



University of Nebraska Medical Center

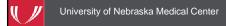
What is a Shared Resource or Core Facility?

Specialized

- 1. Technology
- 2. Services
- 3. Expertise

Access

1. Unrestricted



Advantages to Researchers

Equipment

- 1. Sophisticated
- 2. Expensive

Highly Trained Personnel

- 1. Theory
- 2. Practice
- 3. Development

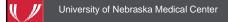


Advantages to Researchers

Improved

- 1. Stability
- 2. Reliability
- 3. Quality Control
- 4. Cost Effectiveness





Access

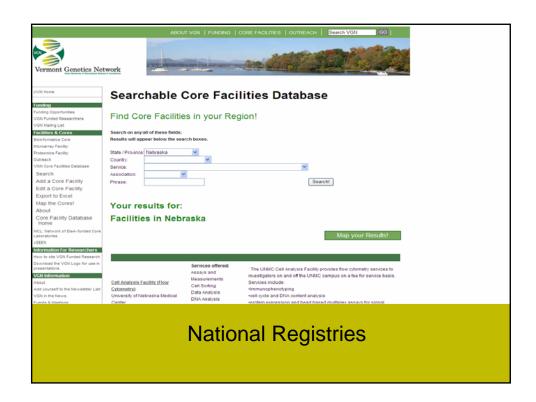
- 1. How to find services
 - Location
 - Point of Contact
 - Type of Service
- 2. How to schedule services
 - Availability
 - Sample Preparation Requirements
 - Cost

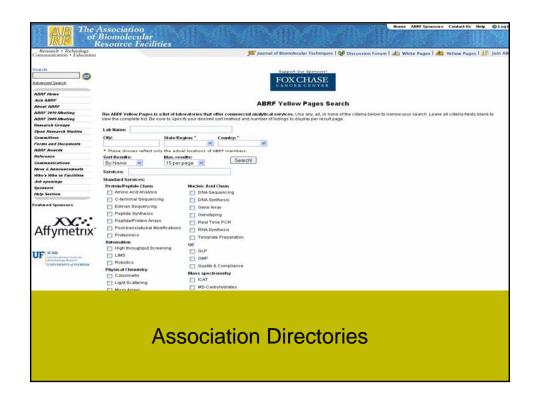
GENOMICS RESOURCES			
EXPERTISE / SUPPORT	LOCATION	RESOURCE CONTACT	FACILITY (webpage)
Cytogenetics	MMI	Warren G. Sanger, Ph.D., FACMG	Oliniani Odananatia ar FIOLI Otadian
DNA Methylation	DRC II	David Klinkebiel, PhD	Clinical Cytogenetic or FISH Studies DNA methylation Core Facility
,	Eppley Institute	David Kelly, PhD	UNMC Eppley Molecular Biology Core
DNA Sequencing	DRC II	James Eudy, PhD	High-Throughput DNA Sequencing and Genotyping
	Ditto II		
DNA transfection	Eppley Institute	David Kelly, PhD	UNMC Eppley Molecular Biology Core
		Warren G. Sanger, Ph.D.,	
FISH (fluorescence in situ hybridization) Studies	MMI	FACMG	Clinical Cytogenetic or FISH Studies
Gene Targeting via transgenic and knockout animals, strain rederivation	DRC II	Kay-Uwe Wagner, PhD	Mouse Genome Engineering Core Facility
Genotyping	DRC II	James Eudy, PhD	High-Throughput DNA Sequencing and Genotyping
Genotyping			
- Microarray	DRC II	James Eudy, PhD	Micro array Core Facility
	Eppley Institute	David Kelly, PhD	UNMC Eppley Molecular Biology Core
Molecular genetics	ммі	Warren G, Sanger, Ph.D., FACMG	Human Genetics Laboratory
Oligonucleotide Synthesis	Eppley Institute	David Kelly, PhD	UNMC Eppley Molecular Biology Core
**siRNA	Eppley Institute	David Kelly, PhD	Eppley Molecular Biology Core
SNP (Single Nucleotide Ploymorphism) Analysis	DRC II	Tricia LeVan, PhD	Targeted SNP Analysis
PROTEOMICS AND SYSTEMS BIOLOGY RESOURCES			
EXPERTISE / SUPPORT	LOCATION	RESOURCE CONTACT	FACILITY
Atomic force microscopy	COP	Yuri Lyubchenko, PhD	Nanoimaging Core Facility
Crystallography	LTC	Gloria Borgstahl-Kramer, PhD	Nebraska Center for Structural Biology
Mass Spectrometry	DRC	Pawel Ciborowski, PhD	Mass Spectrometry and Proteomics Core Facility (MSPCF)
Monoclonal antibody production	DRC		Monoclonal Antibody Facility
NMR	Eppley Institute	Guangshun Wang, PhD	Nuclear Magnetic Resonance Core Facility
Protein structure sequencing	DRC	Laurey Steinke, PhD	Protein Structure Core Facility
Target-ligand interactions	DRC	Donald R. Johnson , PhD	Molecular Interaction Core Facility
CELL AND TISSUE ANALYSIS			
	1		
EXPERTISE / SUPPORT	LOCATION	RESOURCE CONTACT	FACILITY
Tissue Sciences: histology, histochemistry,	Eppley Institute	Wing Chung (John) Chan, MD	Tissue Sciences Facility
Electron Microscopy/Confocal Microscopy/Virtual Microscopy	WH	Gordon Todd, PhD	Virtual Microscopy and Imaging Core Facility
	DRC	Judith Christman, PhD	Confocal Laser Scanning Microscope Core Facility

