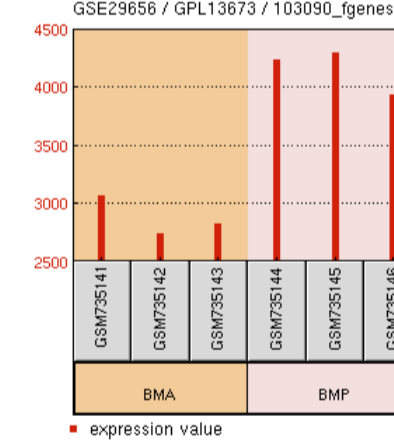
### Terpene Synthase



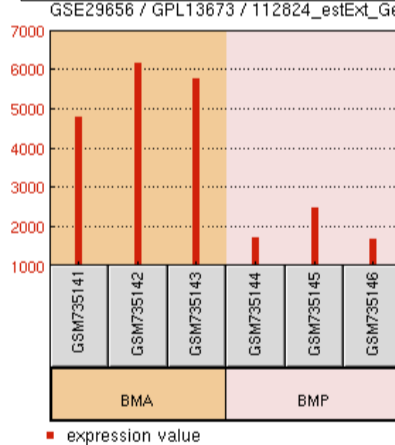
### Transketolase



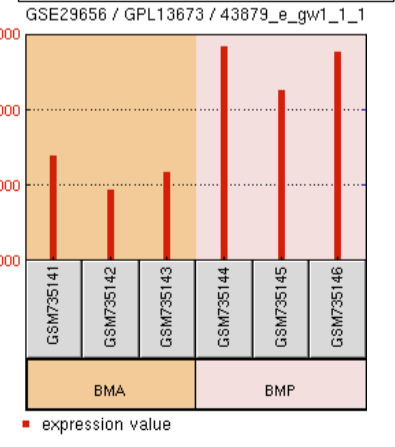
### Zinc alcohol dehydrogenase



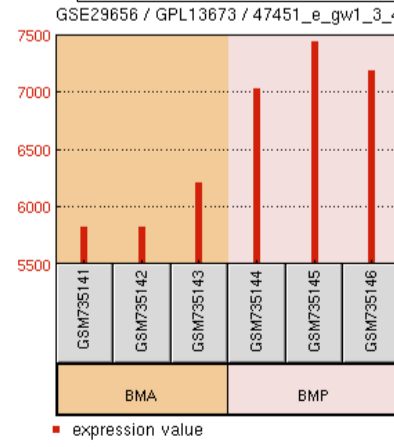
### Phenylalanine ammonia lyase



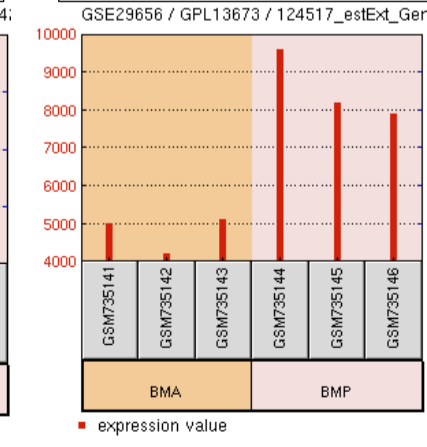
### 4-Coumarate CoA Ligase



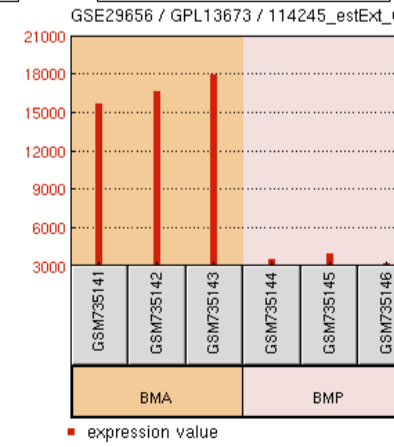
### O-methyl transferase



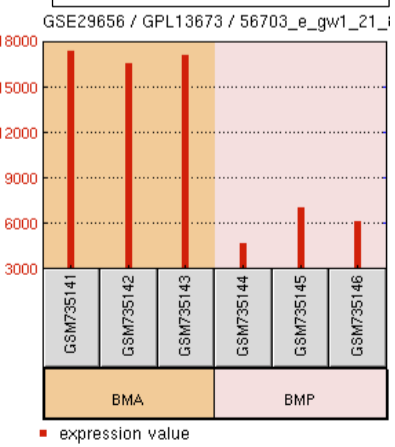
### 1,4-benzoquinone reductase



### Polyphenol oxidase

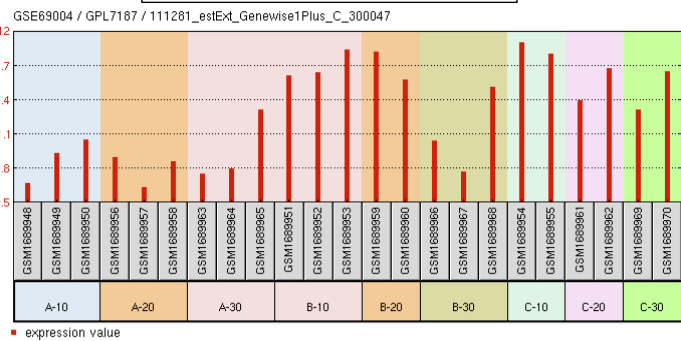


### Copper radical oxidase

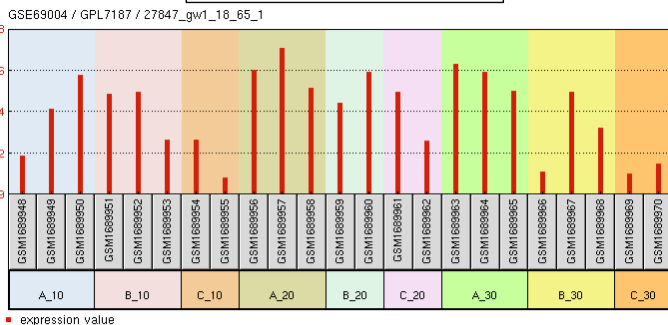


## Differentially expressed genes in GSE69004 dataset:

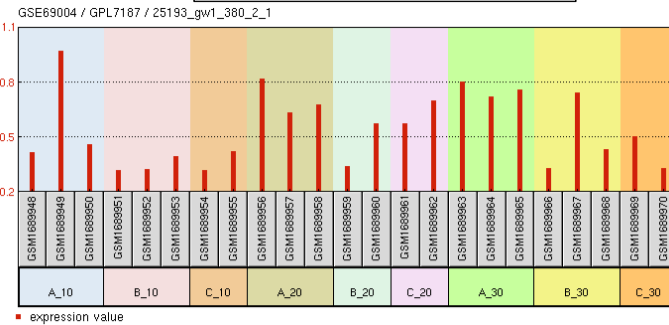
