

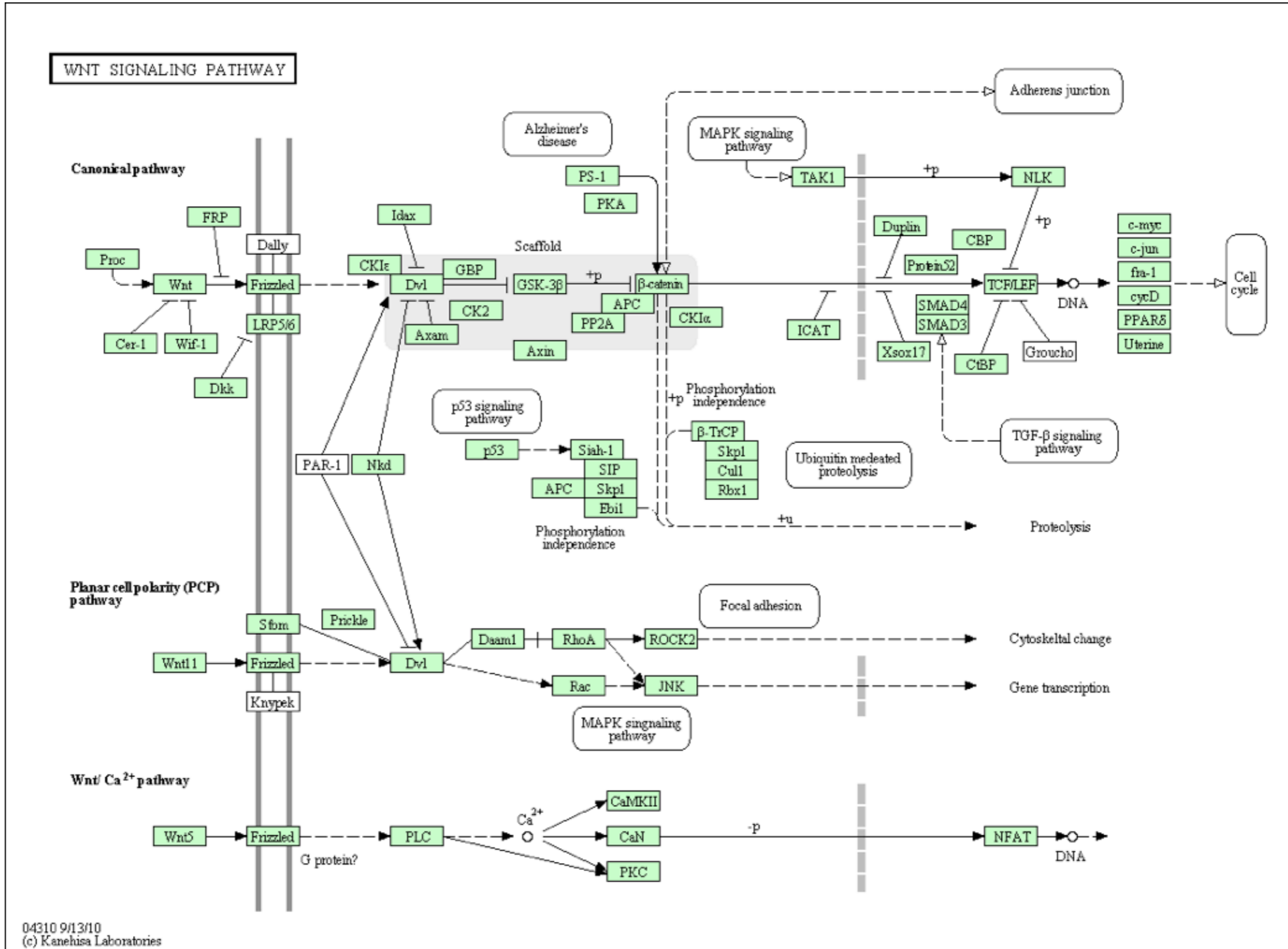
# COAD-READ 221: Correlation analysis for seven consensus clusters

G. Robertson, Andy Chu, Inanc Birol  
20 May 2011, 11h00

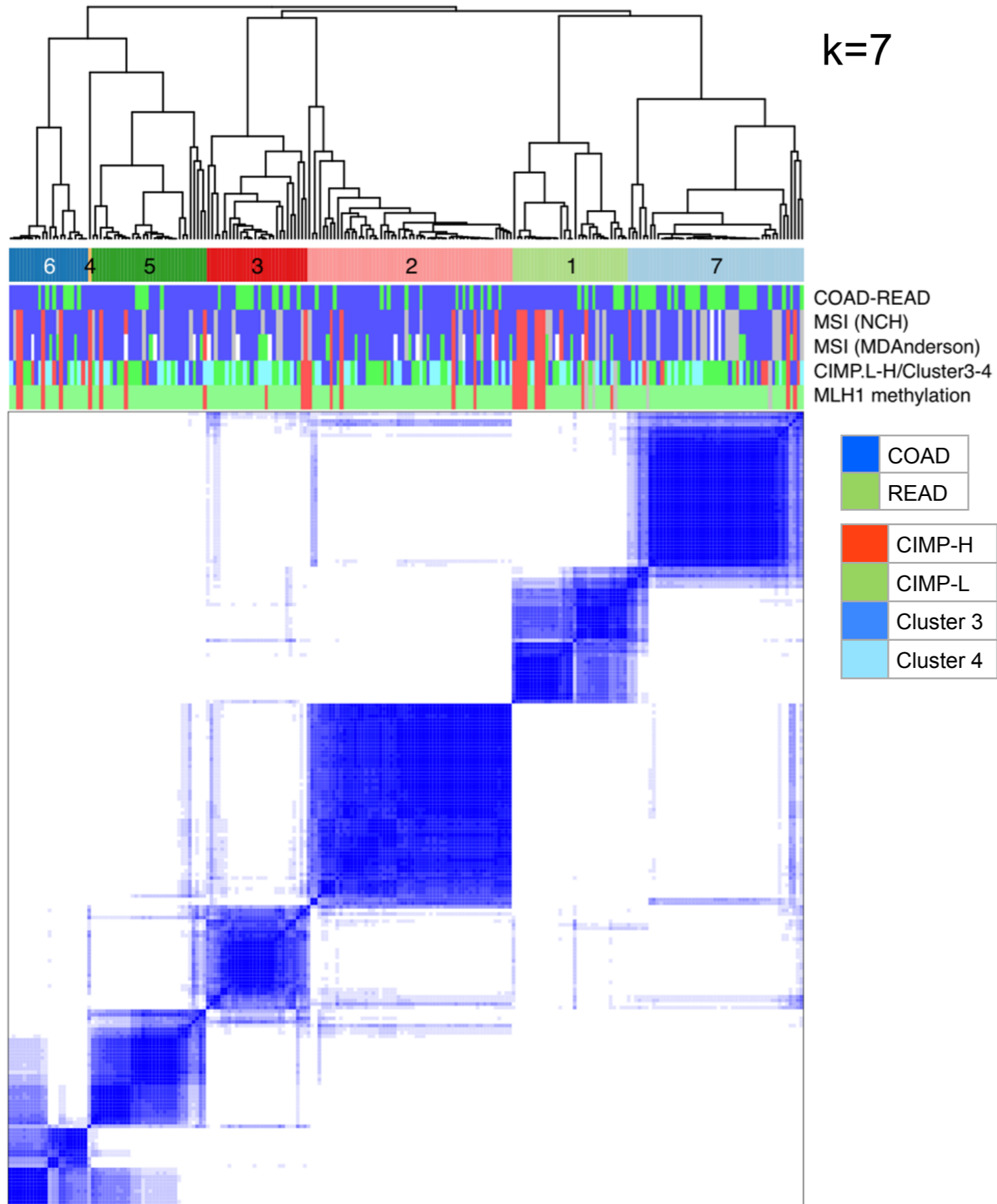
*Context: we hope to send Raju something about miRNAs and the Wnt pathway.*

1. For a  $k=7$  consensus clustering result that used isomiRs, we show all thresholded miRNA-mRNA correlations for all ten Frizzled genes in the KEGG Wnt signaling pathway: FZD1-10. Thresholds: the 99% confidence interval on either m1 or m2 slopes does not include zero, and  $r^2$  must be at least 0.25.
2. The number of correlations varies from 18 to 582. The proportion of positive to negative correlations varies widely, with negatives dominant in clusters 6 and 3, and positives dominant in clusters 1, 2 and 5.
3. We speculate that when a cluster has few thresholded correlations, this is likely due to the samples in this cluster having diverse (rather than consistent) correlations for almost all miRNA-gene pairs.

