



Agenda

1:00 p.m. – 1:10 p.m.	Welcome Remarks <i>Franziska Grieder, D.V.M., Ph.D., Director, ORIP</i>
1:10 p.m. – 1:25 p.m.	Post-Award Requirements for an S10 Grant <i>Monika Aggarwal, Ph.D., Health Scientist Administrator, Program Officer, DCI/ORIP</i>
1:20 p.m. – 1:40 p.m.	Up and Running: Training and Scheduling Your New Users <i>Carol E. Schrader, Ph.D., Associate Professor, UMass Chan Medical School</i>
1:40 p.m. – 1:55 p.m.	S10 Grants – The Good (Advisory Board), Bad (Maintenance), and Ugly (Challenges) <i>Vincent Magnotta, Ph.D., Professor, The University of Iowa</i>
1:55 p.m. – 2:10 p.m.	Strategies to Maximize S10 Instruments Usage, Acknowledgement in Publications, and Outreach Activities <i>Birgit Schilling, Ph.D., Professor, Buck Institute</i>
2:10 p.m. – 2:25 p.m.	"S10 Report Writing for Dummies"....How to Generate a Flawless Report the First Time Through <i>Simon Watkins, Ph.D., Distinguished Professor, University of Pittsburgh School of Medicine</i>
2:25 p.m. – 2:40 p.m.	Q&A and Panel Discussion <i>All Speakers and Panelists: Lauren E. Ball, Ph.D., Associate Professor, Medical University of South Carolina and Robbert Creton, Ph.D., Professor, Brown University</i>
2:40 p.m. – 2:50 p.m.	iSMART Demo – A System to Schedule and Track Instrument Usage <i>Leo Fox, Lead Architect/Developer, and Vadim Fuks-Rabinovich, Business Analysts, Highrise Consulting</i>
2:50 p.m. – 3:00 p.m.	Q&A Session for iSMART
3:00 p.m.	Adjourn <i>Monika Aggarwal, Ph.D., Health Scientist Administrator, DCI/ORIP</i>

If you experience technical difficulties, please email djohnikin@scgcorp.com



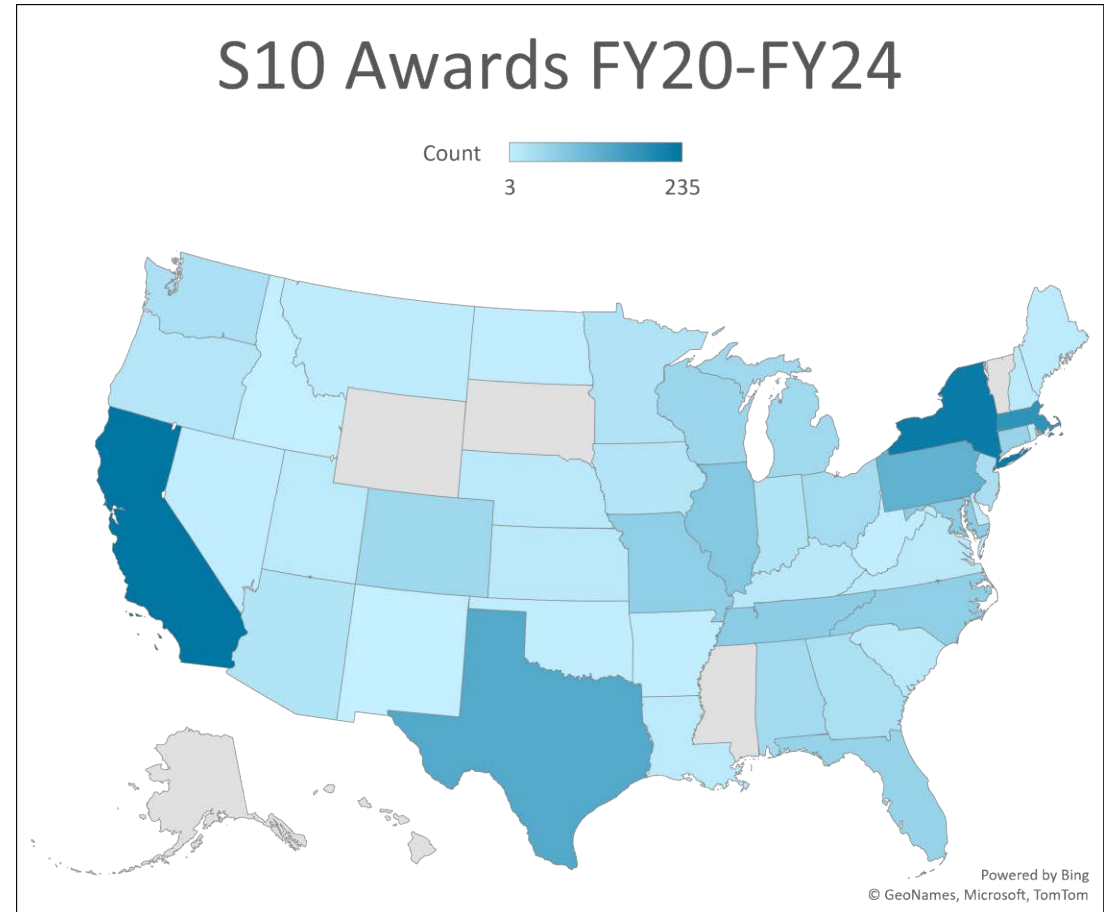
Post-Award Requirements for an S10 Grant

Franziska Grieder, D.V.M., Ph.D.
**Director, Office of Research
Infrastructure Programs (ORIP)**

Congratulations!!!



- The S10 Program has been existence since 1982
- 5,800 instruments have been awarded to over 400 institutions
- Grants are awarded all over the United States