### Glycoside hydrolase- 47



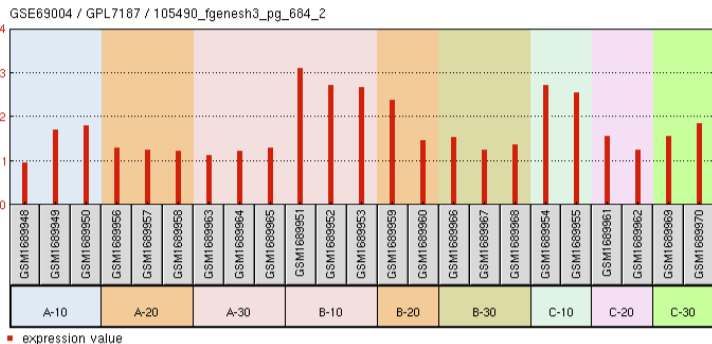
### Auxiliary activity-3



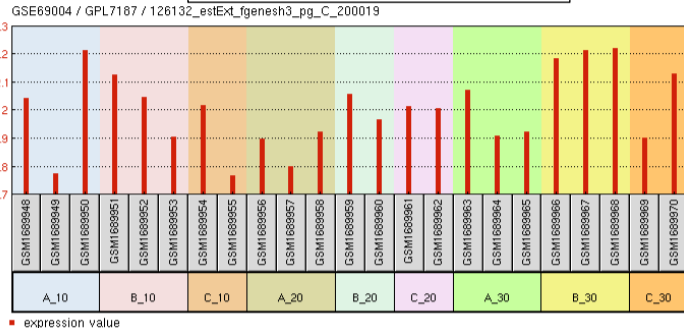
### Glycoside hydrolase-128



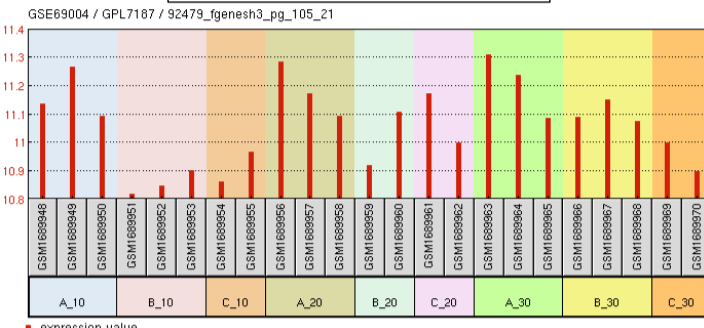
### Glycoside hydrolase-55



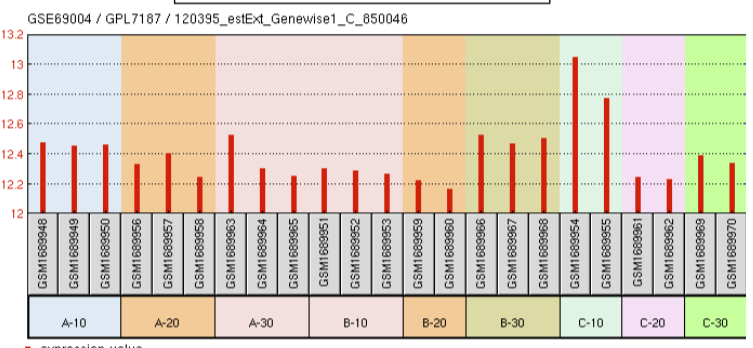
### Glycoside hydrolase-37



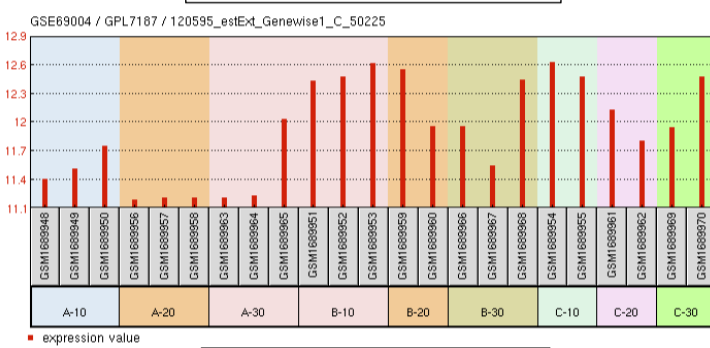
### Glycosyl Transferase-20



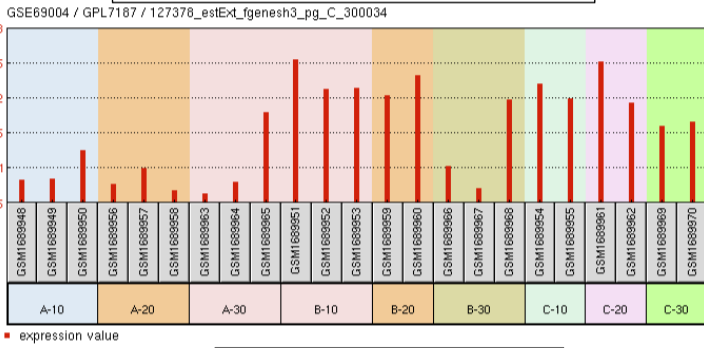
### Glycoside hydrolase- 27



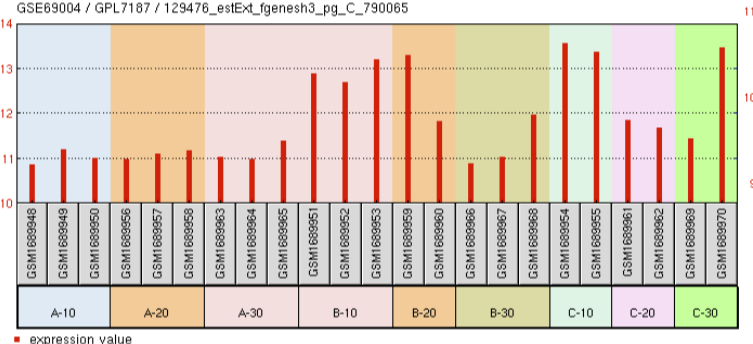
### Glycoside hydrolase- 16



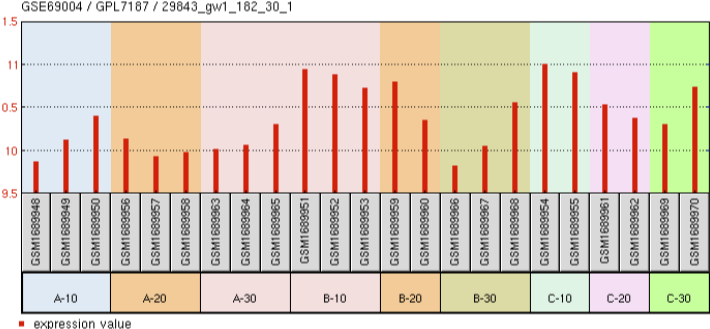
### Carbohydrate binding domain-21



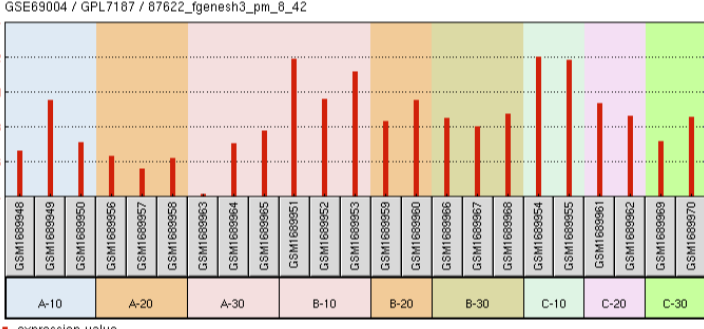
### Glycoside hydrolase - 2



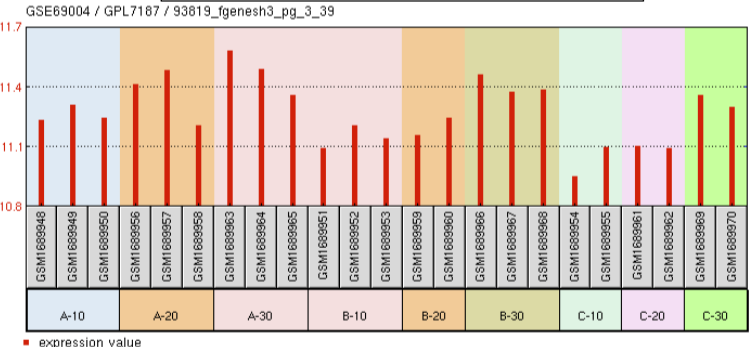
