#### MASARYKOVA UNIVERZITA

PŘÍRODOVĚDECKÁ FAKULTA

# Graph-based modelling of spatial distribution of lymphocytes

Bakalářská práce

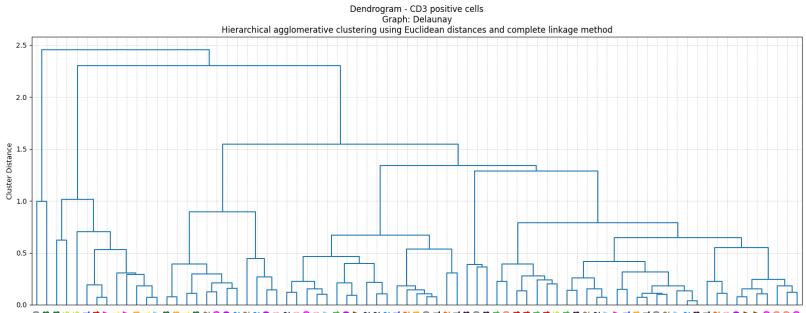
**ANETA BÖHMOVÁ** 

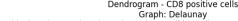
Vedoucí práce: doc. Ing. Vlad Popovici, PhD

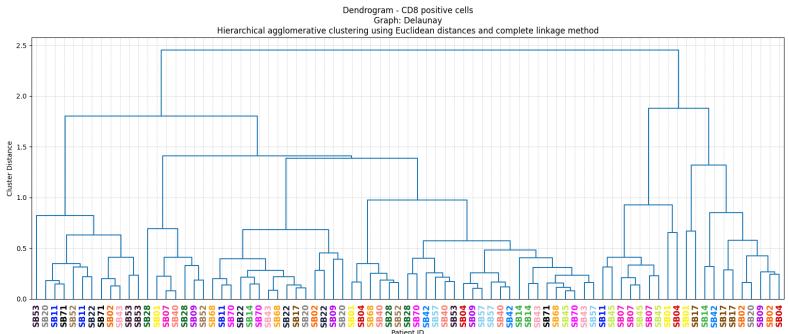
RECETOX
Program Matematická biologie a biomedicína

Brno 2024

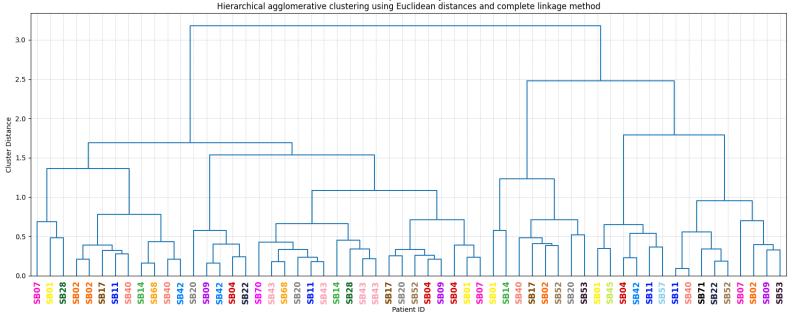
## Cluster analysis



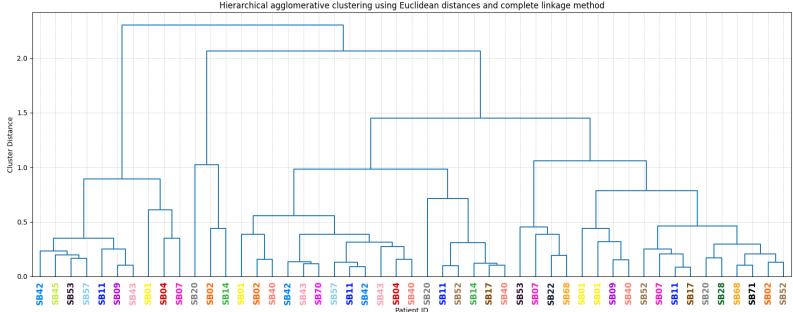




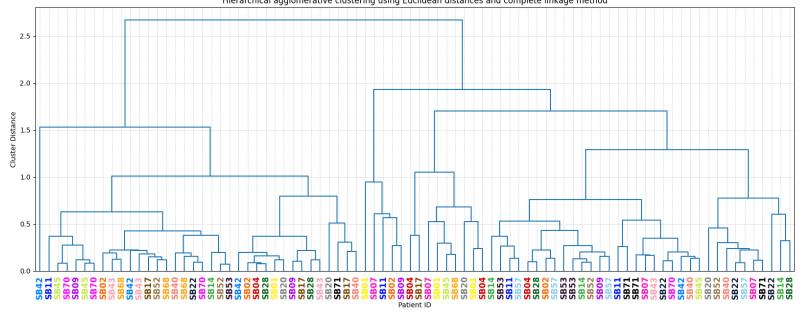
Dendrogram - CD45RO positive cells Graph: Delaunay Hierarchical agglomerative clustering using Euclidean distances and complete linkage method