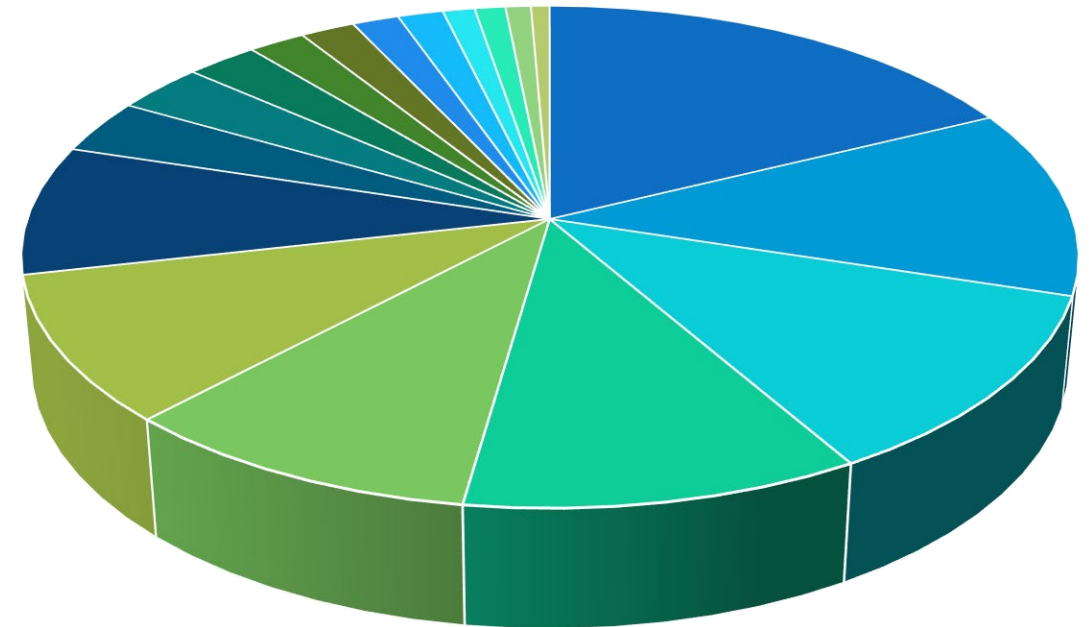


Instruments Empower Research



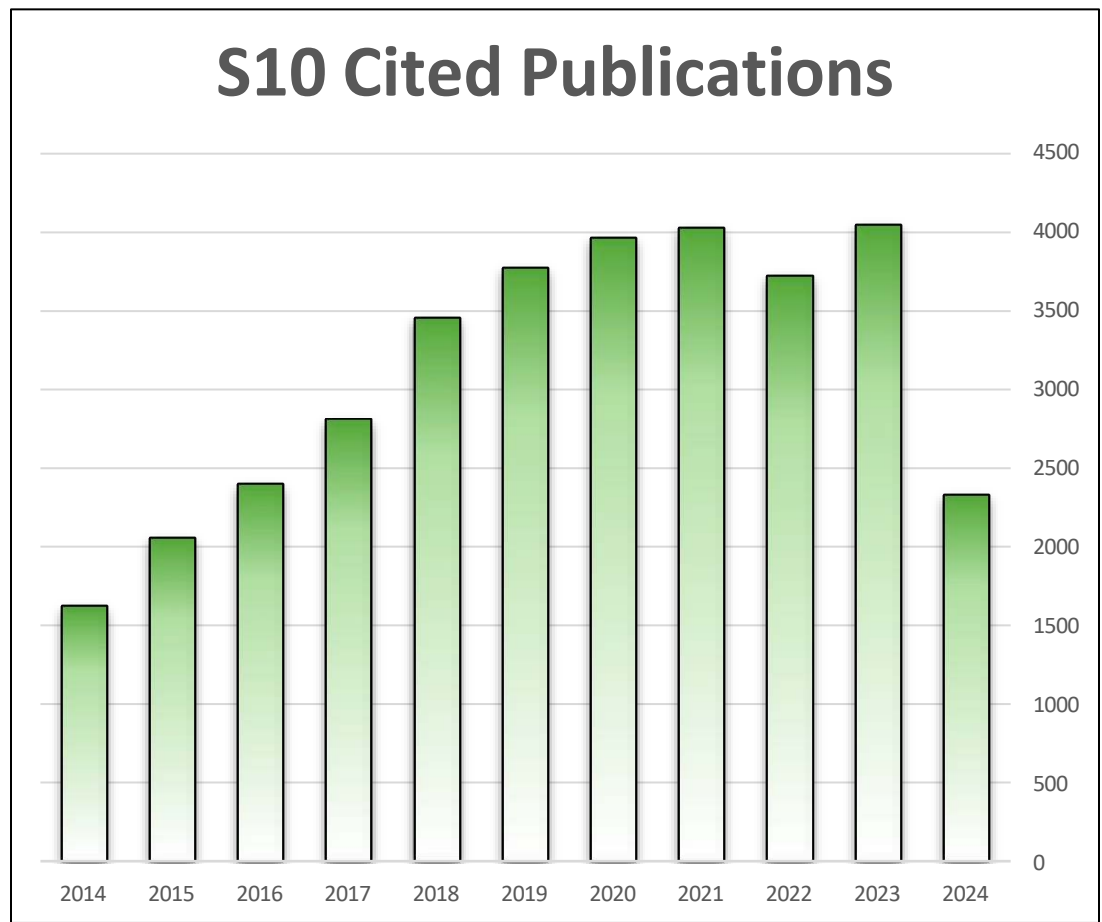
- In FY24, instrument users received funding from nearly all NIH institutes and centers
- Research areas are multiple and very broad, both within grant and across program
- Instruments are diverse and flexible

NIH ICO Support FY24



- | | | | | | |
|---------|---------|---------|---------|---------|---------|
| ■ NCI | ■ NIAID | ■ NIGMS | ■ NHLBI | ■ NIDDK | ■ NINDS |
| ■ NIA | ■ NIAMS | ■ NICHD | ■ NIMH | ■ NIDA | ■ NIBIB |
| ■ NIDCR | ■ NEI | ■ NIEHS | ■ Other | ■ NIAAA | ■ OD |

Publications Cite S10 Support



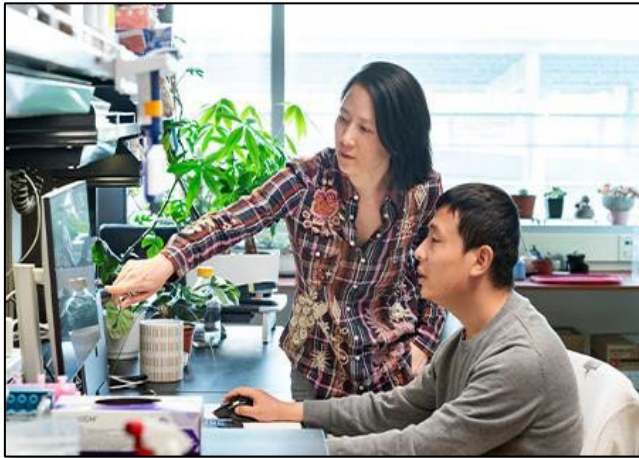
- Over 37,000 papers published in PubMed have acknowledged S10 support
- Over 200 publications are added each month

1 [OMIP-108: 22-color flow cytometry panel for detection and monitoring of chimerism and immune reconstitution in porcine-to-baboon models of operational xenotransplant tolerance studies.](#)
 Cite Gunes ME, Wolbrom DH, Nygaard ED, Manell E, Jordache P, Qudus S, Cadelina A, Weiner J, Nowak G. Cytometry A. 2024 Sep 18. doi: 10.1002/cyto.a.24899. Online ahead of print. PMID: 39291632 No abstract available.

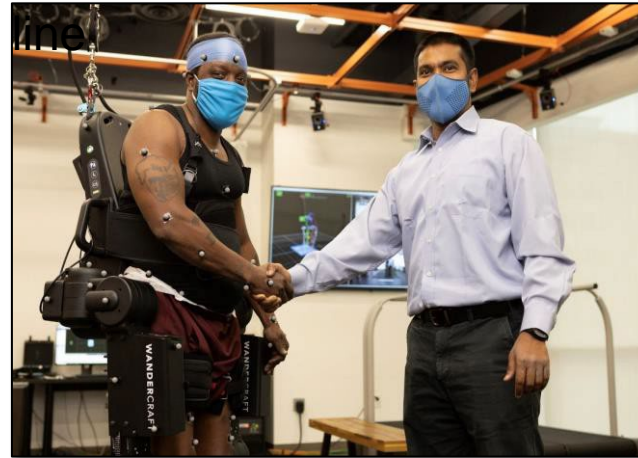
2 [Rapid imaging of intravenous gadolinium-based contrast agent \(GBCA\) entering ventricular cerebrospinal fluid \(CSF\) through the choroid plexus in healthy human subjects.](#)
 Cite Sun Y, Cao D, Pillai JJ, Paez A, Li Y, Gu C, Pogson JM, Knutsson L, Barker PB, van Zijl PCM, Bakker A, Ward BK, Hua J. Fluids Barriers CNS. 2024 Sep 16;21(1):72. doi: 10.1186/s12987-024-00571-3. PMID: 39285434 [Free PMC article.](#)

