

Miriah Meyer

School of Computing
University of Utah

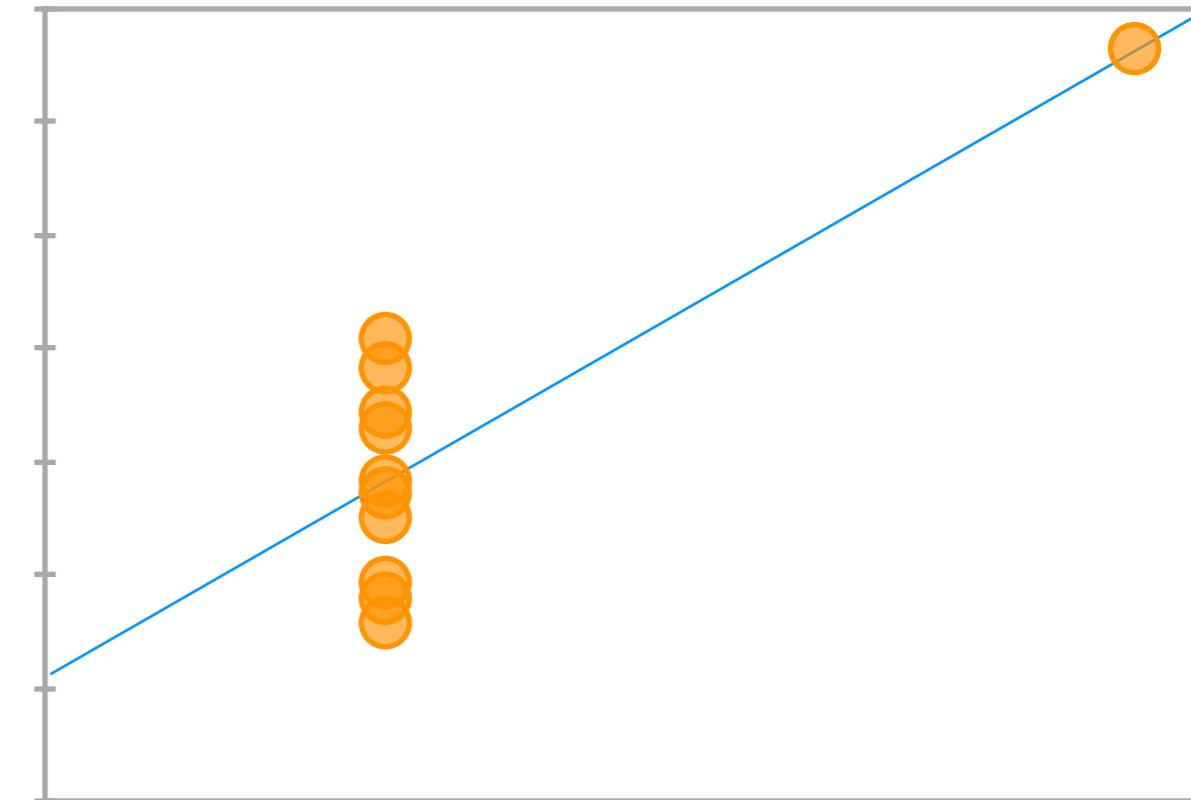
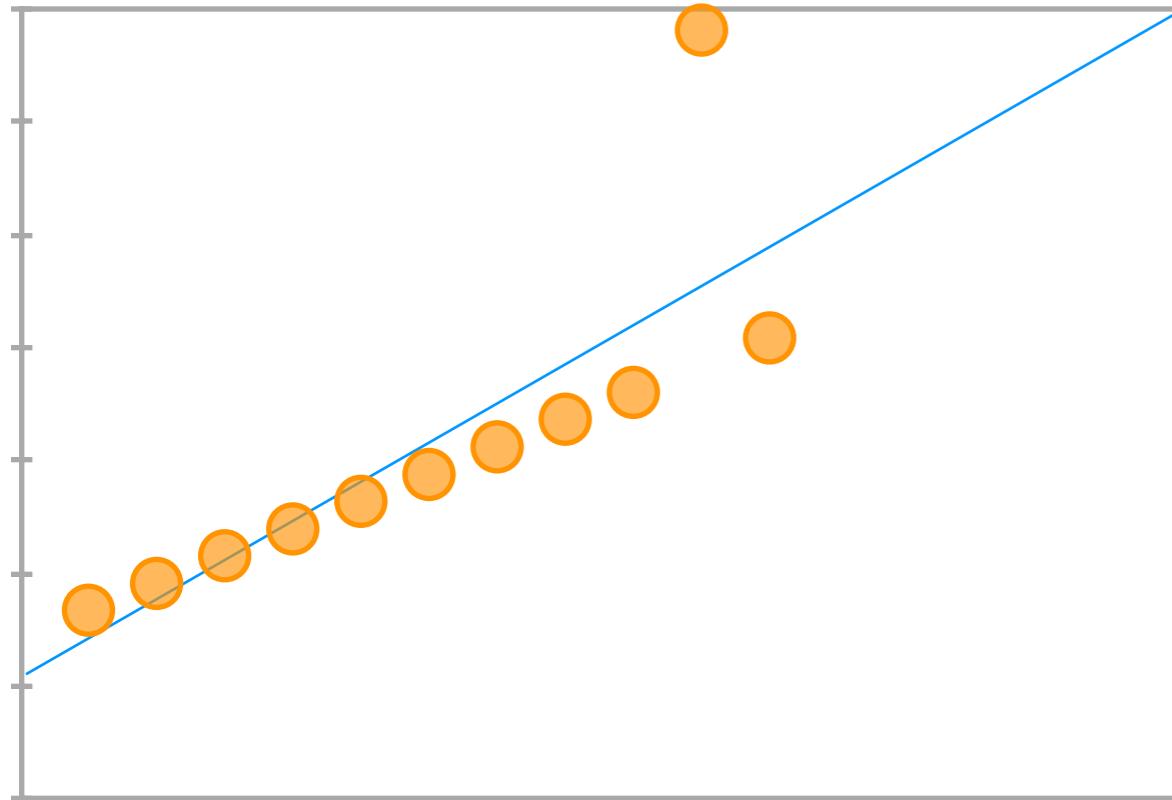
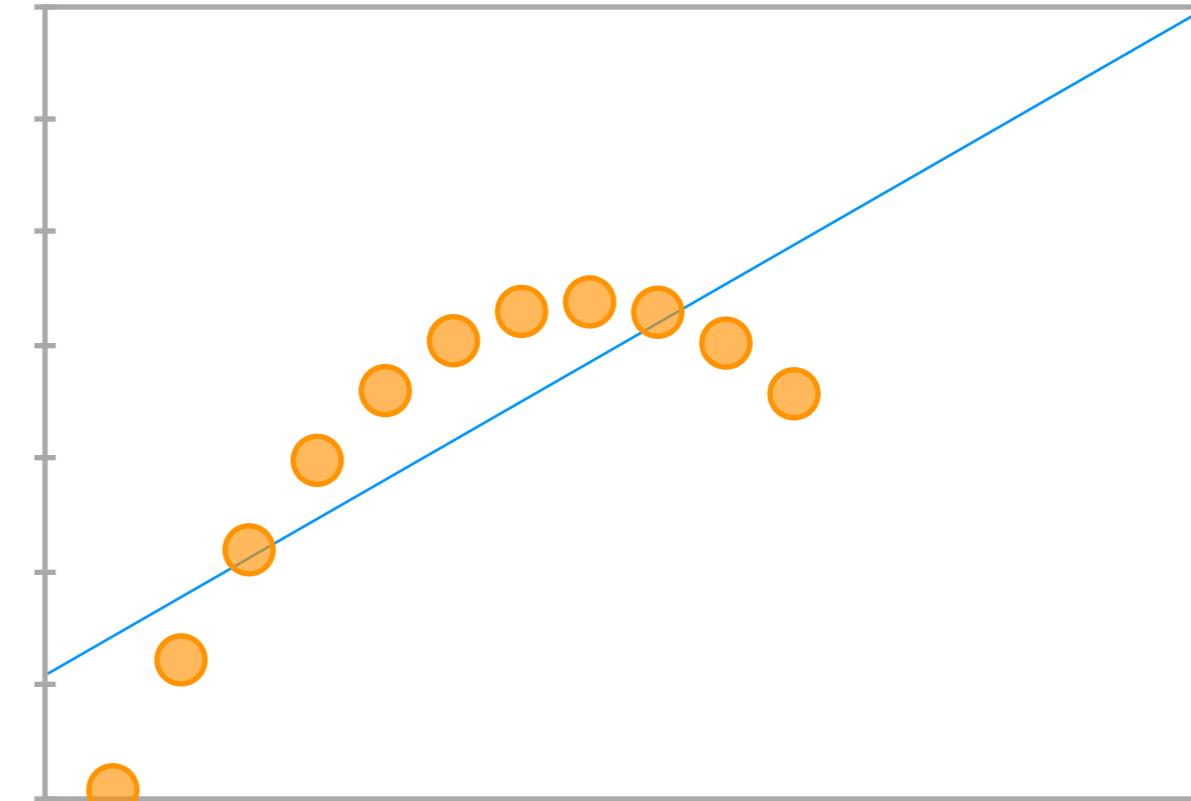
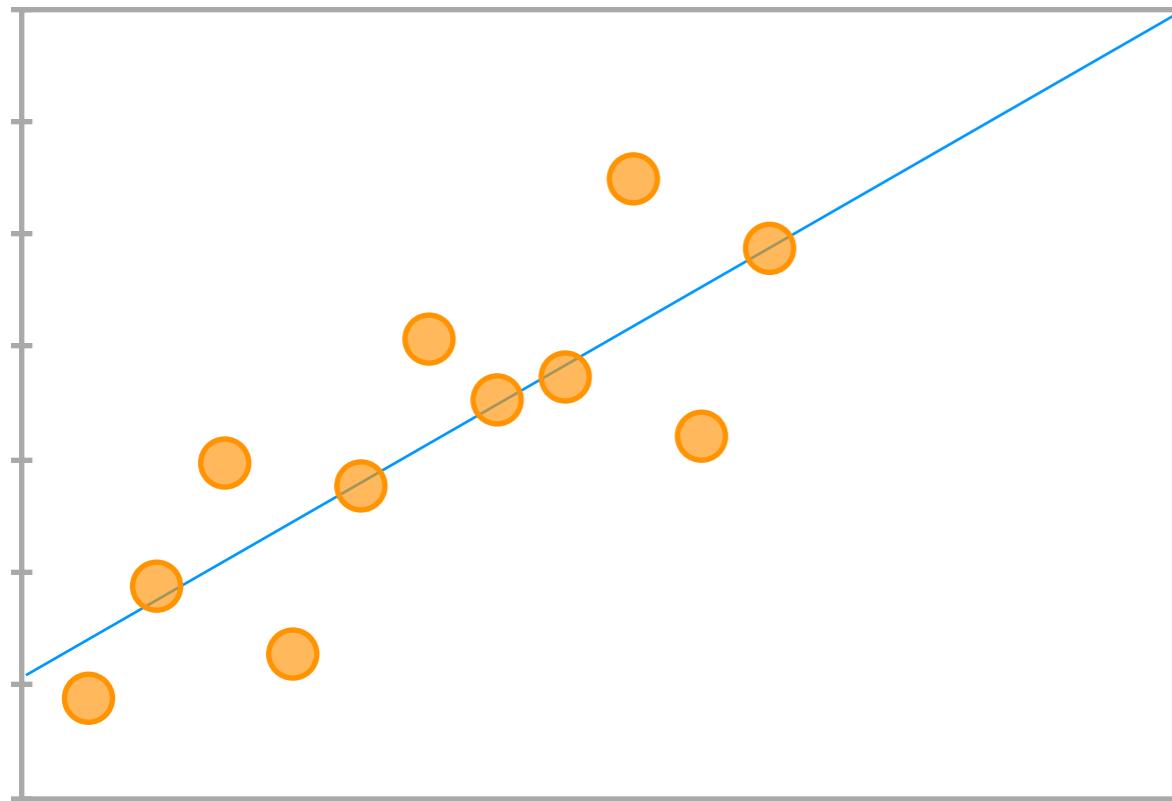
| x | y | x | y | x | y | x | y |
|----------|----------|----------|----------|----------|----------|----------|----------|
| 10 | 8.04 | 10 | 9.14 | 10 | 7.46 | 8 | 6.58 |
| 8 | 6.95 | 8 | 8.14 | 8 | 6.77 | 8 | 5.76 |
| 13 | 7.58 | 13 | 8.74 | 13 | 12.74 | 8 | 7.71 |
| 9 | 8.81 | 9 | 8.77 | 9 | 7.11 | 8 | 8.84 |
| 11 | 8.33 | 11 | 9.26 | 11 | 7.81 | 8 | 8.47 |
| 14 | 9.96 | 14 | 8.1 | 14 | 8.84 | 8 | 7.04 |
| 6 | 7.24 | 6 | 6.13 | 6 | 6.08 | 8 | 5.25 |
| 4 | 4.26 | 4 | 3.1 | 4 | 5.39 | 19 | 12.5 |
| 12 | 10.84 | 12 | 9.13 | 12 | 8.15 | 8 | 5.56 |
| 7 | 4.82 | 7 | 7.26 | 7 | 6.42 | 8 | 7.91 |
| 5 | 5.68 | 5 | 4.74 | 5 | 5.73 | 8 | 6.89 |

