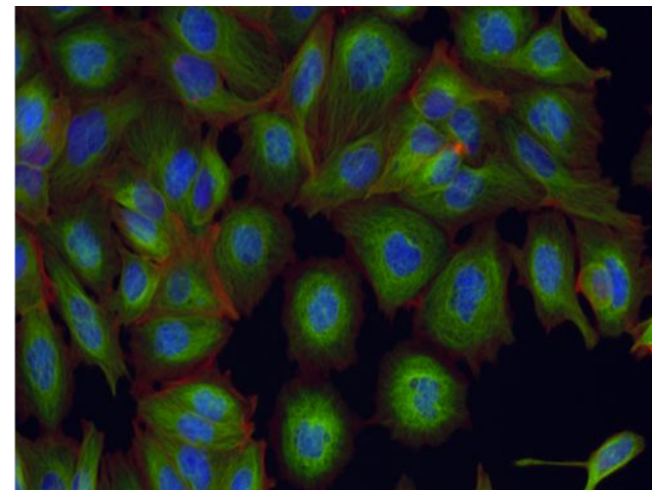
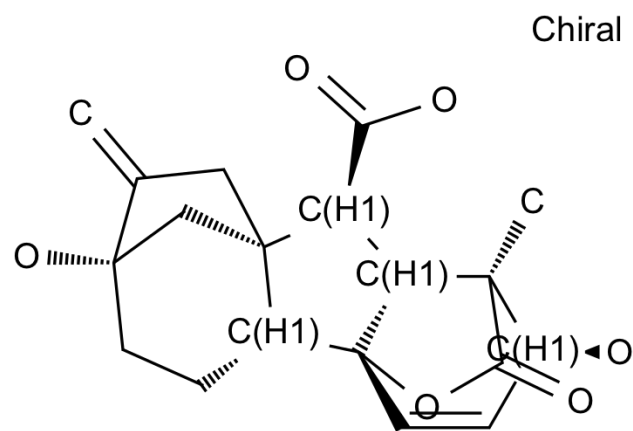


Aspiring to find relations between

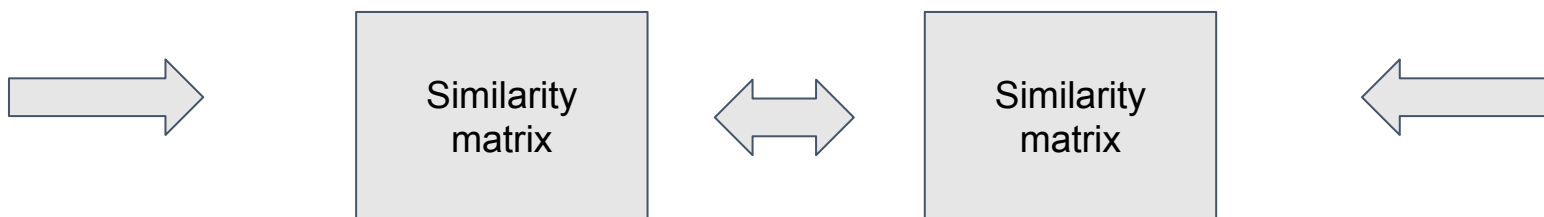
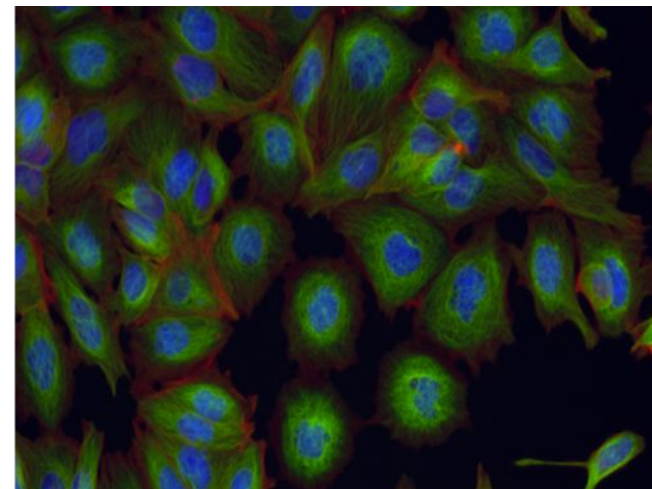
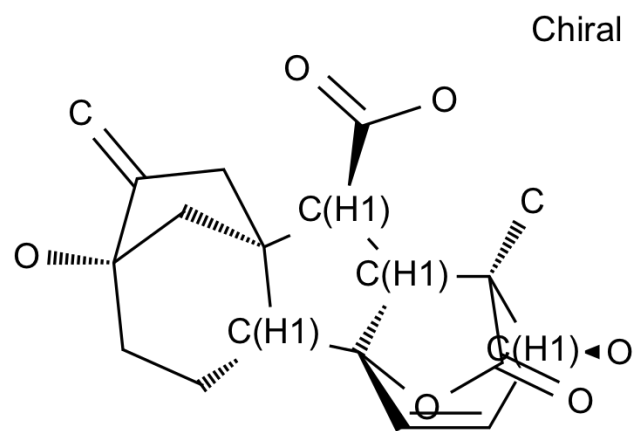
# Chemical structures and Morphological features

