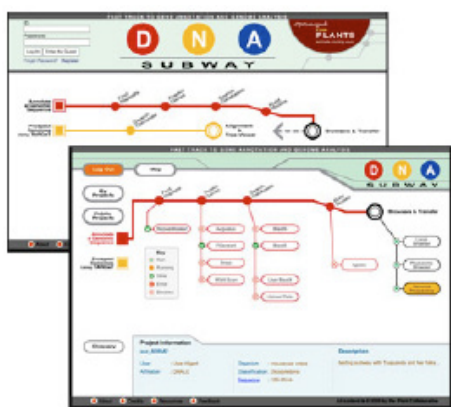


Education, Outreach, and Training (EOT) in iPlant



iPlant's EOT effort is centered around the cyberinfrastructure it is building to support the Grand Challenge projects. The guiding principles for EOT are to develop computational tools to help teaching faculty integrate research projects into courses and to focus on a few projects with potential for broad impact nationwide. Our first national project is the DNA Subway (described below), which is a bioinformatics workspace that makes high-level genome analysis accessible to undergraduate students and educators.

The iPlant EOT Team invites iPlant 2010 conference participants to discuss ideas for a second national project during the informal session Monday evening between 8-10 P.M. in 319 Premier. Look for the EOT table! Contact Martha Narro: narro@email.arizona.edu.



DNA Subway captures the essence of iPlant's goal: to develop computer (cyber) infrastructure that provides plant researchers and educators access to the large-scale datasets and high-powered informatics tools that drive modern biology.

Developed by iPlant staff at Cold Spring Harbor Laboratory's Dolan DNA Learning Center (DNALC), DNA Subway presents complex bioinformatics and visualization tools – predominantly open-source software – in an intuitive and appealing interface. “Riding” different lines, users can predict and annotate genes in up to 100,000 base pairs of DNA (Red Line), and prospect entire plant genomes for specific genes (Yellow Line). Additional lines are being developed to analyze next-generation sequencing data, and to construct and work with phylogenetic trees. “Ride” DNA Subway (<http://dnasubway.iplantcollaborative.org/>).

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Educator training workshops on DNA Subway at locations around the country are listed on the iPlant website (<http://www.iplantcollaborative.org/top-stories/2010/04/28/dna-subway-fast-track-gene-annotation-and-genome-analysis>).

Modeling Workshop for Biology Educators

Contemporary biology is increasingly driven by the computational approaches developed to model biological processes and analyze data. This workshop will be a week-long, hands-on, tutorial on teaching modeling and computational analysis in biology. Modeling and analysis concepts and tools will be introduced using examples from plant biology, biomedicine, biochemistry and systems biology. The workshop is designed for undergraduate faculty from biological sciences, math, and computer science who would like to add computational methods to their teaching, or biological applications to their mathematics or algorithms course. This workshop is a partnership between iPlant, Shodor, NCSI and North Carolina Agricultural and Technical State University. Details are on the iPlant website (<http://iplantcollaborative.org/2010/03/17/eot-computational-biology-biology-educators>).