mean of x = 9

mean of y = 7.5

correlation = 8.16

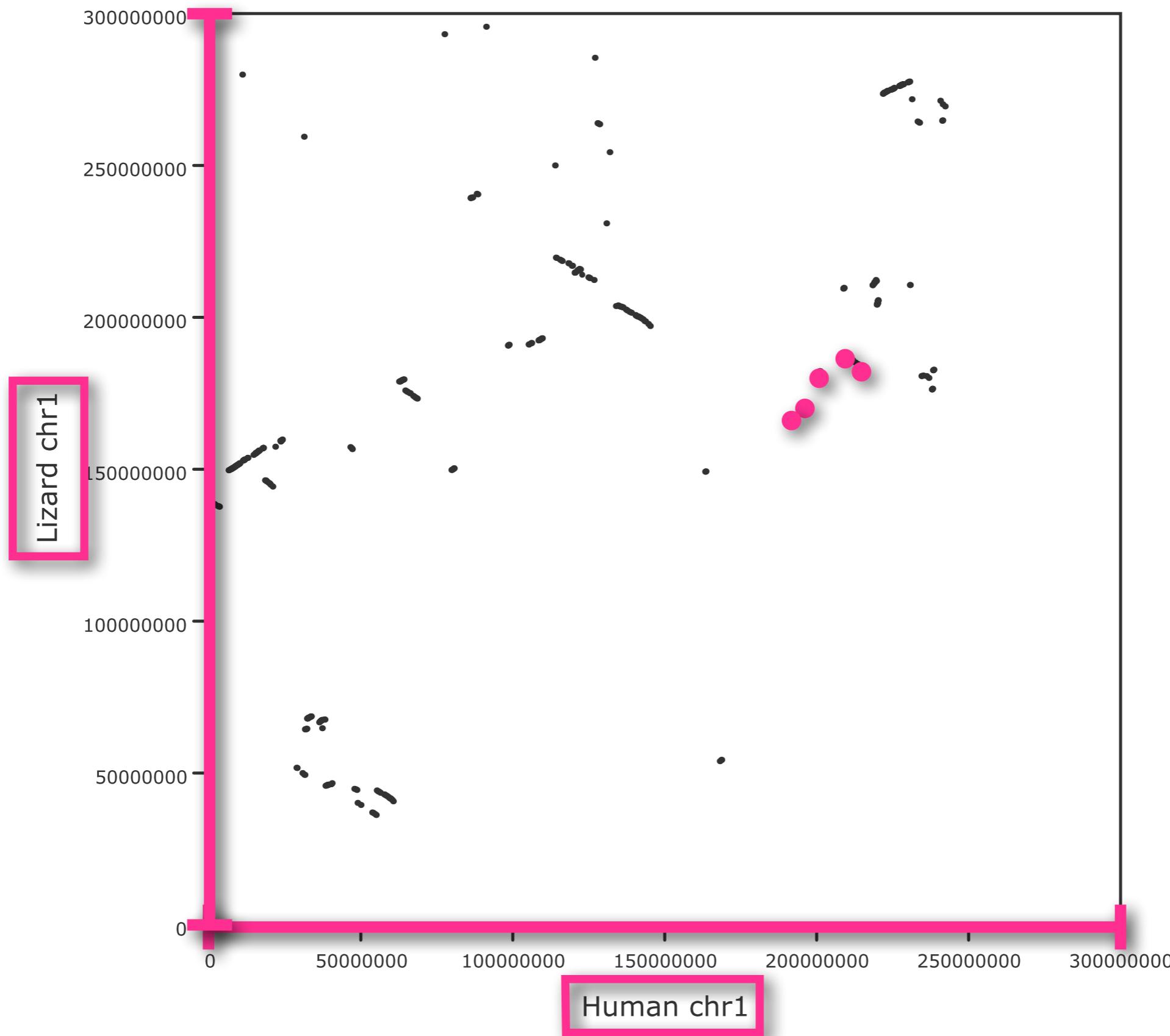
linear regression line, $y = 3 + 0.5x$

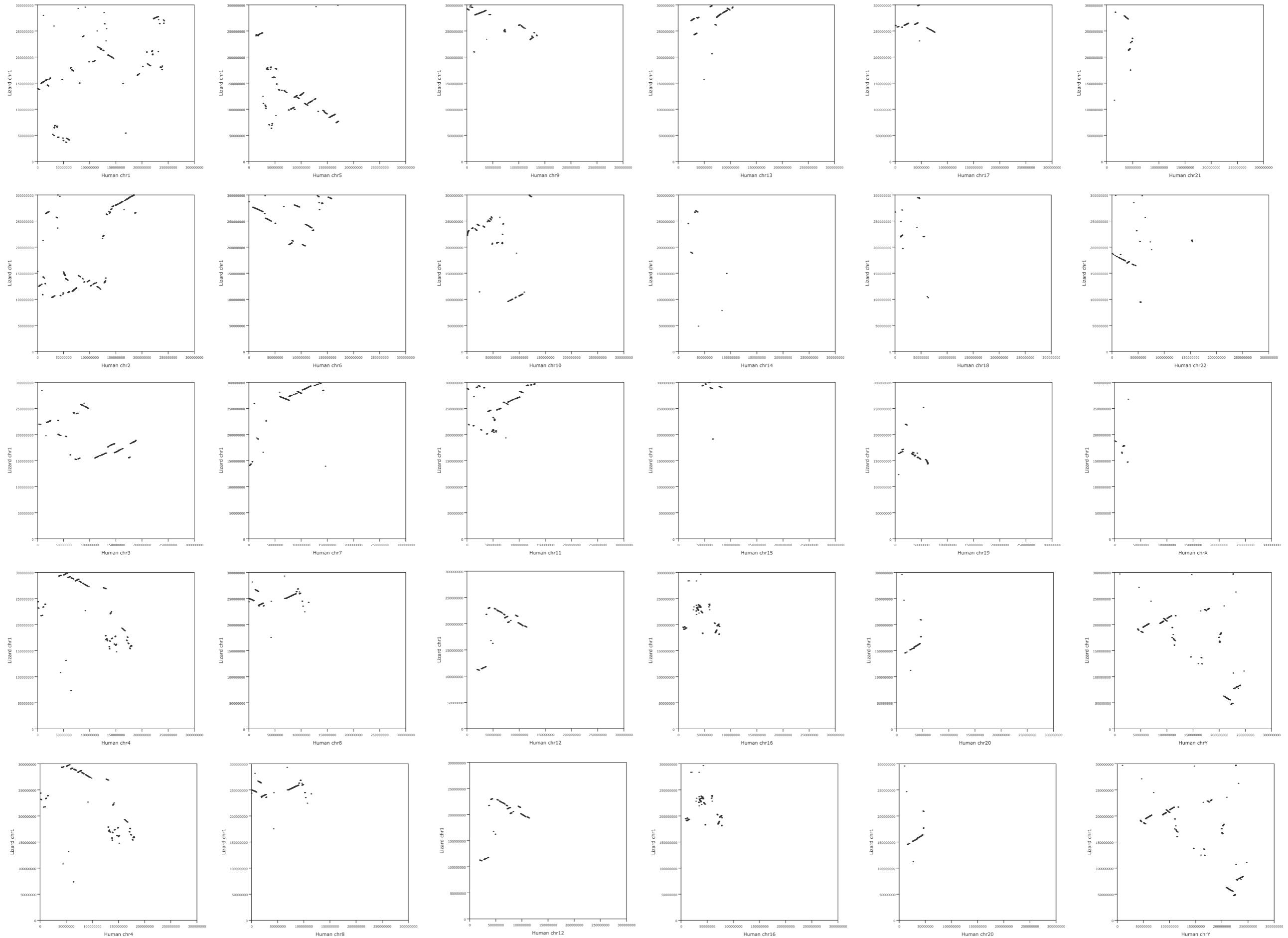




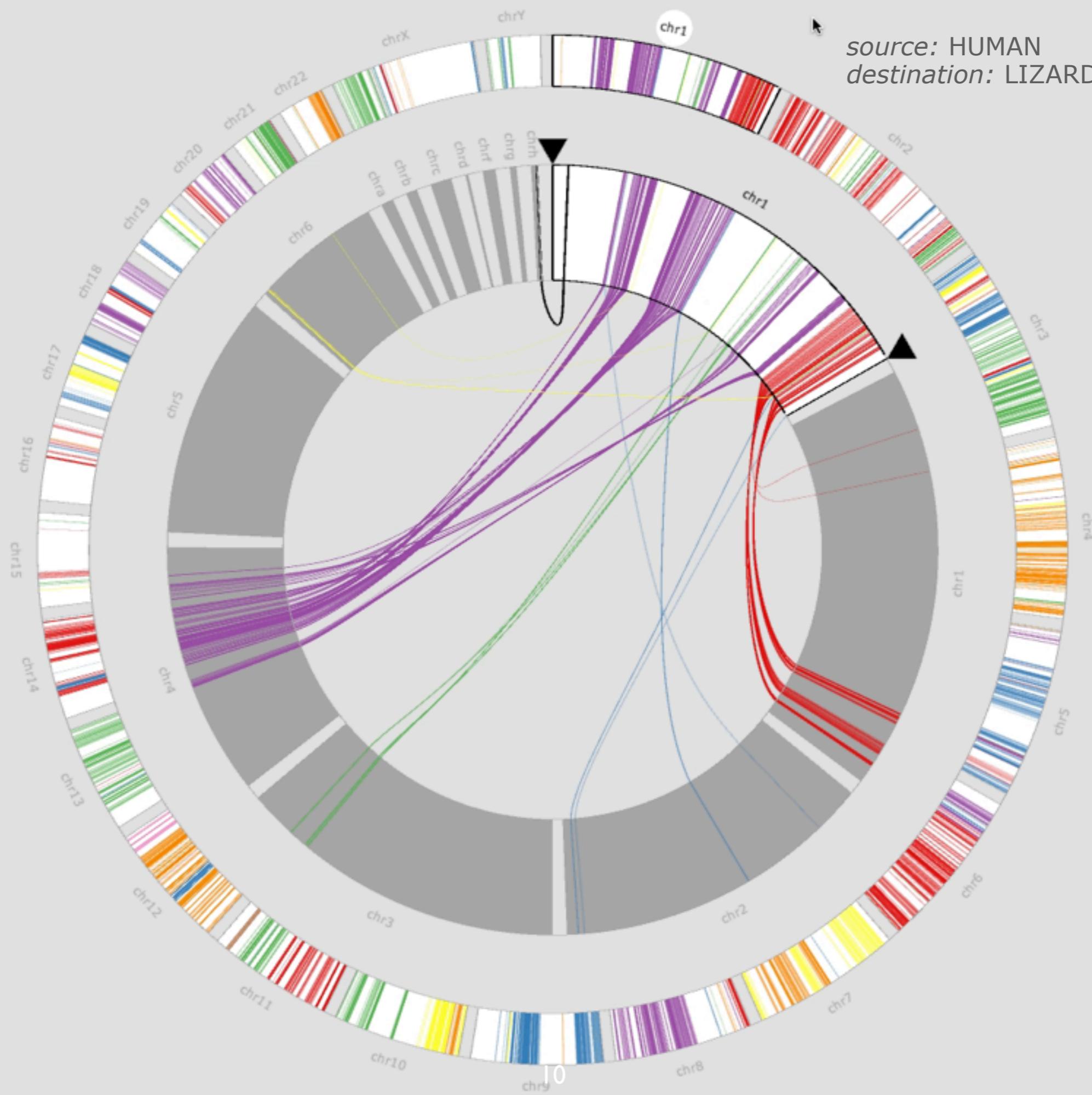
MANFRED
GRABHERR



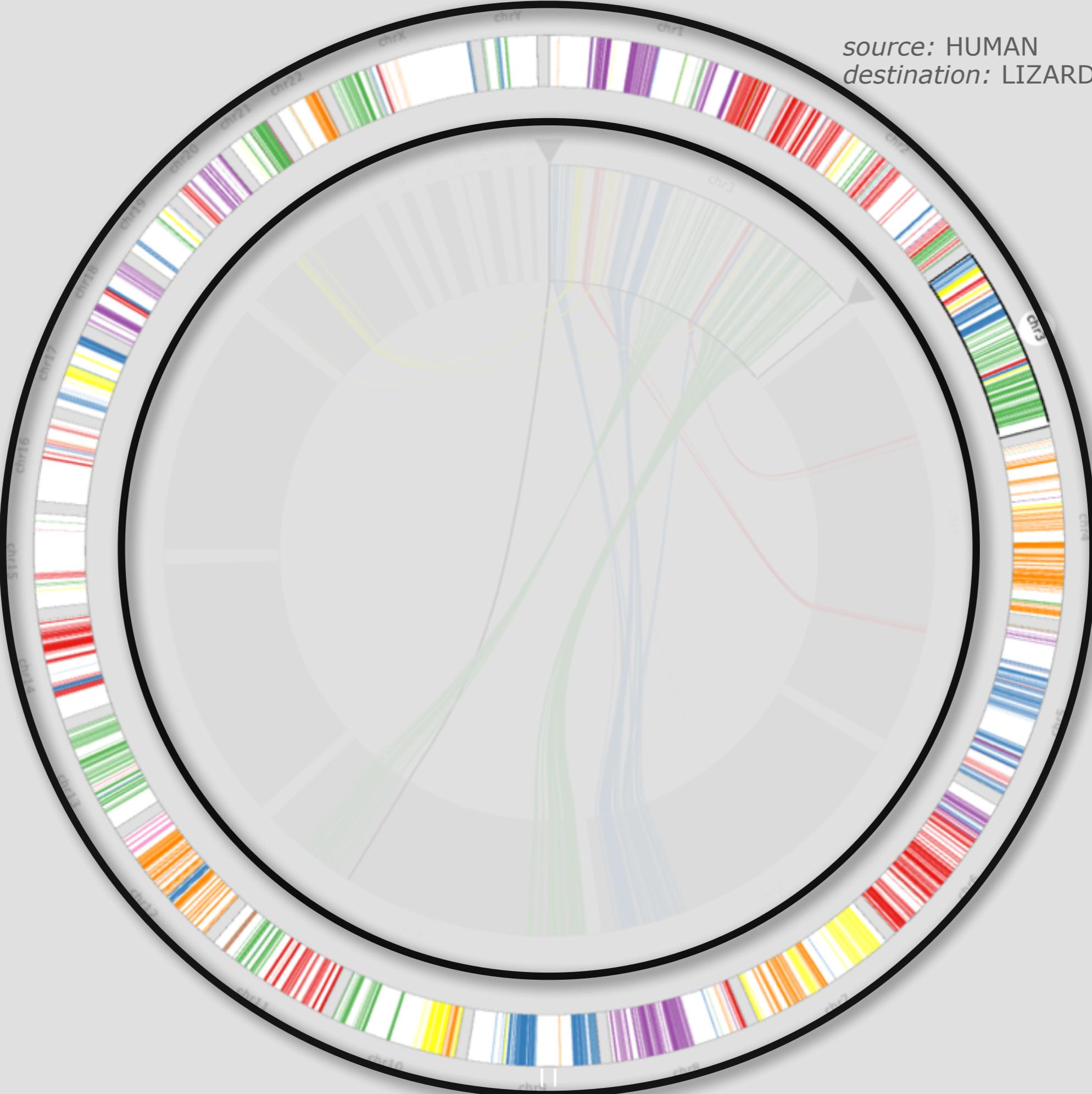




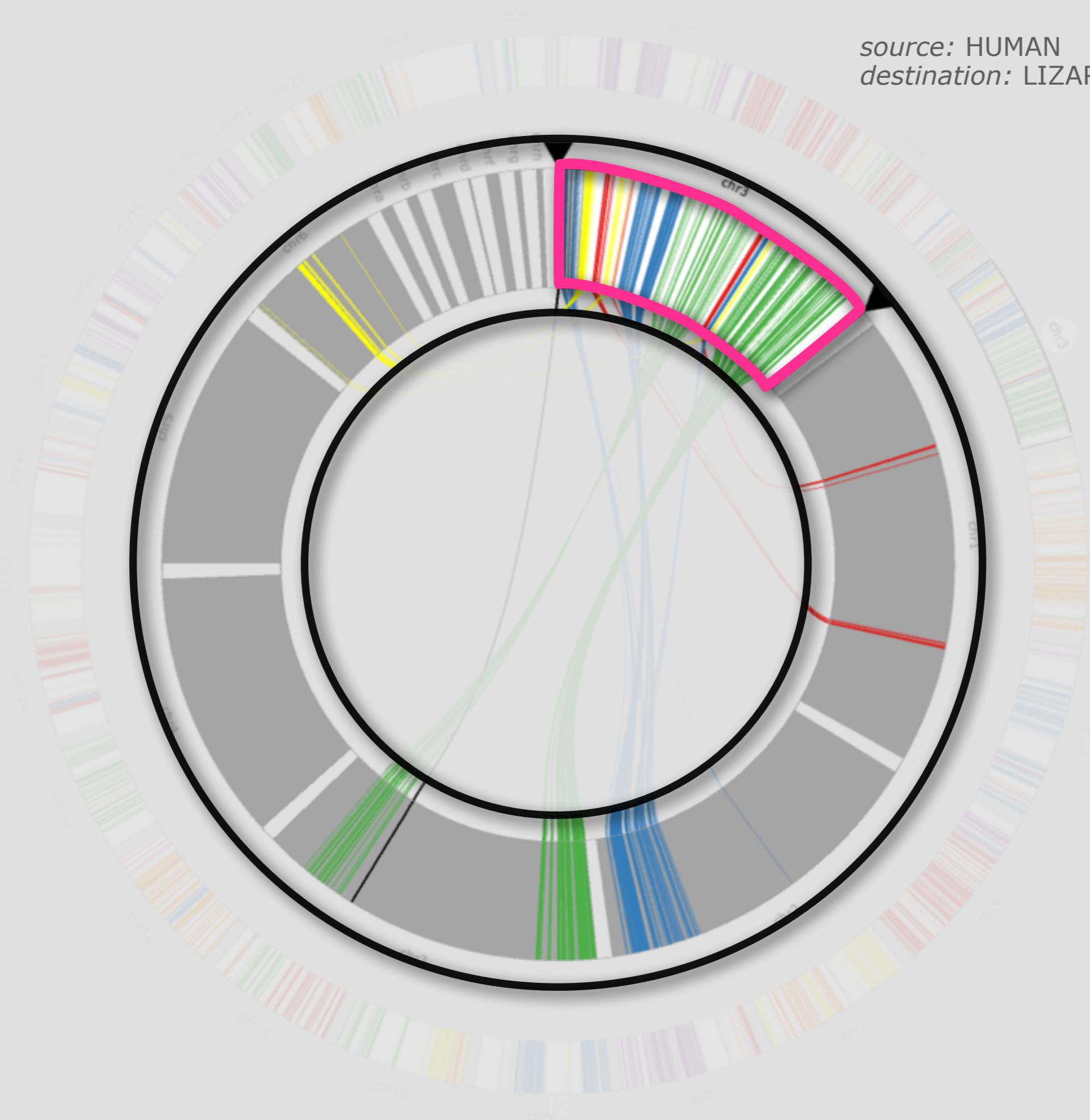
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destination: LIZARD



