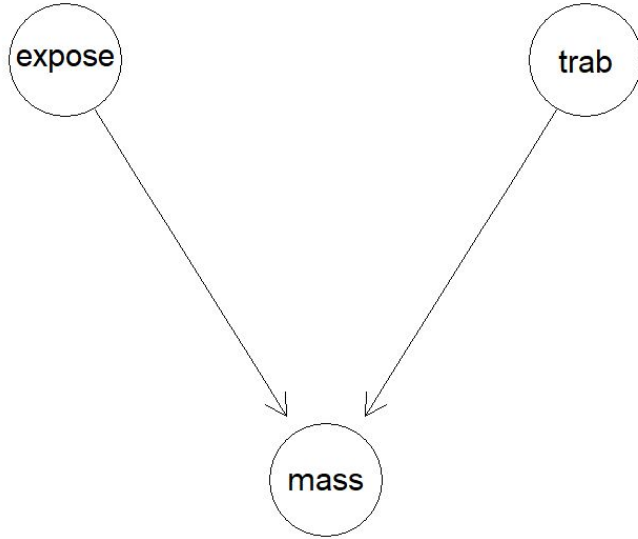


# How I would determine causal relationships

```
for i, var1 in enumerate(data):  
    for j, var2 in enumerate(data):  
        if i == j:  
            cm[i][j] = 1.0  
        else:  
            r =  $\Sigma((d\_var1)(d\_var2)) / sd\_var1 * sd\_var2$   
            cm[i][j] = r  
            cm[j][i] = r
```

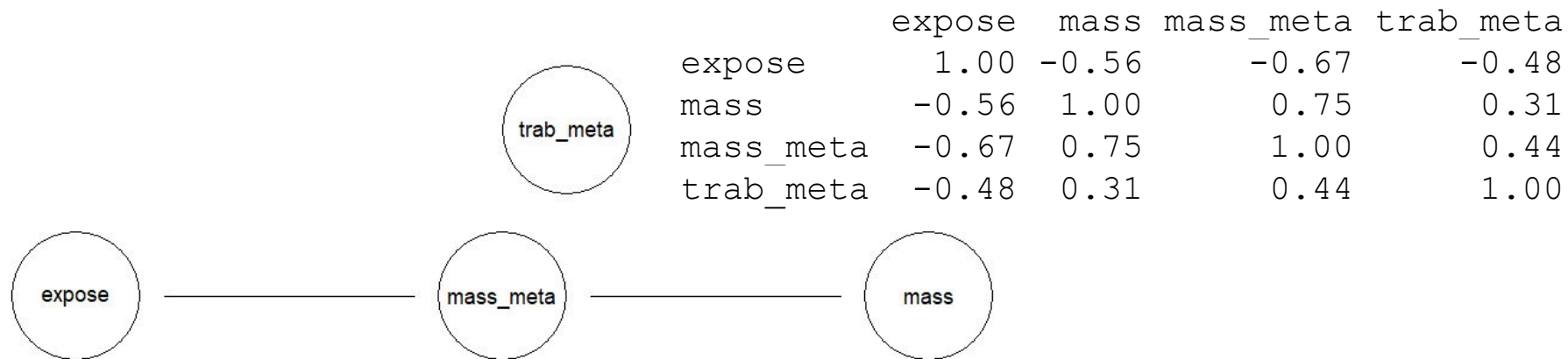
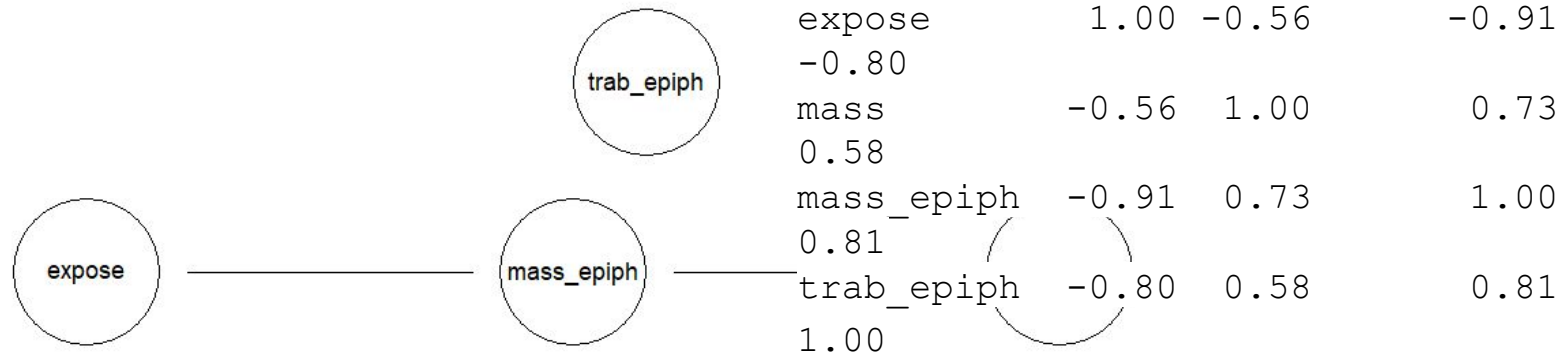
```
for i, var1 in enumerate(data):  
    for j, var2 in enumerate(data):  
        if abs(cm[i][j]) > some_threshold  
            add_undirected_edge(var1, var2)  
  
**Search for V structures**  
  
If  $A \perp B \mid C$ ,  
    Orient edges  $A \leftarrow C \rightarrow B$   
Else  
    Orient edges  $A \rightarrow C \leftarrow B$ 
```

