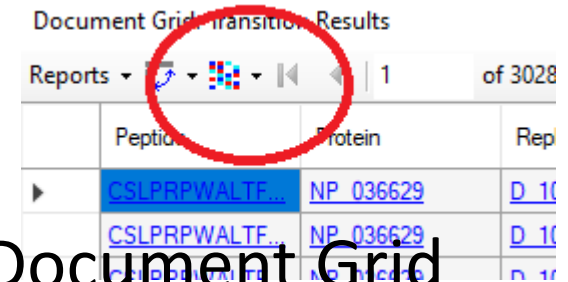


# Hierarchical Clustering and PCA Plots in Skyline Daily

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Nicholas Shulman

# “Cluster” button on the Document Grid



Document Grid Transition Results

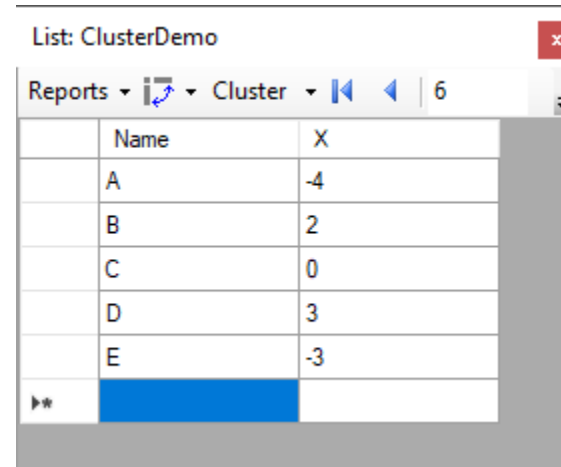
Reports ▾ [Cluster Button] 1 of 3028

Peptide	Protein	Rep
<a href="#">CSLPRPWALTE...</a>	<a href="#">NP_036629</a>	<a href="#">D_10</a>
<a href="#">CSLPRPWALTE...</a>	<a href="#">NP_036629</a>	<a href="#">D_10</a>
<a href="#">CSLPRPWALTE...</a>	<a href="#">NP_036629</a>	<a href="#">D_10</a>

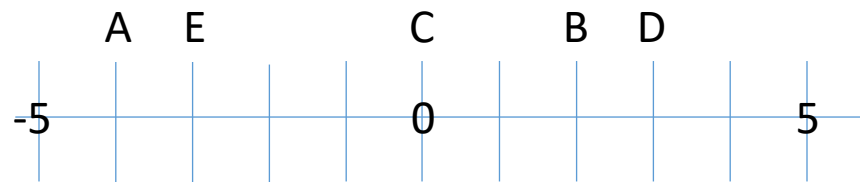
- A “Cluster” button appears on the Document Grid (and related windows) in the newest release of Skyline-Daily.
- When you push that button, Skyline will choose a set of numeric columns to perform hierarchical clustering on
- The clustering works best if some numeric columns have been pivoted by replicate

# What is hierarchical clustering?

- Finds which points are closest to each other, and then finds which points or groups of points are closest to each other.
- In this case, A&E are close to each other, and B&D are close to each other. After that, C is closer to B&D than it is to A&E.

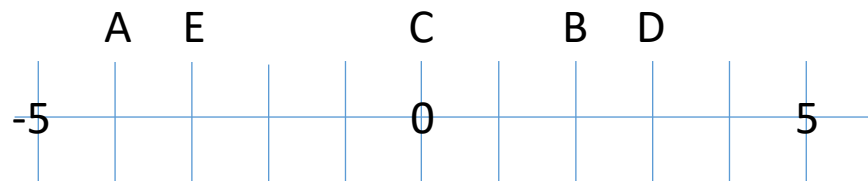
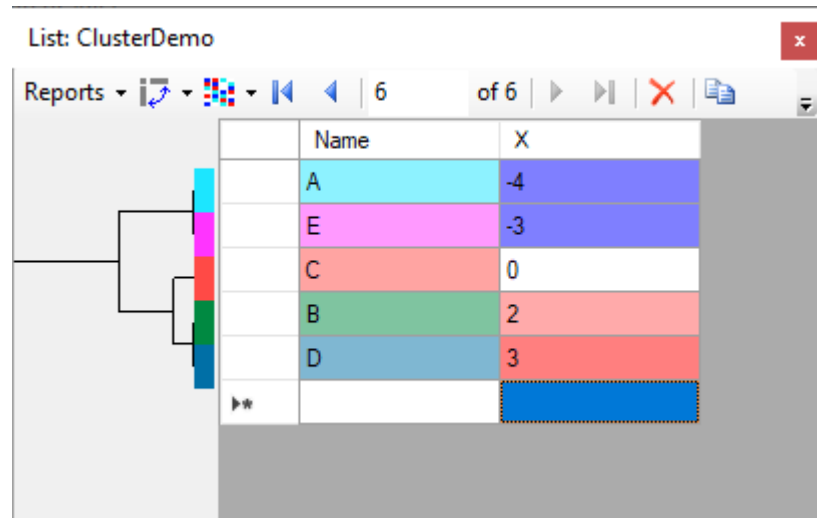