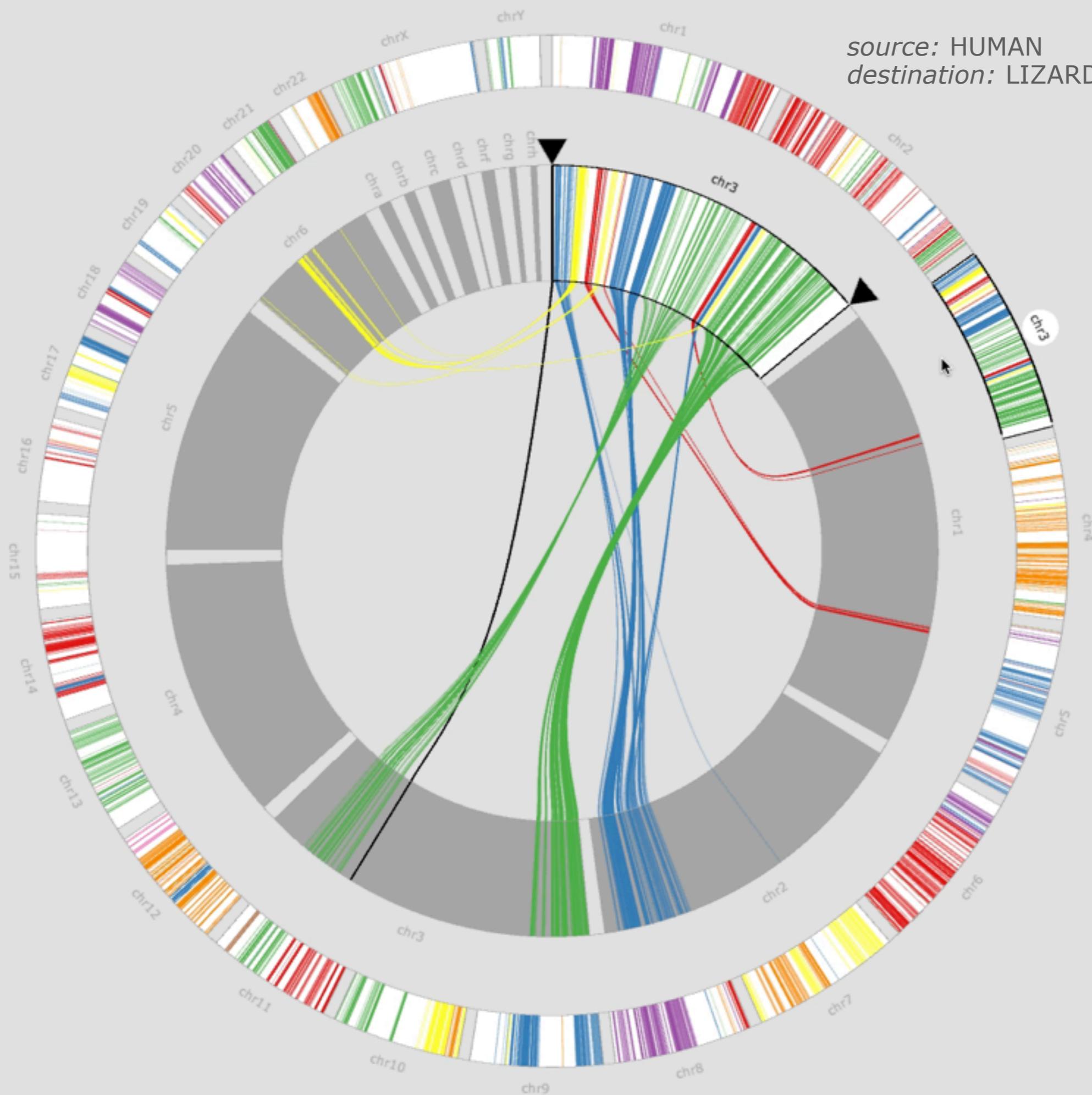
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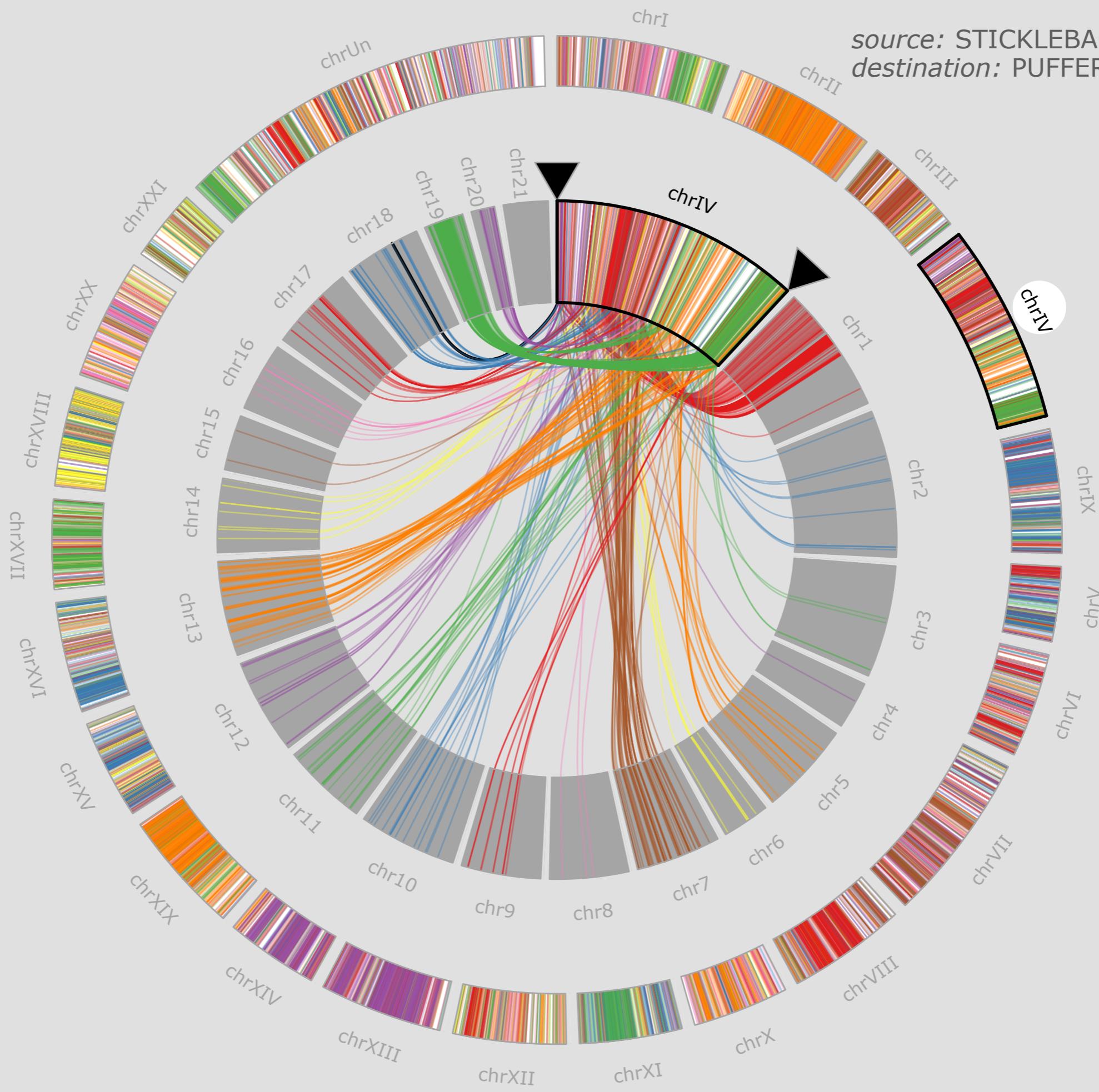
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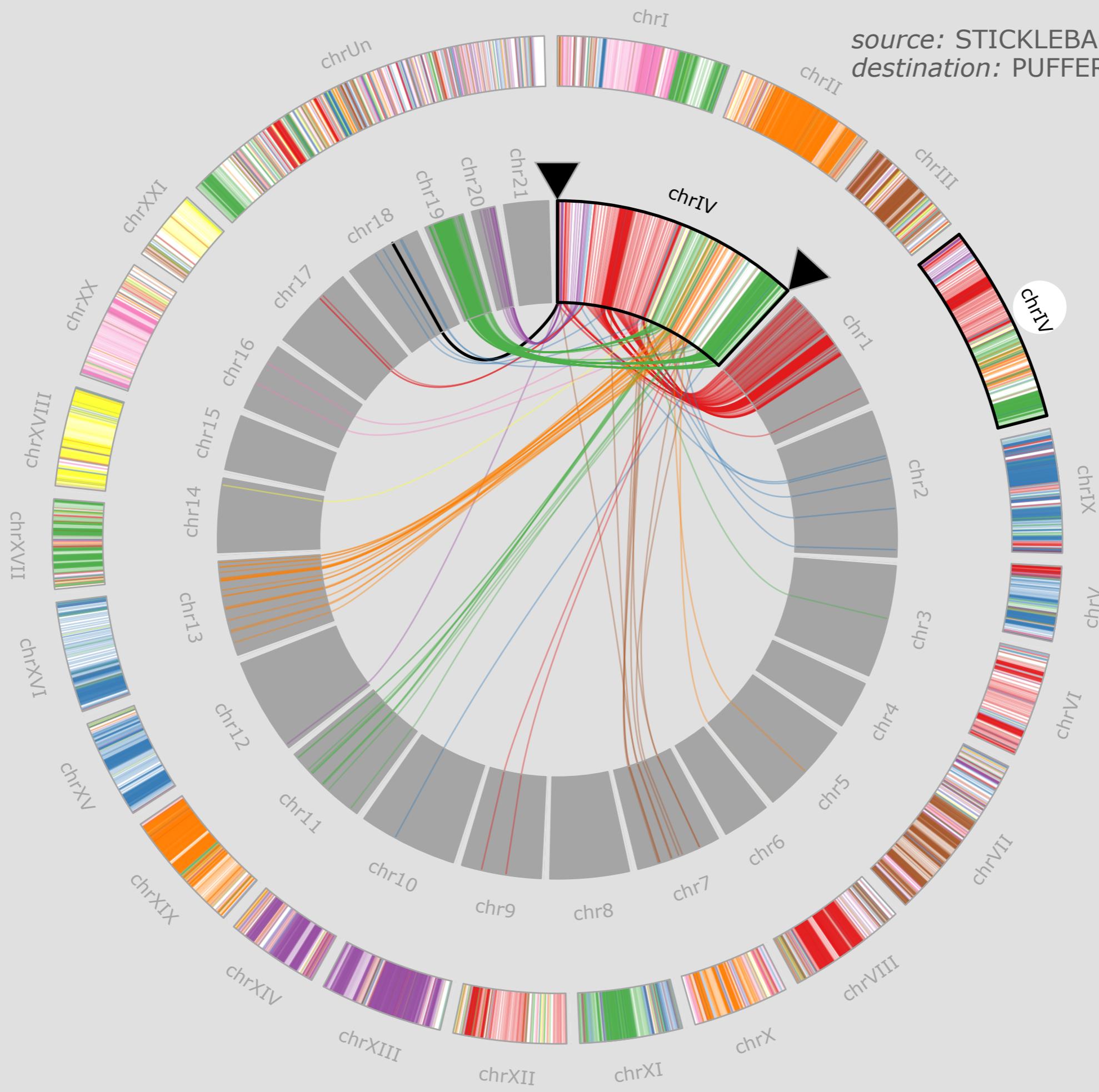
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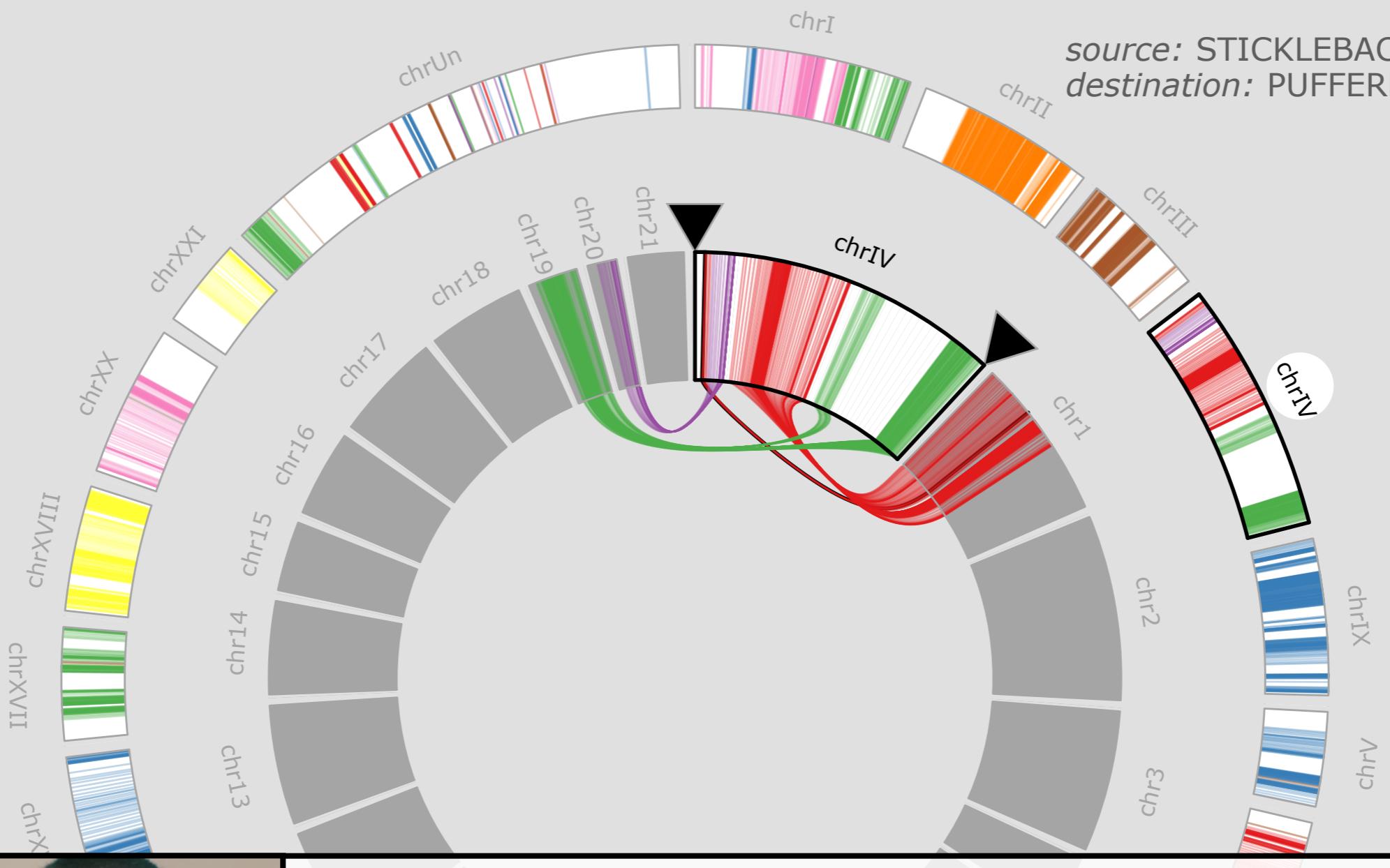
source: STICKLEBACK
destination: PUFFERFISH