# KEGG WNT signaling pathway



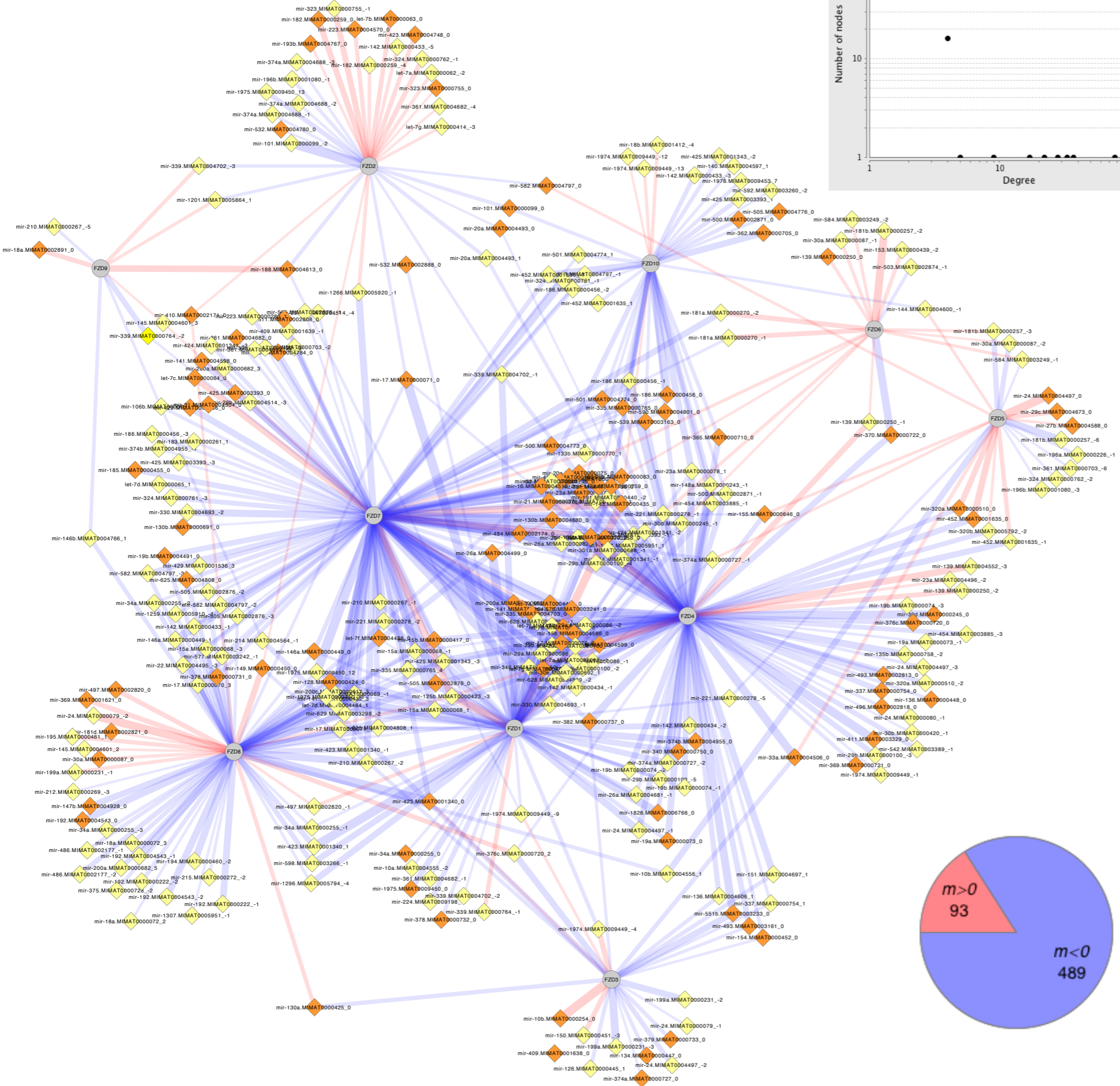
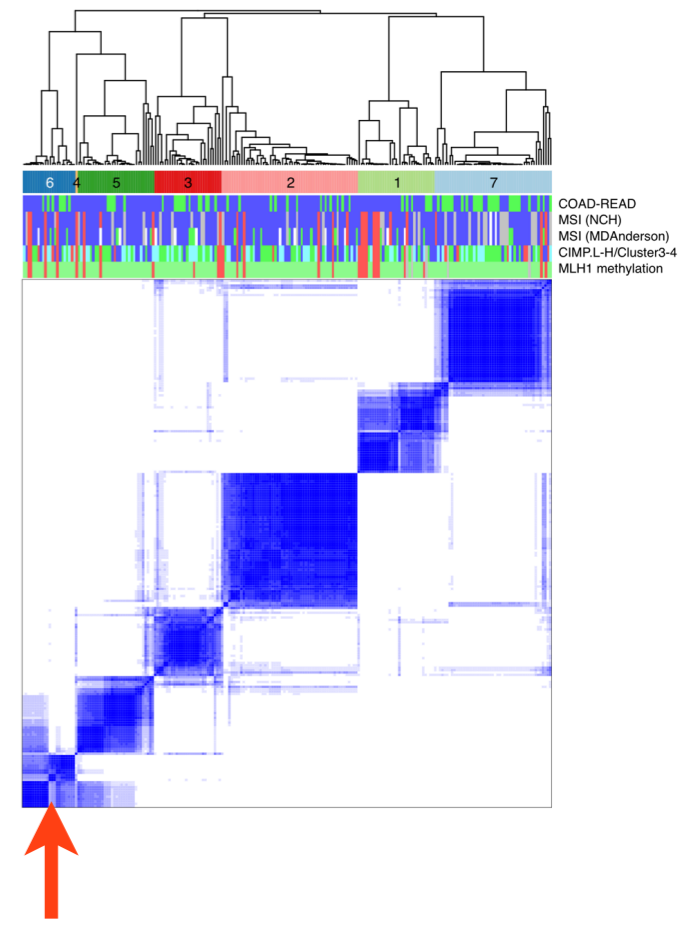
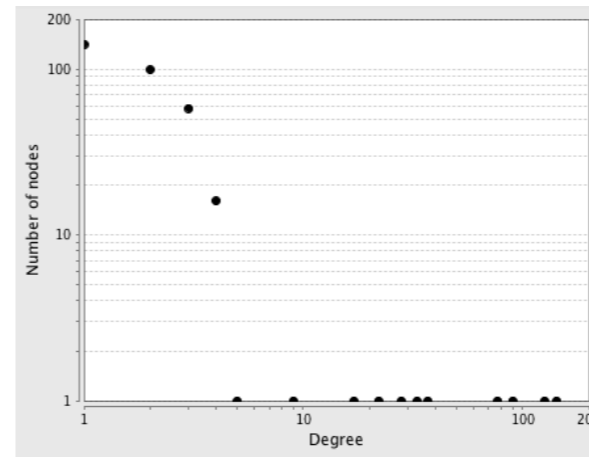
# Clustering COAD-READ unfiltered isomiR data for 221 samples