Name	X
A	-4
B	2
C	0
D	3
E	-3



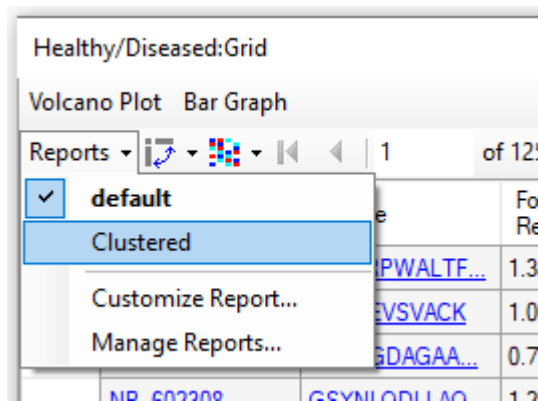
# What hierarchical clustering looks like in the Document Grid

- Rows get reordered so that the dendrogram can be drawn without the lines crossing
- Values in “Text” column get colored arbitrarily
- Values in “X” column get colored based on how far they are from zero



# Group Comparisons

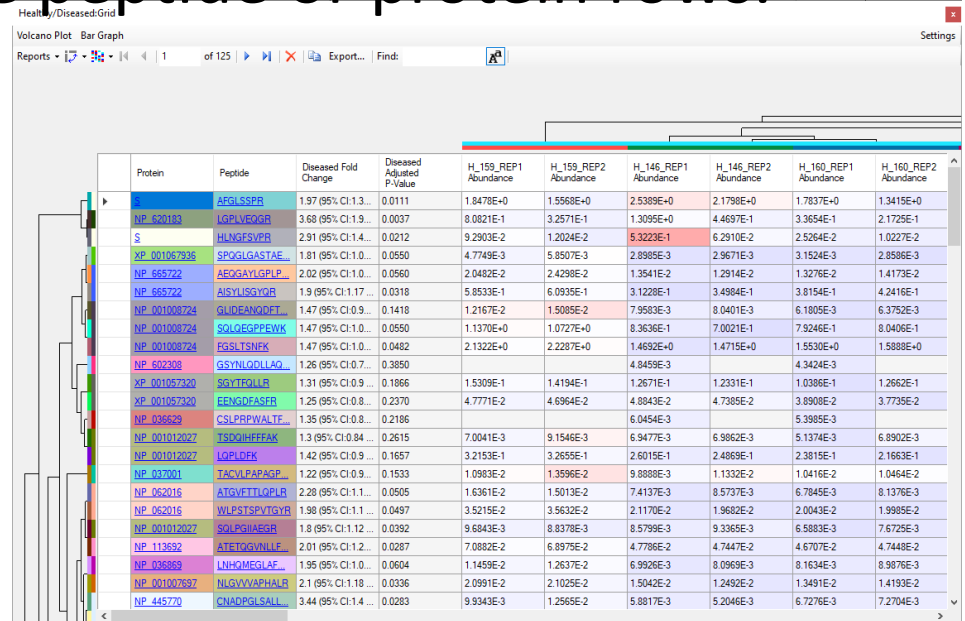
- The Group Comparison grid in Skyline-Daily now has an additional report available “Clustered”.



- Also, pushing the colorful cluster button automatically switches the report from “default” to “Clustered”.

# Clustered Group Comparison Report

- The “Clustered” comparison report displays the replicate abundances in separate columns.
- Hierarchical clustering is performed on the replicate columns, as well as the peptide or protein rows.



# Displaying the heat map graph

- There is a dropdown menu item from the cluster button which brings up a heat map graph.