source: STICKLEBACK
destination: PUFFERFISH



source: STICKLEBACK
destination: PUFFERFISH



“Honestly . . . I don't think I would ever have gotten here.”



visualization

uses perception to point out interesting things.

MTHIVLWYADCEQGHKILKMTWYN
ARDCAIREQGHLVKMFPSTWYARN
GFPSVCEILQGKMFPSNDRCEQDIFP
SGHLMFHKMVPSTWYACEQTWRN

MTHIVLWYADCEQGHKILKMTWYN
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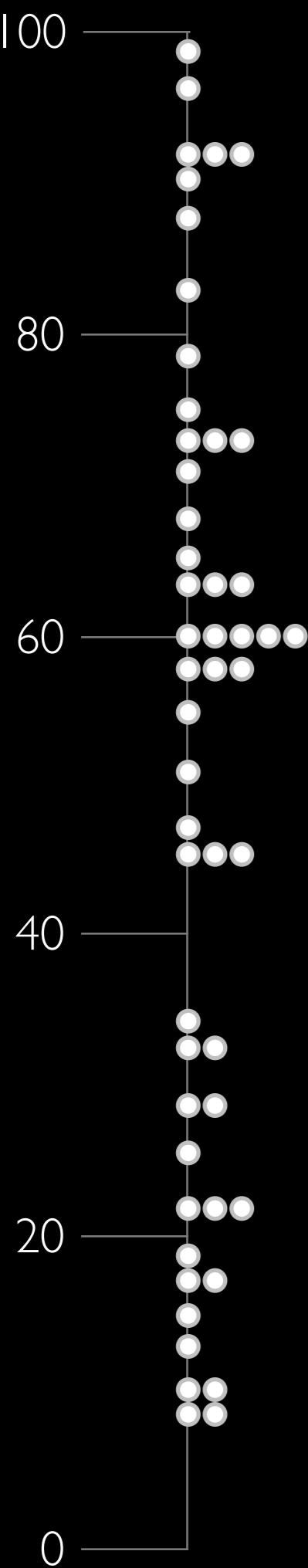
visualization

uses pictures to enhance working memory.

| | | |
|----|----|----|
| 15 | 19 | 60 |
| 33 | 11 | 75 |
| 57 | 34 | 79 |
| 18 | 51 | 92 |
| 73 | 22 | 13 |
| 71 | 60 | 22 |
| 17 | 10 | 68 |
| 73 | 18 | 55 |
| 65 | 46 | 29 |
| 60 | 73 | 22 |
| 46 | 92 | 97 |
| 10 | 58 | 46 |
| 57 | 17 | 83 |
| 26 | 99 | 33 |
| 88 | 92 | 60 |
| 91 | 29 | 57 |
| 96 | 12 | 47 |

given these 50 numbers . . .

. . . what number appears most often?



given these 50 numbers . . .

. . . what number appears most often?

less accurate

more accurate

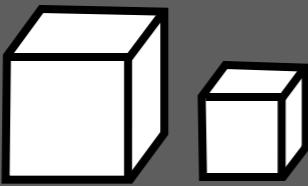
color



density



volume



area



angle



slope



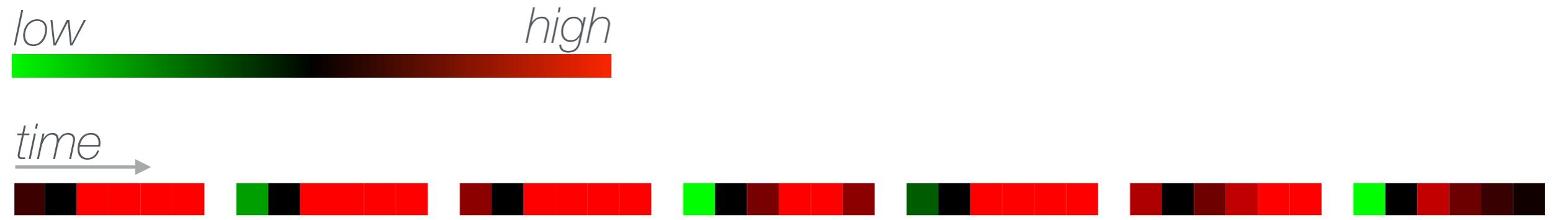
length



position







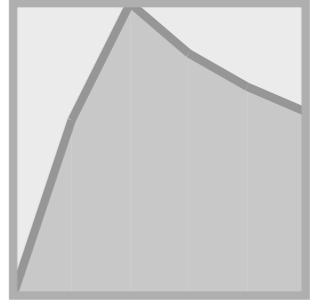
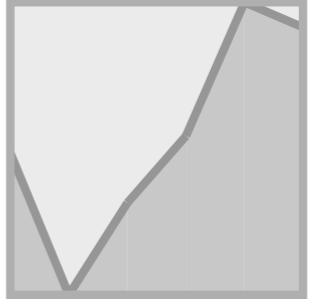
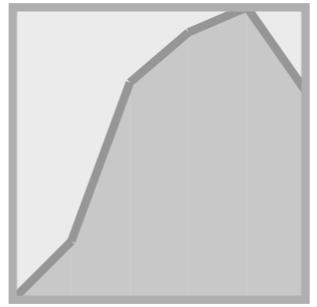
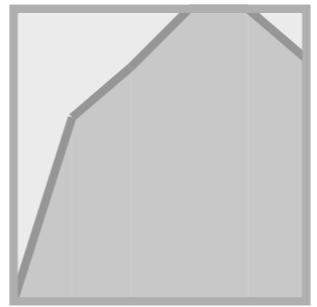
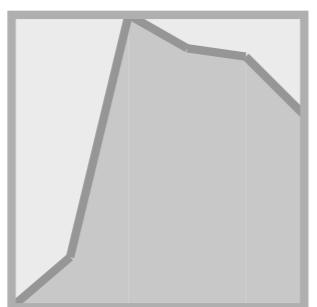
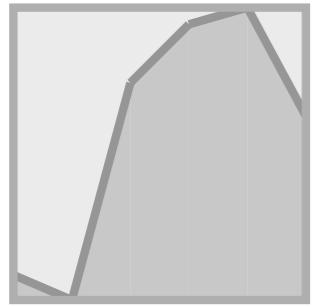
low