Lakshmi Balasubramanian, Minh Doan, Lassi  
Paavolainen, David Healey, Juan Caicedo

# Are compound structures correlated to morphology features?



# Are compound structures correlated to morphology features?



# Processing morphology data

1. Normalize features
  - a. Remove NaNs
2. Aggregate wells
3. Compute similarity matrix

# Processing chemical structures

## 1. Compute string similarity matrix between SMILES

Öztürk *et al. BMC Bioinformatics* (2016) 17:128  
DOI 10.1186/s12859-016-0977-x

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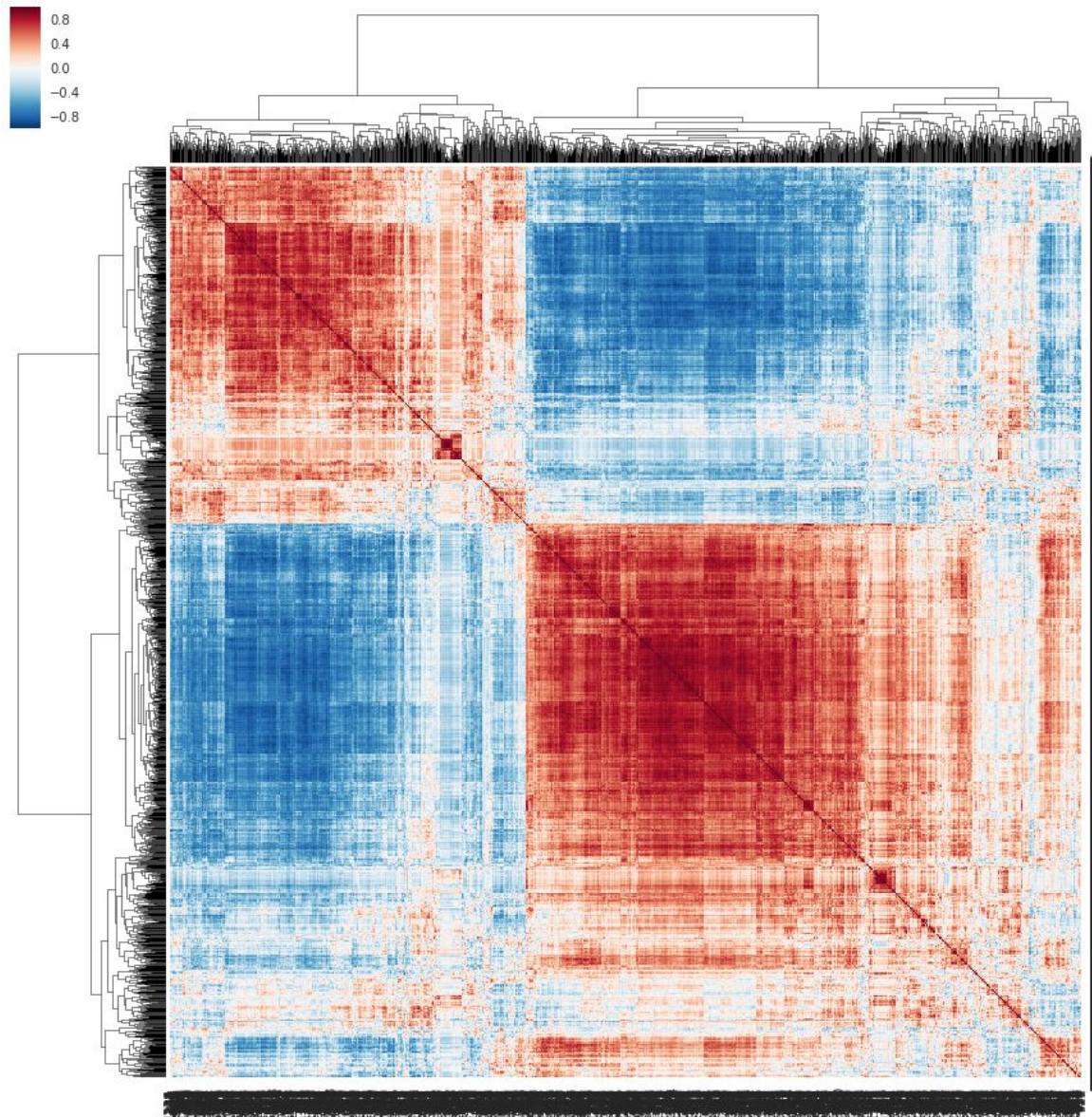
### A comparative study of SMILES-based compound similarity functions for drug-target interaction prediction



