

Careers in Life Sciences Workshop: Colorado State University

Stu Field (SomaLogic, Inc. | Boulder, CO)

Monday June 18, 2018



Who am I?



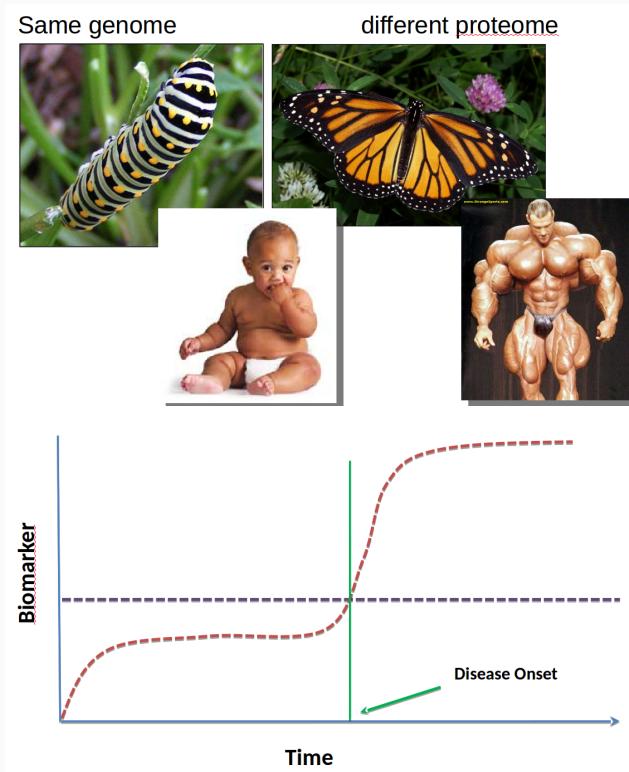
Stu Field, Ph.D.

- Head R code developer
- Bioinformatics Scientist II
- Statistical tools
- Bioinformatics Dept.
- SomaLogic, Inc.



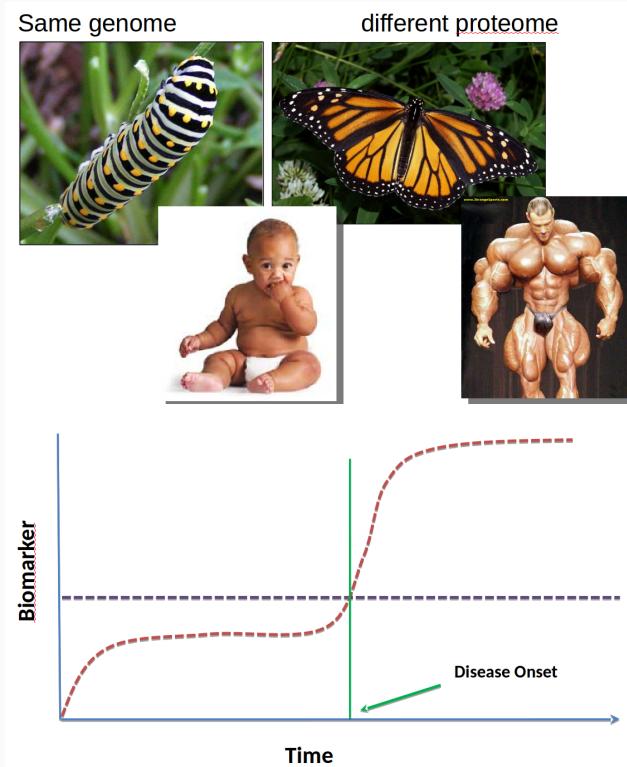
What is SomaLogic?

- Proteomics company; Boulder, CO.
- Founded in 2000 by Larry Gold (Pioneer in aptamer research)
- Why Proteomics?

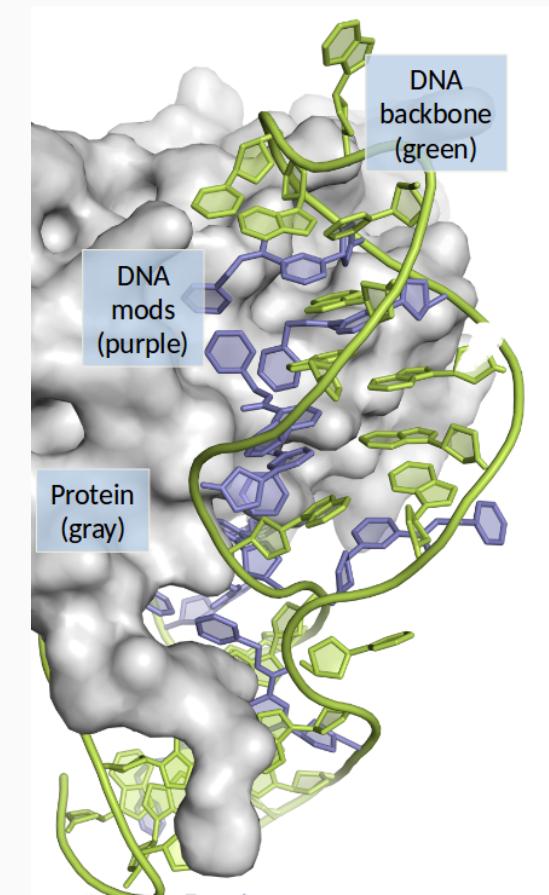


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Magical reagents called SOMAmers