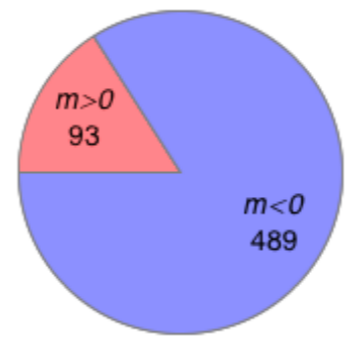
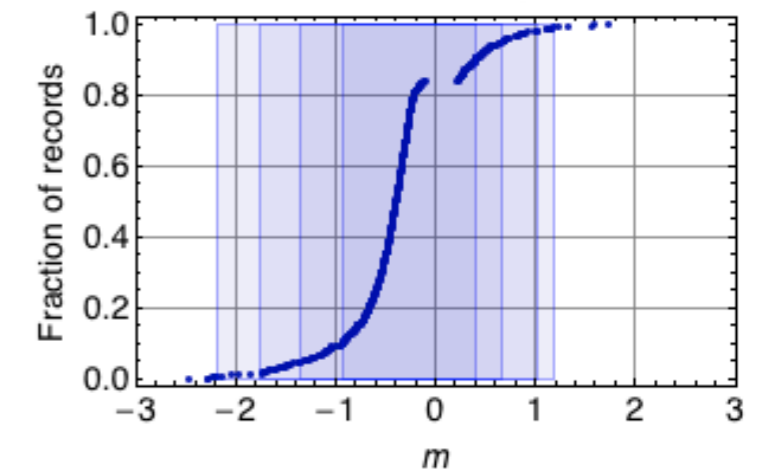
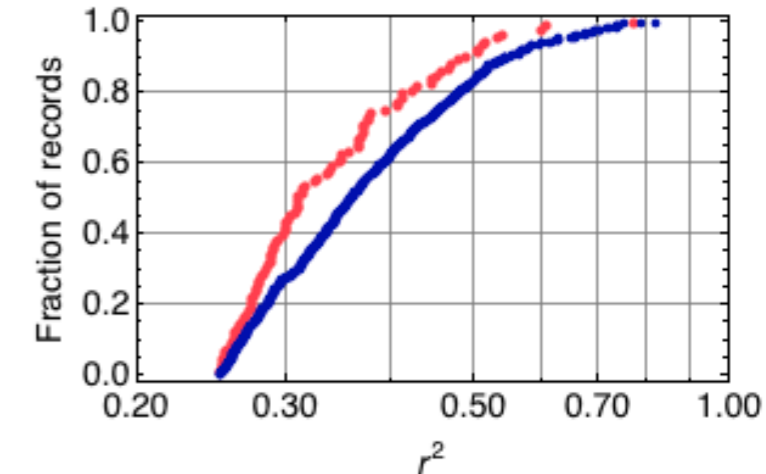
Number of thresholded miRNA-mRNA correlation records.

Clust	negative m records		positive m records	
	all	Wnt p'way	all	Wnt p'way
6	600,539	5,230	338,098	2,803
4	--		--	
5	6,653	70	9,962	104
3	240,680	2,076	296,453	2,210
2	113,668	679	133,305	1,072
1	181,005	1,282	218,039	1,809
7	329,394	2,249	356,766	2,269

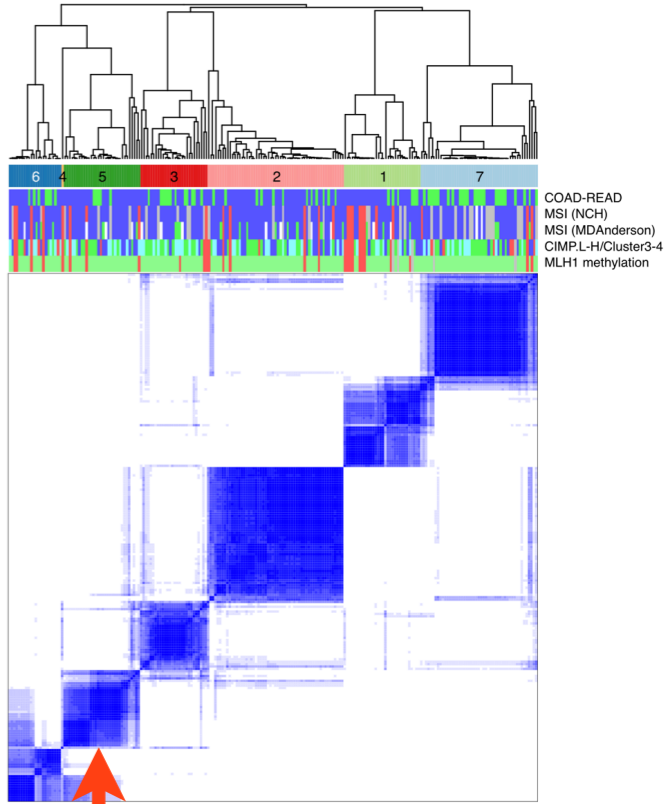
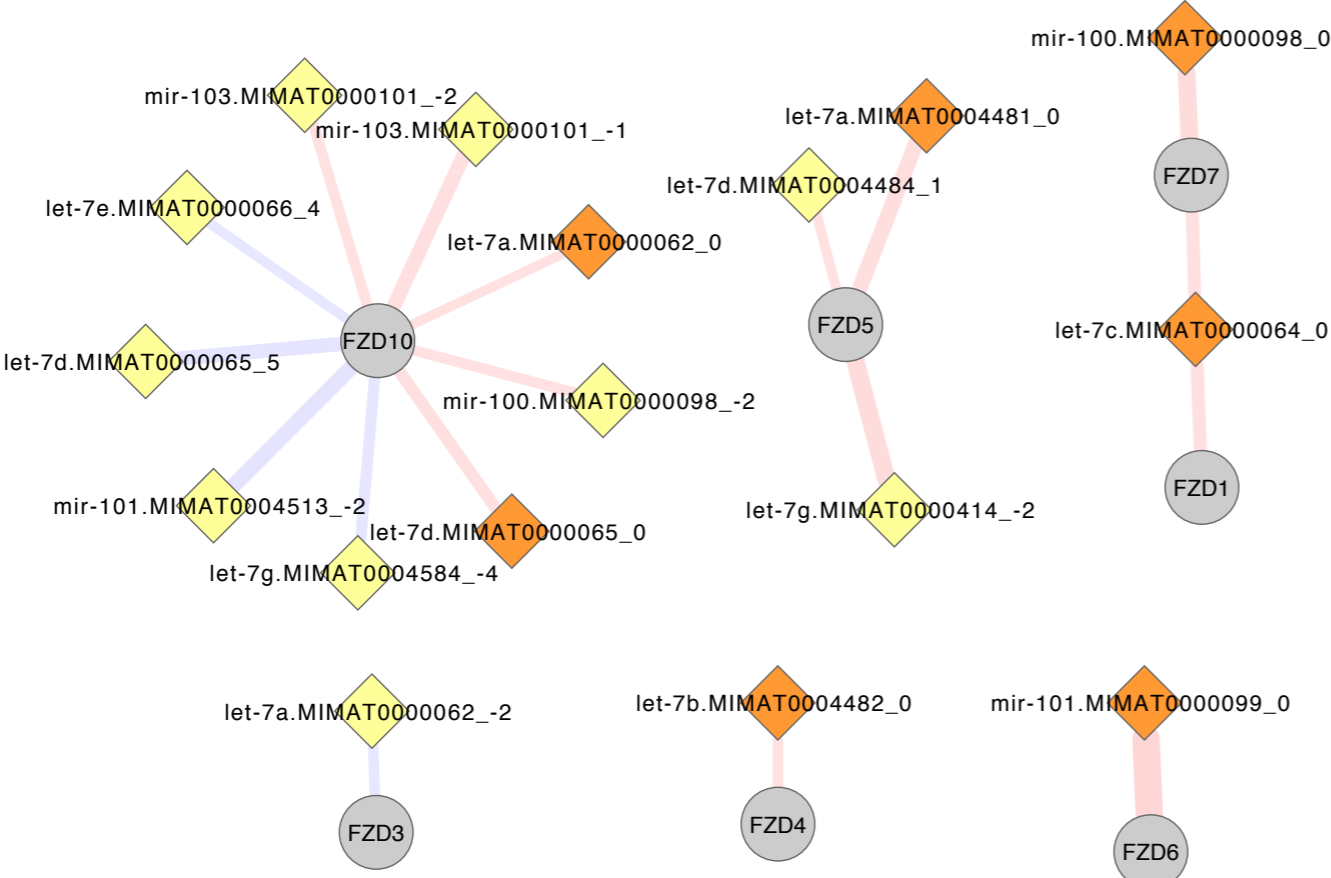
# 582 FZD records, cluster 6



