

Introduction: Reproducible omics data analysis workflows

with the COVID-19 Disease Map, WikiPathways and Cytoscape

Lauren J. Dupuis, PhD

ISMB/ECCB 2021 - Tutorial 8
22 July 2021



Instructors

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Executive Director,
Resource on Biocomputing,
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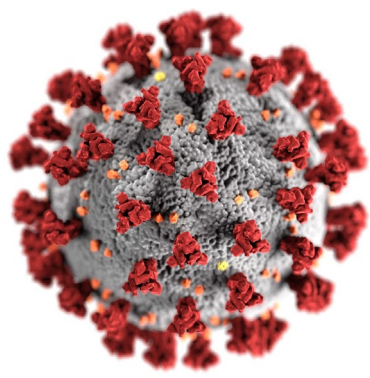
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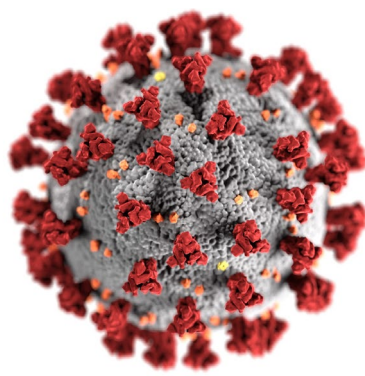
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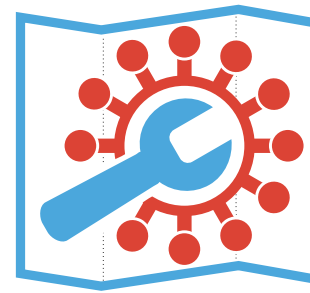
What are we going to do?



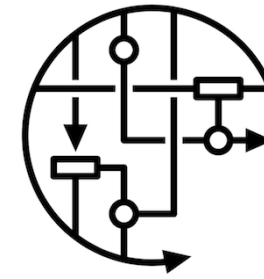
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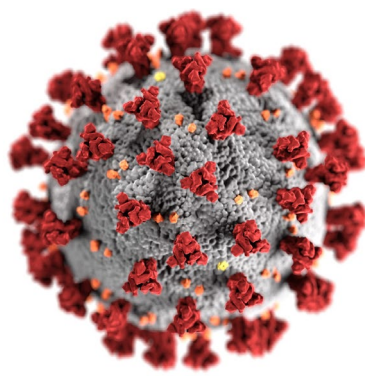
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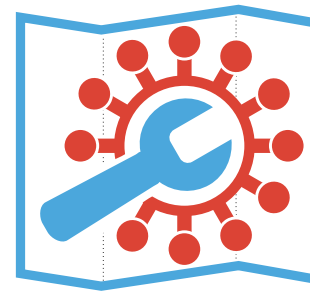
COVID-19
Disease Maps



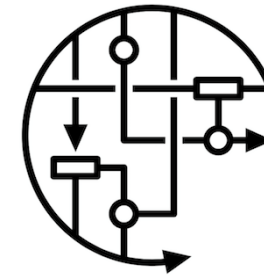
WikiPathways



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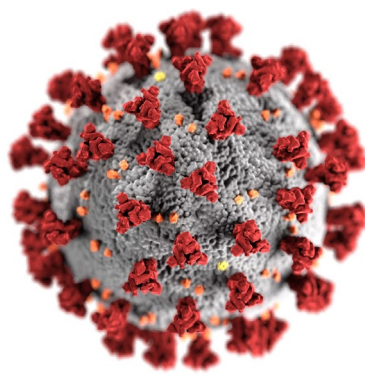
COVID-19
Disease Maps



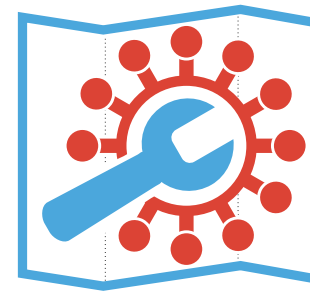
WikiPathways

Day 1

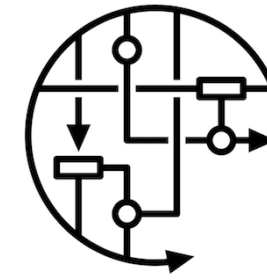
Day 2



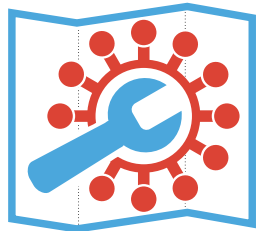
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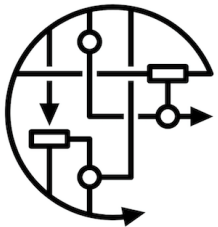
COVID-19
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WikiPathways