3 [Sulfated glycosaminoglycans are host epithelial cell targets of the Candida albicans toxin candidalysin.](#)
 Cite Lin J, Miao J, Schaefer KG, Russell CM, Pyron RJ, Zhang F, Phan QT, Solis NV, Liu H, Tashiro M, Dordick JS, Linhardt RJ, Yeaman MR, King GM, Barrera FN, Peters BM, Filler SG. Nat Microbiol. 2024 Sep 16. doi: 10.1038/s41564-024-01794-8. Online ahead of print. PMID: 39285260

We highlight S10 Research



This study uncovers biological changes that might serve as biomarkers of long COVID or targets for therapies to cure this debilitating condition.



The New Jersey Institute of Technology led the first U.S. acquisition of the Wandercraft Atalante X, the first self-balancing exoskeleton for use in rehabilitation of patients with neurological disorders.



The supercomputing cluster was used to identify and validate immunological markers that have been used to predict the efficacy of four COVID-19 vaccines enrolled in Phase III trials of several vaccines.



S10 Experts



Lauren E. Ball, Ph.D.

Associate Professor
Medical University of South Carolina

Birgit Schilling, Ph.D.

Professor
Buck Institute

Robbert Creton, Ph.D.

Professor
Brown University

Carol E. Schrader, Ph.D.

Associate Professor
UMass Chan Medical School

Vincent Magnotta, Ph.D.

Professor
The University of Iowa

Simon Watkins, Ph.D.

Distinguished Professor
University of Pittsburgh School of Medicine

Post-Award Requirements for an S10 Grant

September 26, 2024
1-3 p.m.

Congratulations to the FY 2024 S10 Awardees!

BIG
Basic

SIG
Mid-Range

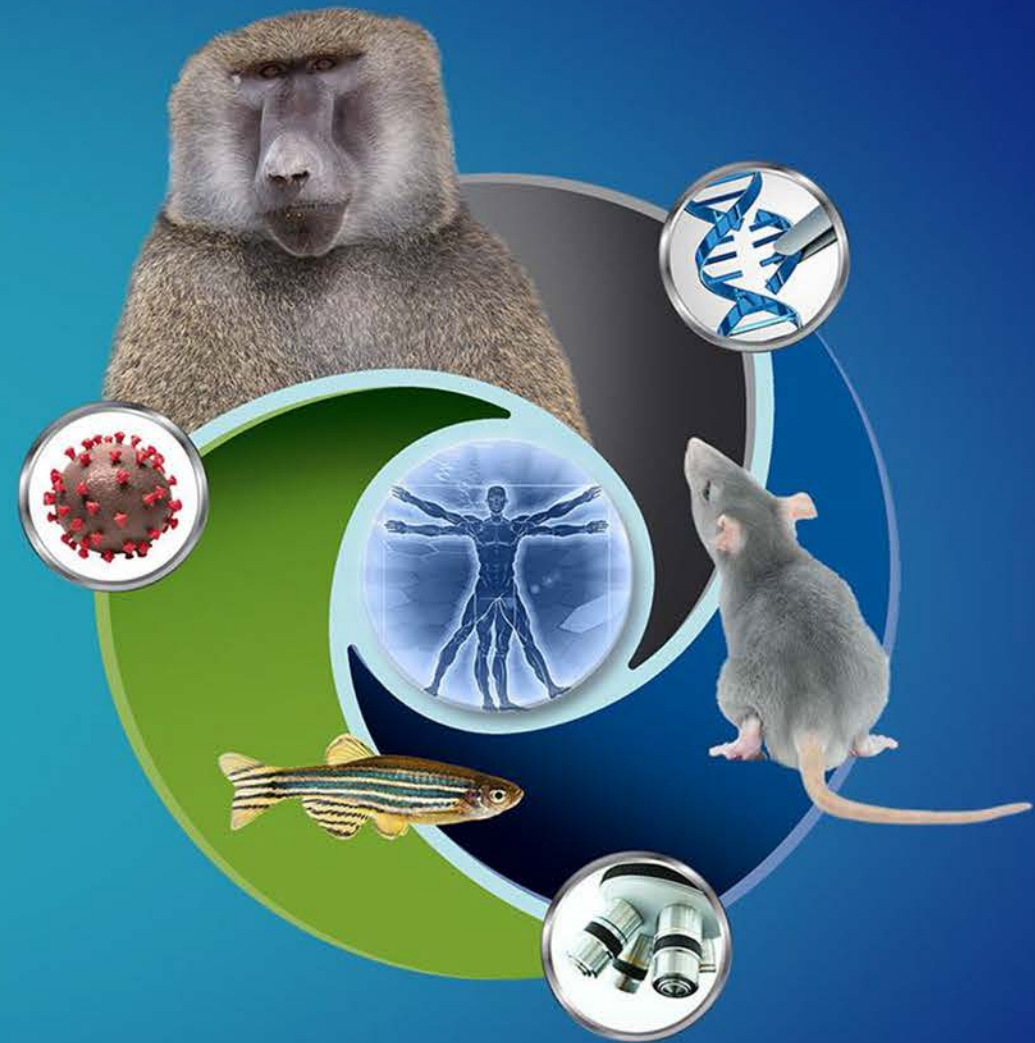
HEI
High-End

SHARED STATE-OF-THE-ART INSTRUMENTS
S10
Instrumentation
Programs

POST-AWARD REQUIREMENTS FOR AN S10 GRANT

Division of Construction and Instruments
OD/DPCPSI/ORIP

Monika Aggarwal, Ph.D.
September 26th, 2024



Overview of the Webinar

- **Introducing Our Team, invited Speakers and Panelists**
- **S10 Post-award Activities and Project Timelines**
- **Annual Reports and Acknowledgment of S10 grant**
- **Instrument Administration, Operation and Advisory Committee**
- **Instrument Scheduling**
- **Demo on instrument Schedule Management, Access Requesting and Tracking (iSMART) toolset**
- **Q&As – All**



Introduction to Our Team

ORIP/DCI

Franziska B. Grieder, DVM, PhD
Xiang-Ning Li, MD, PhD
Monika Aggarwal, PhD
Yong Chen, PhD
Henrike Nelson, MS
Cecilia Fox

OGM

Ki-Cha Flash-Zapata
Kenneth Holiness
Sabrina Oasan
Donna James
Rachel Norcio
De Krizia James

HRCG

Leo Fox
Vadim Fuks-Rabinovich

ORIP – Office of Research Infrastructure Programs

DCI – Division of Construction and Instruments

OGM – Office of Grants Management

HRCG - High Rise Consulting Group



Introduction to Our Speakers and Panelists

Speakers

Carol E. Schrader, PhD, Associate Professor, UMass Chan Medical School

Vincent Magnotta, PhD, Professor, The University of Iowa

Birgit Schilling, PhD, Professor, Buck Institute

Simon Watkins, PhD, Distinguished Professor, University of Pittsburgh School of Medicine