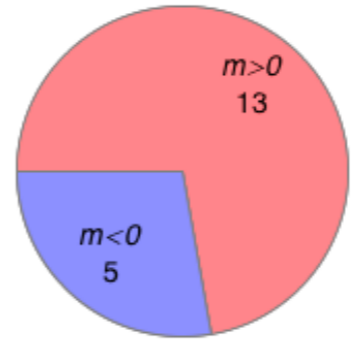
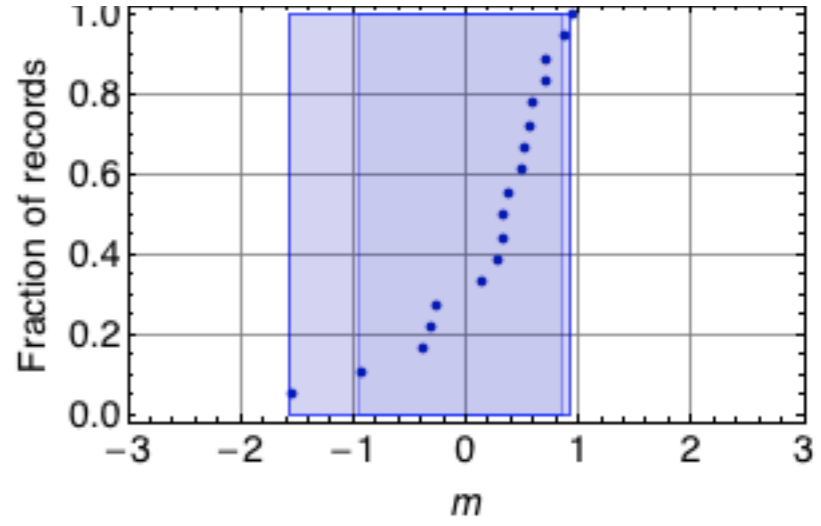
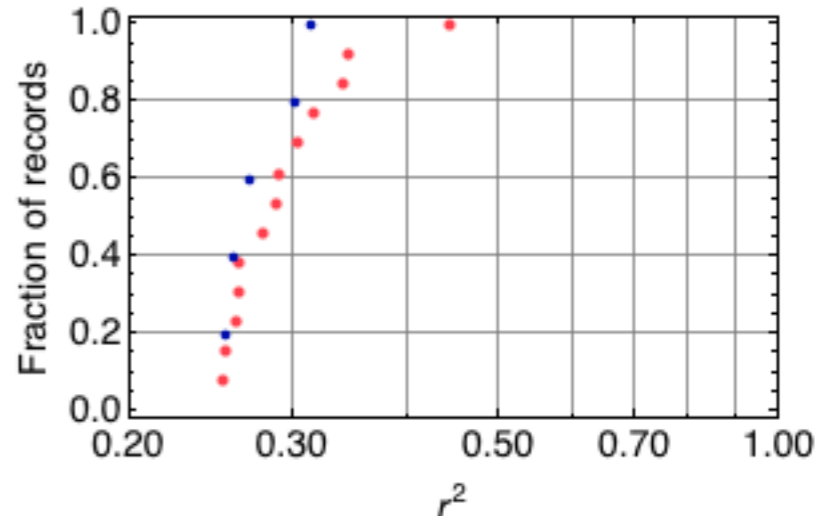
COAD-READ c6, FZD