### Glycoside hydrolase - 5



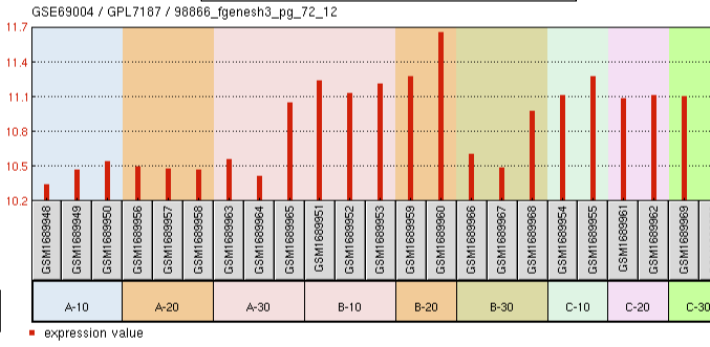
### Glycosyl transferase -8



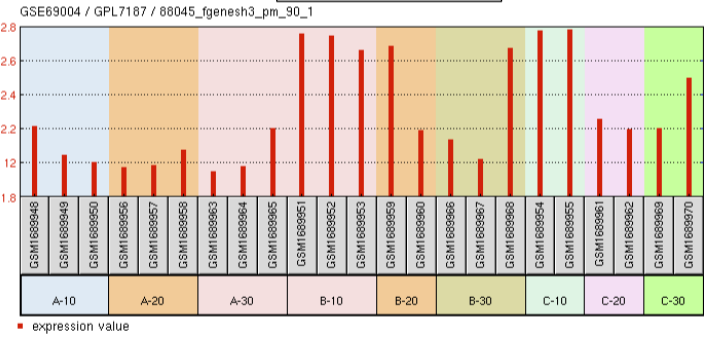
### Carbohydrate binding domain- 13



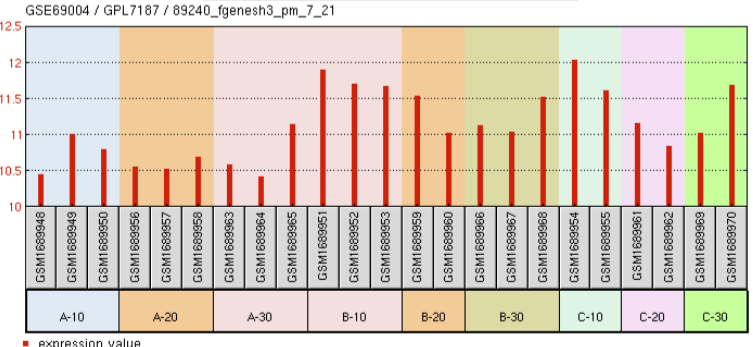
### Glycoside hydrolase - 71



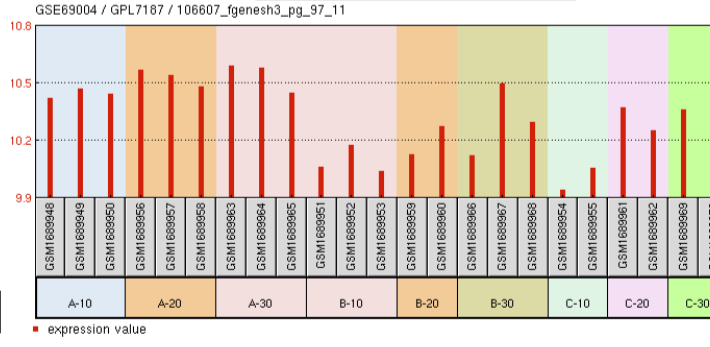
### AAA ATPase



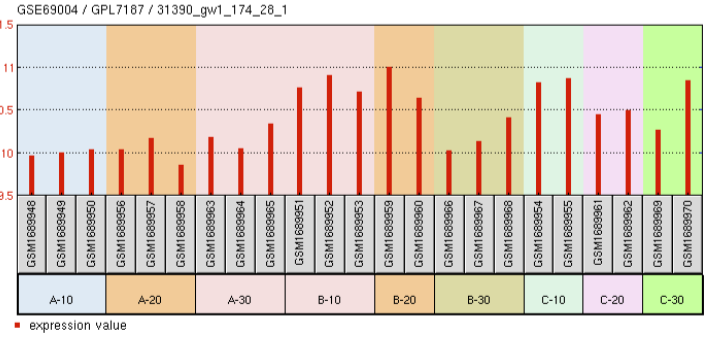
### Acyl-CoA dehydrogenase



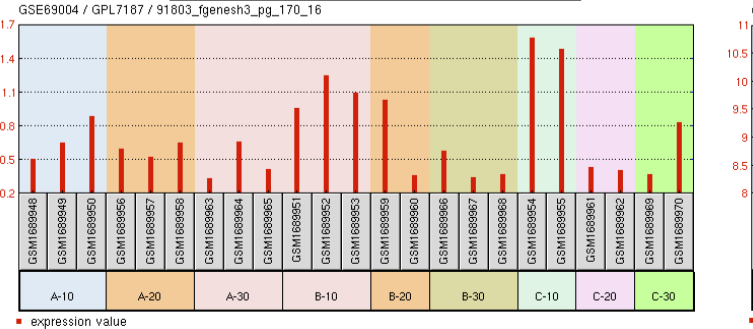
### Aldo/Keto reductases



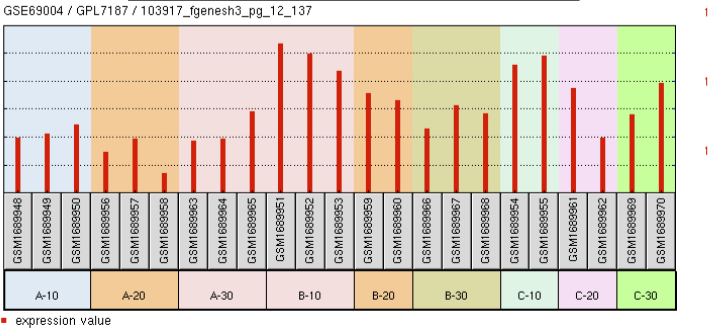
### Amino acid Permease



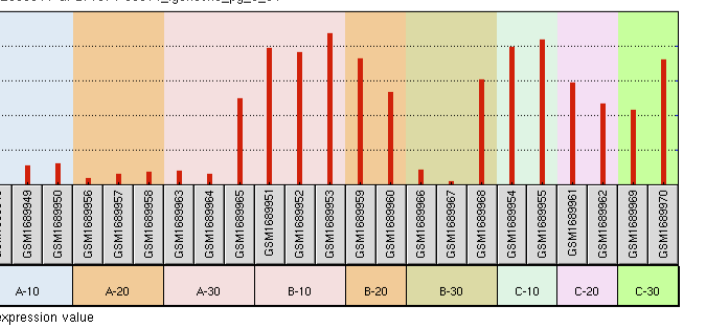
### Argonaut and Dicer Protein



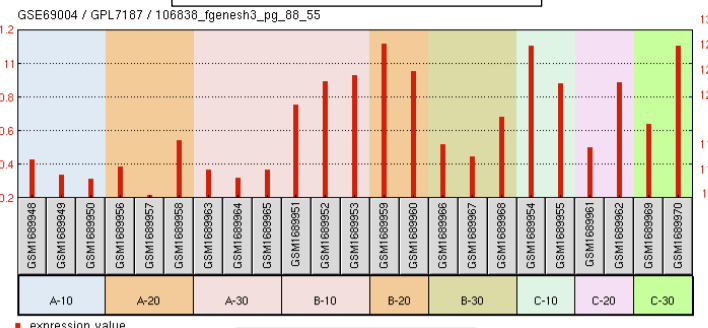
### Basic helix loop helix (BHLH)



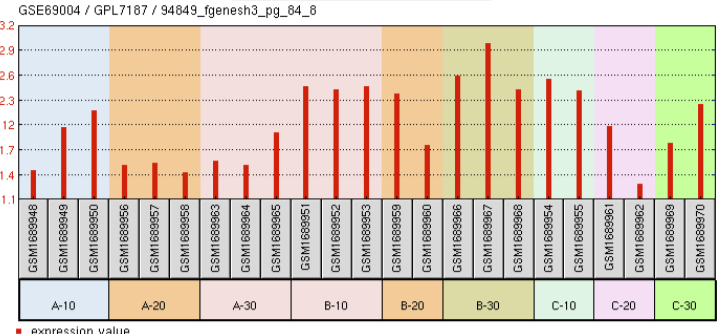
### Basic leucine zipper (bZIP)



