Prostate Cancer Interactome

Stratification of prostate cancer patients based on molecular interaction profiles

Matteo Manica  Maria Rodriguez Martinez

Roland Mathis, Rocky 2016
HIPSTER
HIgh Performance SysTEms biology network Reconstruction
Inference from data

352 prostate tumor samples with 152 proteins (RPPA)

210 prostate tumor samples with 3780 proteins (SWATH)

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<th>Name</th>
<th>Based on</th>
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<tr>
<td>Pearson</td>
<td>Correlation</td>
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<td>Spearman</td>
<td>Ranks correlation</td>
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<td>Aracne</td>
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Consensus
Inference from public databases

OmniPath (1)

Consensus

Inference from publications

PMC query

xml processing & corpus creation

representation learning & clustering

neighbours distribution over clusters
Stratification

Identify relevant interaction modules through graph-theory approach

Cluster patients for each submodule

Classification of patients based on vectors of submodule cluster-ids