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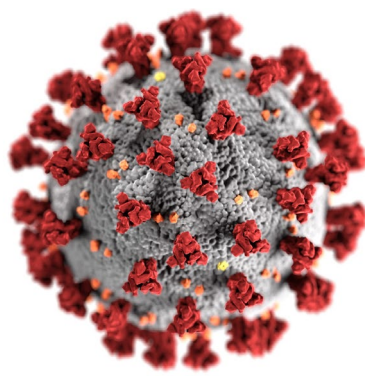


WikiPathways

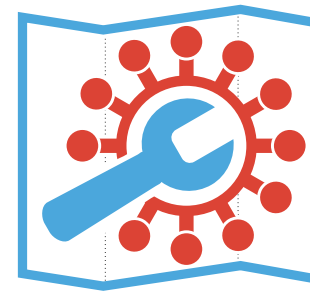
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Day 2

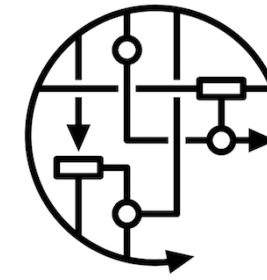
ALL ABOUT THE TOOLS



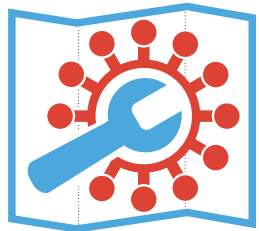
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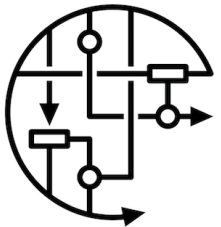
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WikiPathways



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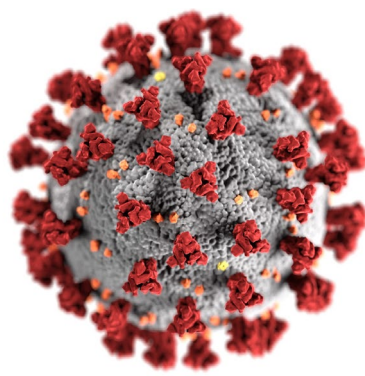


WikiPathways

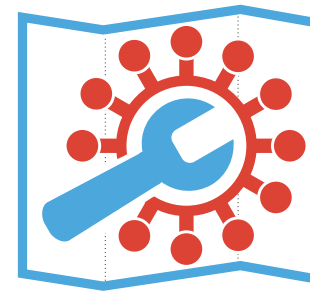


Day 1
ALL ABOUT THE TOOLS

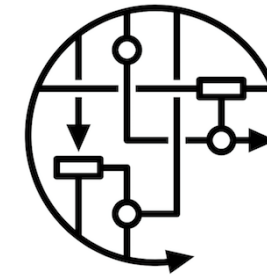
Day 2



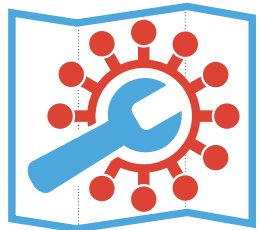
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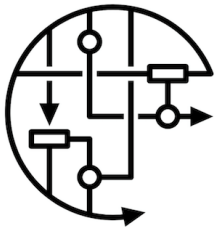
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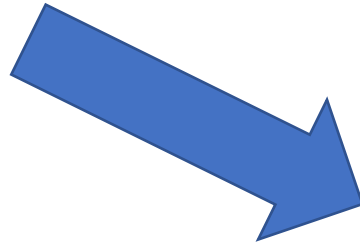
WikiPathways