high

time



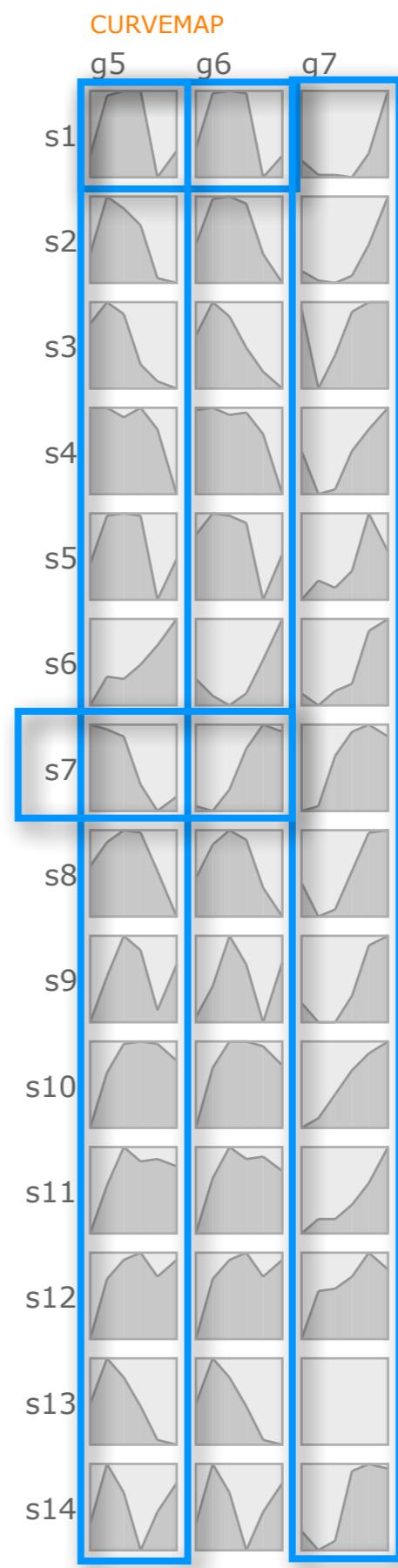
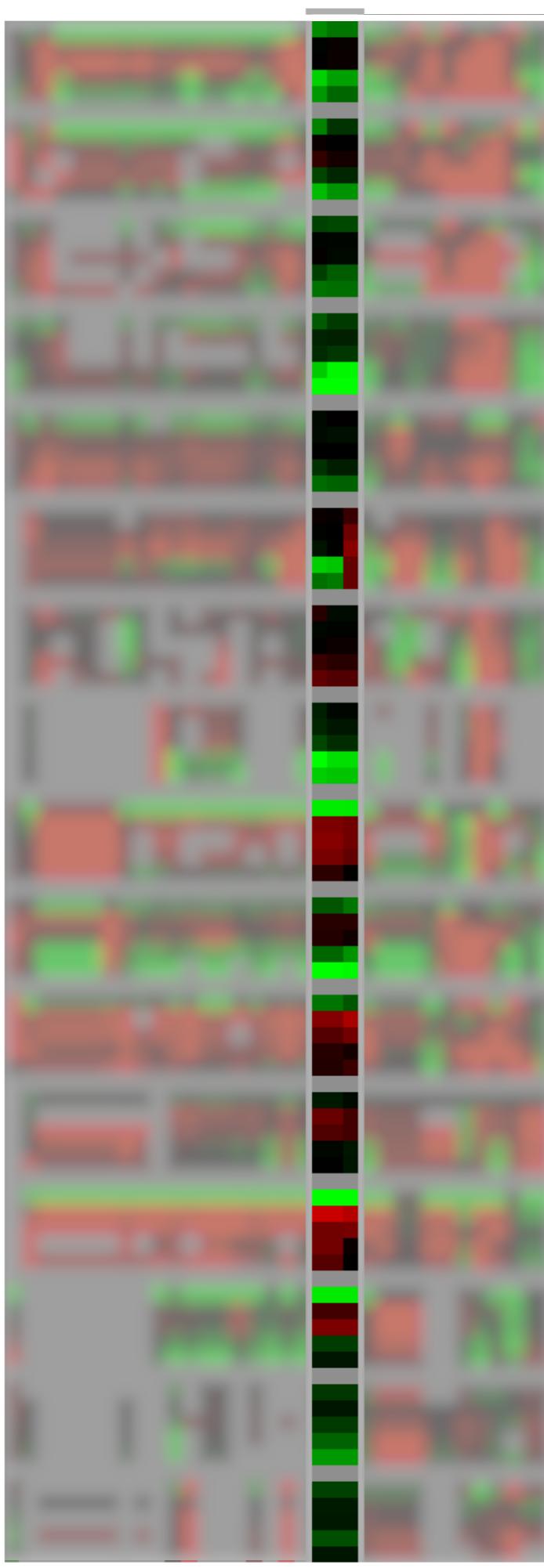
↑
value





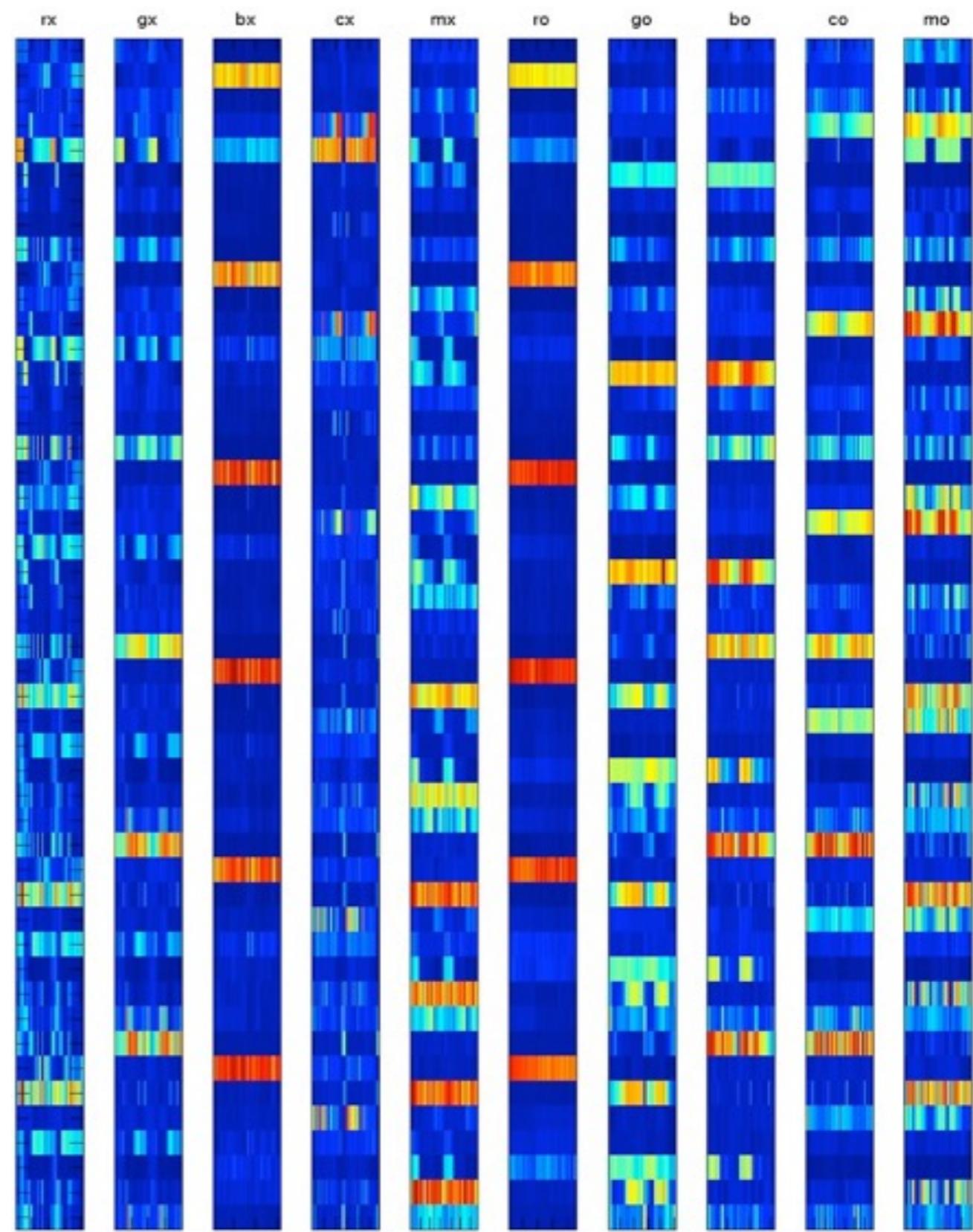
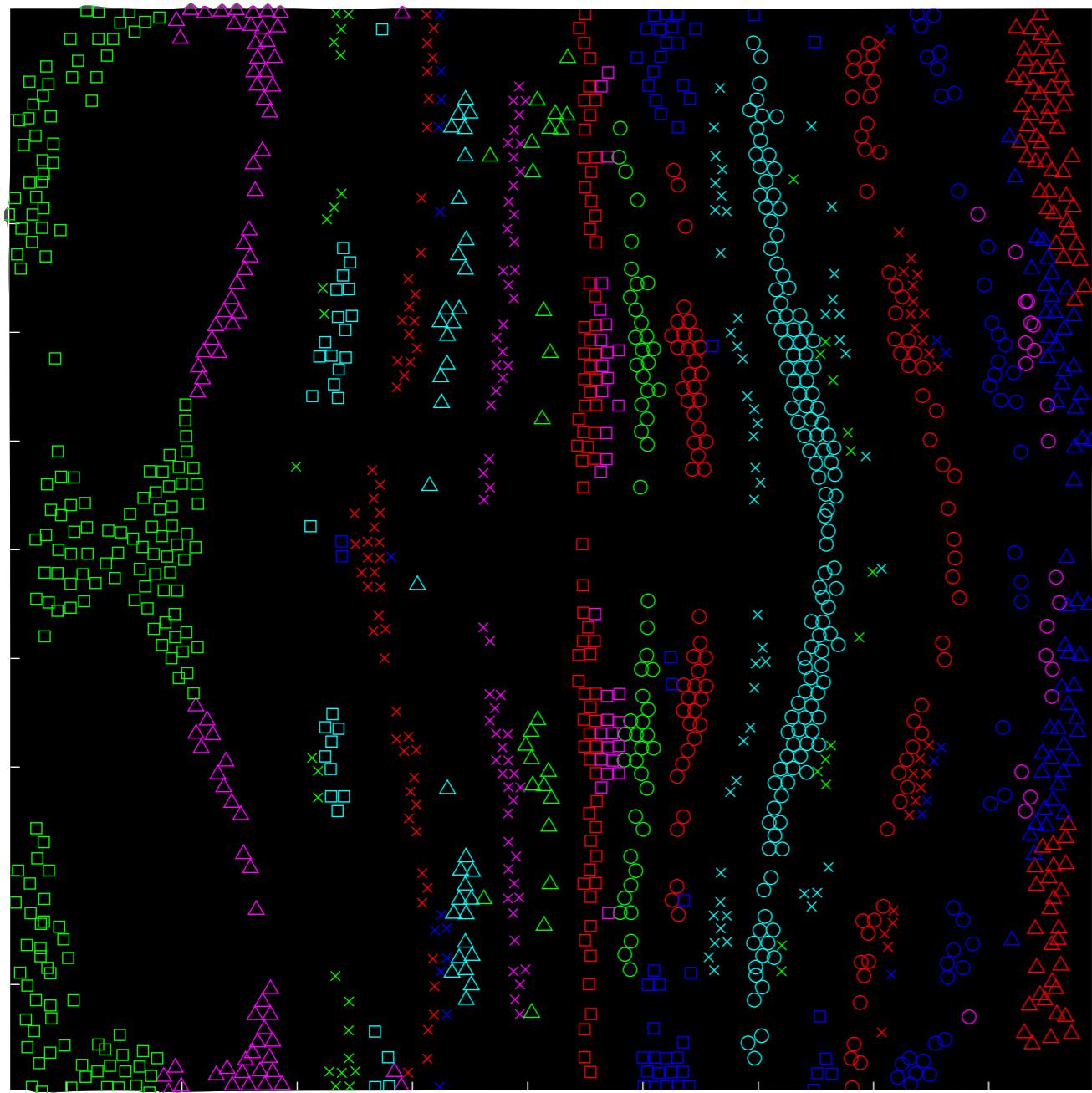
AVIV REGEV