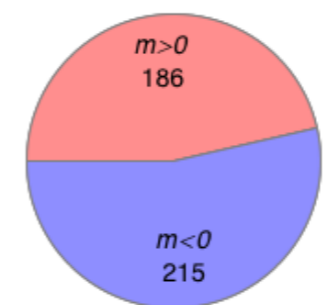
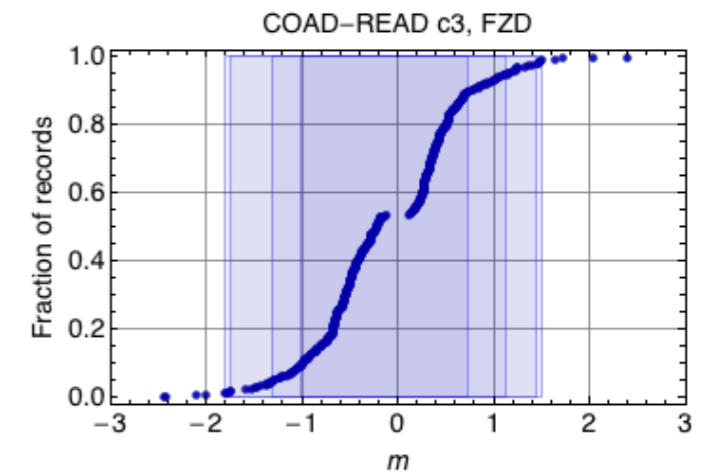
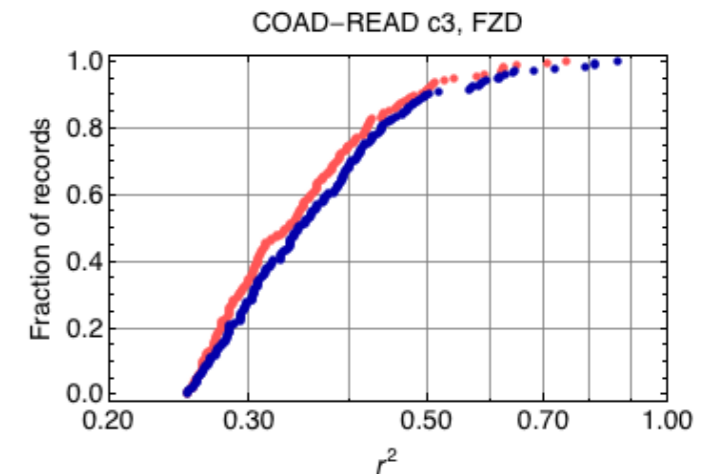
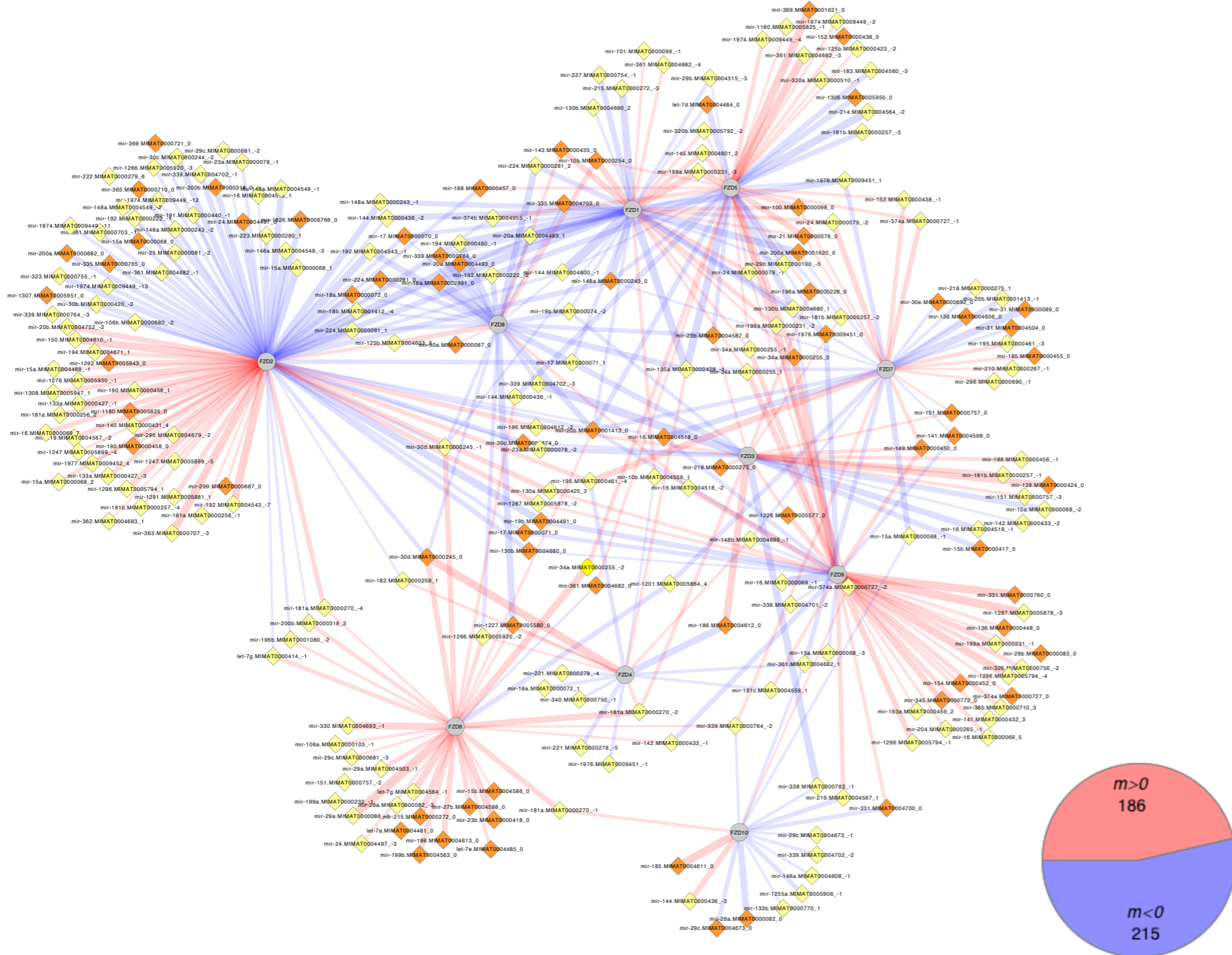
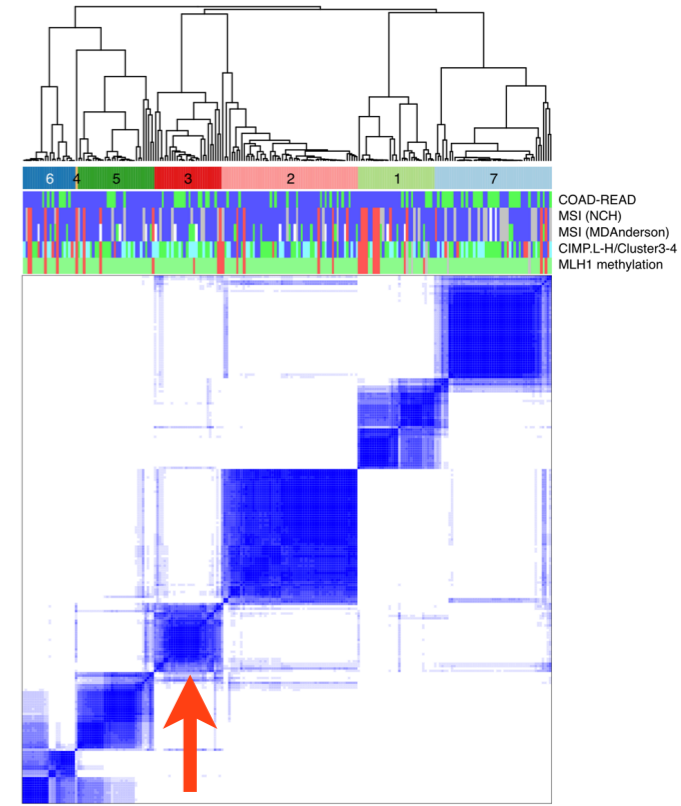
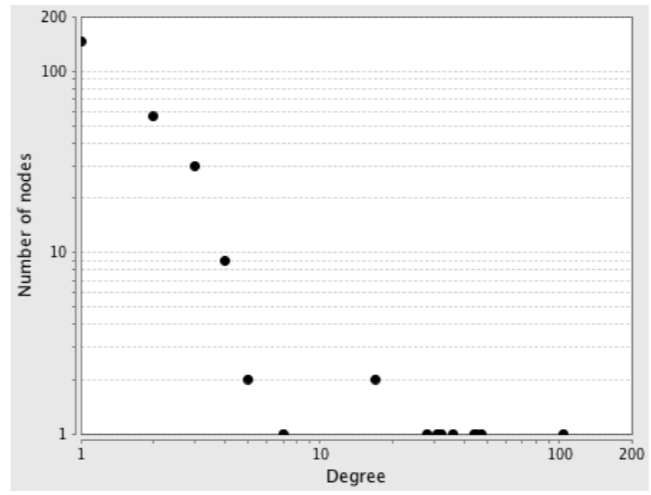
# 18 FZD records, cluster 5