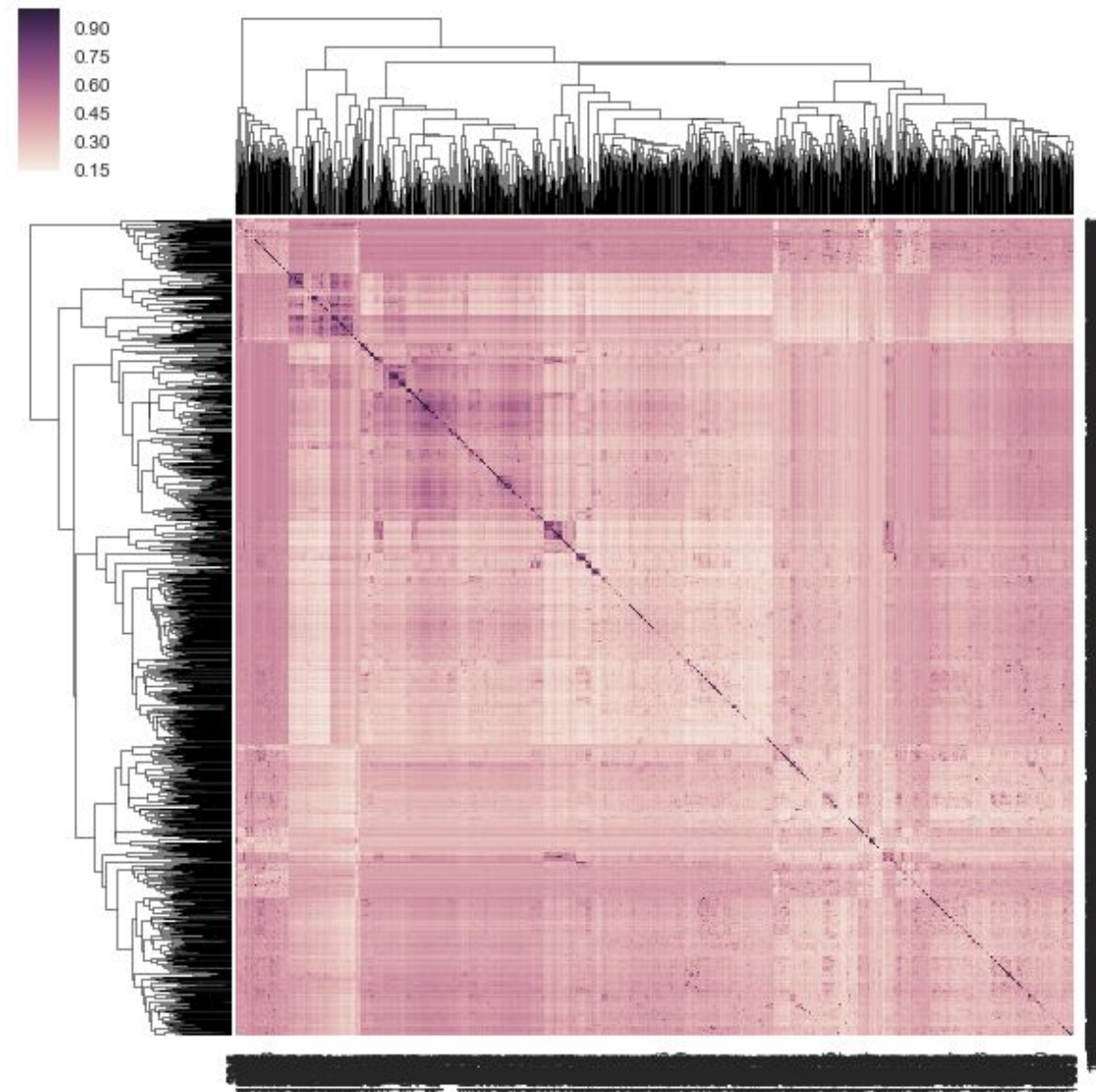
Hakime Öztürk<sup>\*</sup> , Elif Ozkirimli<sup>\*</sup> and Arzucan Özgür<sup>\*</sup>