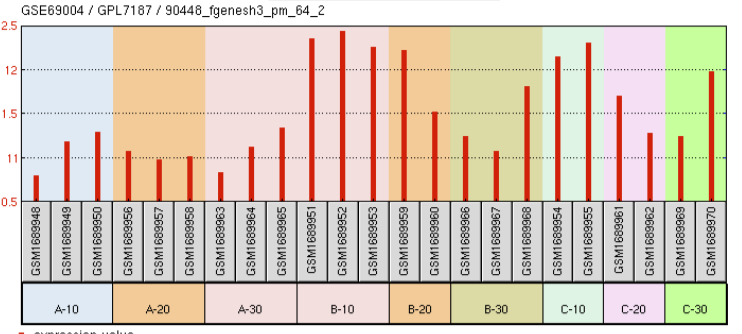
### Carboxylesterase type B



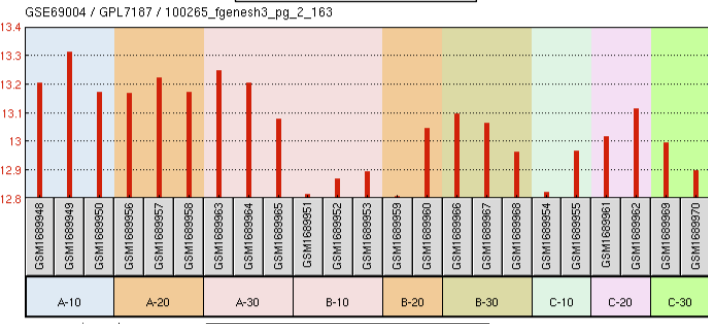
### Cytochrome b5



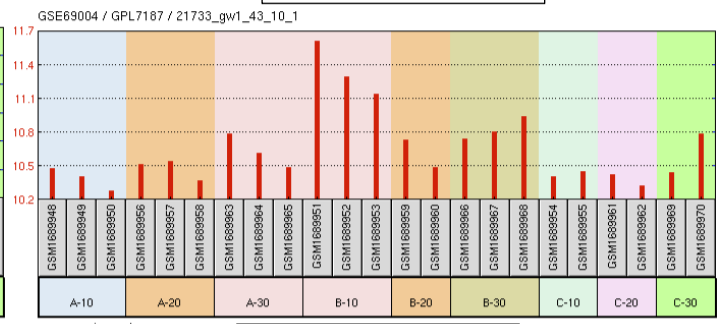
### Cytochrome c



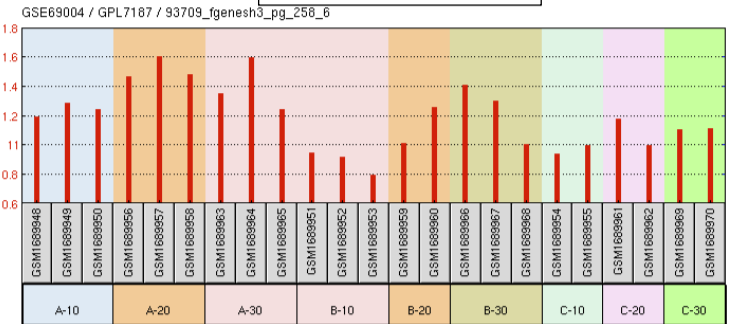
### Cytochrome c



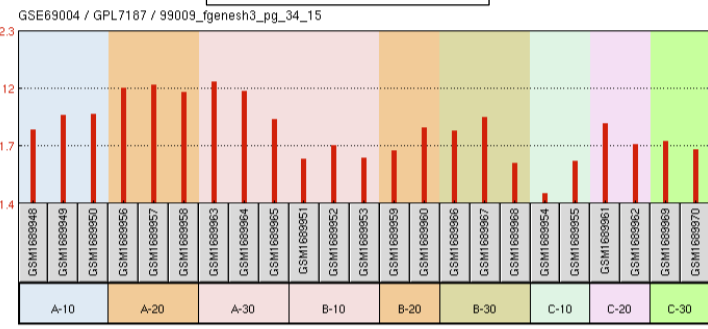
### Cytochrome P450



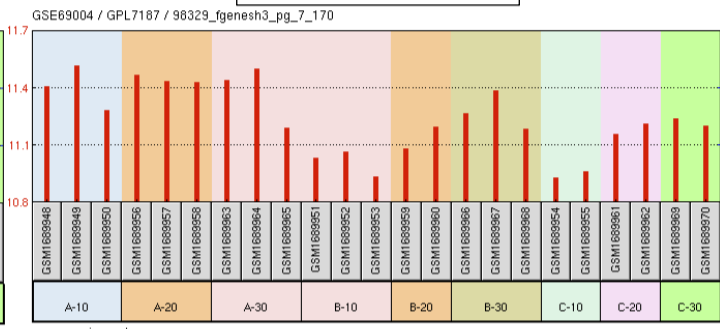
### Cytochrome P450



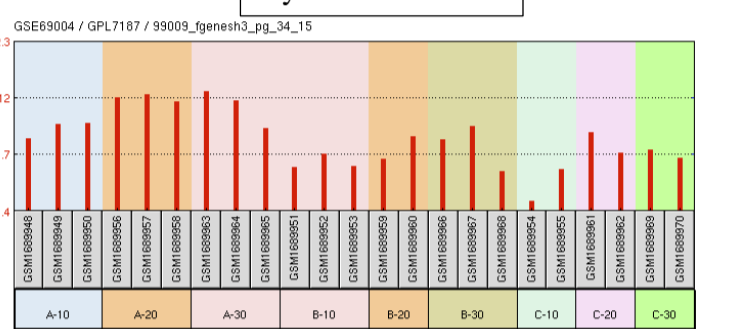
### Cytochrome P450



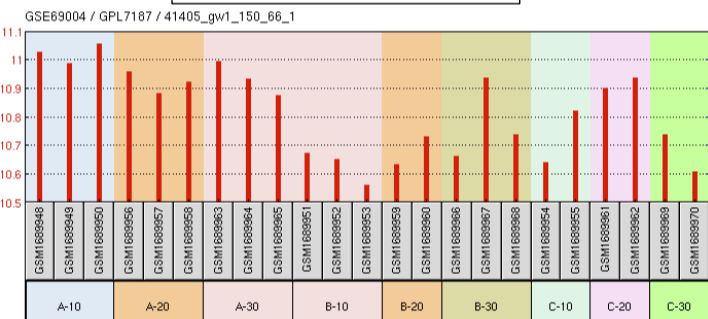
### Cytochrome P450



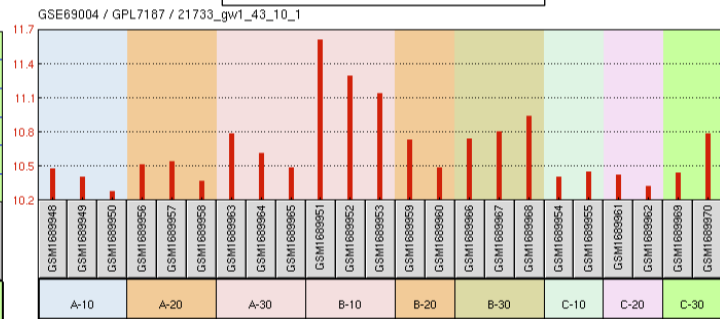
### Cytochrome P450



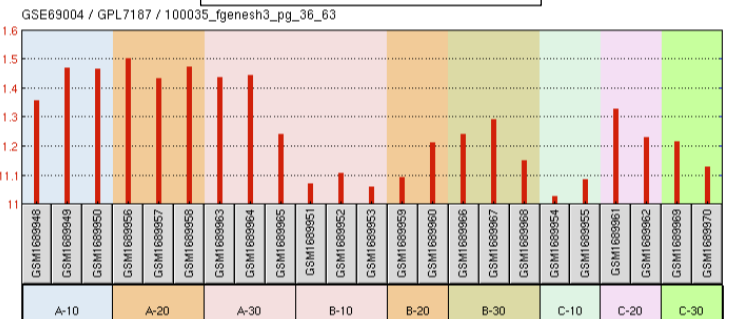
### Dienelactone hydrolase



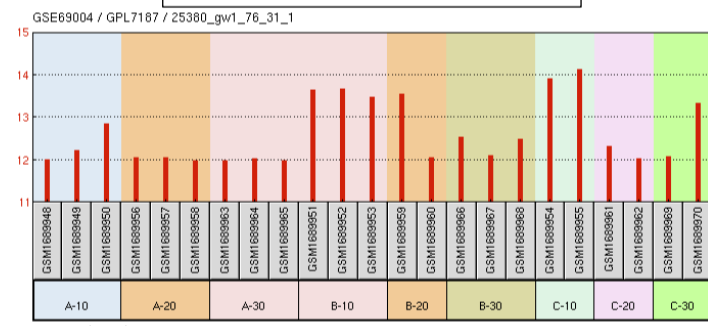
### E-class P450, group I



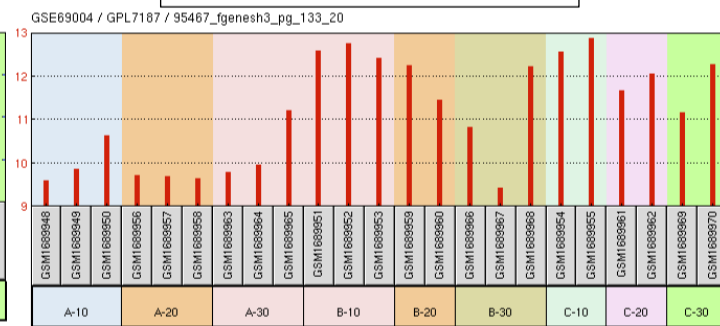
### E-class P450, group IV



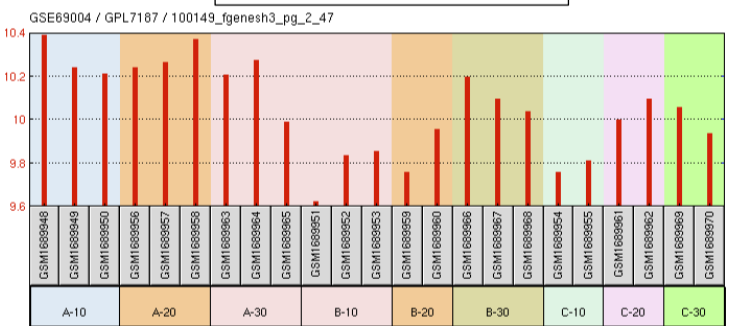
### Esterase/Lipase/Thioesterase



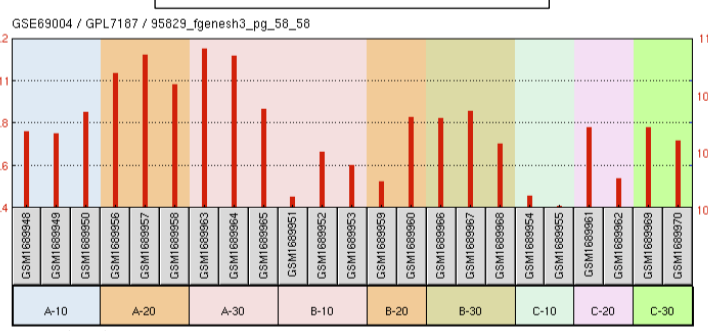