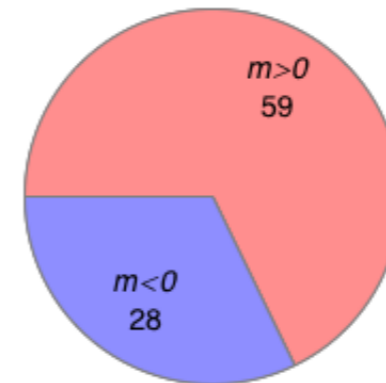
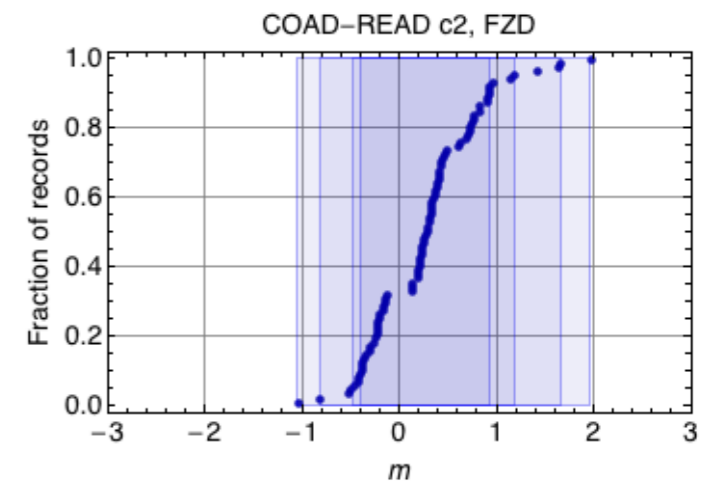
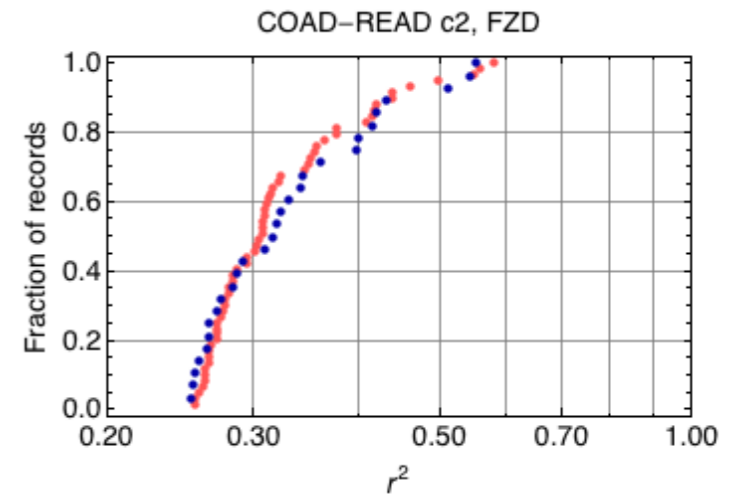
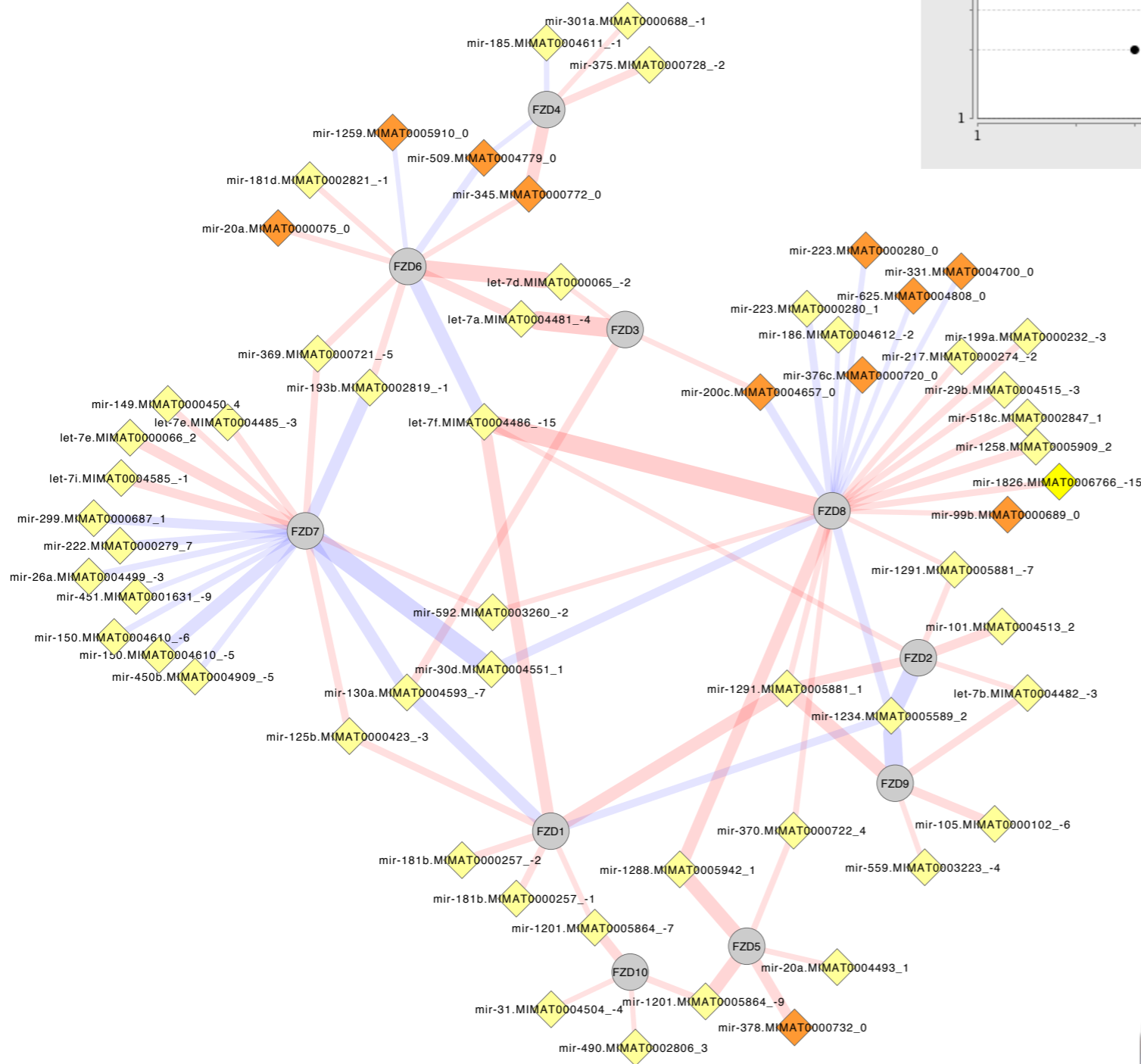
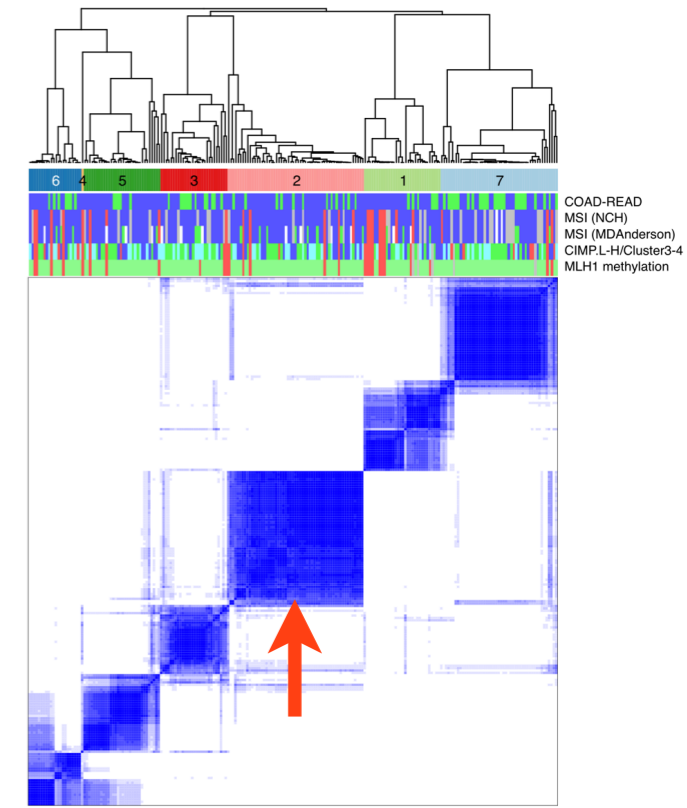
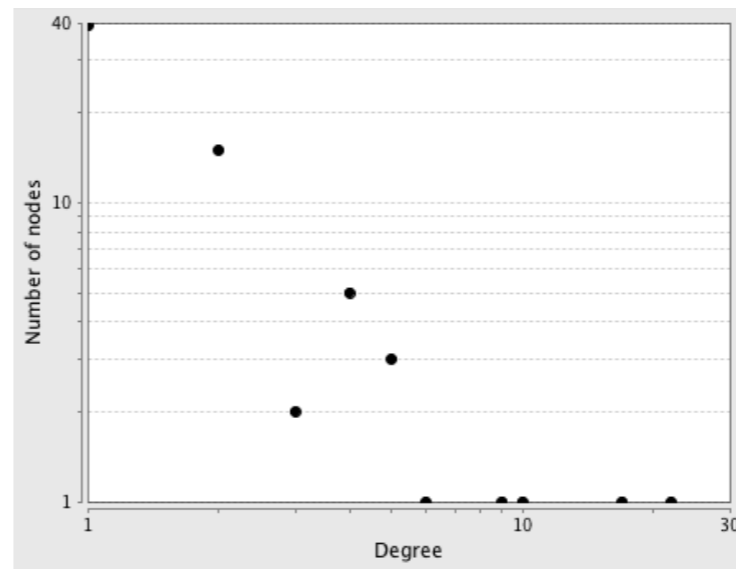
COAD-READ c5, FZD



