

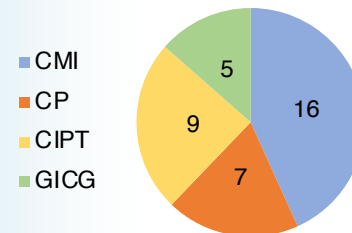
Aims

- The mission of the MSR is to support services that enable CINJ's pre-eminence at the leading edge of cancer metabolism and immunology research
- The MSR offers MALDI-imaging mass spectrometry provided by a Bruker SOLARIX instrument, capable of distinguishing tumor regions (e.g., hypoxic core versus proliferative perimeter) but not single cells
- We lead methodological development, develop peer-reviewed educational content and resources as well as metabolomics assays to our members

Attachments available

- Publications
- Grants
- 5-year user list
- FY23 Advisory Committee Presentation
- FY21 – FY23 Advisory Committee Action Items
- FY21 – FY23 Advisory Committee Notes
- CY20 – CY22 Satisfaction Survey Action Items
- CY22 Usage
- Submitted Research Strategy
- Submitted Aims
- Submitted SRM Research Strategy

Research Program Support (2018-2022)



44 Members
(1 non-aligned)

Publications

| | |
|-------------|-----|
| Total | 240 |
| Co-Authored | 119 |
| IF>10 | 79 |

Peer-Reviewed Grants

| | |
|-----|---------|
| All | 38 (1T) |
| NCI | 17 (1T) |

Scientific examples to be shown

- Nature, 2023, 614 (7947): 349-357
- Blood Cancer Discov 2023, Jan 6;4(1):12-33
- Cell Death & Disease 2022, Apr 19;13(4):370
- J Clin Invest 2022, 132(24): e161408
- Nat Commun 2022, 13(1):7404

Services & Innovation

New

Spatial metabolomics (30 μm spatial resolution) capable of distinguishing tumor regions (e.g., hypoxic core versus proliferative perimeter) but not single cells

Software development integrates prior literature knowledge and “global optimization” machine learning to determine with high fidelity the molecular formulas and nearest molecular neighbors of unknown metabolites

Nat Methods. 2021;18(11):1377-85

Accurately assess the incorporation of stable isotopes, we developed R package Accucor2

Lab Invest. 2021;101(10):1403-10

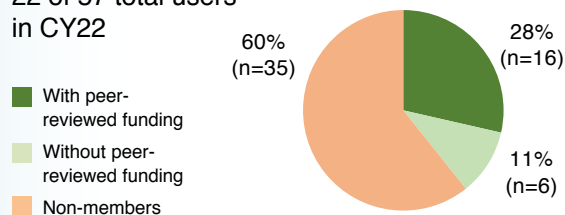
Continuing

- Water-Soluble Metabolite Quantitation
- Lipid Quantitation
- Novel or Unexpected Metabolite Discovery
- Expert Consultation
- Training

Utilization & Management

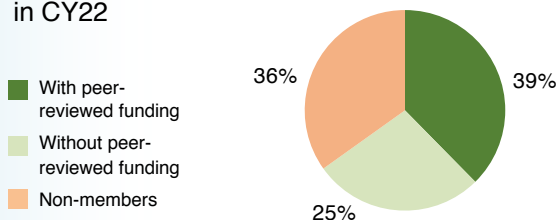
Member Users: 39%

22 of 57 total users
in CY22

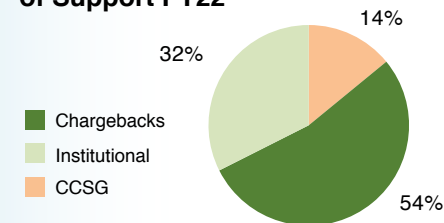


Member Usage: 64%

6,819 of 10,589 samples
in CY22



Sources of Support FY22



FY24 Chargeback target: 55%

Satisfaction Survey for CY22 services



- Satisfied (9)
- Dissatisfied (0)
- Neutral (0)

Participated: 9 of 22 members (41%)

Organization & Governance

MSR

3.1 FTE

SRACs

- Advisory Committee meets annually
- Discusses operational and scientific progress
- SRM supports organization

SRM

- SR Faculty Directors report to the ADSR
- SRM tracks and supports SRAC recommendations, productivity, service development, outreach

CINJ Director

- RLC
- Finance & Admin
- EAB