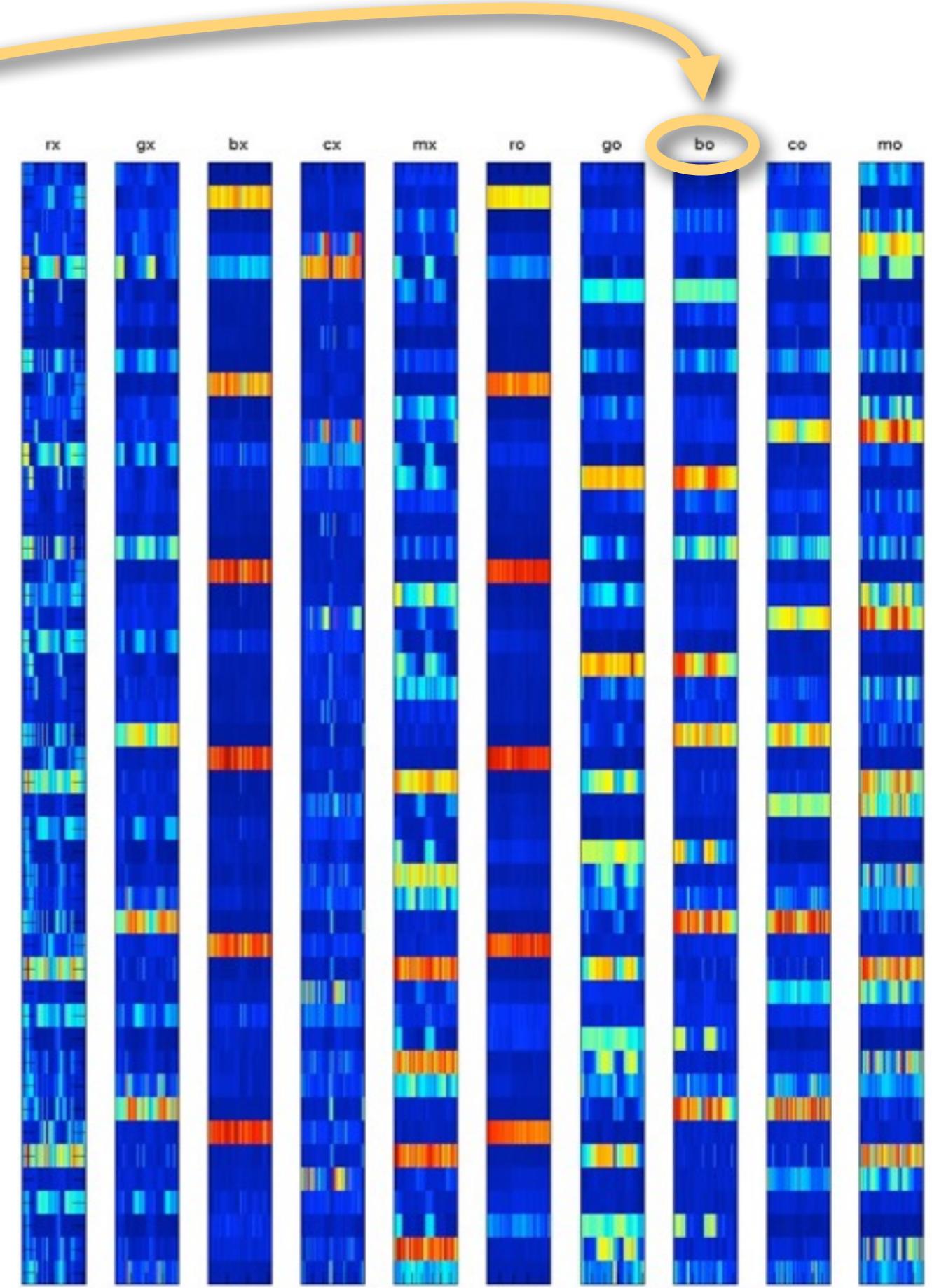
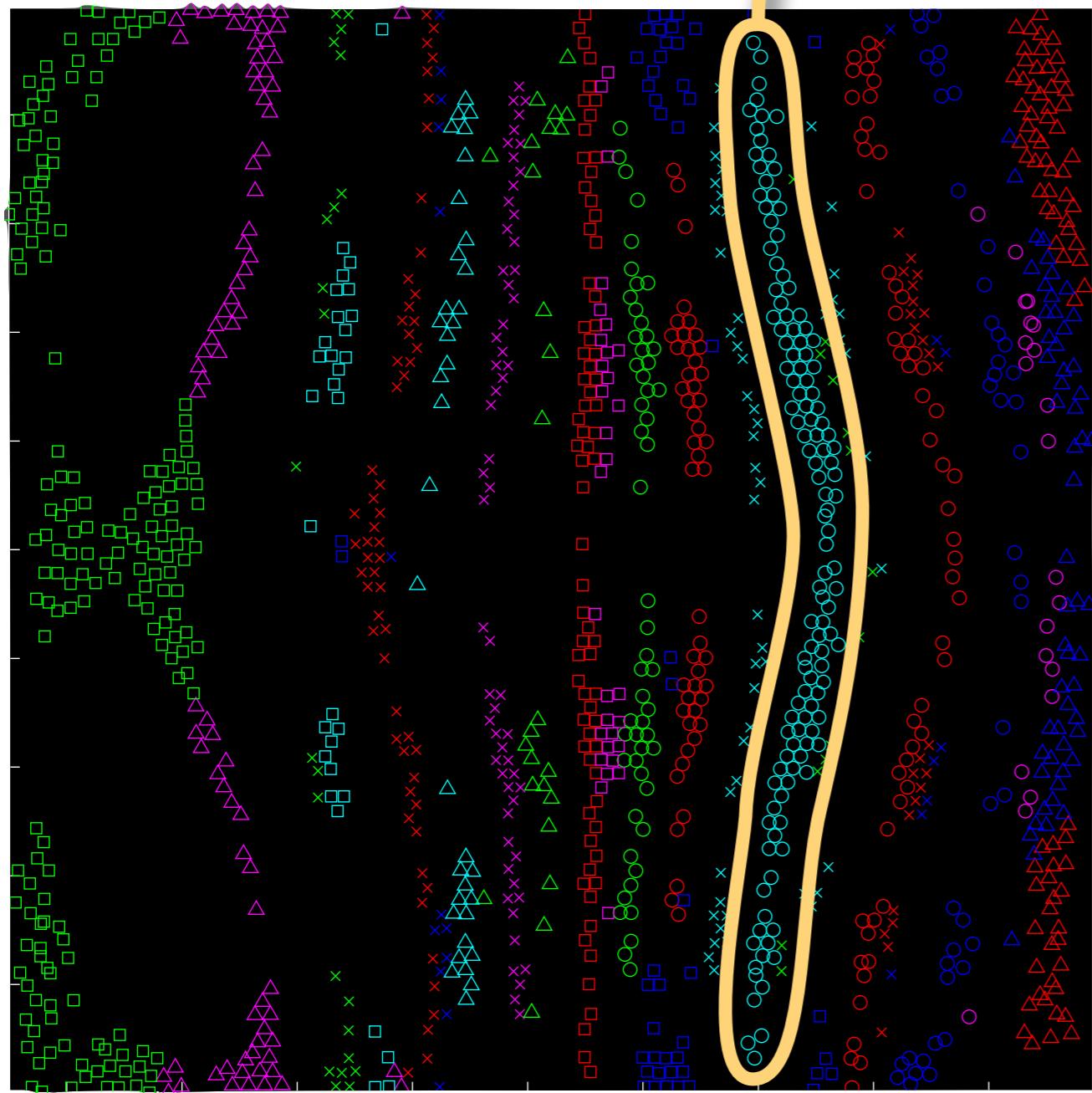




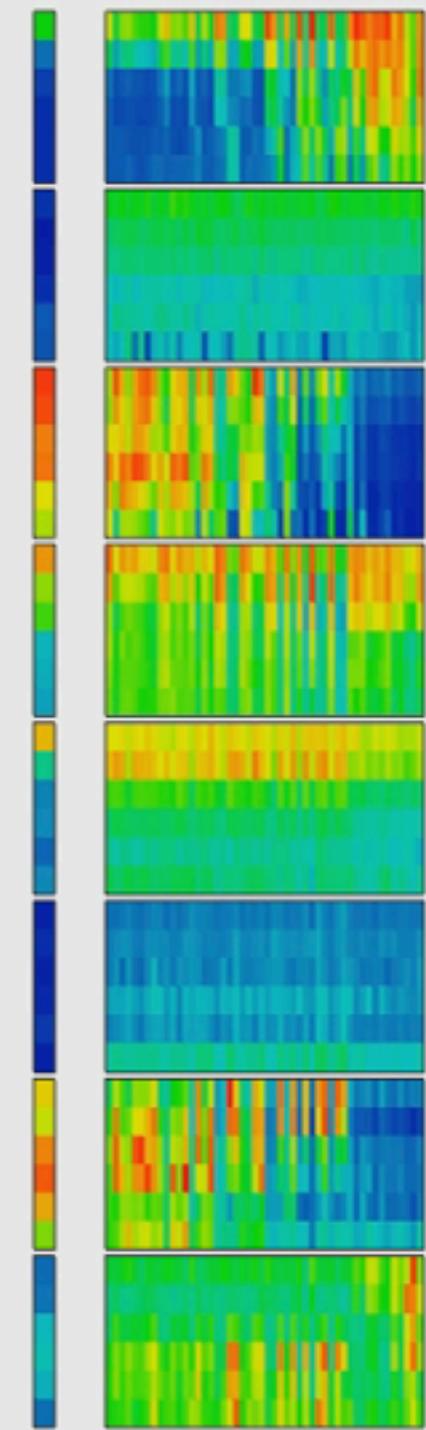
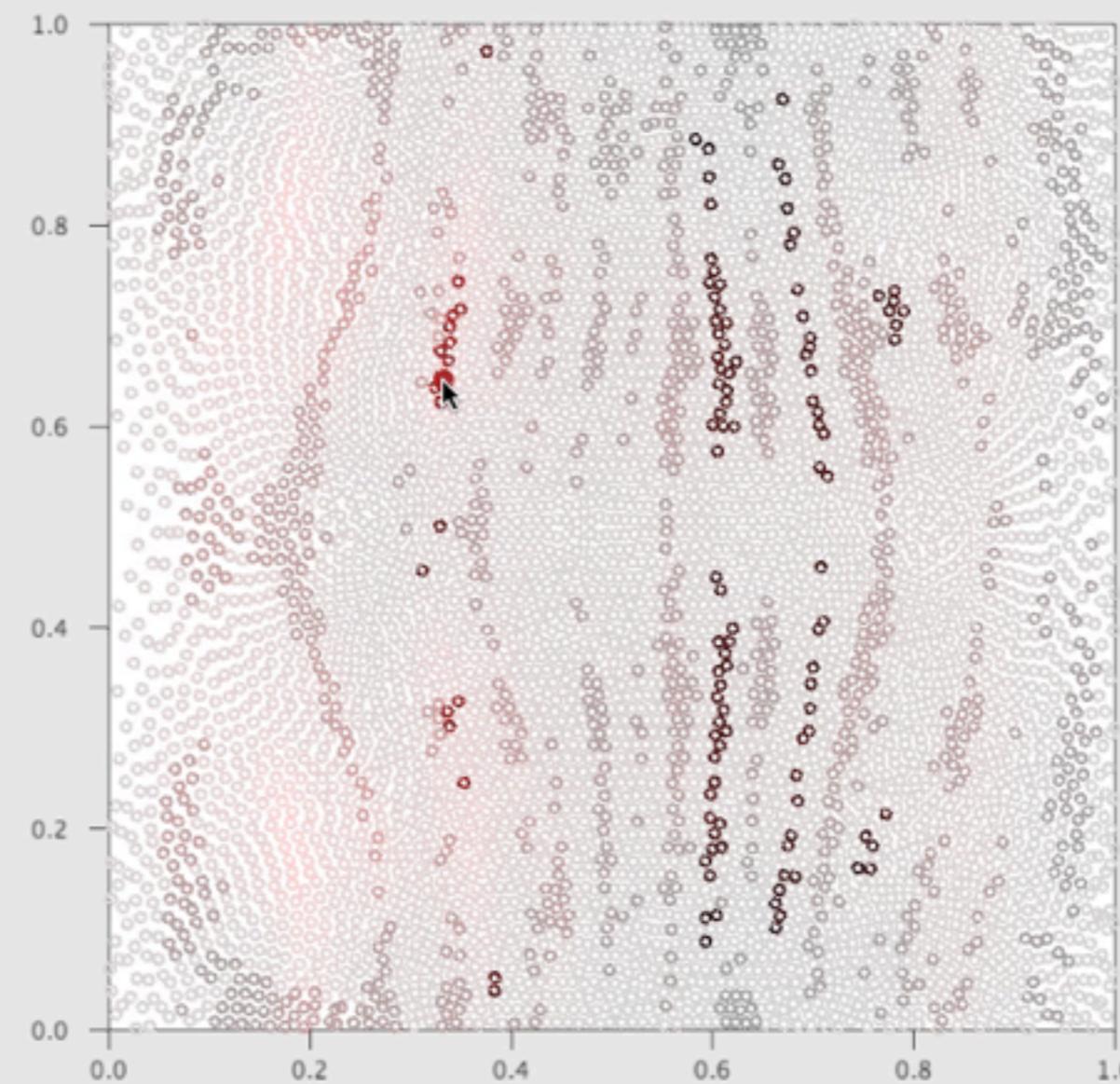
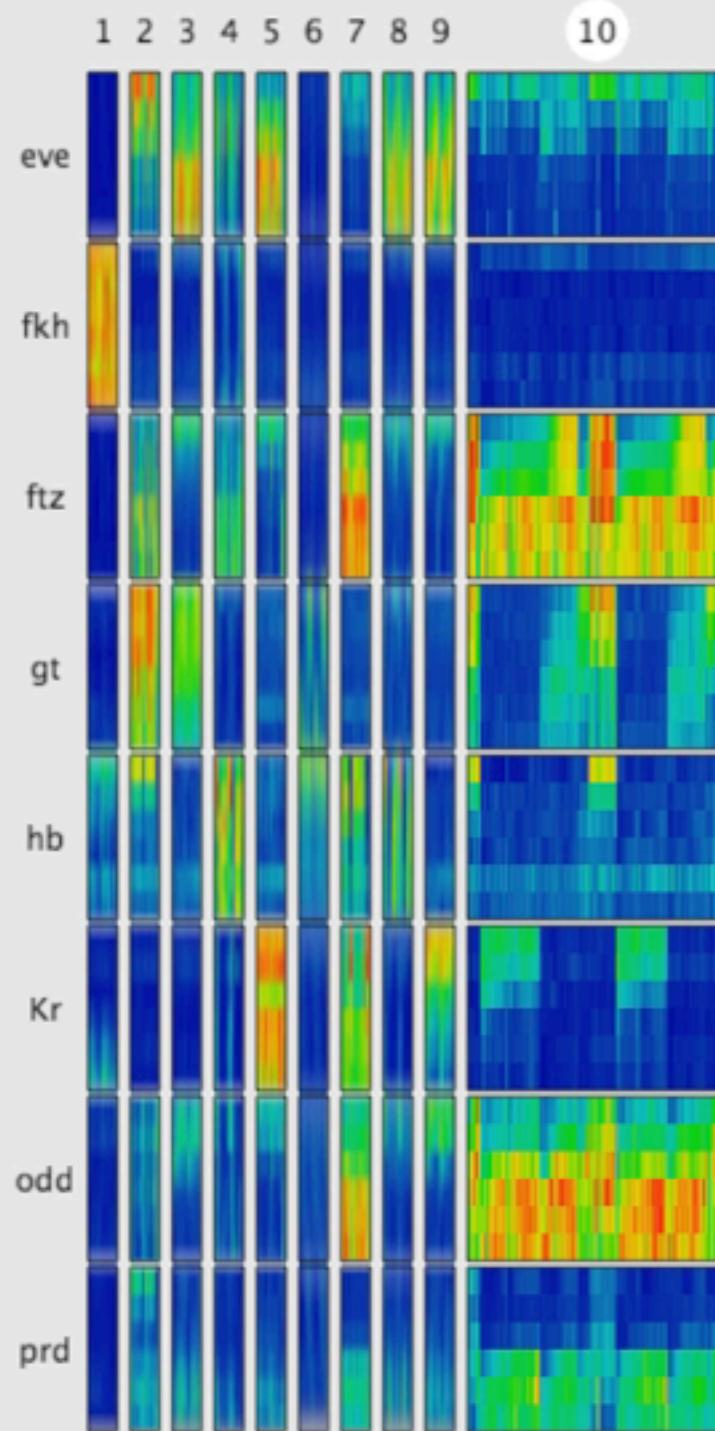
ANGELA DEPACE