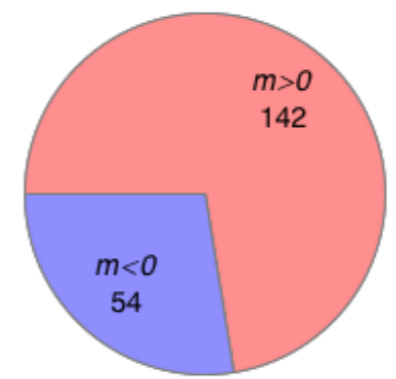
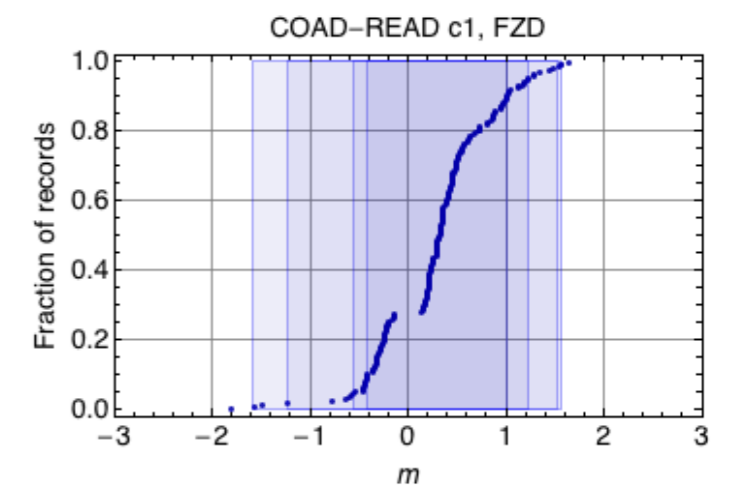
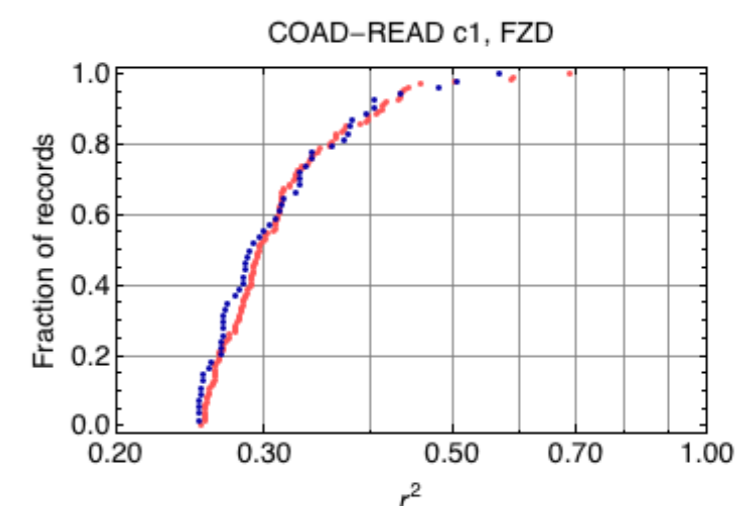
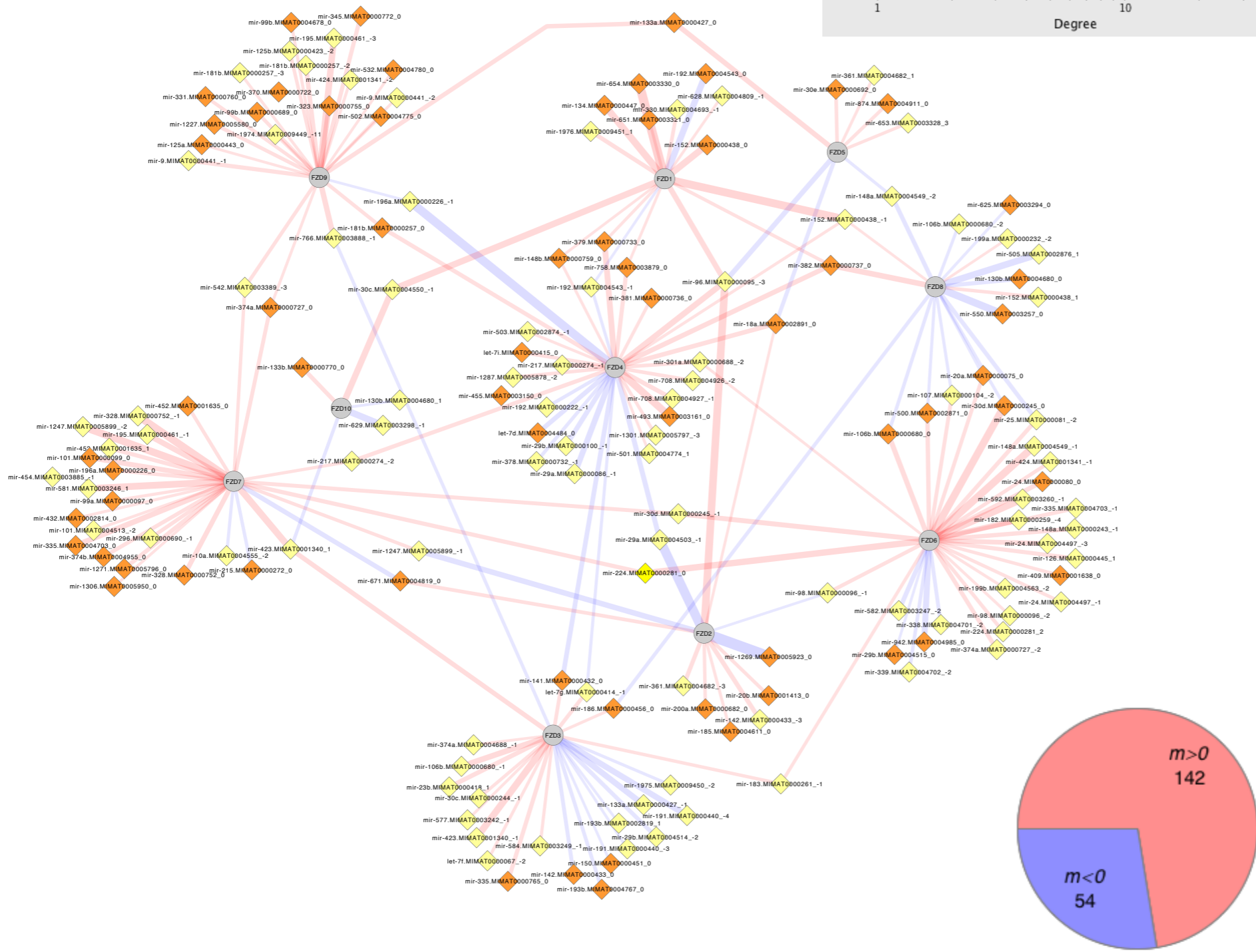
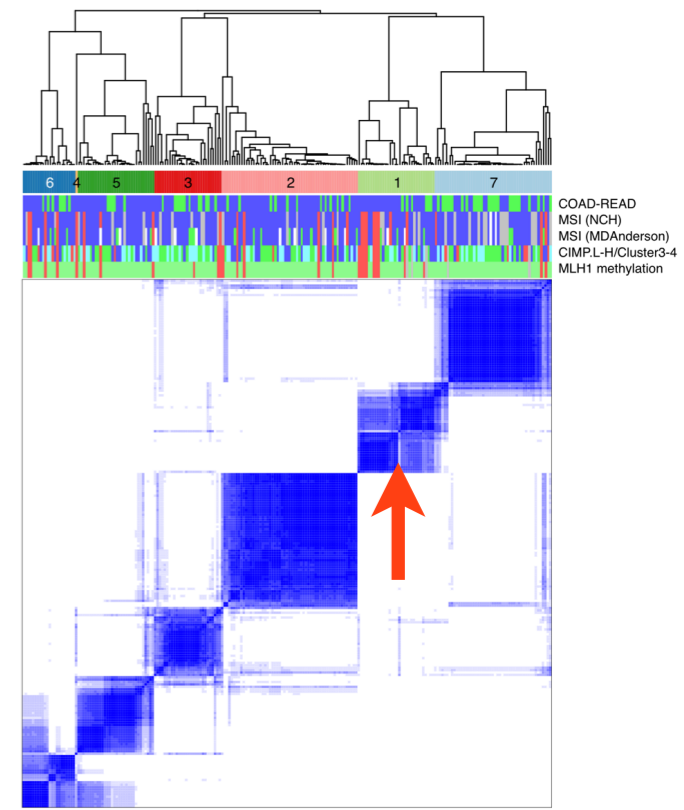
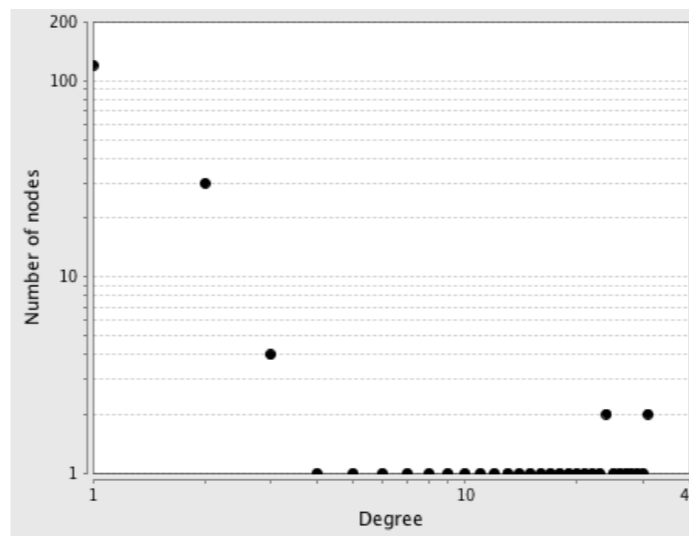
# 401 FZD records, cluster 3



