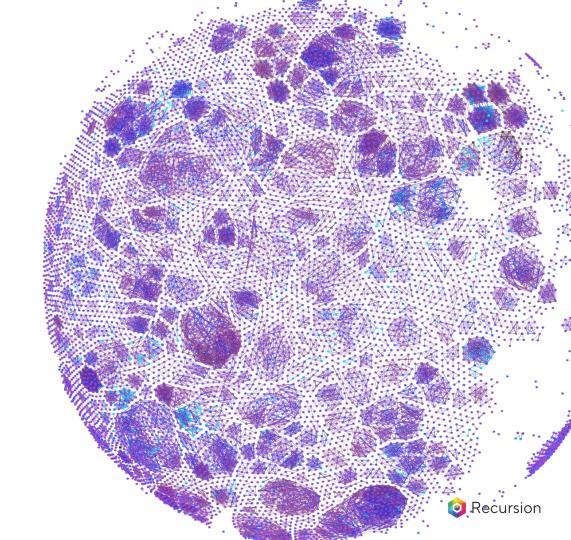
# Maps To Medicines: One Map to an Atlas

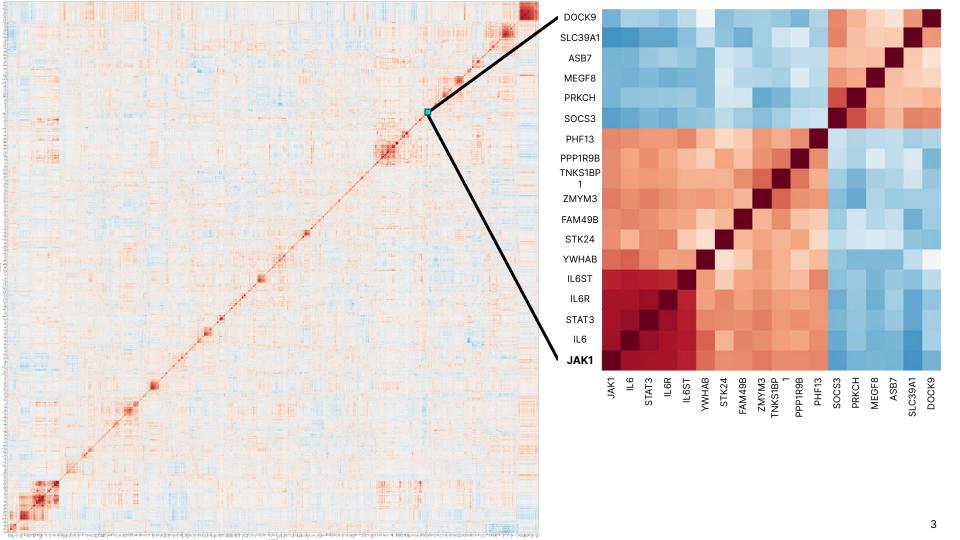
Shweta Bhandare, PhD

June 28, 2023



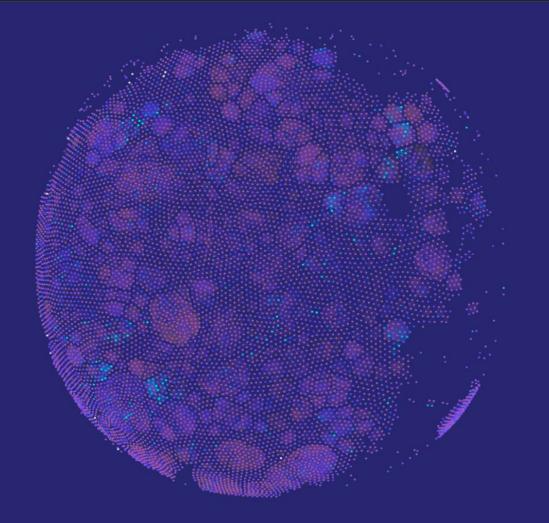
#### How we build our maps of biology and chemistry





**GRAND CHALLENGES 2022** 

# Build the Atlas Follow the Atlas Serve Humanity





How were the maps built?

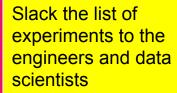
Is my experiment in the map?



- # exp-2-scheduling
- # exp-reports
- # exp-6-computation
- # ht-experiment-design
- # exp-3-design
- # exp-4-preparation
- # exp-5-execution
- # exp-7-data\_review
- # exp-8-handoff







How were the maps built?