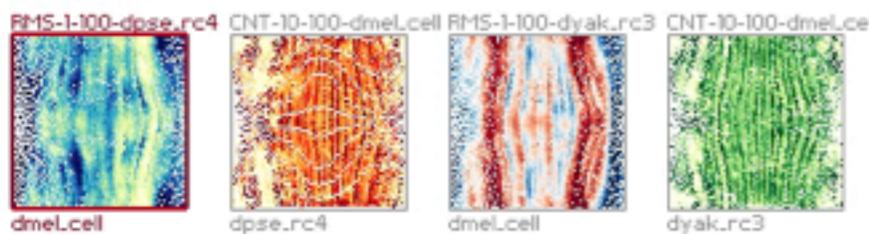
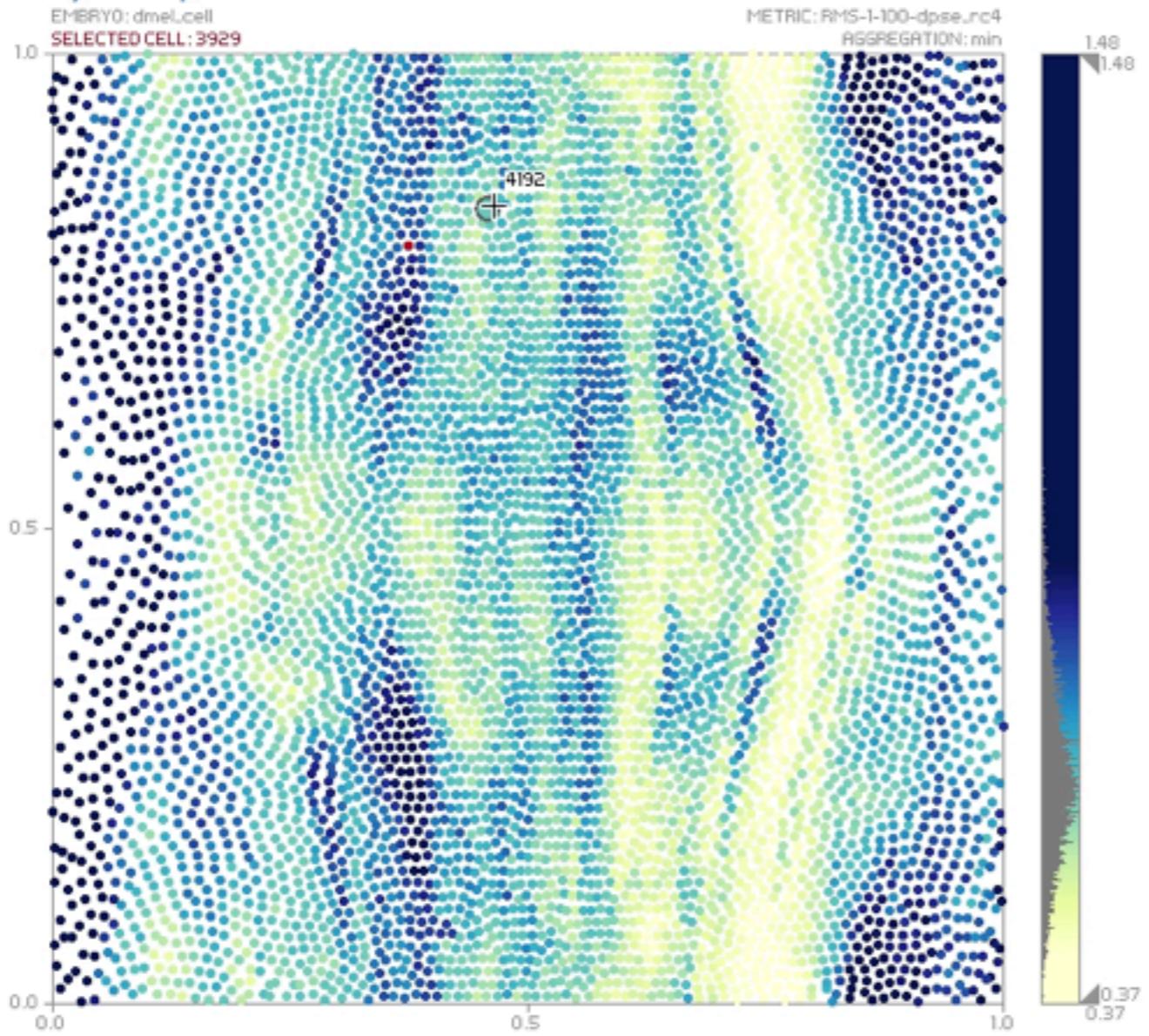






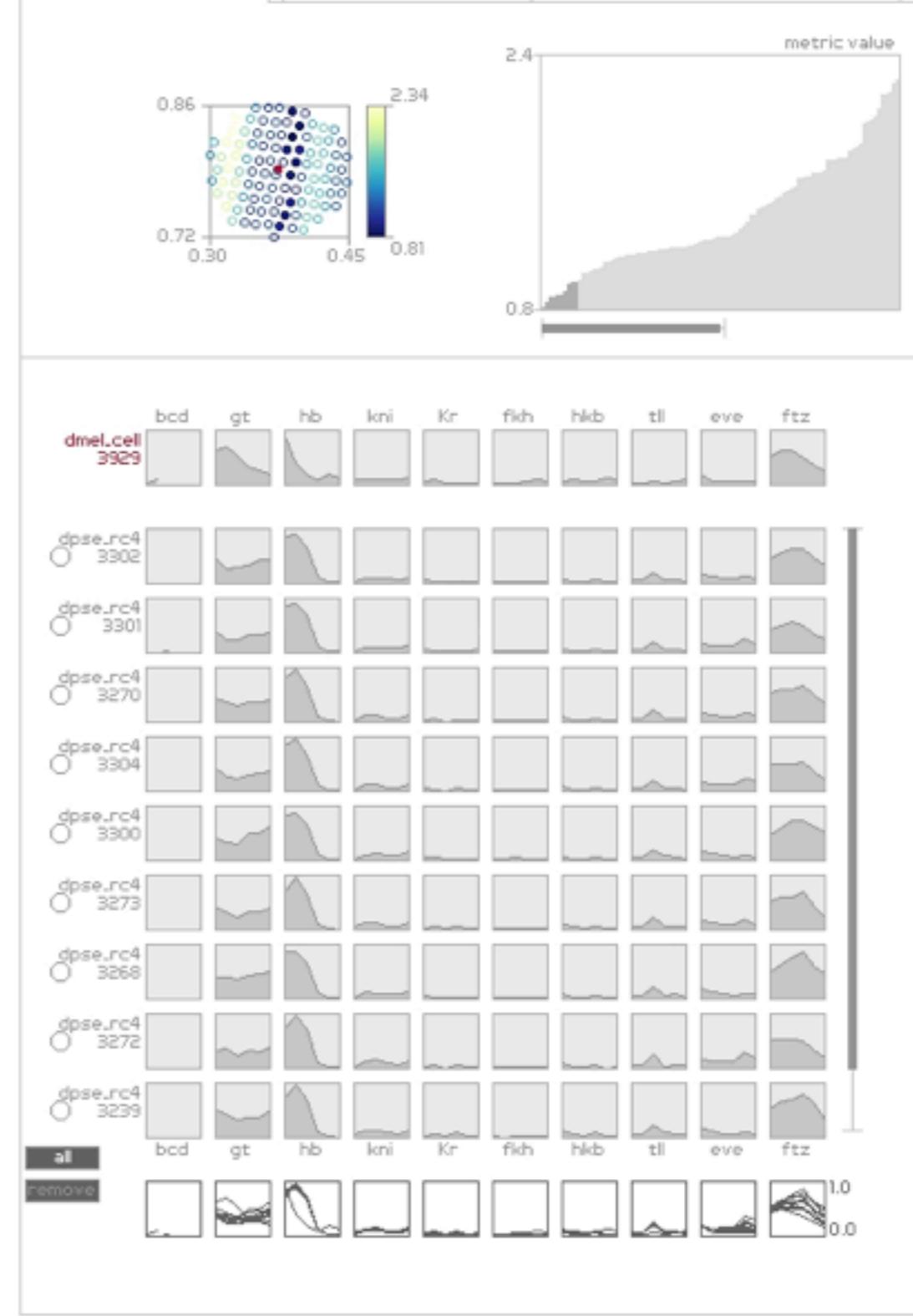
ExpressionExplorer



Summaries**Embryo Map****Colormaps▲**

AGGREGATION GROUP

CREATED GROUP

Curvemap

Visualization Design Lab

@ the University of Utah



Miriah Meyer



Alex Bigelow



Safia Hassan



Ethan Kerzner

Julian
lab manager



Nina McCurdy



Sean McKenna



Sam Quinan



Zella Urquhart



Kris Zygmunt



Dasha Pruss



technique-driven

what **can** we build?

what **should** we build?