Panelists

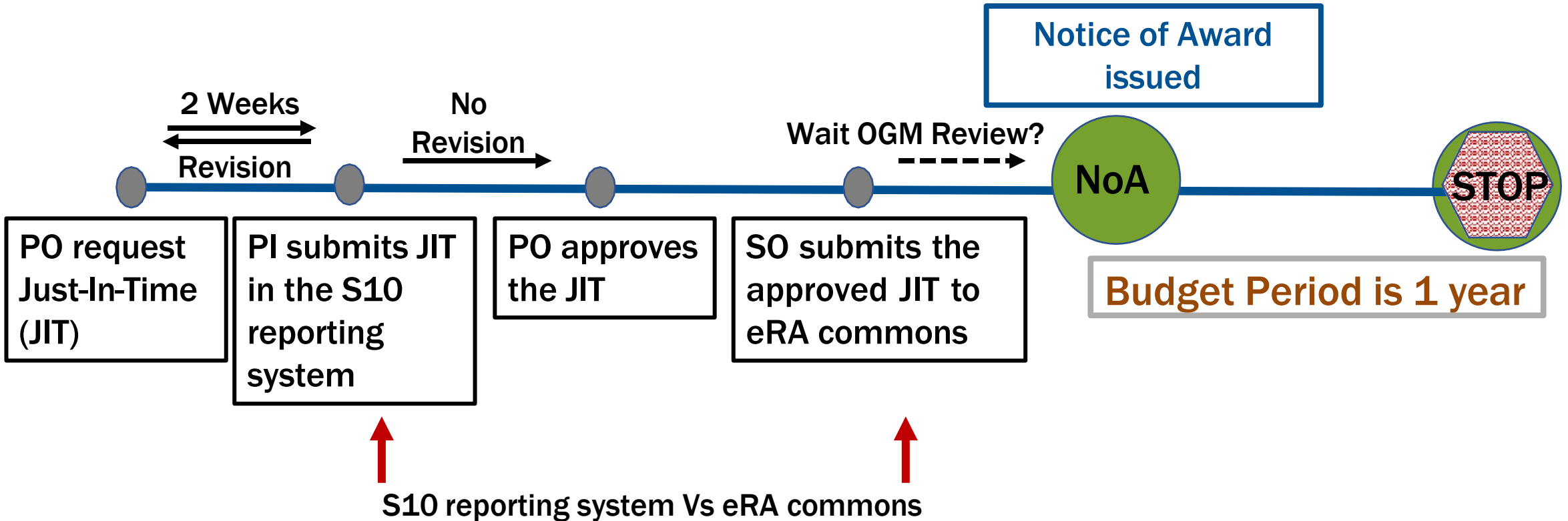
Lauren E. Ball, PhD, Associate Professor, Medical University of South Carolina

Robbert Creton, PhD, Professor, Brown University

Overview of S10 Post-award Requirements

- **S10 post-award Activities and Project Timelines**
- **S10 Reporting System and Annual Report Templates**
- **Key Elements in Annual Reports**
- **Prior Approval Requirements**

Timeline: Pre-award and Budget Period

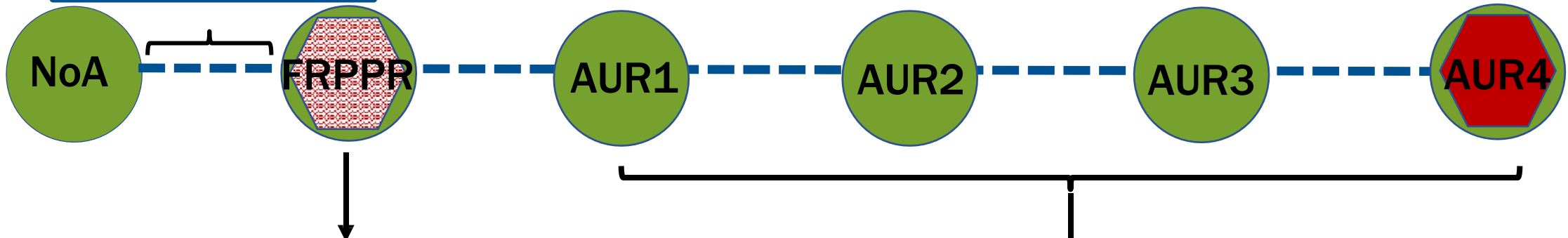


Timeline: Post-award Period and Usage Reports

Full award must be commissioned towards the purchase and installation of the instrument

FRPPR - Final Research Performance Progress Report
AUR - Annual Usage Report
FSR - Financial Status Report

End of Federal Oversight



- PI submit FRPPR in the S10 reporting system
- SO submits approved FRPPR report in eRA commons
- SO submits FSR in eRA commons
- PI submits in the S10 reporting system
- SO acknowledges the approval in S10 reporting system

Do not submit FRPPR directly to eRA commons
Attach PO approved FRPPR report as attachment B

➤ **ALL reports need to be submitted through S10 reporting system first!**

FRPPR and AURs

FRPPR Narrative Template

Grant #: 1S100D PI:
 Title:
 Generic name of the Instrument:

Installation, Operation and Usage

1. Describe accomplishments and challenges with the instrument during installation, day-to-day operation, and instrument usage in this reporting period, as applicable.
2. Information on scheduling system for instrument and training of users.

New Projects

1. Descriptions of all new projects that were added during the reporting period.

Administration

1. Activities pertaining to the administration and Advisory Committee during the current reporting period.
2. Strategies to encourage users acknowledging S10 in publications.

Project Outcomes, Accomplishments, and Impacts on Research

Summarize the project outcomes, accomplishments (including publications), and impact of the instrument on future research in the box below [Word limit: 500]. When submitting the FRPPR to eRA, paste this content to **Section I. OUTCOMES, viewable to public** via NIH RePORTER.

Other Information

1. Any activities that benefit the S10 users or S10 program that you can share with us, e.g., success stories, lessons learned, future research or operational prospects, etc.

Final Research Performance Progress Report (FRPPR) Narrative - please use [FRPPR Narrative Template](#) *:

Upload a picture of the installed instrument (optional):
 The image must be at least 2 MP(megapixels) in resolution

Check the box to allow ORIP to use the picture for NIH internal communication

Final Research Performance Progress Report (FRPPR) Narrative - please use [FRPPR Narrative Template](#) *:

Annual Usage Report (AUR) template

AUR Narrative Template

Grant #: PI:
 Title:
 Generic name of the Instrument:

Impact and Accomplishments

1. What research that this instrument supported has largest impact on health or scientific discovery and why?
2. Highlights of research and/or publications using the instrument during the reporting period, as applicable.
3. Highlight of research supporting activities.

Usage, Operation and Maintenance

1. Describe accomplishments or challenges with the instrument during day-to-day operation and its usage in this reporting period, as applicable; plans to boost the usage if there is a substantial reduction in instrument usage.
2. Improvement on using scheduling system for instrument and training of users.

New Projects

1. Descriptions of all new projects that were added during the reporting period.

Administration

1. Activities pertaining to the administration and Advisory Committee during the current reporting period.
2. Were the strategies to encourage users acknowledging S10 grant in their publications effective? If not, what improvements have/(will) you implement(ed)?