# Alwood

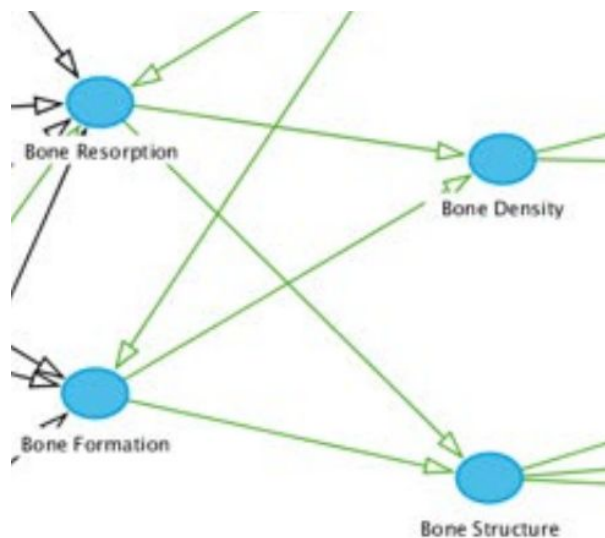


	expose	trab	mass
expose	1.00	-0.26	-0.48
trab	-0.26	1.00	0.77
mass	-0.48	0.77	1.00

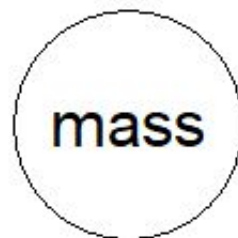
# GLDS



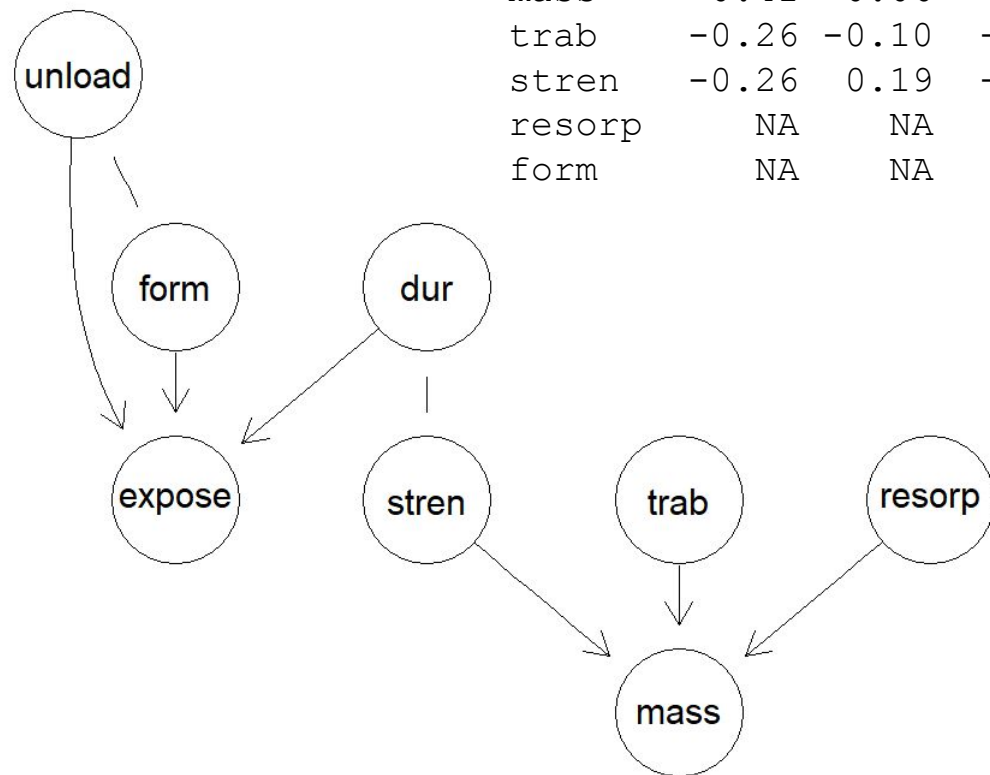
# Turner



	expose	mass	resorp	form
expose	1.00	-0.63	0.72	-0.42
mass	-0.63	1.00	-0.78	0.56
resorp	0.72	-0.78	1.00	-0.29
form	-0.42	0.56	-0.29	1.00



# Ko



	unload	dur	expose	mass	trab	stren	resorp	form
unload	1.00	-0.02	0.73	-0.41	-0.26	-0.26	NA	NA
dur	-0.02	1.00	0.53	-0.06	-0.10	0.19	NA	NA
expose	0.73	0.53	1.00	-0.34	-0.25	-0.07	NA	NA
mass	-0.41	-0.06	-0.34	1.00	0.80	0.26	NA	NA
trab	-0.26	-0.10	-0.25	0.80	1.00	0.19	NA	NA
stren	-0.26	0.19	-0.07	0.26	0.19	1.00	NA	NA
resorp	NA	NA	NA	NA	NA	NA	1	NA
form	NA	NA	NA	NA	NA	NA	NA	1