BioCore
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Addressing Research Equipment Needs: the BioCore Model

Green Labs Program
UNIVERSITY OF COLORADO BOULDER

A Neglected Niche

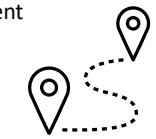
CU Boulder likely spends around ten millions dollars per year or more on new equipment. But many are unreachable to most researchers because they are behind closed doors accessible to only individual research groups. As research changes directions, many resources become underutilized or unused turning expensive, energy-intensive lab space into storage space. Lastly, equipment sharing is more prevalent for expensive resources but is lacking for mid to lower cost items. The BioCore model aims to address these issues.

> "When a researcher is unable to get [access to] the instrument that they need, they really only have two options; to alter their experiment or purchase the instruments themselves."
> – Dustin Quandt, former BioCore Shared Equipment Manager

At CU Boulder, a path to connect researchers (faculty, staff, and students) with existing instruments on campus was lacking:

In need of equipment

Traditionally seek out:
Nearby labs
Partnered labs
Word-of-mouth



Labs with resources

Do not share because:
Burden of training
Scheduling issues
Managing repairs

Establishing BioCore

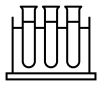
BioCore is an instrument sharing program that was established in May 2018 to enhance equipment sharing in three departments at CU: Molecular, Cellular, and Developmental Biology, Ecology and Evolutionary Biology, and Integrative Physiology. The purpose is to:

1. Benefit research
2. Allow for efficient instrument utilization
3. Enable improved lab space utilization

2018-2022 BioCore impact in three departments

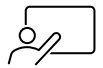
100	4,000	$3 million	90	370
participating lab groups	instruments tracked	in avoided purchases	permanently shared instruments	surplus instruments redistributed

The Model- BioCore Services



Access to Shared Equipment

Equipment Repair



Instrument Training

Single Point of Contact

Track Down Equipment

Lab Surplus Clean Outs

Benefits of Managed Equipment Sharing

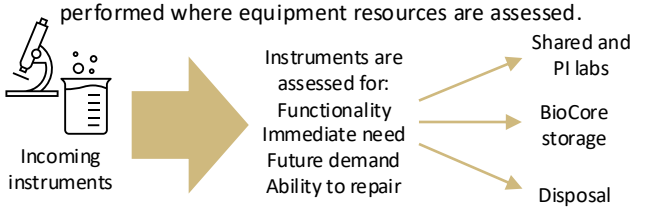
Optimized Space Use	Time Savings	Resource Efficiency	Recruitment & Retention	Equity and Inclusivity
Avoided equipment duplication leads to better, optimized lab space use. This is important since lab space is one of the most expensive and energy-intensive spaces on campus.	Shared equipment managers save researchers time by providing immediate access to equipment, aid in locating instrument-ation, & providing training/expertise.	By not duplicating equipment, thus reducing electrical loads and improving lab space use, equipment, energy, & building resources are utilized more efficiently.	Shared equipment can attract top scientists and students to campus and help retain them by providing access to a wide-range of instrumentation.	Managed shared equipment enables inclusive & equitable access to instrumentation & expertise regardless of a scientist's position or level of funding or support.

The BioCore provides a more efficient approach to research. If implemented campus-wide, it is projected to save $4.5 million/year in avoided equipment purchases.

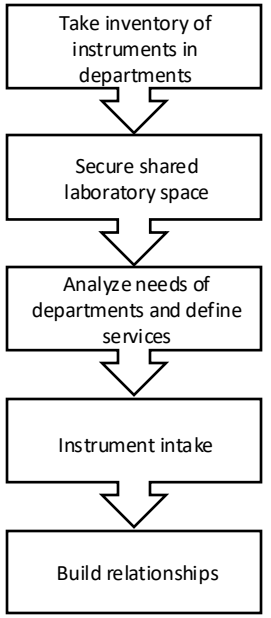
Instrument intake process

Instruments are pulled into the shared program in 4 main ways:

1. Surplus items donated by labs are vetted for usefulness.
2. Underutilized equipment nominated for sharing are considered for relocation into BioCore space or through Biocore coordinating access within individual PI labs.
3. All new departmental purchases of capital equipment are tracked as they enter departments.
4. When faculty retire or move labs, lab cleanouts are performed where equipment resources are assessed.



Steps of Initial Development



The BioCore has ~1000% return on investment (ROI).

Future Directions

The significant positive impacts and benefits of the BioCore model has been demonstrated over a 4-year pilot. Funding is needed from the university level to re-realize the full impact of the program and to expand it to other departments across campus.

Learn more about BioCore's services and the 17 benefits of shared equipment: