

# Michael Caldera



<b>Research Group:</b>	<b>Menche Group</b>
<b>Department:</b>	<b>Center for Molecular Medicine (CeMM)</b>
<b>Current academic degree:</b>	MSc ETH
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<b>PhD Thesis:</b>	Towards a Systematic Understanding of Drug-Drug Interactions
<b>Project title:</b>	Towards a Systematic Understanding of Drug-Drug Interactions

## **Project description:**

Drug-drug interactions (DDIs), i.e. changes in the effect of one drug when used in combination with a second drug, have important implications for both clinical applications and drug development. The broad ambition of this project is to investigate DDIs by creating and analysing a large-scale DDI network using (1) high-content screening of a representative library of FDA-approved drugs; (2) machine learning techniques to extract drug specific cell phenotypes; (3) network theory approaches to map a DDI network of unprecedented resolution; (4) integrative analysis in the context of other molecular networks, such as protein interaction, metabolic or disease networks.