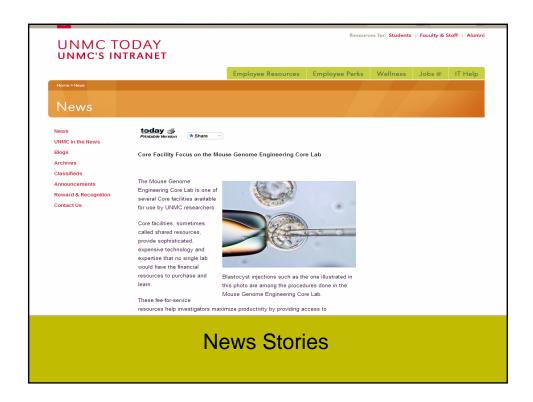
Centralized Directory



Core Facility Day









Federal Policies and Requirements

- 1. NIH
 - Access restricted by Institute funding
 - Requirement for stand-alone core centers (P01, P30, P20- COBRE)
 - · Lack of:
 - Incentives to promote use
 - Standardized policies on funding personnel salary and setting rates
 - · Standardized reporting



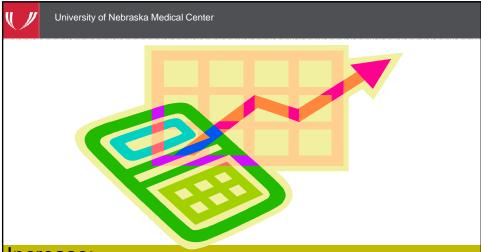
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Challenges

Federal Policies and Requirements

- 2. OMB Circular A-21
 - No depreciation on federally-funded high end equipment
 - Inability to make a profit or develop capital reserve
 - Lack of standardized interpretation of circular A-21



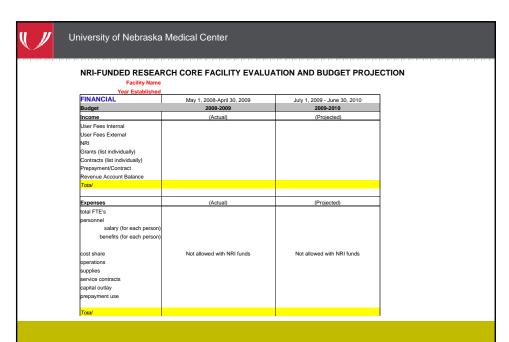


Increase:

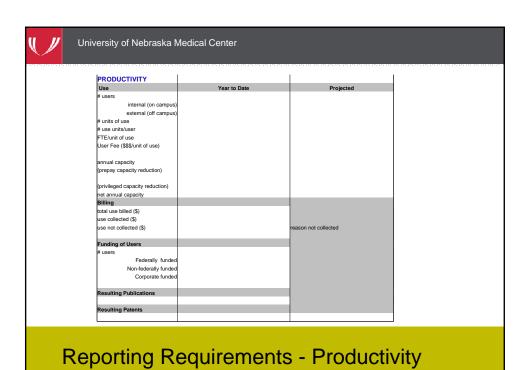
- Allowable rates for the cost of administration
- Maximum annual activity that defines a specialized service center