Other Information

1. Any activities that benefit the S10 users or S10 program that you can share with us, e.g., success stories, lessons learned, future research or operational prospects, etc.

Annual Usage Report 1 (AUR1) Narrative - please use [AUR Narrative Template](#) *

Do you have any other publications to report that used the awarded S10 instrument during the reporting period in addition to publications reported under PubMed?

Yes No

Annual Usage Report 1 (AUR1) Narrative - please use [AUR Narrative Template](#) *:



Key Elements in FRPPR/AURs

- **Installation, Operation and Usage**

- Challenges and lessons learned during installation and day-to-day operation
- Establishing an effective scheduling system and training of users
- Strategies to maximize usage

- **Administration**

- Change in personnel or modification/upgrading of instruments
- Synopsis of advisory committee (AC) meeting
- Strategies to acknowledge S10 award in publications (NCBI My Bibliography)

- **Accomplishments**

- Impact on research support and health discovery
- Highlights of research that uses the instrument and/or publications
- Activities supporting research

- **Other information**

- Future research or operational prospects
- Outreach activities
- Mentioning S10 award in grant applications which used S10-instrument to generate preliminary data



iSMART System

U.S. Department of Health & Human Services | National Institutes of Health | Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI)

NIH National Institutes of Health
Office of Research Infrastructure Programs

Grant Detail | Help | Welcome, PI Three | Logout

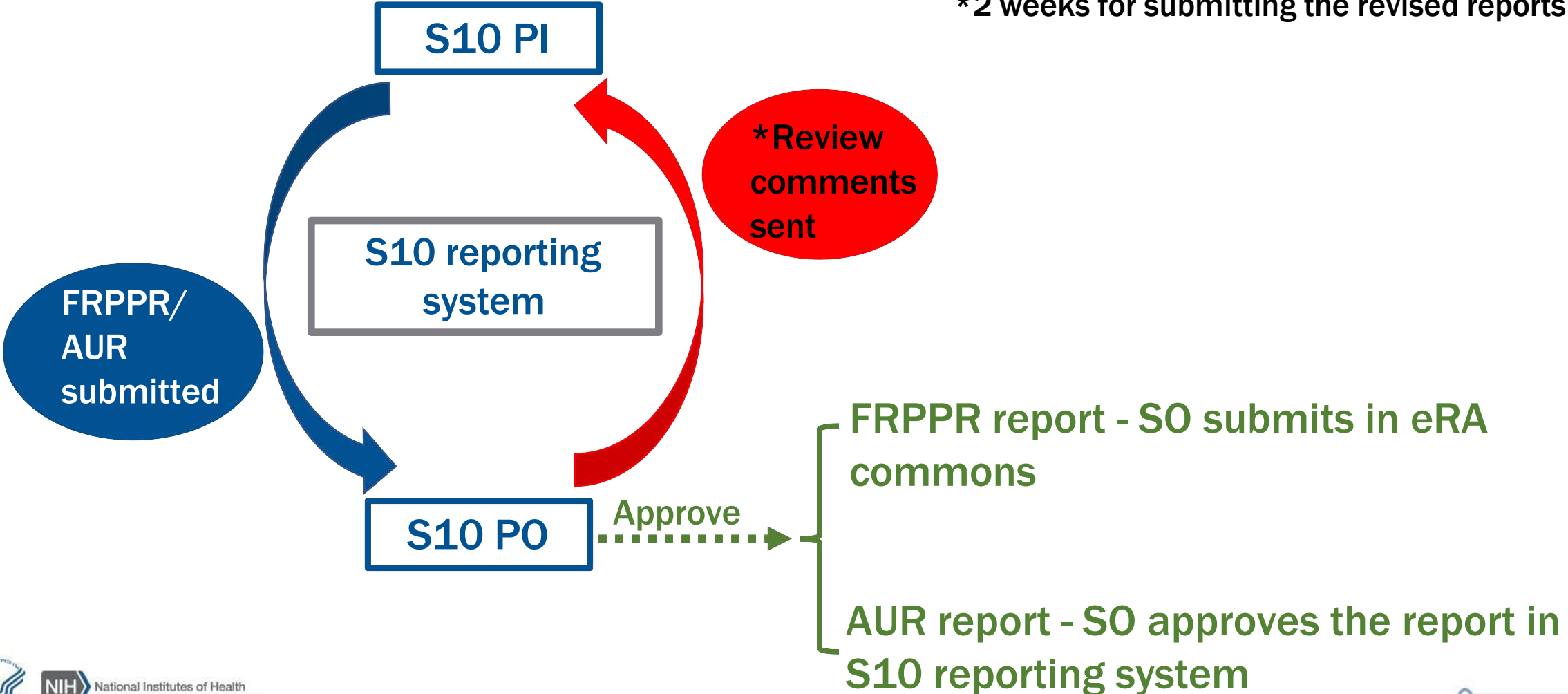
Grant Number:	<input type="text"/>	Generic Name of Instrument:	<input type="text"/>
Application ID:	<input type="text"/>	Model:	<input type="text"/>
Application Title:	<input type="text"/>	Manufacturer:	<input type="text"/>
Principal Investigator's Last Name, First Name, Middle Initial:	<input type="text"/>	Date of Installation:	<input type="text"/>
Principal Investigator's Email Address:	<input type="text"/>	Application Requested Budget:	<input type="text"/>
Principal Investigator's Phone Number:	<input type="text"/>	Amount of Award:	<input type="text"/>
Principal Investigator's Organization:	<input type="text"/>	Project Start Date:	06/03/2019
Signing Official's Last Name, First Name, Middle Initial:	<input type="text"/>	Project End Date:	06/02/2020
Signing Official's Email:	<input type="text"/>	Designee Last Name, First Name:	<input type="text"/>
Program Officer's Name (Last Name Only):	Li	Designee's Email:	<input type="text"/>

- **Key features of iSMART include the following:**
 - Graphic Availability Calendar
 - Ability to import and export data via Microsoft Excel
 - Generate usage report for S10 annual report
 - Reminder for users to acknowledge the S10 grant
 - Manage S10 or non-S10 instruments
- **Available free of charge**
- **Improve the operational efficiency of S10 instruments**
- **Reduce administrative burden for S10 PIs by collecting usage hours and publications.**

- ✓ **Delegate-** A key personnel with technical expertise and is responsible for the operation and management of the instrument along with the PI
- ✓ **Operator:** An instrument user in Major/Minor user's lab

Approval Process for FRPPR and AURs

*2 weeks for submitting the revised reports



Timeline: Grant Closeout

- **Signing Official must submit the following documents through the Closeout module in eRA commons within 120 days after the end of project period**
 - FRPPR
 - Financial Status Report

(Records of expenditures and any program income generated must be maintained in accordance with the provisions of 2 CFR Part 200.328 (see Administrative Requirements— Monitoring—Record Retention and Access in IIA))
- **Four Annual Usage Reports (AURs) are required, as defined in the Notice of the Award. FRPPR and AURs should include a report from the Advisory Committee.**
- **If a recipient has failed to comply with the terms and conditions of award, NIH may take one or more enforcement actions which include-**
 - disallowing costs
 - withholding of further awards
 - or wholly or partly suspending the grant, pending corrective action
- **NIH may also terminate the grant in whole or in part as outlined in 2 CFR Part 200.340. The regulatory procedures that pertain to suspension and termination are specified in 2 CFR Parts 200.340 through 200.343.**