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Disease Maps



WikiPathways



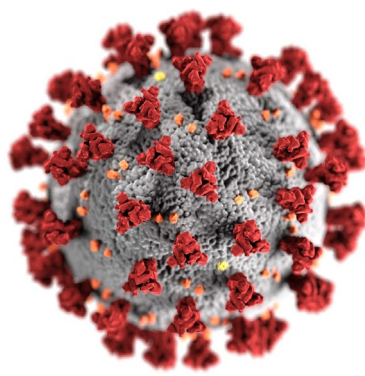
Cytoscape
Automation



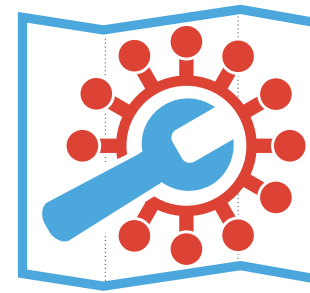
Day 1

ALL ABOUT THE TOOLS

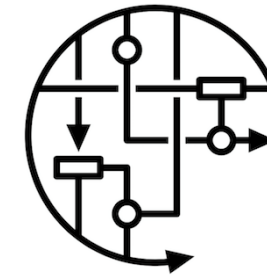
Day 2



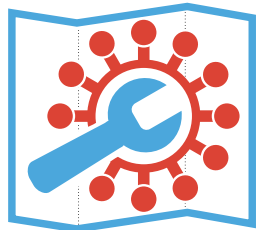
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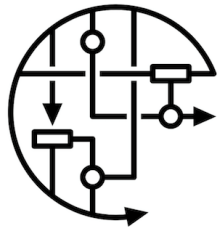
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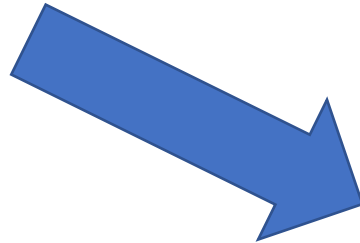
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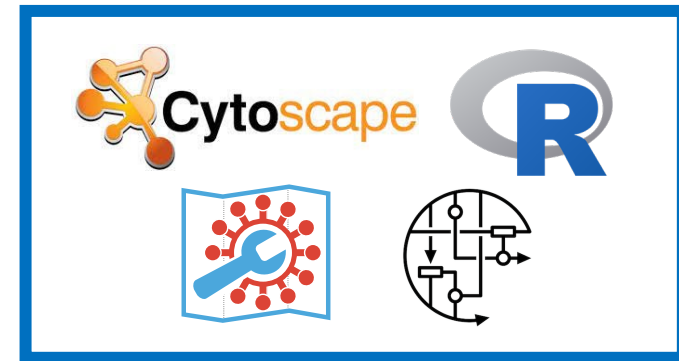


Cytoscape
Automation



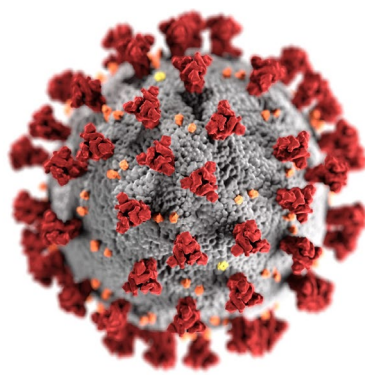
Day 1

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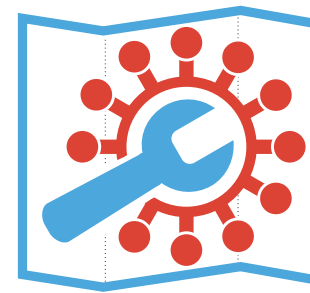


Day 2

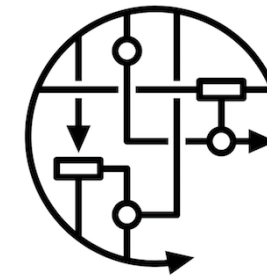
ALL ABOUT THE APPLICATION



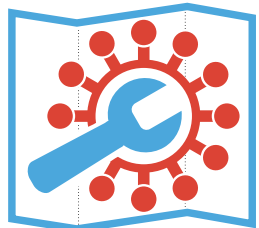
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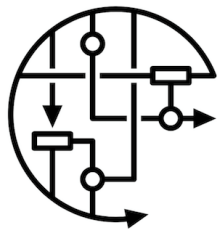
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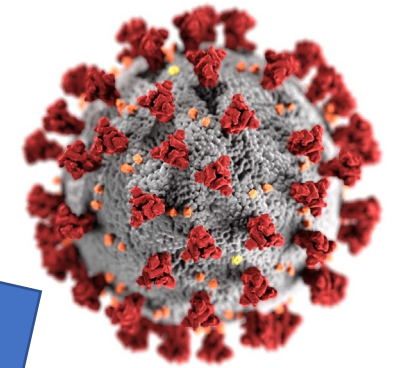
Cytoscape
Automation



Day 1

ALL ABOUT THE TOOLS

Application



<https://covid-19.sciensano.be/nl>



Day 2

ALL ABOUT THE APPLICATION

Program Day 1

Time	Activity	Speaker/instructor
15:00 - 15:15	Introduction	Lauren Dupuis
15:15 - 15:45	Introduction COVID19 Disease Map / WikiPathways	Martina Kutmon
15:45 - 16:30	Introduction Cytoscape	Scooter Morris
16:30 - 17:30	Hands-on Cytoscape 1	Scooter Morris
17:30 - 17:45	Break	
17:45 - 18:30	Hands-on Cytoscape 2	Scooter Morris
18:30 - 19:00	Wrap up and outlook for next day	Lauren Dupuis

Program Day 2

Time	Activity	Speaker/instructor
15:00 - 15:30	Introduction workflows	Martina Kutmon
15:30 - 16:15	Workflow 1 Pathway enrichment / network visualization / drug-target extension	Martina Kutmon Lauren Dupuis
16:15 - 17:00	Workflow 2 Protein-protein interaction network / pathway information extension	Martina Kutmon Lauren Dupuis
17:00 - 17:15	Coffee break	
17:15 - 18:00	Workflow 3 Pathway crosstalk analysis	Martina Kutmon Lauren Dupuis
18:00 - 18:30	Wrap up and quiz	Lauren Dupuis
18:30 - 19:00	Q&A / Get input on your own project	All instructors