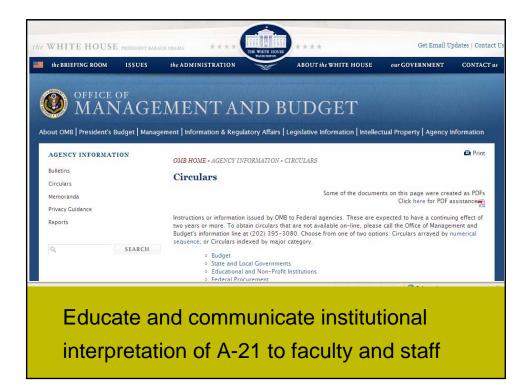


Allow capital equipment purchases to be charged directly to core operating fund



Reporting Requirements - Financial



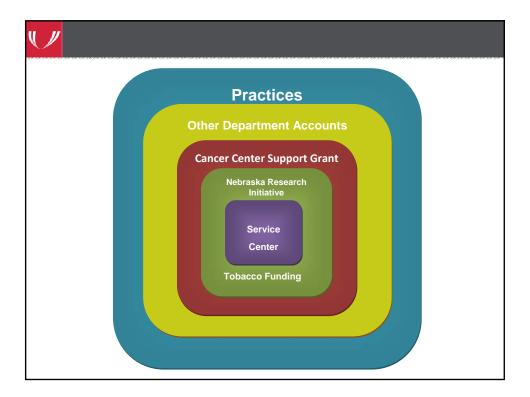




Service Center Context & Challenges

- 1. Funding sources
- 2. How did each SC calculate each rate
- 3. Proof of approval
- 4. Range of billings & accounting methods
- 5. Scarce funding at Dept level
- 6. Fed. Compliance and UNMC Policy
- 7. Role of Central Office
- 8. Translating: Science to & from Business

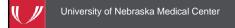
The \$ balance in a SC is not always reality-see next slide





UNMC Service Center Improvement Plan

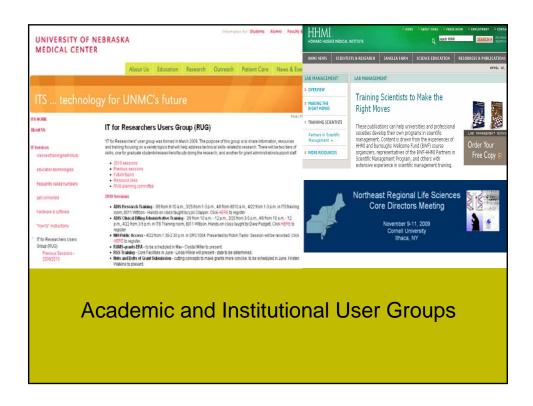
- ✓ If Federal charges > \$10,000
 all rates will be reviewed and approved by FCC
 Office & Office of Research (when Core labs)
- ✓ Education classes on rate setting & practices
- ✓ Policy to be updated
- ✓ Monitoring & reporting

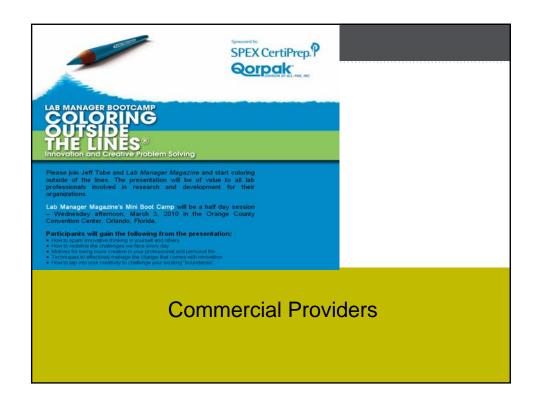


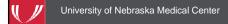
Personnel Training

- 1. Resource Scientists
 - No well-defined career path or funding
 - No training that would lead to certification for core directors
 - No designated entity to provide certification









Management

- 1. Centralized versus de-centralized management?
- 2. Reduce duplication of core facilities within an institution or region
- 3. Develop and implement core management systems customized for individual cores
- 4. Access software that can be used for core management



