

Virginia Bioinformatics Institute

Research Core Structure



**Presentation to the Virginia
Research Resource Consortium**

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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

Cost Recovery Client Structure

Internal Rates

VT/VBI Researchers

External – Federal Rates

Federal agencies, directly

External – Corporate Rates

Non-federal, corporate entities;
also international organizations

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