### Esterase/Lipase/Thioesterase



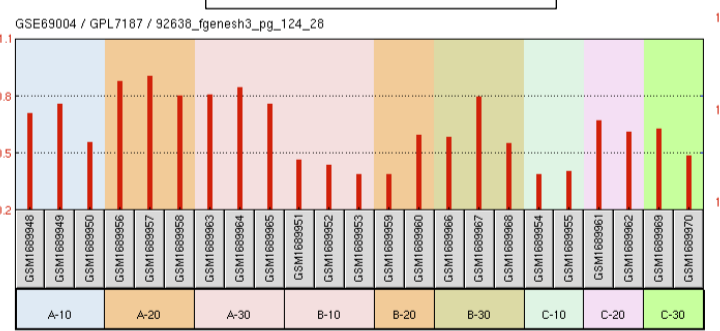
### Induced cAMP Protein



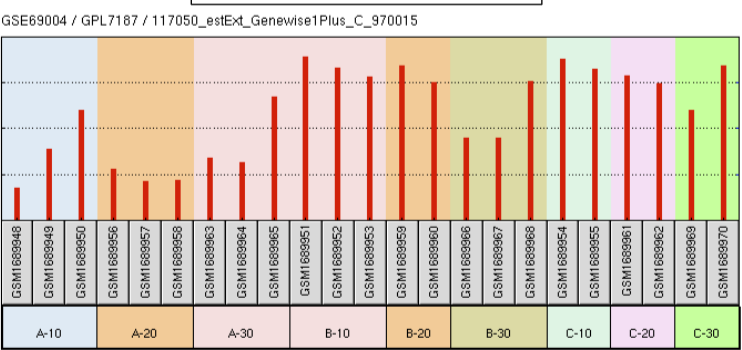
### Glutathione-S-Transferase



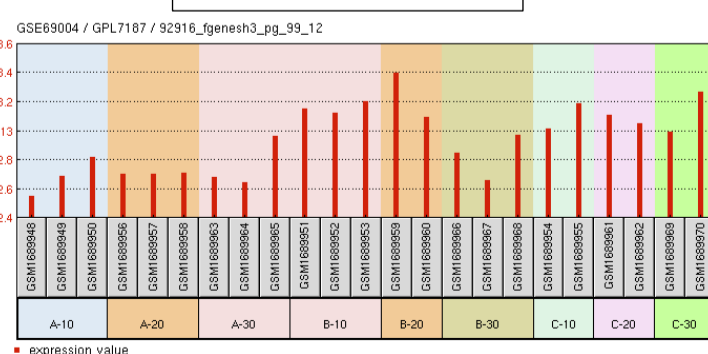
### G-Protein beta WD-40



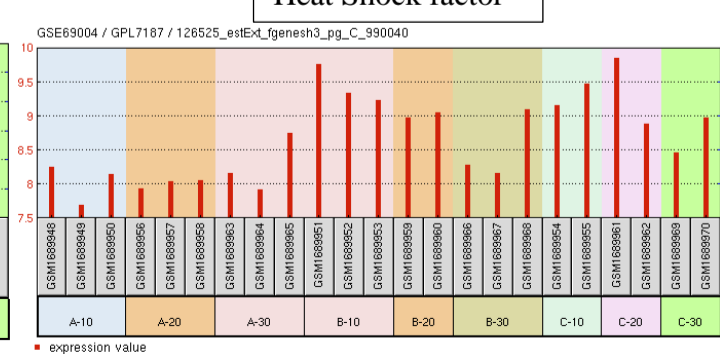
### G-Protein beta WD-40



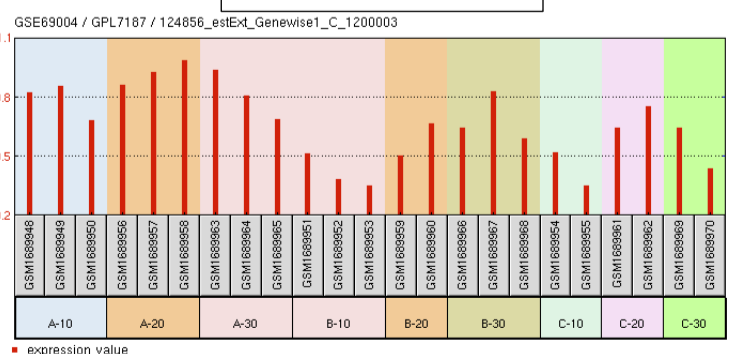
### Haloacid dehalogenase



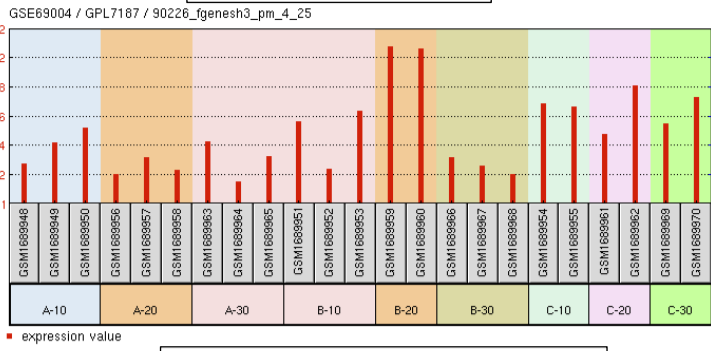
### Heat Shock factor



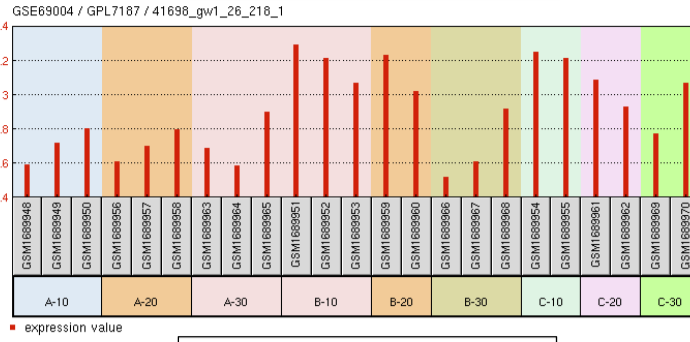
### Iron Permease FTR1



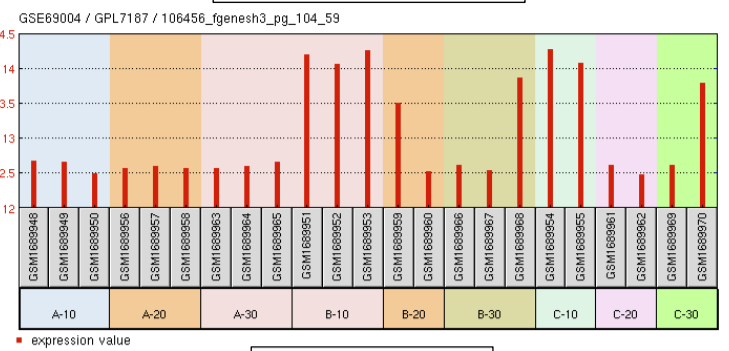
### Mandelate racemase



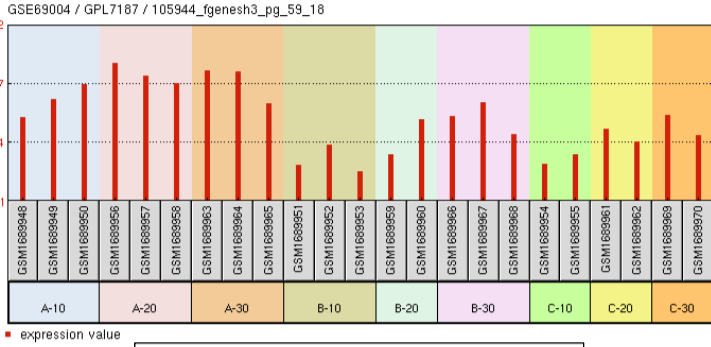
### Metallophosphoesterase



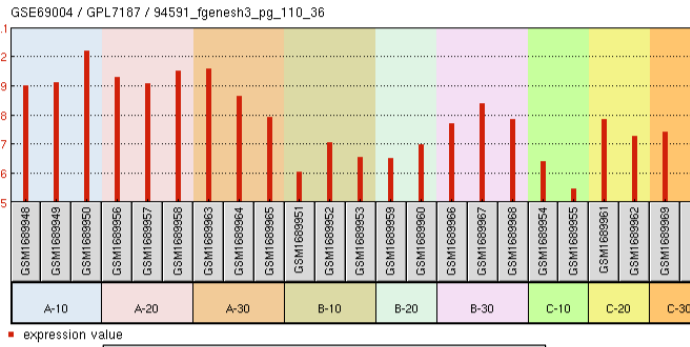
### FAD Monooxygenase



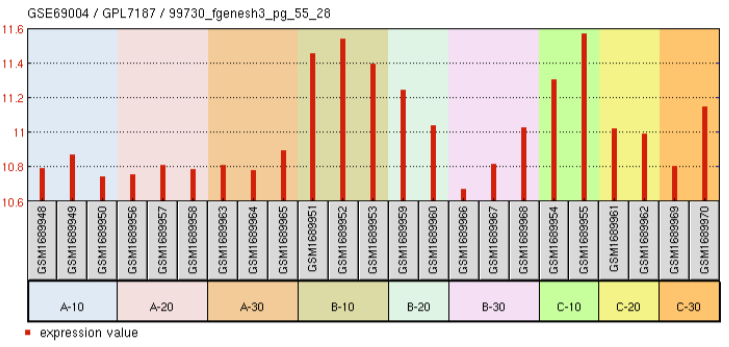
### NADH Flavin oxidoreductase



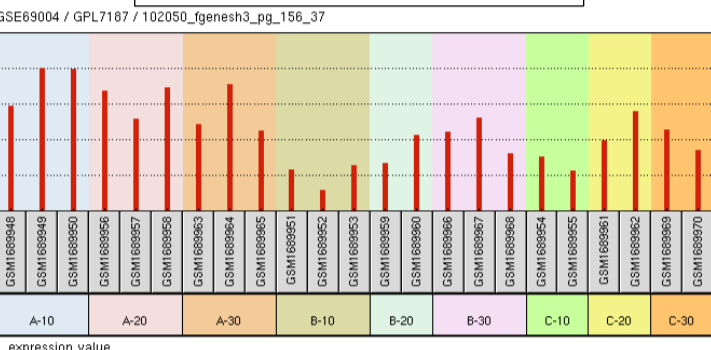
### Oligopeptide transporter



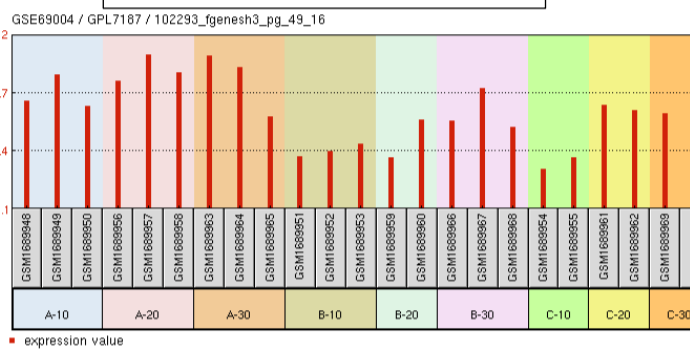