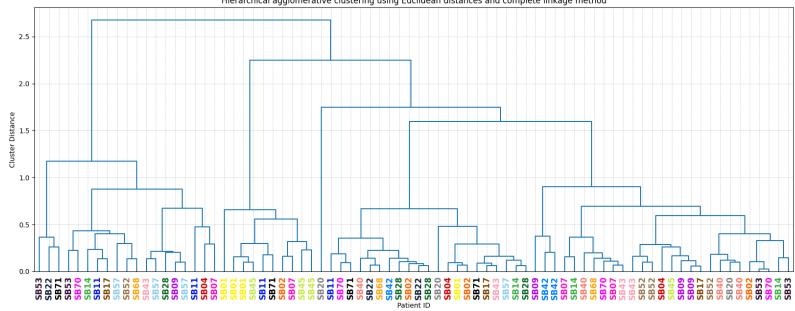


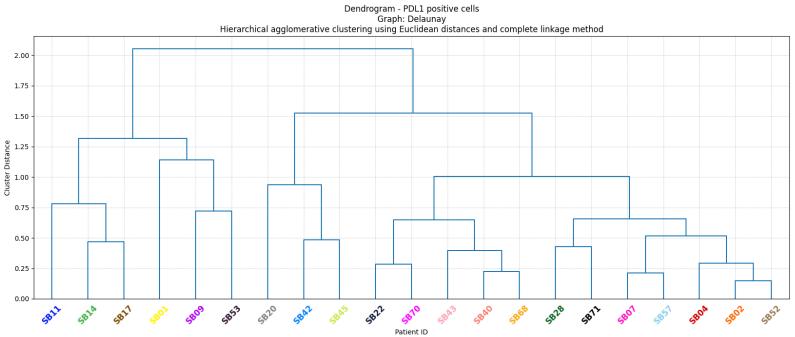


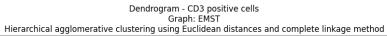
Dendrogram - FOXP3 positive cells Graph: Delaunay Hierarchical agglomerative clustering using Euclidean distances and complete linkage method

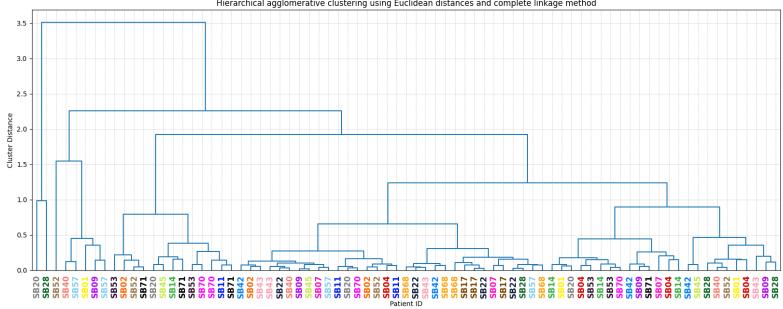


Dendrogram - PD1 positive cells Graph: Delaunay Hierarchical agglomerative clustering using Euclidean distances and complete linkage method