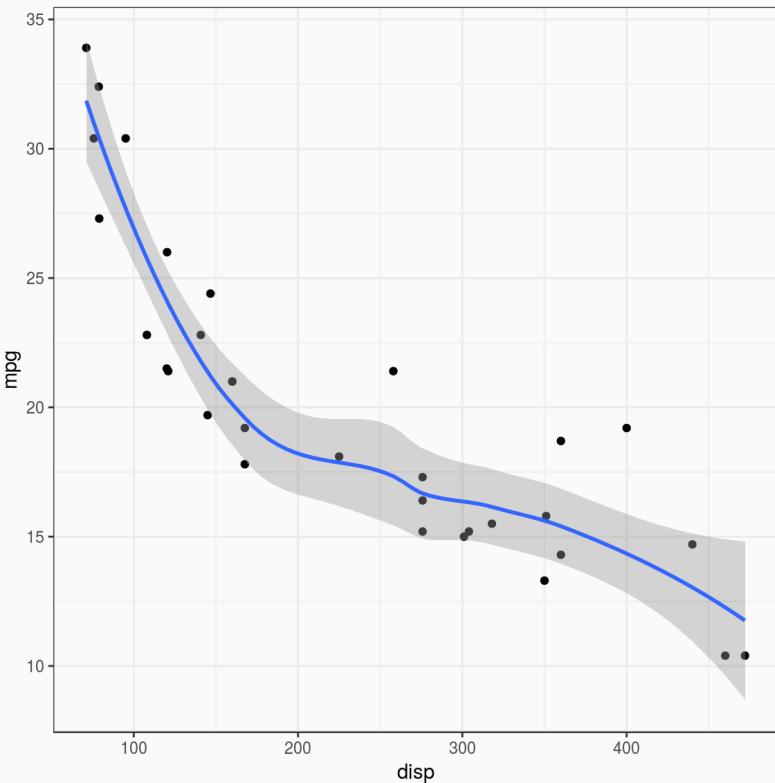
What do I do?

What do I do?



- Primarily looking for patterns in data:
 - reproducible
 - prediction
- Pattern recognition tool box:
 - Statistical Learning
 - Machine Learning
 - Deep Learning (?); AI (?)
- Statistical Computing Tools:
 - R
 - Python
 - Git, GitHub (<https://github.com/stufield>)
 - Linux OS; BASH

```
ggplot(mtcars, aes(x = disp, y = mpg)) +  
  geom_point() +  
  geom_smooth(method = "loess")
```



How did I get here?

Took the long way



- University of Guelph, Ontario, Canada
 - Bachelor Environmental Sciences (B.Sc. env)
 - Erie similarities with CSU



Auf nach Deutschland mit Dir!



University of Münster, Germany



Auf nach Deutschland mit Dir!



