Virginia Bioinformatics Institute
Research Core Structure

Presentation to the Virginia Research Resource Consortium

November 5, 2009
Institutional philosophy on cores and research resources

– Core Facilities
  • Provides high throughput, biotechnology services for genomics, proteomics, transcriptomics and other -omics
  • High-end equipment that require specialized skills and trained technicians
  • High cost reagents
  • Demand from many users: internal & external

– Shared Equipment (Research Resources)
  • Less specialized
  • Addresses generic needs of internal research community
  • No need for specialized, trained technicians
  • No cost reagents

– Maintenance contracts on both Core Facilities and Shared Equipment unless other alternatives are available for replacement
Cores: number & type, administered & organized, managed & staff

• Three Cores
  – Core Laboratory Facility (CLF)
    https://www.vbi.vt.edu/core_laboratory_facility/
  – Core Computational Facility (CCF)
    https://www.vbi.vt.edu/core_computational_facility
  – Growth Chamber Facilities
    https://www.vbi.vt.edu/other_resources/growth_chambers/
  – Collectively, over $10 million in expenditures since 2001, when Cores were established

• Centrally organized under administration

• Core Director or Associate Director as leader
  – Staffed by research associates/scientists in special research faculty ranks, and some staff positions
How cores are funded

• Cost recovery services mechanism under A-21
• Costs for various services are reviewed either annually or semi-annually
  – For high demand/fast changing economic environment regarding cost of new technologies
  – Cost of reagents fluctuates up or down following technology changes
• Key:
  – Rates are approved by university controller’s office
  – Controller’s cost accounting management understands the services/structure and must be available to turn around cost services quickly
• How are major equipment/technology platforms within cores purchased or financed?
  – CRI; Tobacco Commission Support; other one-time allocations
Where the $$ comes from determines the rate structure applied

<table>
<thead>
<tr>
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<th>Cost Recovery Client Structure</th>
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<tbody>
<tr>
<td>Internal Rates</td>
<td>VT/VBI Researchers</td>
</tr>
<tr>
<td>External – Federal Rates</td>
<td>Federal agencies, directly</td>
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<tr>
<td>External – Corporate Rates</td>
<td>Non-federal, corporate entities; also international organizations</td>
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</tbody>
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Current Issues affecting core operations

- Reduced demand for proteomic services
- Fast changing technology especially in whole genome sequencing platforms
- CLF and CCF should be linked by data analysis services offered by trained bioinformaticians, users really want advanced biomedical interpretations, not raw data
- In order to breakeven, Cores must be operated like private sector, high throughput biotechnology facilities; this is difficult to achieve in academic setting and requires some subsidies even in the best of situations