

# Biology Institute 2001: Genomics, Genetics and Genethics

## Schedule of Activities

### WEEK 1

- Sunday July 1:** *Morning:* Arrival and check in  
*Afternoon:* Campus tour and laptop assignment  
*Evening:* Barbecue and introduction by Dr. Rob DeSalle, Curator of the Molecular Systematics Laboratory, The American Museum of Natural History
- Monday July 2:** *Morning:* Lecture: Dr. Bruce Alberts, President, National Academy of Sciences  
*Afternoon:* Orientation sessions with different faculty  
*Evening:* Free
- Tuesday July 3:** *Morning – Afternoon:* Field trip: American Museum of Natural History  
*Evening:* Working Groups: Scope and Discussion
- Wednesday July 4:** Holiday: Free
- Thursday July 5:** *Morning:* Laboratory workshop: Molecular Lab 1 - “Introduction to Molecular Biology”  
*Afternoon:*
  - Reflection and synthesis of lab
  - Laboratory workshop and Power Point lab*Evening:*
  - Lab group presentations
  - NIH Image Workshop
- Friday July 6:** *Morning:* Laboratory workshop: Molecular Lab 2 – “DNA Extraction: Low Tech”  
*Afternoon:*
  - Reflection and synthesis of lab
  - Lab group presentations*Evening:*
  - Working groups assigned
  - Journal Club 1
- Saturday July 7:** *Morning:*
  - Lab workshop: Making a video protocol
  - Outreach seminar*Afternoon – Evening:* free
- Sunday July 8:** Free

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### WEEK 2

- Monday July 9:** *Morning:* Laboratory workshop: Molecular Lab 3 – “DNA Extraction: High Tech”  
*Afternoon:*
- Seminar: Classroom Assessment with Dr. Virginia Anderson, Towson State University
  - Reflection, synthesis and lab completion
- Evening:*
- Workshop: Introduction to Blackboard
  - Journal Club 2
- Tuesday July 10:** *Morning:*
- Laboratory workshop: Molecular Lab 4 – “Low Tech ‘Molec’”
  - Reflection and synthesis of lab
- Afternoon:*
- Lab group presentations
  - Curriculum development: “Doggy DNA Lab” with Kim Noethen, WWNFF Biology Institute Alumni
- Evening:*
- Working group development
  - Journal Club 3
- Wednesday July 11:** *Morning-Afternoon:* Field trip to the American Museum of Natural History
- Laboratory workshop: Molecular Lab 5 – “Buccal cell extract and sequence” with Dr. Jim Bonacum, The American Museum of Natural History
- Evening:* Movie night: Genomics in film theme
- Thursday July 12:** *Morning:* Travel to Washington D.C.  
*Afternoon:* USDA Agricultural Research Center Beltsville, MD  
*Evening:* Check in at George Washington University
- Friday July 13** *Morning:* Meet with scientists from the Federal Bureau of Investigation  
*Afternoon:*
- Dr. Jane Rissler, Senior Staff Scientist, Union of Concerned Scientists
  - Tour The Institute for Genomic Research
- Evening:* Free time
- Saturday July 14** *Morning:* Tour Walter Reed Hospital Museum  
*Afternoon:* Free time  
*Evening:* Bus leaves for Lawrenceville at 7:00 PM
- Sunday July 15:** Free

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## Schedule of Activities

### WEEK 3

- Monday July 16:** *Morning:* Laboratory Workshop: Molecular Lab 6 – “Databases, Genebanks, & Primers”  
*Afternoon:*
- Workshop: Designing Primers
  - Reflection and Synthesis of Lab
- Evening:*
- Lab Group Presentations
  - Movie night
- Tuesday July 17:** *Morning:* Laboratory Workshop: Molecular Lab 7 – “Molecular Systematics: Data Analysis, Taxonomic Trees and Cladistics”  
*Afternoon:*
- Computer lab: systematics
  - Reflection and synthesis of Lab
- Evening:* Lab Group Presentations
- Wednesday July 18:** *Morning:* Laboratory Workshop: Molecular Lab 8 – “Microarrays, cloning and transformation”  
*Afternoon:*
- Lecture on Transgenics with Dr. Steven Kunkel, University of Michigan
  - \* Lecture: Genomics in the pharmaceutical industry with scientists from Merck
- Evening:* Finish Molecular Lab Protocols for Workbook
- Thursday July 19:** *Morning – Evening:*  
Symposium at the American Museum of Natural History:  
Distinguished scientists and educators - program available separately
- Friday July 20:** *Morning:* Lecture: Dr. Eric Wieschaus, Princeton University  
*Afternoon:* Working Group Lab Kick Off  
*Evening:* Journal Club 4
- Saturday July 21:** *Morning:* Working group time (customize design)  
*Afternoon:* Free
- Sunday July 22:** Free

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## Schedule of Activities

### WEEK 4

- Monday July 23:** *Morning:*
- Working group time (lab & library)
  - Seminar: AP Biology with Beth Nichols, The College Board
- Afternoon:* Computer lab
- Evening:* Working group time (lab & library)
- Tuesday July 24:** *Morning:* Working group time (lab & library)
- Afternoon:* Working group time (lab & library)
- Evening:* Journal Club 5
- Wednesday July 25:** *Morning:* Working group time (lab & library)
- Afternoon:* Working groups meet with Dr. Virginia Anderson
- Evening:* Working group time (wrap-up and writing)
- Thursday July 26:** *Morning:* Working group time (wrap-up and writing)
- Afternoon:* Field trip to Rockefeller University
- Evening:* Barbecue with Rockefeller teachers
- Friday July 27:** *Morning:* Seminar: Legislative Concerns
- Afternoon:* Working group time (synthesis)
- Evening:* Working group time (finish presentations)
- Saturday July 28:** *Morning and Afternoon:* Working Group Presentations
- Evening:*
- The Mosaic Picture of “Big Science” – WWNFF Faculty
  - Closing Banquet
- Sunday July 29:** Check out