Scientific Computing and Bioinformatics Resources at Noble Foundation

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The Samuel Roberts Noble Foundation Ardmore, Oklahoma, USA

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Scientific Computing Department

- Officially founded in 2009, as a result of a multi-million \$ Scientific Computing Initiative (SCI)
- Aims to secure Noble's leading position in plant science in the "post-genome" era
 - Computer systems: essential to tackle data explosion in modern science
- The go-to place for scientific computing and bioinformatics support at Noble Foundation

Tiered Operation

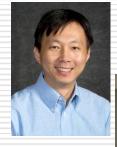
Infrastructure Management



Applied Research

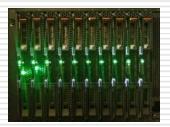


End-user Support





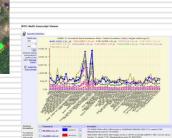


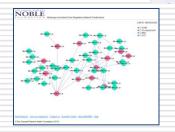


















R&D Focus

- □ Goal: Improve the accessibility of computing resources to average scientists to enhance the effectiveness and efficiency of their scientific research
- □ Approach: Development of integrative software interfaces for:
 - Effective scientific data management
 - Productive scientific data analyses
- In other words: provide reusable, informatics building blocks for scientific studies

Joint Proposal on Tackling Drought Problems to Increase Agriculture Sustainability

Functional Genomics

Genotyping and Phenotyping

Bioinformatics
Platform: Data
Management,
Analyses, Integration
and Dissemination

Germplasm & Genetic Diversity

Collaboration,
Outreach &
Education

Summary of Resources Available

- High performance computing resources tailored to life science applications
- Expertise in, and systems for bioinformatics data analyses
- Expertise in scientific software development
- Expertise in scientific data management
- Active in education and outreach activities

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