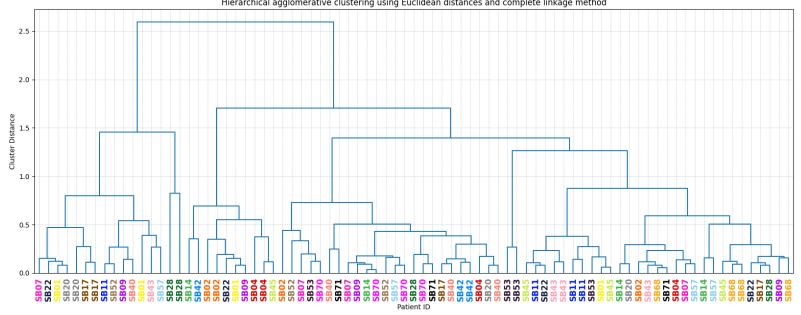


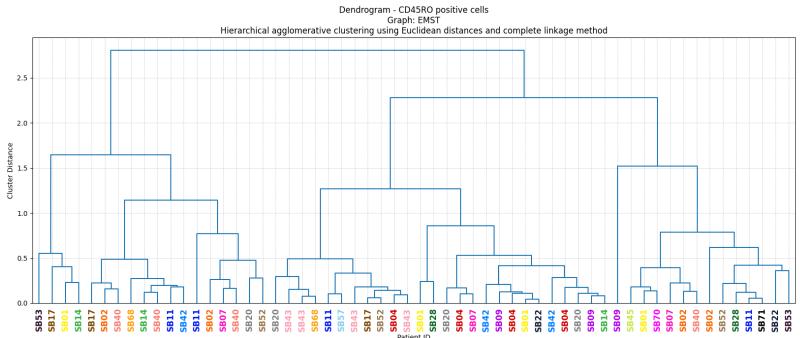


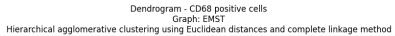


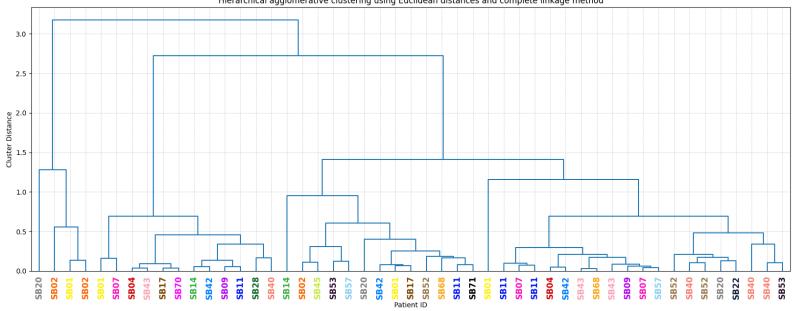


Dendrogram - CD8 positive cells Graph: EMST Hierarchical agglomerative clustering using Euclidean distances and complete linkage method

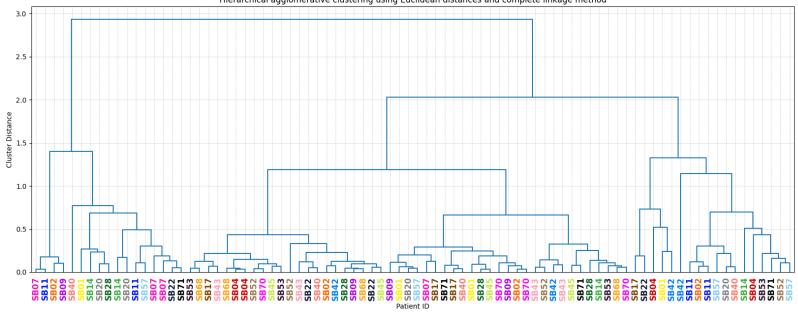




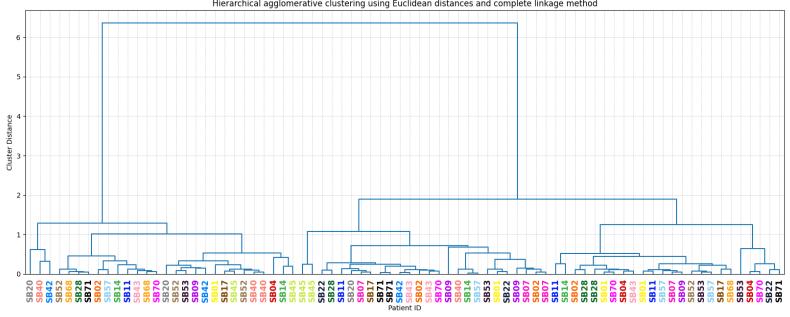


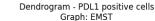


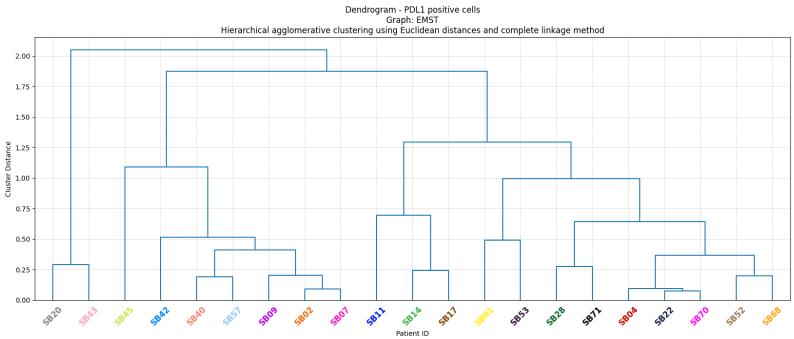
## Dendrogram - FOXP3 positive cells Graph: EMST Hierarchical agglomerative clustering using Euclidean distances and complete linkage method