Centralized

Uniform Policies / Procedures

Advocacy

Promotion and Marketing

Transparency

Decentralized

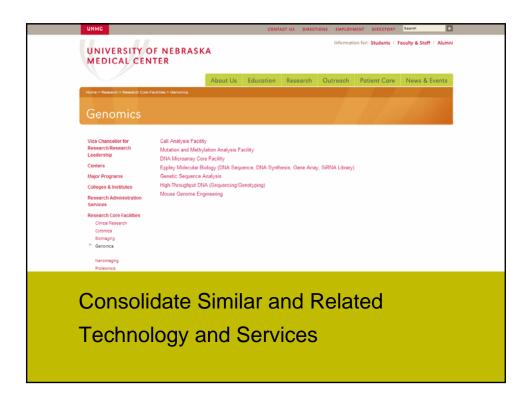
Customized Operations

Independent Decision Making

Initiation / Sunset

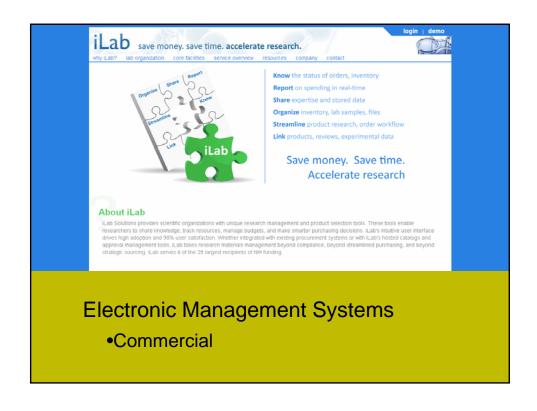
Access

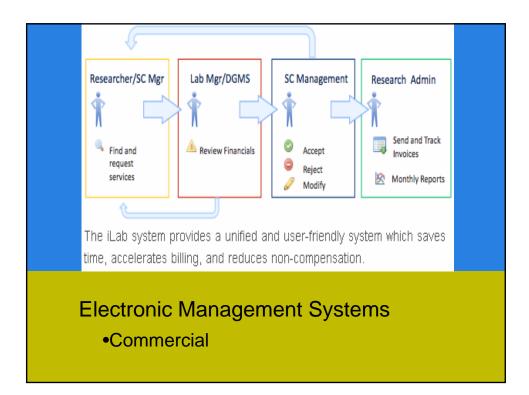
Management Structure Advantages











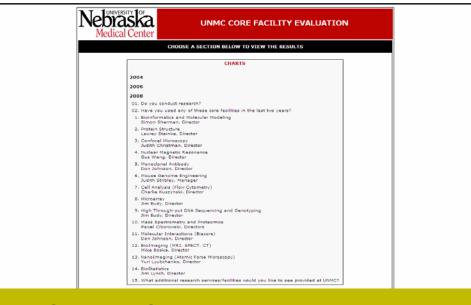


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Challenges

Quality Improvement Activities

- 1. No evaluation or certification requirements
- 2. No technology-specific metrics to assess quality of service
- 3. Need for time and personnel to track and report metrics
- 4. Analysis of human subjects samples add increased complexity and cost
 - HIPAA-Health Information Portability and Accountability Act
 - CAP-College of American Pathologists
 - CLIA-Clinical Laboratory Improvement Amendments



Customer Surveys



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- Do you use this core?
- If yes, are you happy with the service?
- If yes, are you happy with the cost?
- If no, why? (select reason)
 - o No need
 - o Use an outside vendor
 - o Do not know about services
- Comments
- . What additional research services/facilities would you like to see provided at UNMC?

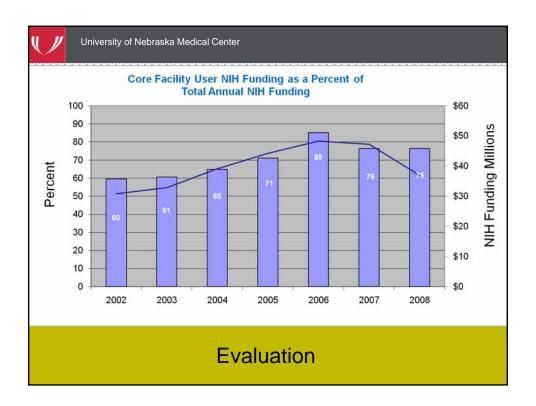
Customer Surveys

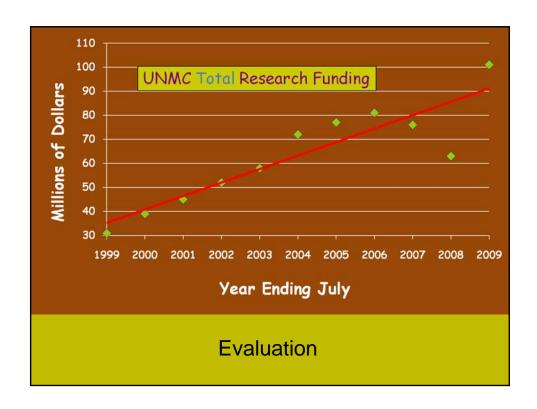


Open Research Studies

- •Glycoprotein Research Group (gPRG) 2010 Study
- •Nucleic Acid Research Group (NARG) 2010 Study
- •Proteome Informatics Research Group (iPRG) 2010 Study
- Proteomics Standards Research Group (sPRG) 2010 Study
- Light Microscopy (LMRG) 2009 Study

Promote and support the development and use of standards and benchmarking







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NIH Response

Funding Opportunity Announcements

- Core Facility Consolidation NOT-RR-10-001
- 2. Develop Materials for Training Courses
- 3. Support a national resource directory
- 4. Support development of core management software

Discussions with OMB Regarding A21 Interpretation

- 1. Extramural grantees
- 2. NIH staff

Continue Dialogue with Core Resource Stakeholders