### Oxidoreductase



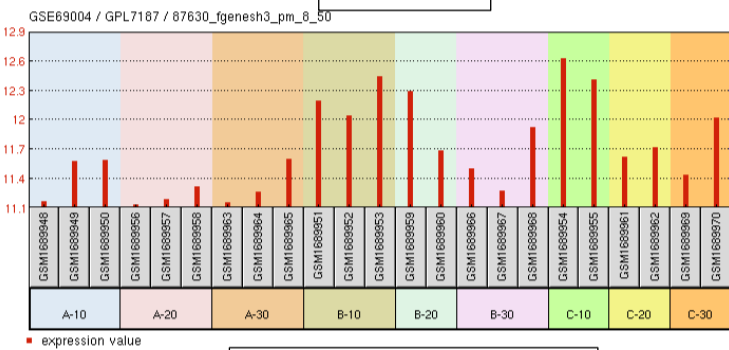
### Sugar Transporter Superfamily



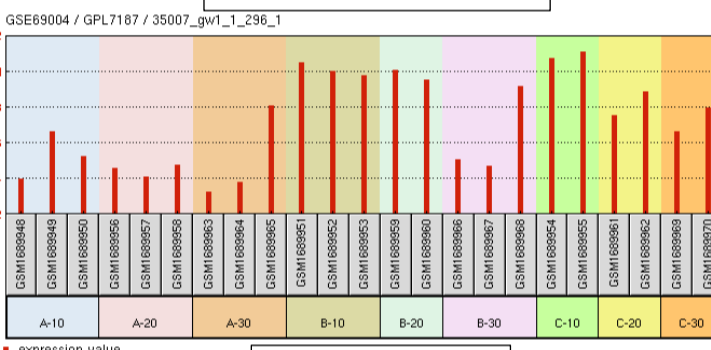
### Sugar Transporter Superfamily



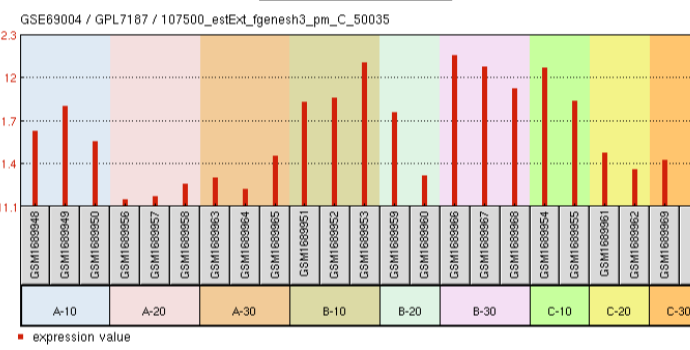
### Thiolase



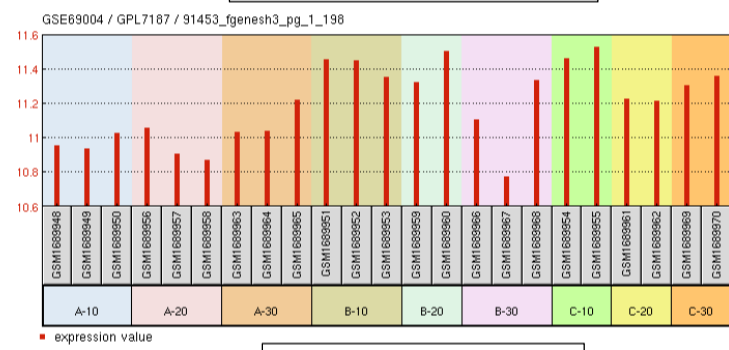
### UbiA Prenyltransferase



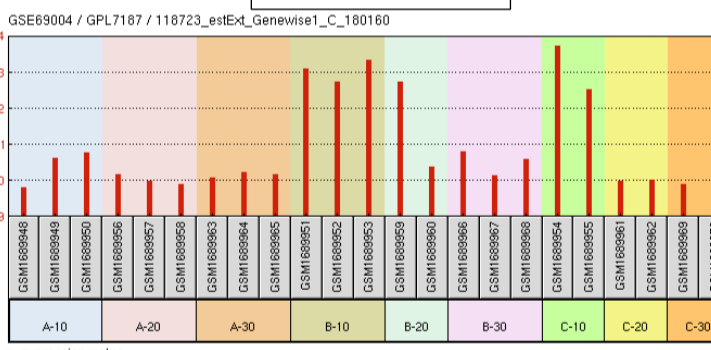
### Ubiquitin



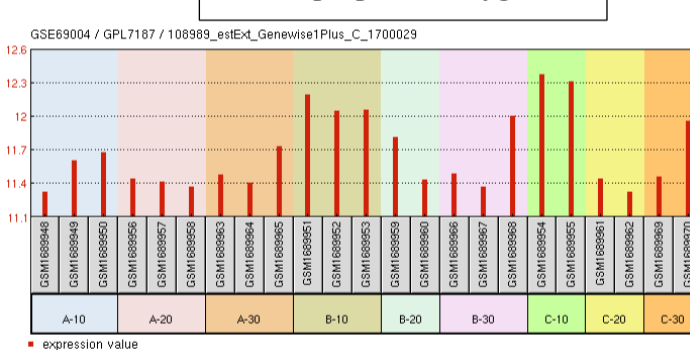
### Universal Stress Protein



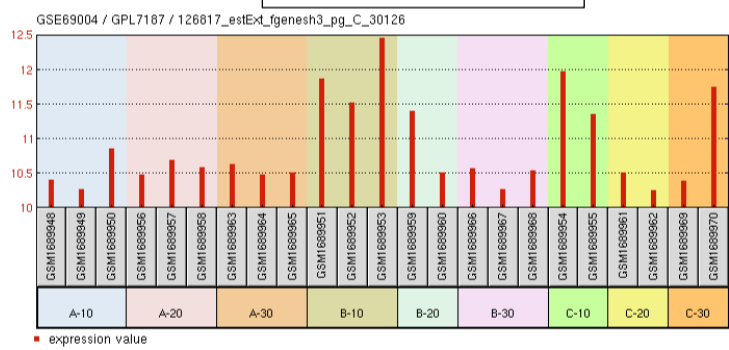
### Alcohol Oxidase



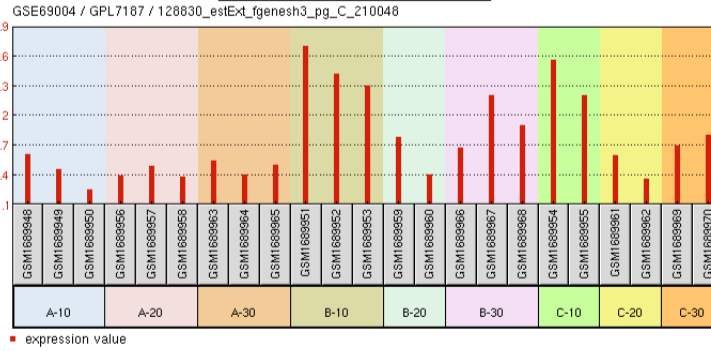
### 2-Nitropropane dioxygenase



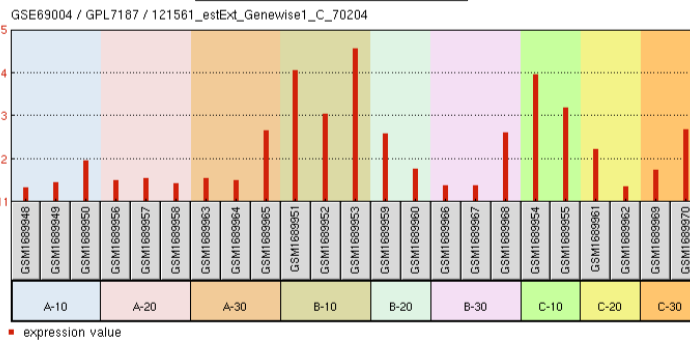
### Flavin monooxygenase



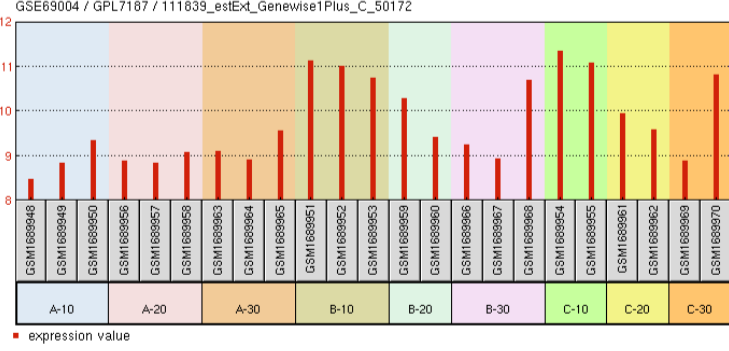
### Glucose Oxidase



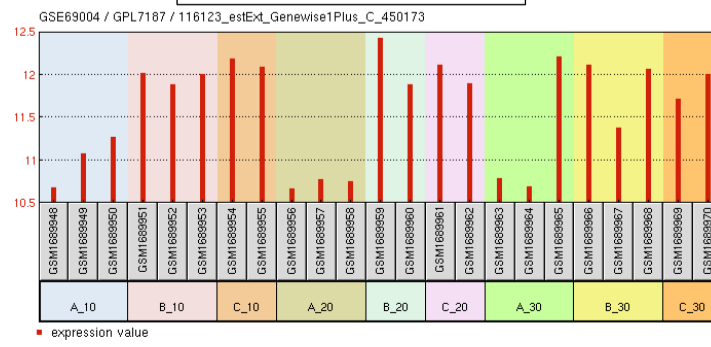
### Glycolate oxidase



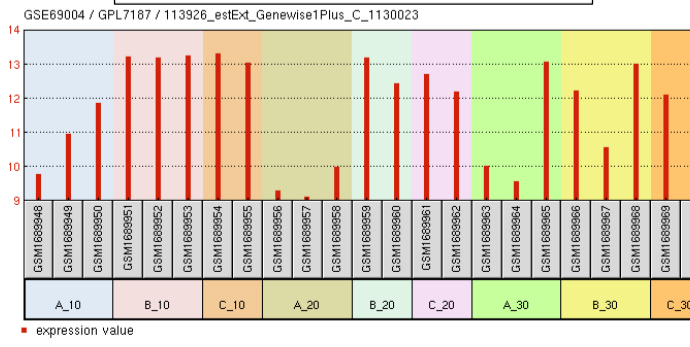
### Peroxidase



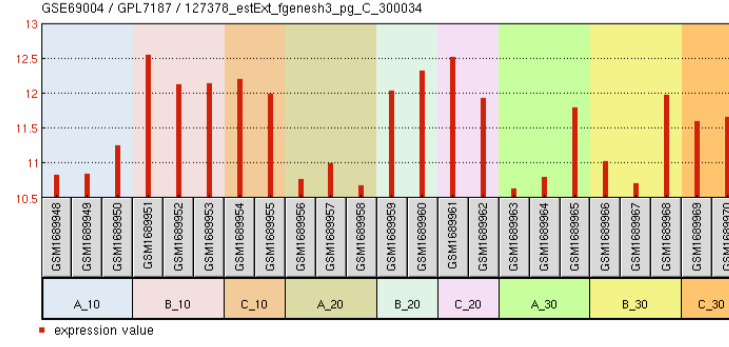