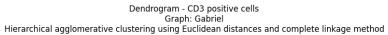


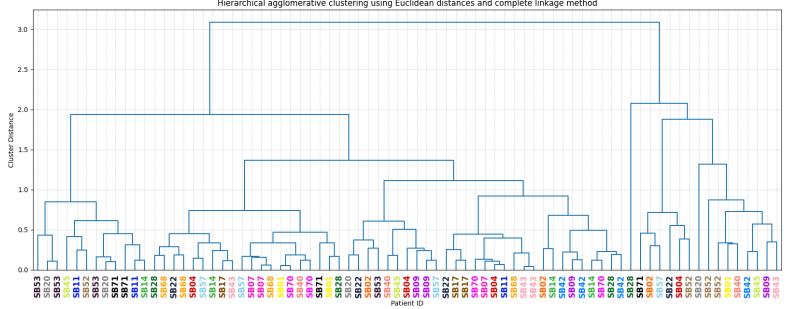
Dendrogram - PD1 positive cells Graph: EMST Hierarchical agglomerative clustering using Euclidean distances and complete linkage method



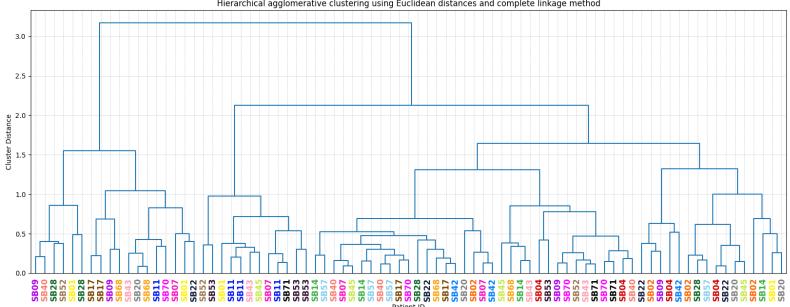




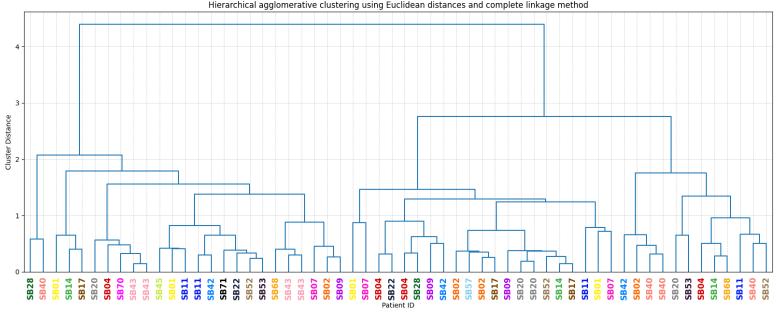


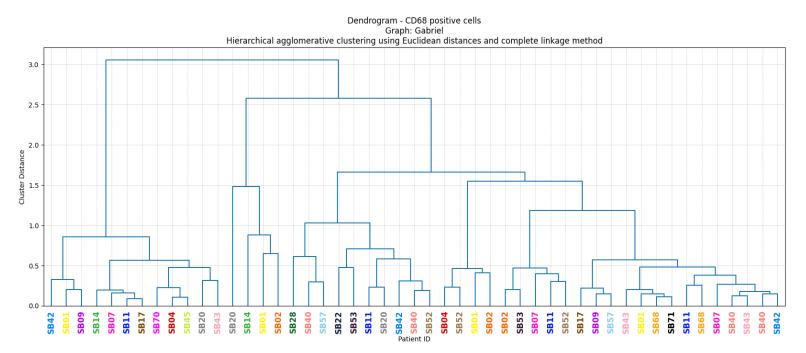


## Dendrogram - CD8 positive cells Graph: Gabriel Hierarchical agglomerative clustering using Euclidean distances and complete linkage method



Dendrogram - CD45RO positive cells Graph: Gabriel Hierarchical agglomerative clustering using Euclidean distances and complete linkage method





Dendrogram - FOXP3 positive cells Graph: Gabriel Hierarchical agglomerative clustering using Euclidean distances and complete linkage method