problem-driven

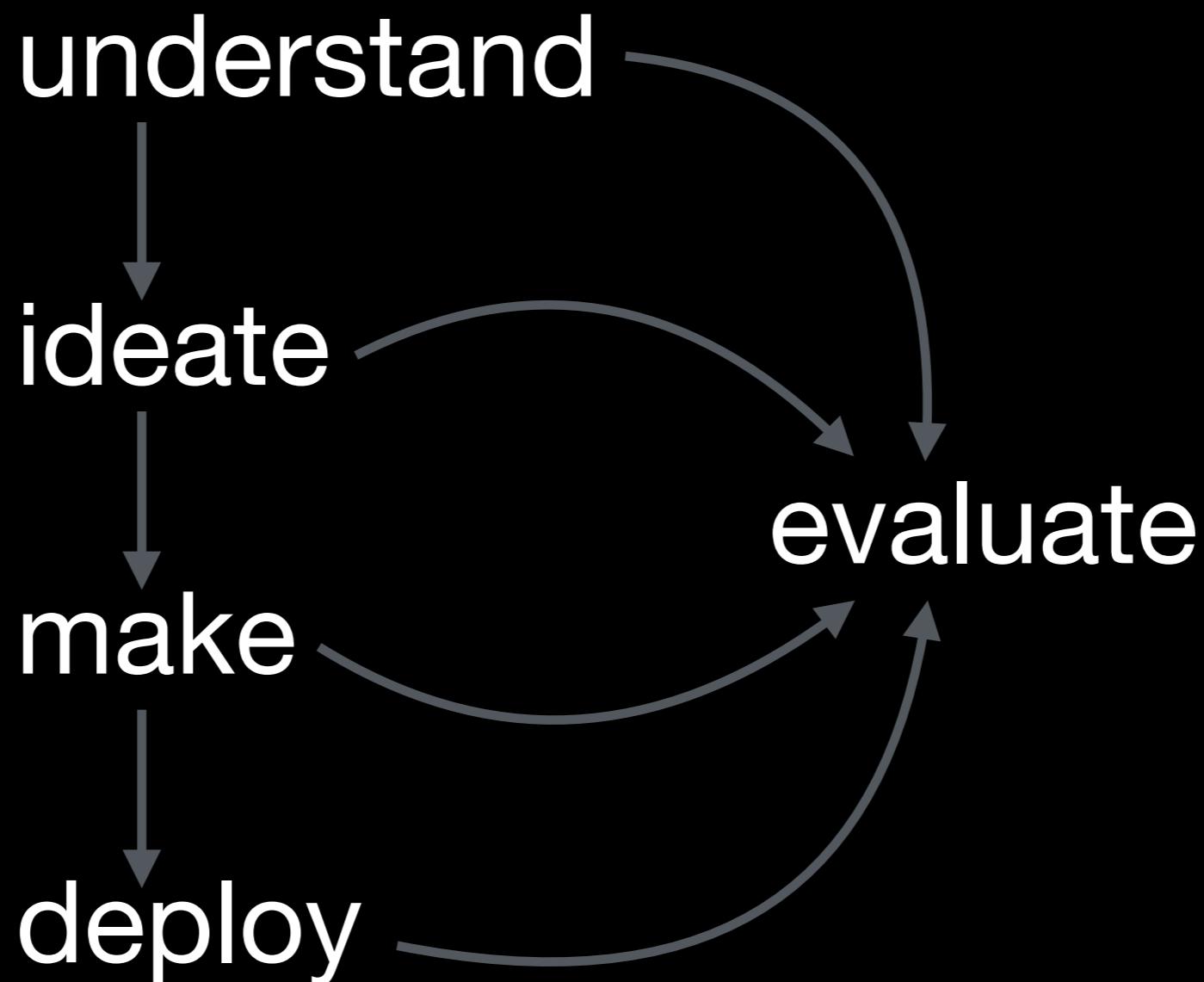


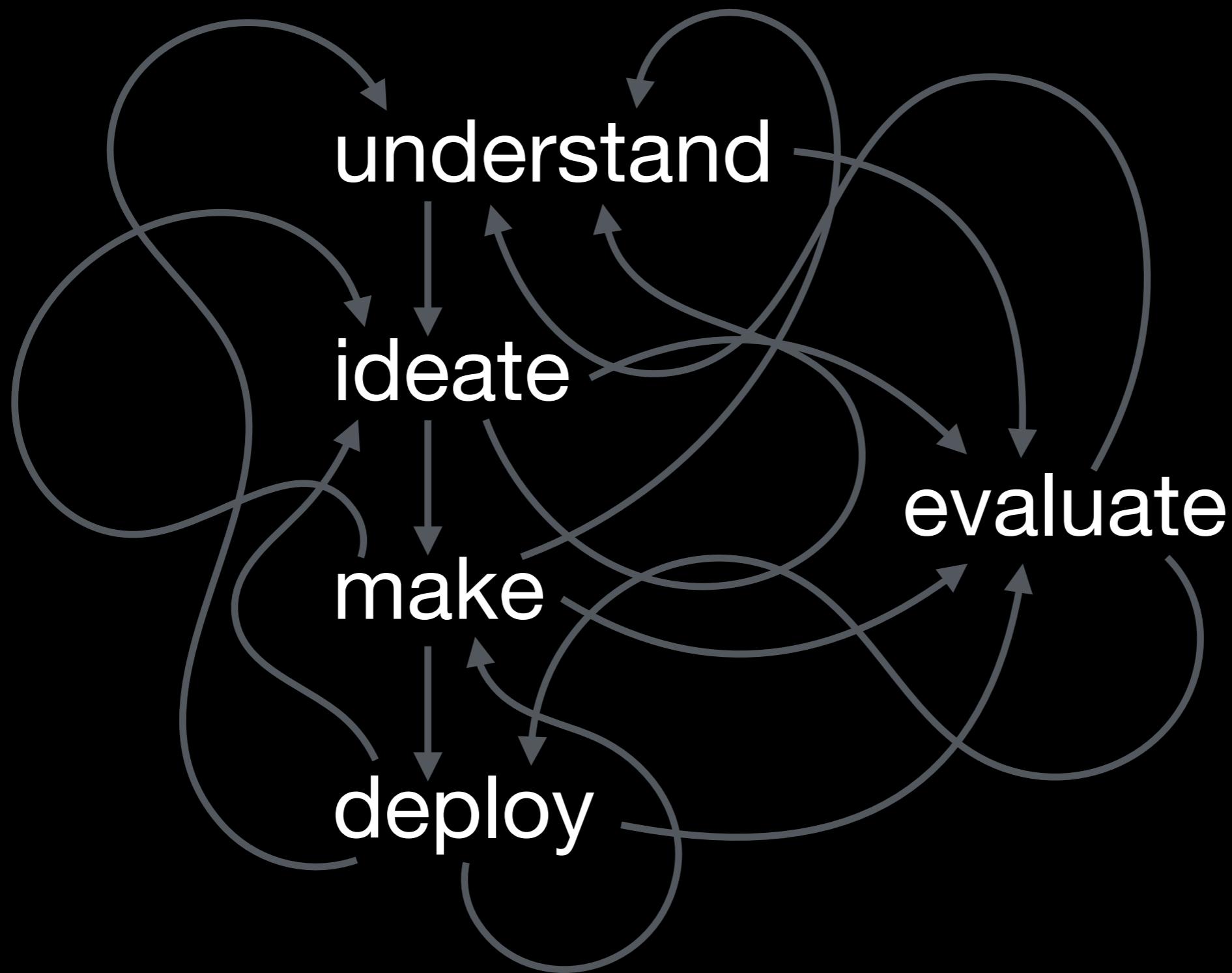
target specific problems

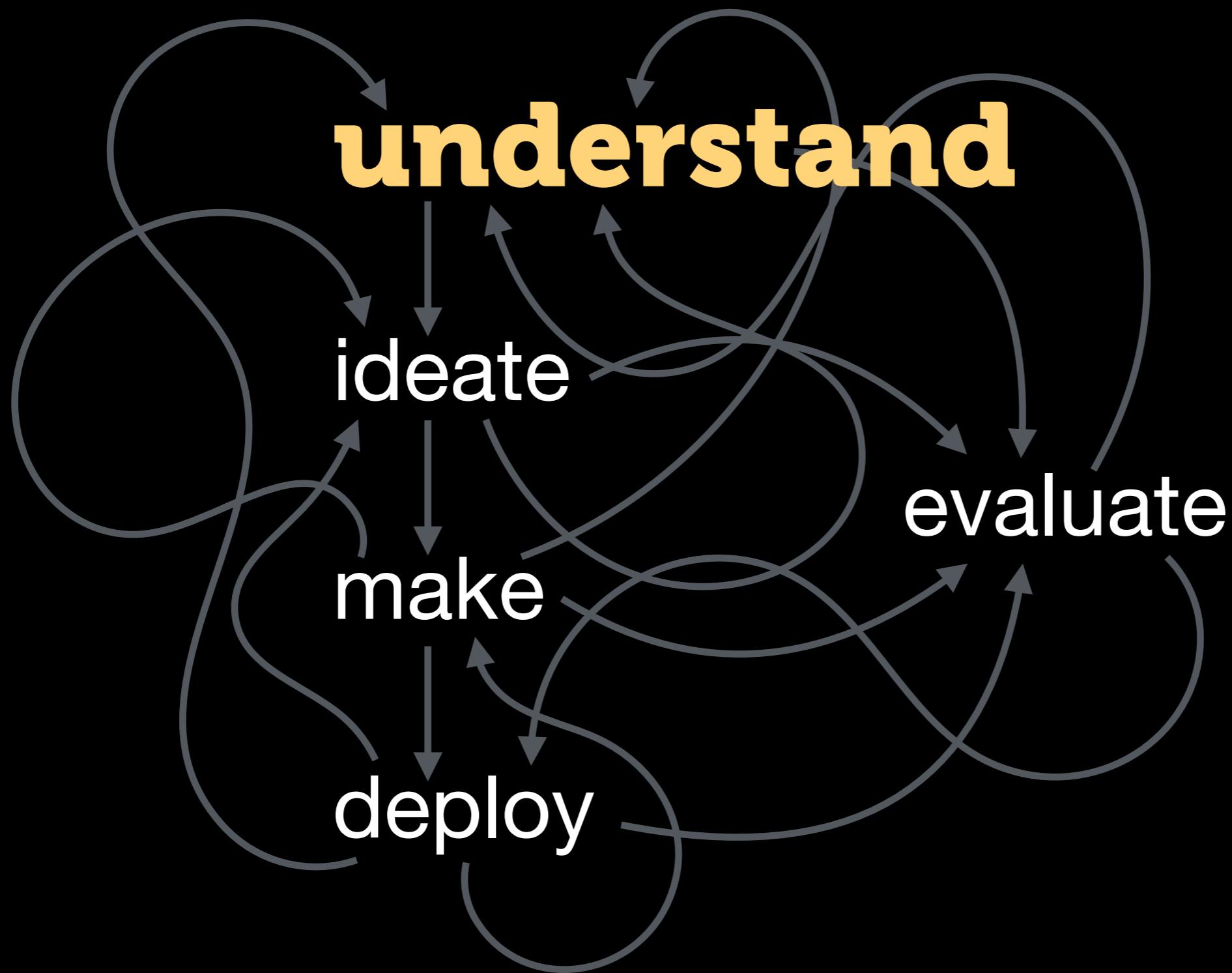
close collaboration with experts

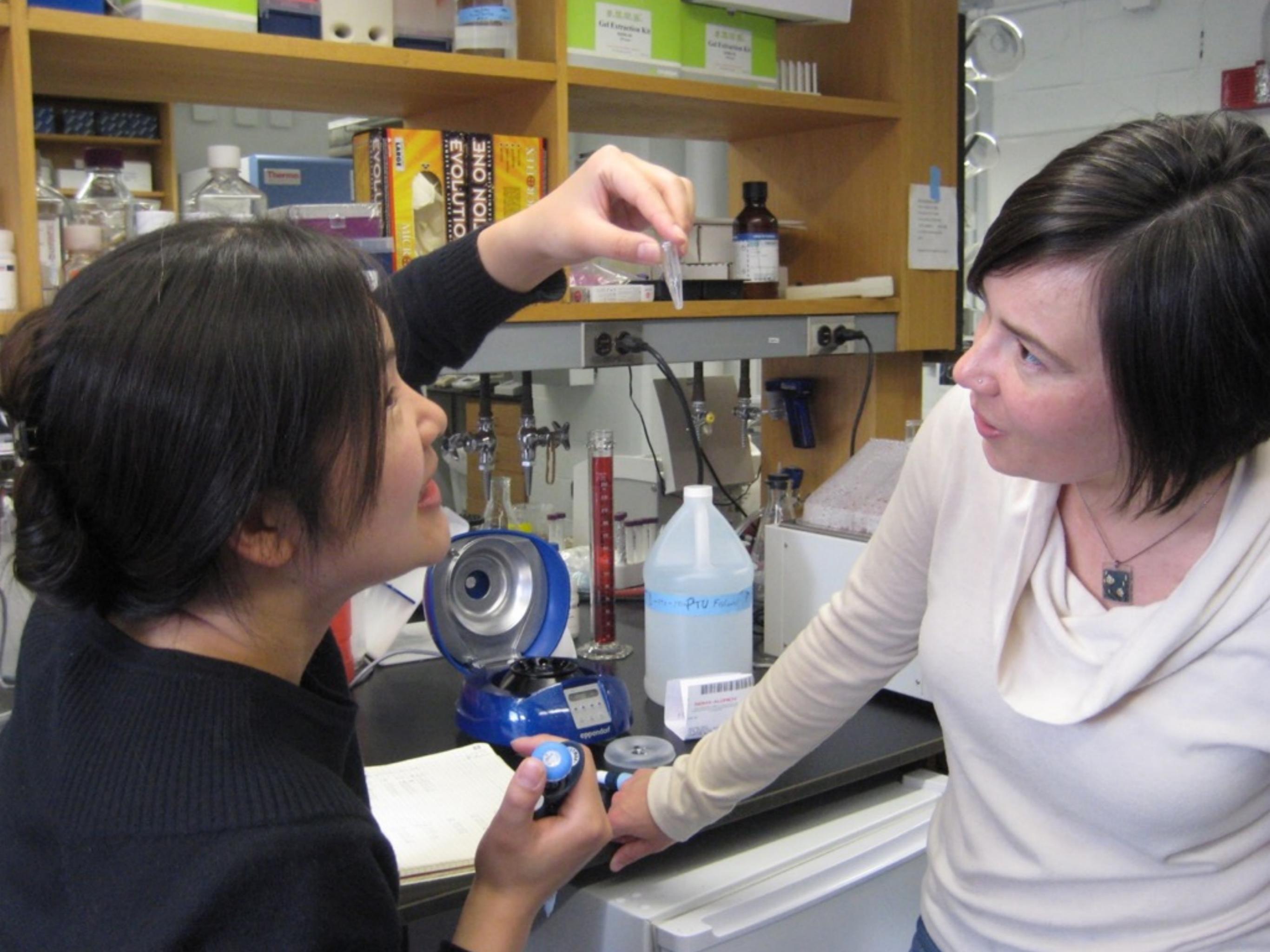
rapid, iterative prototyping

refine visualizations through feedback









open challenges

interviewing & observation

rapid prototyping with data

evaluation

beyond pretty pictures . . .
... deep investigation into sense-making

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