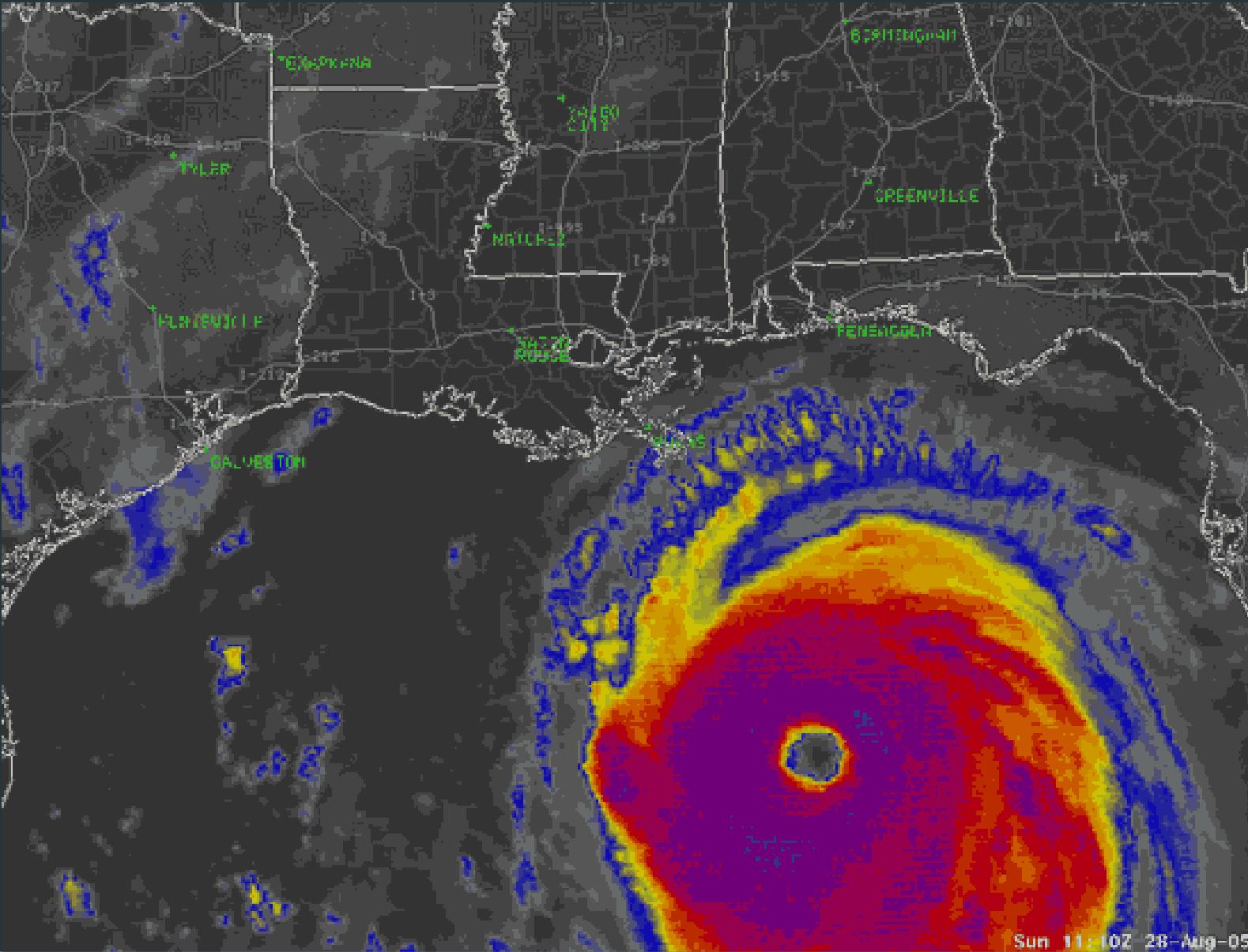
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- Ph.D. Disease Ecology & Host-Parasite Interaction
 - Earthworms "makin' love"



Short Stop Back in NoLa



Rocky Mountain High!

- Colorado State University
 - Post-doc (Dr. Mike Antolin, Dr. Simon Tavener)
 - Modeling of disease

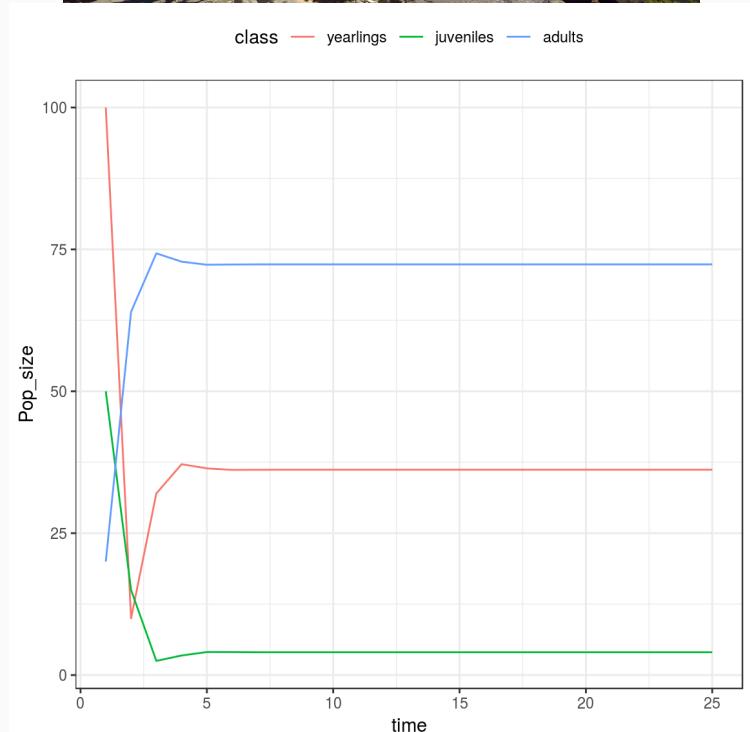
$$\vec{x}_1 = \vec{x}_0 * A \quad A = \begin{pmatrix} 0 & 0.1 & 0 \\ 0 & 0.1 & 0.9 \\ 0.5 & 0 & 0.95 \end{pmatrix}$$

```
x <- c(100, 50, 20)
A <- matrix(c(0, 0, 0.5, 0.1, 0.1, 0, 0, 0.9, 0.95), ncol = 3)
A
```

```
[,1] [,2] [,3]
[1,] 0.0 0.1 0.00
[2,] 0.0 0.1 0.90
[3,] 0.5 0.0 0.95
```

```
c(x %*% A)
```

```
[1] 10 15 64
```



Careers are like a box of chocolates ...

- Difficult to predict where you'll end up
- Be flexible
- Be curious
- Be open to alternatives
- Be ready when opportunity knocks ...



Donkey in a hammock = I'm done!