# Morphological Features

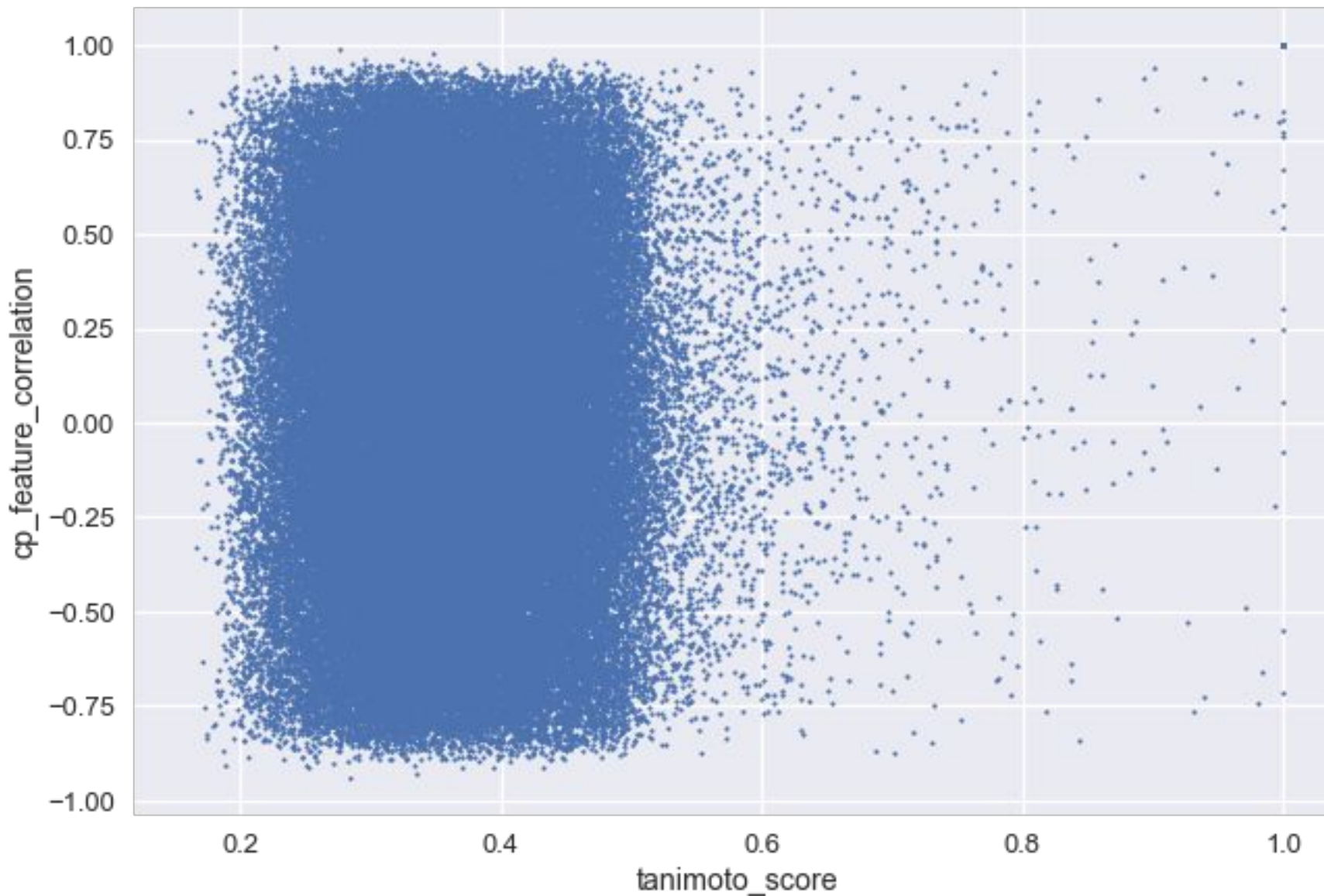


# Chemical structures





# Correlation between chemical structures and morphological features



Thank you!