# 87 FZD records, cluster 2

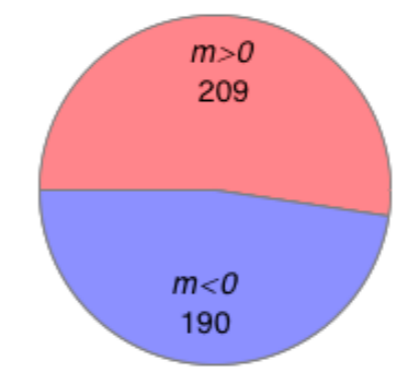
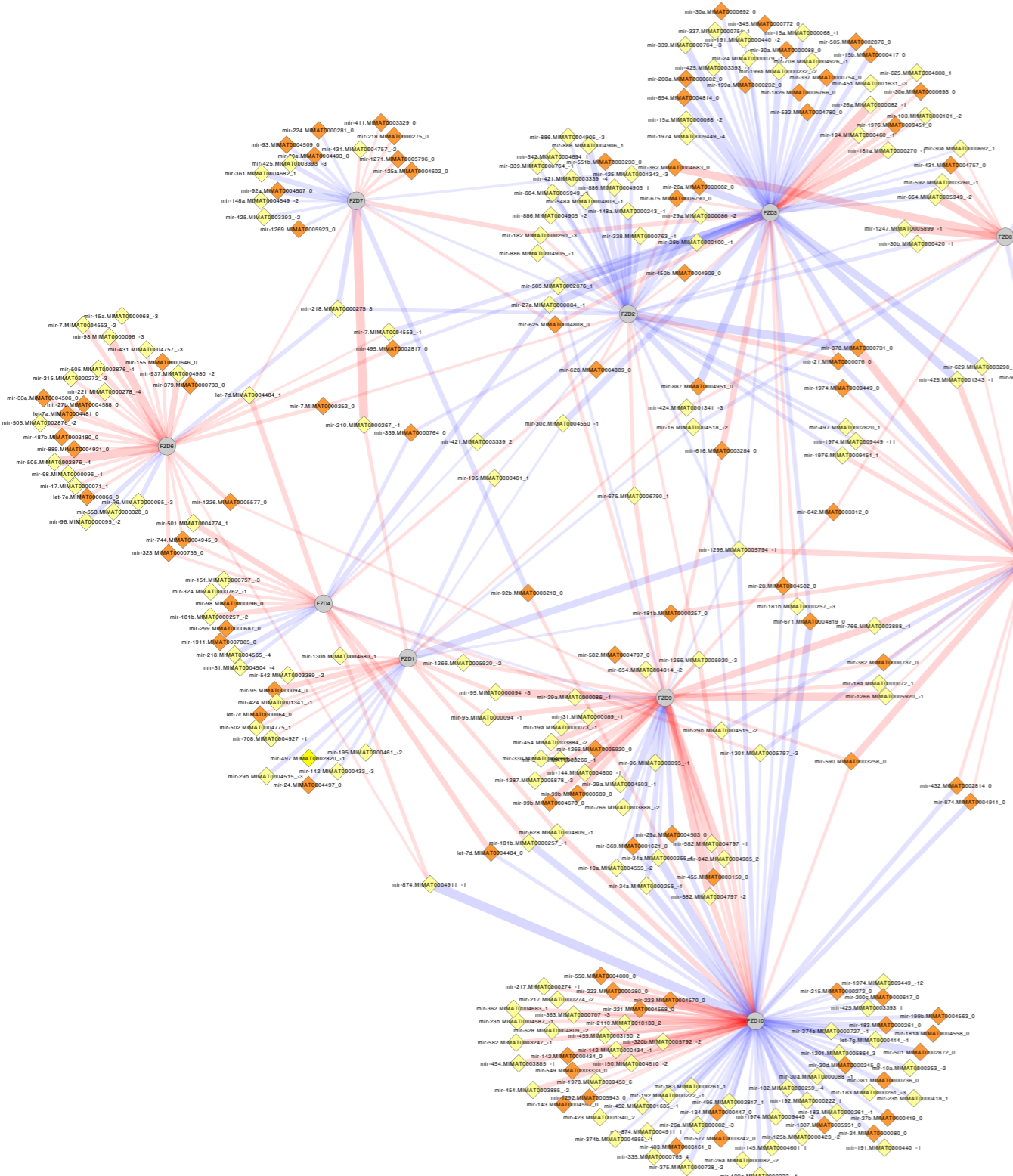
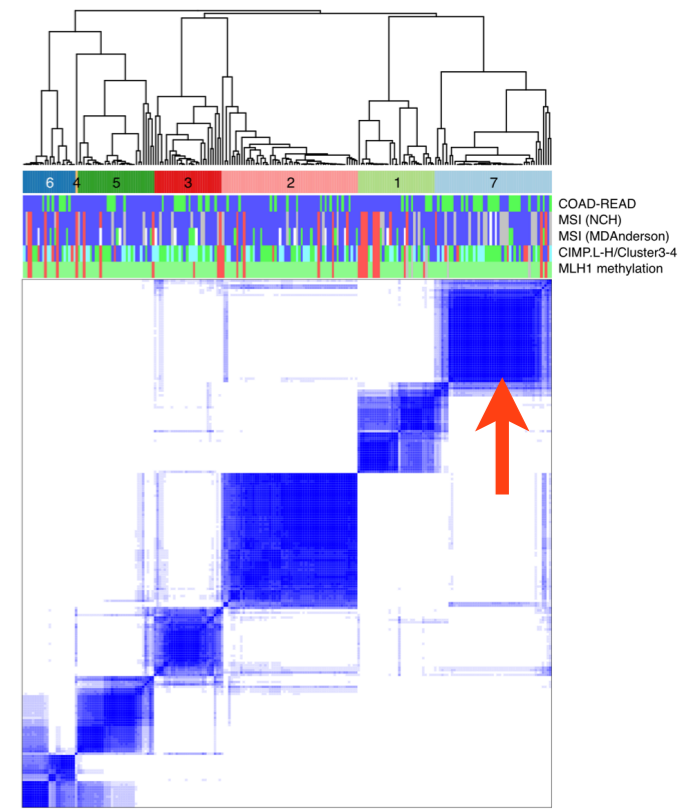
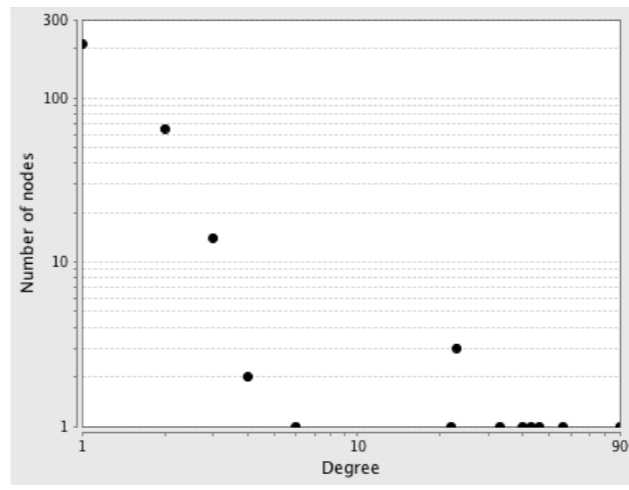


# nn FZD records, cluster 1





# 399 FZD records, cluster 7



COAD-READ c7, FZD