### Carbohydrate esterase 4



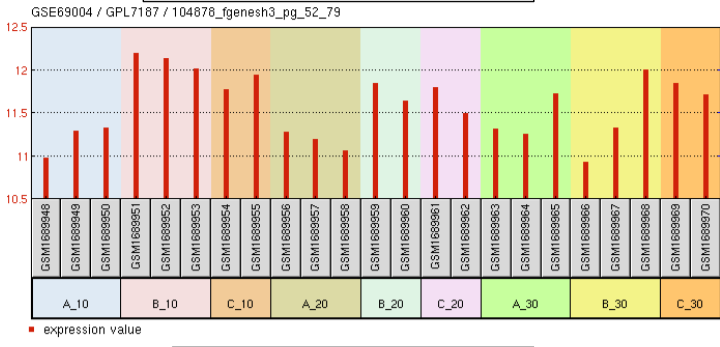
### Carbohydrate binding domain 18



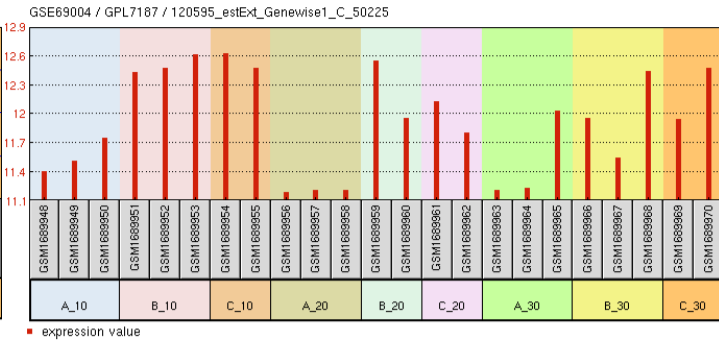
### Carbohydrate binding domain 21



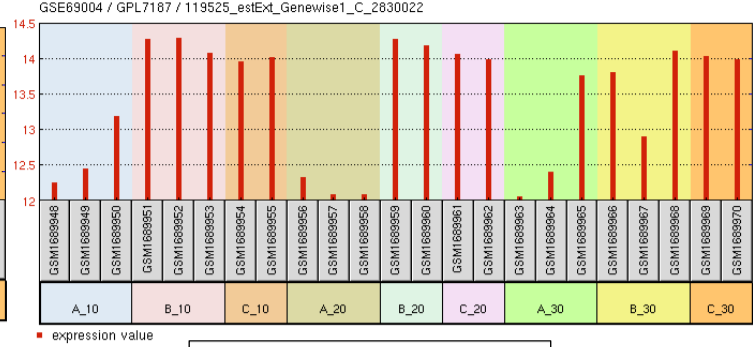
### Glycoside hydrolase 128



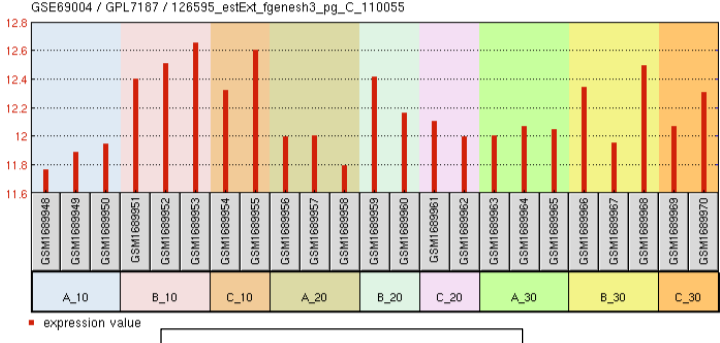
### Glycoside hydrolase 16



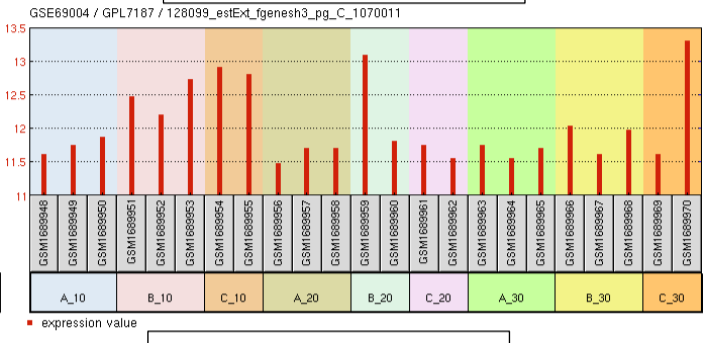
### Glycoside hydrolase 18



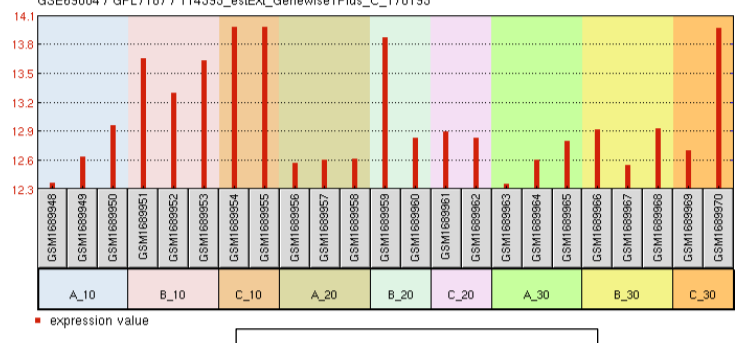
### Glycoside hydrolase 18



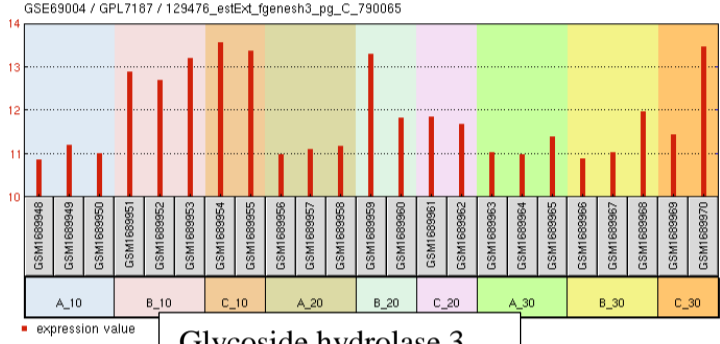
### Glycoside hydrolase 2



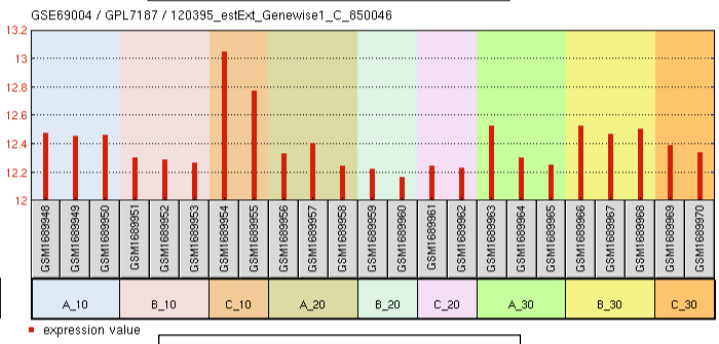
### Glycoside hydrolase 2



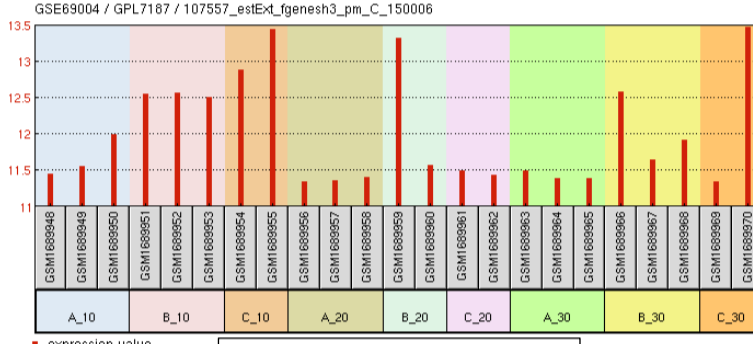
### Glycoside hydrolase 2



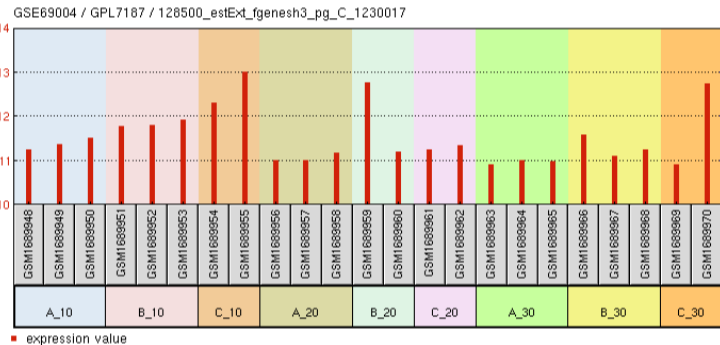
### Glycoside hydrolase 27



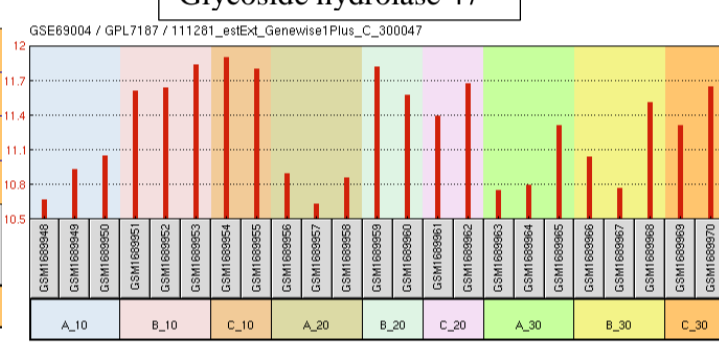
### Glycoside hydrolase 3



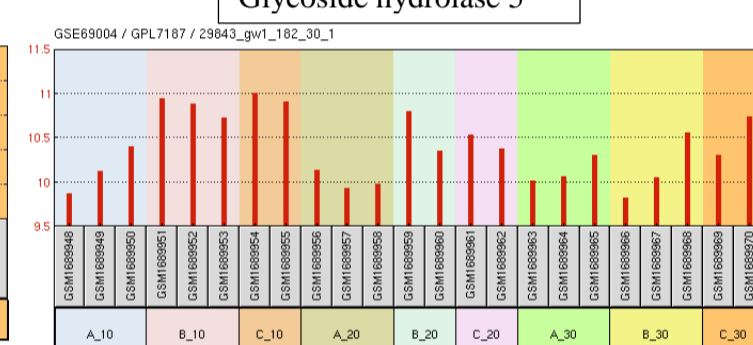
