

# Diversifying our portfolio

The impact of plant biology on  
human health

- Genome comparison
  - Arabidopsis 2000 vs human 2003
  - Cancer genes
  
  - Survived intact?
  - Functions in a similar way?

# Light signaling & cancer

- DET, COP, and FUS
- COP9 signalosome
  
- P53
- CREB, c-JUN

# Cryptochromes, the circadian clock

- CRY1, CRY2
- Free-running photoperiod
- Per

# Argonautes and RNA silencing

- Argo sailors
- Guide to its target mRNA
  
- Homology-dependent gene silencing
  - Cosuppression
  - RNA-directed DNA methylation
- siRNA
- Dicer

- Implications for Ago proteins and RNA silencing

# Natural Genetic Variation

- Heritable differences -> disease susceptibility?
- Extremely well-suited for studying genotype-environment interaction
- A larger genomic polymorphism database