Is my experiment in exp-1-request



exp-2-scheduling

exp-reports

exp-6-computation

ht-experiment-design

exp-3-design

exp-4-preparation

exp-5-execution

exp-7-data review

exp-8-handoff





Slack the list of experiments to the engineers and data scientists







- CreatePhenoMapGroup.py
- DevelopmentOnPhenomapFlows.py
- GetExperimentsInGroup.py
- GetPhenomapData.py
- README.md
- RunAnyAnalysis.py
- RunEmbeddings.py
- RunPhenoScreenAnalysis.py
- RunPhenomapAnalysisNewTransformation
- RunPhenomapAnalysisProductionTransfo
- Transformations.pv

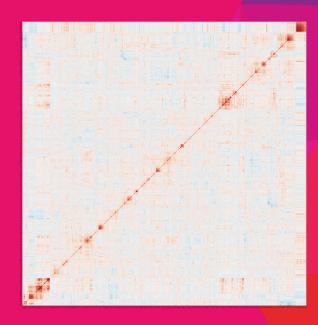




## How were the maps built?

### Beck's Directive

- · Make it Work
- · Make it Right
- · Make it Fast



- CreatePhenoMapGroup.py
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- Transformations.py







#### # exp-1-request

# exp-2-scheduling

# exp-reports

# exp-6-computation

# ht-experiment-design

# exp-3-design

# exp-4-preparation

# exp-5-execution

# exp-7-data\_review





Map Experiments tagged



# exp-2-scheduling

# exp-reports

# exp-6-computation

# ht-experiment-design

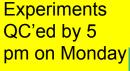
# exp-3-design

exp-4-preparation

# exp-5-execution

# exp-7-data\_review

List of map building experiments obtained programmatically!







Map Experiments tagged

exp-1-request

exp-reports

exp-2-scheduling

exp-6-computation



group\_auto\_creation\_updates APP 8:13 PM

LIST OF EXPERIMENTS

NEW MAP NAME

OLD MAP NAM

Map Build Summa

A new group was

Compared to the prior

DO THE THING!

**I** 

Ho

RECURSION

experiments:

CreatePhenoMapGroup.py

GetExperimentsInGroup.py

DevelopmentOnPhenomapFlows.py

■ Get new experiment data ■ Aggregate data ■ Build a new map ■ Load map into application Send slack notification to





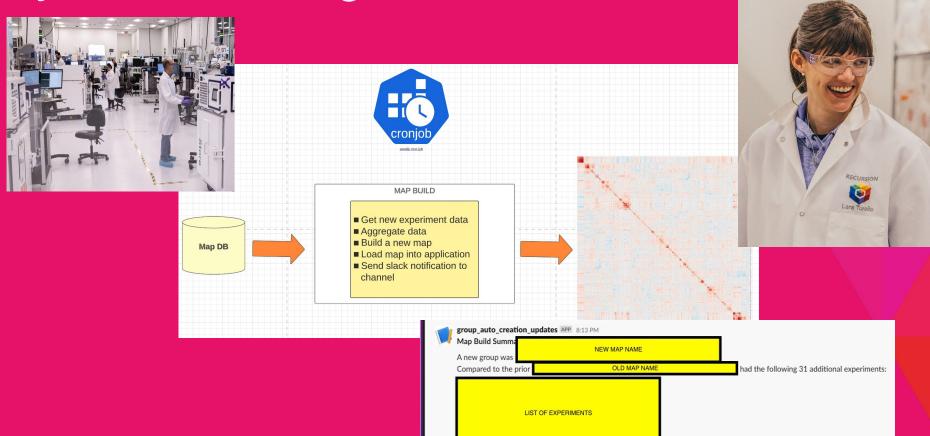
pm on Monday

QC'ed by 5

ht-experiment-design exp-3-design exp-4-preparation exp-5-execution

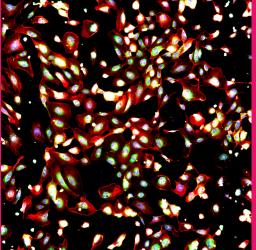
exp-7-data\_review

Map Experiments tagged



 It's not always about building the best technical solution – systems thinking is the key for some problems







This was One Recursion - multiple teams had to come together to build this system, and I am grateful to be here and share this win with all of you