Prior Approval Requirements

- **Change of Instrument**

- Best time of doing so is during JIT
- Institutional support letter for the new instrument
- Letter from the AC Chair on behalf of other AC members and users supporting new instrument
- PI's justification for the new instrument, list of key features needed by each project, comparison of key features between original and new instrument

- **No Cost Extension**

- Issues with the procurement, installation and/or functioning of the instrument

- **Change of PI- Inform your PO at least a month in advance**

- Institutional support letter for the new PI
- Letter from the AC Chair on behalf of other AC members and users supporting new PI
- New PI's Bio sketch and Other Support





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Up and Running: Training and Scheduling your new Users

Carol E. Schrader PhD

Assoc. Professor, Dept. of Microbiology

Vice Chair, IBC

Director, Flow Cytometry Core

UMassChan Medical School

Up and Running: Training and Scheduling your new Users ²

My experience with the S10 SIG program:

- S10 Award 2020: BD FACSAria Fusion Cell Sorter
- S10 Award 2024: Cytex ImageStreamX MKII imaging cytometer
- S10 Review Panel 2022, 2024

**Is your S10 grant for a New Technology
or a Replacement Instrument?**

Up and Running: Training and Scheduling your new Users 3

Replacement or 2nd Instrument: will be much easier but will still require effort on your part! If the old instrument is still in service, people like to keep using it and are reluctant to transition

- Offer free training/refresher/orientation to the new instrument
- Allow one free use to compare results
- Schedule all **new** users on the new instrument

Up and Running: Training and Scheduling your new Users 4

New Technology: Will be much more involved and require more time and effort

- Advertise!! Get users excited and involved from the beginning
 - Email announcements
 - Thank you to users who supported the grant
 - Announce widely to all researchers
 - ❖ Go beyond the scope your current user base
 - all faculty and researchers
 - students
 - Poster Boards and Seminar style Postings
 - Physical board on tripod showing instrument and its capabilities
 - Electronic Billboards at Institution (lobby, cafeteria)
 - Website
 - Host a Vendor or Internal User seminar who can showcase its capabilities

Up and Running: Training and Scheduling your new Users 5

Installation

- Identify staff or user who will be responsible for operation and maintenance and get them fully trained by the vendor
- Have a backup person also well trained

Demonstration Day

- Ask Major user(s) to bring some test samples to run
- Offer 1:1 appointments with users to discuss their project with you or vendor field application scientist
- If limited time/space, priority/exclusive access to S10 Major and Minor Users

Up and Running: Training and Scheduling your new Users 6

Training: timing is everything!

- **Software training**
 - If limited space, priority/exclusive access to S10 Major and Minor Users
 - If possible, use sample data files (from vendor?) for people to work with on their own laptop
 - Record everything possible – make recordings available on your server or website
 - Store training documents on the new instrument workstation
- **Instrument Training**
 - Best done 1:1 or 1:2 at most
 - Best done when people are ready to start using (not 3 months before!)

Up and Running: Training and Scheduling your new Users 7

Scheduling

- Self-service vs. staff scheduling?
 - Staff scheduling might be required if samples will be run by a staff member
 - Self-service – for self-run samples

Calendar Options

- Separate calendar for the instrument (Outlook, Google...)
- Flexible timeslots is preferred
- Restrict access to trained users
- Possibility to provide priority access to Major and Minor users

Up and Running: Training and Scheduling your new Users 8

Continued Support

- **Workshops!!**
 - Involve super-users to support new users
 - Share data and problems
 - Plan to cover one or two specific topics
 - be prepared for people to show up but NOT have specific questions
 - Make it social – get your users to know and support each other

Up and Running: Training and Scheduling your new Users 9

Citing your new S10 Grant

- Remind users to cite the S10 award in:
 - All publications that report data from the instrument need to cite the grant in the acknowledgements
 - All new grant applications (especially NIH) when proposing to use the instrument for new research, or when data from the instrument supports the new proposal
 - Remind your new trainees
 - Training grants!!
 - New technology is great for new trainees!

Up and Running: Training and Scheduling your new Users 10

Citing your new S10 Grant

- Good places for *ongoing* reminders:
 - Permanent sign on the instrument itself and any associated workstations
 - On your website
 - Landing page (what's new)
 - Page with instrument information
 - ❖ give a sample citation people can copy
 - In/under your email signature box
 - In any mass emails where you announce events, new instruments, annual rate changes, etc.

S10 Grants – The Good, Bad, and Ugly

Vincent A. Magnotta

Professor of Radiology

Carl L. Gillies Chair

September 26, 2024

vincent-magnotta@uiowa.edu



The Good

Advisory Committee



- Be self reflective
 - What are the major achievements from the past year
 - How has the equipment been utilized
 - How has this impacted the institutional research program
- Define goals for next year
- Opportunity for improving management of equipment / facility
- Representation from users as well as external experts
 - Get feedback on how other instruments/facilities are managed
- Get written feedback that can be shared with institutional administration
 - Will need to include this as well in your annual S10 progress report



The Bad

Operations



- The equipment is installed, now what?
 - Who will operate the equipment (Users or Technologist)
 - How will equipment be scheduled (iSMART, etc)
 - Who will bill users
 - Do user fees cover costs to run and maintain equipment
 - How is data disseminated to users
 - What resources are available for analyzing the data collected
- What is missing that user's need
- How is system monitored and what is the impact of utility disruption

Maintenance

- Maintenance for the first year is covered by warranty
- Who will perform service in subsequent years
 - Service contract
 - Self maintained
- What preventive maintenance is needed
- What QA program is needed
- How quickly can instrument be repaired and how does this impact ongoing studies



The Ugly

Challenges and Lessons Learned

- Delays with equipment delivery and installation
- Ramp up time always takes longer than expected
- Often users included in the original application move
- How to expand beyond the original proposed user base
 - Find strategic partners
 - Pilot time allocation
- Does your institution value S10 proposals for promotion and tenure
- Use S10 mechanism to build institutional support
- Need good system to help with annual reports to



IOWA

Strategies to maximize S10 instruments usage, acknowledgement in publications, and outreach activities