### Glycoside hydrolase 3



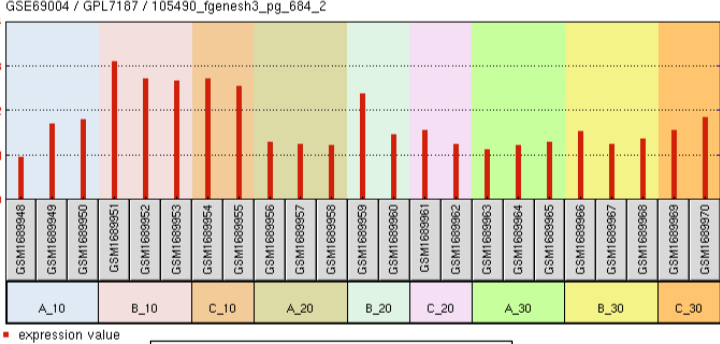
### Glycoside hydrolase 47



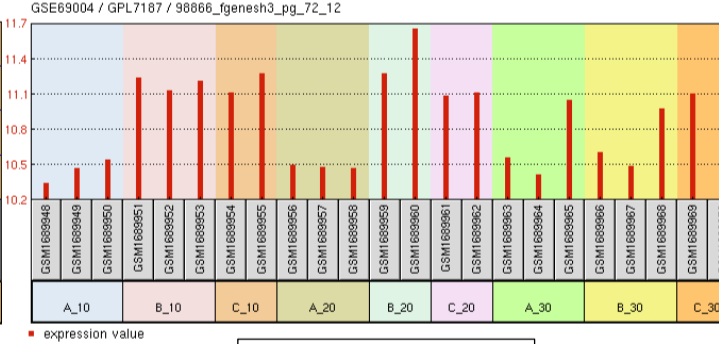
### Glycoside hydrolase 5



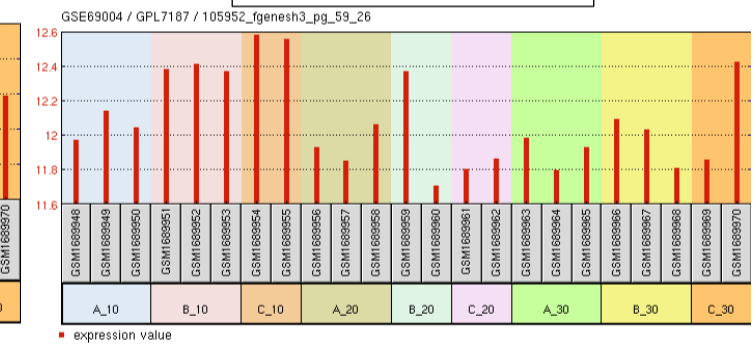
### Glycoside hydrolase 55



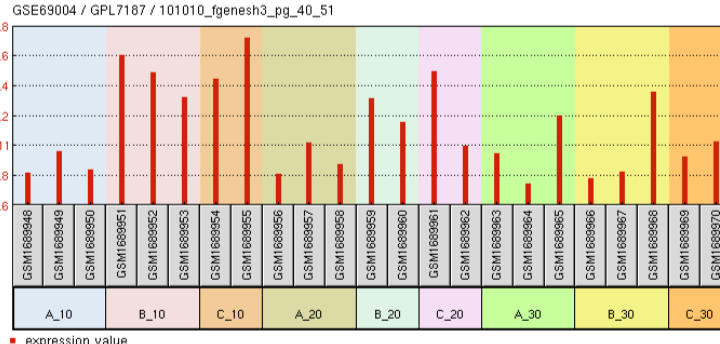
### Glycoside hydrolase 71



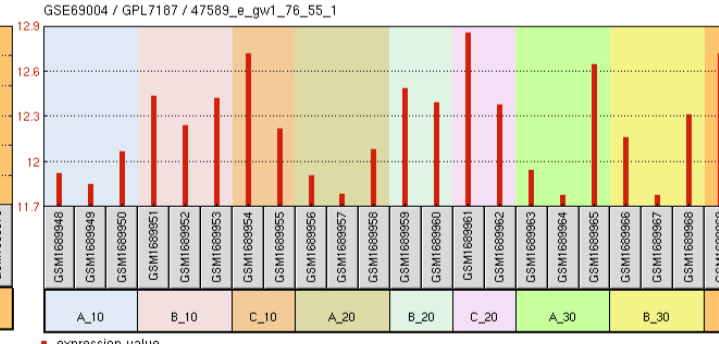
### Glycoside hydrolase 95



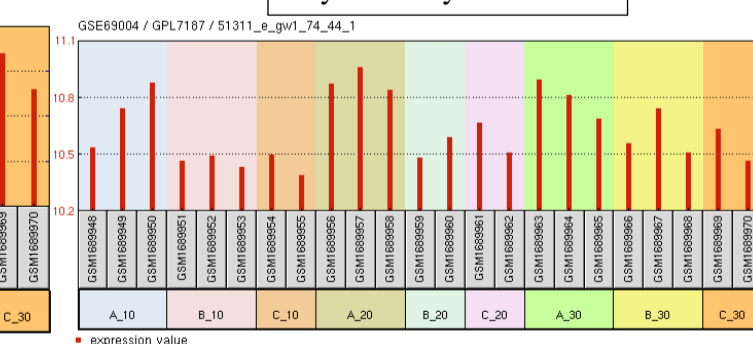
### Glycosyl Transferase 1



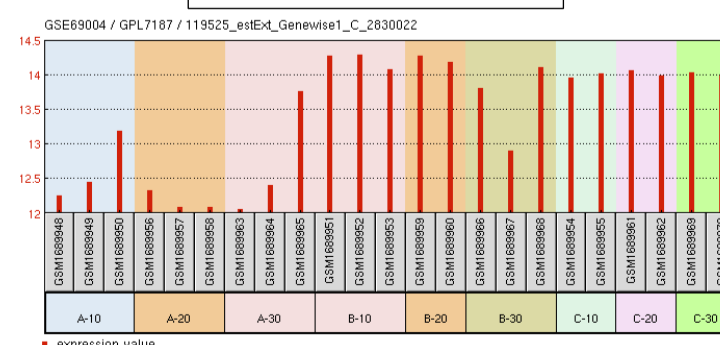
### Auxiliary activity 1



### Glycoside hydrolase 16



### Glycoside hydrolase- 18



**The customized awk script to specifically retrieve the annotations from the genome wide annotations (CAZy (or) InterPro Id's) was listed below:**

*>awk 'FNR==NR{a[\$1]=\$2;next} (\$1 in a) {print \$1,a[\$1],\$2}' Differentially expressed gene list.txt list with gene level annotations.txt > Final list of expressed genes with annotations.txt*