Birgit Schilling

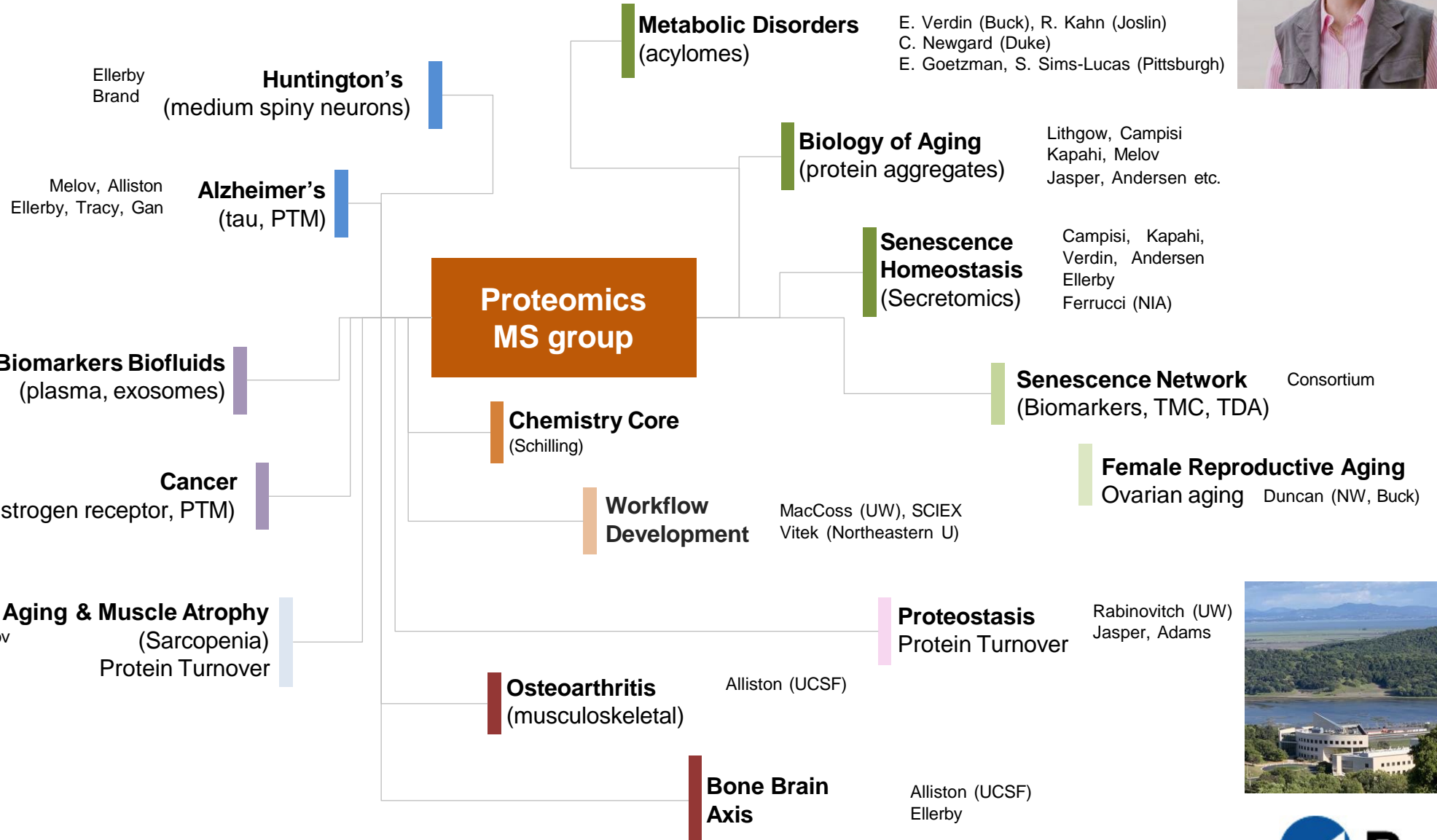
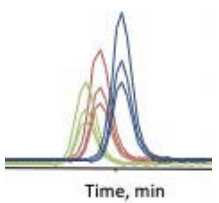
Professor and Director of the Proteomics and Metabolomics Core



September 26, 2024

Live better longer.

Selected Proteomics Projects - Buck Institute 2024



NIH S10 Mass Spectrometer Installation at Buck Institute

S10 MS instrument Installation



Orbitrap Eclipse, September 2020
S10 OD028654 (PI Schilling)

Major and Minor users (September 2020)

- 9 major users (grants)
- 13 minor users (grants)

of those 90% NIH funded

of those 6x outside users (non-Buck)

At the time Schilling was co-Investigator or PI
on 14 of the user projects/grants already

*with Dr. Christina King (Associate Director)
and Dr. Joanna Bons (Research Scientist, operator)*

Procedures to work with S10 users – Orbitrap Eclipse Tribrid MS

- **Complexity of high-end instrumentation**/mass spectrometry and workflows
- Typically, handled as **collaborative projects** (even if fee-for-service)
 - Meet with users prior to experiment design
 - Sample submission sheet (**form mentions S10 grant number**)
 - Samples are typically prepared/acquired in Proteomics Core (training)
- Results report with quantification reports (**reports mentions S10 grant number**)
- Poster presentations and manuscripts typically include us **as co-authors**
S10 grant number is typically always guaranteed (co-authors)
we review/contribute to the manuscripts before submission/publication

Outreach and New S10 Mass Spectrometry Users

- **Teaching** “GERO 616 Mass Spectrometry for Aging Research” for USC/Buck PhD graduate program (14 weeks) — **future users !!!**
- Combined lab meetings at Buck, large **PPG (P01)** and **U54** Project meetings

Connecting with large Programs (at Institute/University) to feature S10 MS use

- Buck Institute **Nathan Shock Center** (PI Verdin) – Excellence in Aging (**NIA P30**)
resources from Buck NSC cores, Pilot project funding to scientists
- UCSF **Core Center for Musculoskeletal Biology & Medicine** (PI Alliston, **NIAMS P30**)
resources from UCSF for UCSF investigators to use Buck MS Core/S10 instrument

Proactively connecting with existing and future users

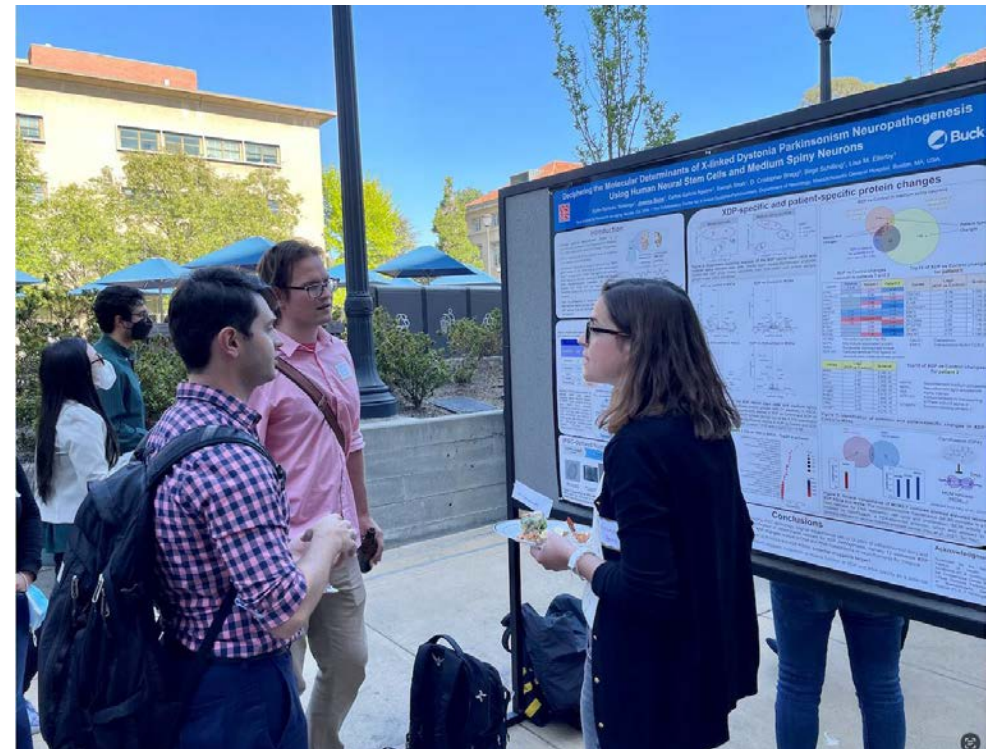
- At the 'home' Institute or Department, making sure they all understand and see the **value for their research** of the new S10 instrumentation !!!
- **Training of users** so they efficiently can use the S10 instrument --- connecting them with members from my core and lab
- **Conferences and open house** -- showing the MS instrument capabilities with users presenting (see below) their successful biological projects

Outreach and New S10 Mass Spectrometry Users

- Participation in Institute Symposia with posters and talks from MS/Schilling lab
 - Students Conference BSAS, Postdoc Conference VITAL at Buck
- Participation at Bay Area Aging Meeting (BAAM) twice a year (> 500 attendents)



BAAM at Buck



BAAM at UC Berkeley

Friday, September 6, 2024

10 am – 1 pm

Mass Spectrometry OPEN HOUSE

Presenting Special Guests:

Sunder Sims-Lucas and Eric Goetzman (U Pittsburgh)

'Altering the PTM Landscape to Protect Against Disease'

and our own Buck scientists:

- **Sidhardth Madhavan** (Newman Lab)
- **Kizito-Tshitoko Tshilenge** (Ellerby Lab)
- **Christina D. King** (MS Core & Schilling Lab)
- **Kenny Wilson** (Ellerby & Kapahi Labs)
- **Genesis Vega Hormaza** (Verdin Lab)
- **Don't miss the fun and science !!!!**

Where: **Drexler**

When: Friday September 6, 2024 at 10 am

Join for PIZZA at 1 pm



MS-OPEN HOUSE

Friday, September 6, 2024

10 am – 1 pm

Special Guests : **Sunder Sims-Lucas & Eric Goetzman** (U Pittsburgh)

Altering the PTM Landscape to Protect Against Kidney Disease

- **Sidhardth Madhavan** (Newman Lab)

Regulation of Protein Solubility by Ketone Bodies

- **Kizito-Tshitoko Tshilenge** (Ellerby Lab)

Proteomic analysis of X-linked dystonia parkinsonism disease striatal neurons reveals key molecular determinants of the neuropathogenesis

- **Christina King** (MS Core & Schilling Lab)

Proteomic Strategies Uncover A Novel Aging Phenotype in the Post-Menopausal Ovary

- **Genesis Vega Hormazabal** (Verdin Lab)

Molecular Signatures of Senescence: Proteomics Reveals New Avenues for Restoring Blood-Brain Barrier Function

- **Kenny Wilson** (Ellerby & Kapahi Labs)

The role of OXR1 in protecting against brain degeneration and cellular senescence



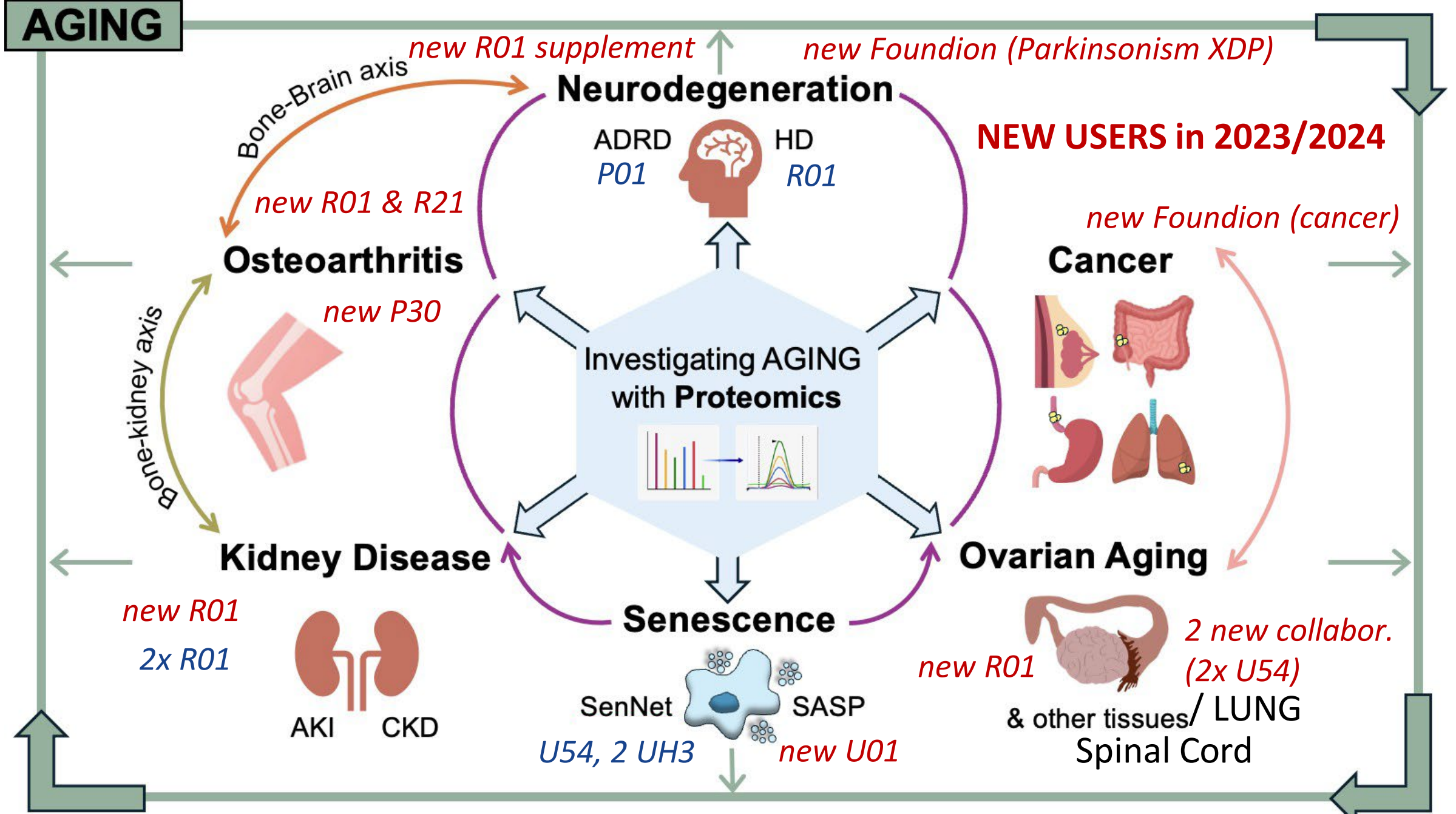
How to maximize and expand the S10 instrument usage

- Actively participating in **collaborative grant writing** (co-Investigator, or PI)
- Actively encouraging collaborators / faculty at Institute to write **new MS funds** (for S10 instrument) into their NIH grant -- **NEW GRANTS as NEW USERS**
- Engage with scientists to identify **new research areas for application of S10 instrument** --- knowing other people's science efforts

Creative Strategies:

- Being co-mentor for other labs' postdocs and students
- Increasing scientific network / collaborations via conferences

Expanding Collaborative Research – new S10 instrument use



Conclusions

- **Highly dynamic user group** for S10 (grants ending and new grants / users starting)
- Continuous collaborations and discussions with users for S10
 - to ensure they get **successful data/results/biological interpretations**
 - to help publication efforts (S10 acknowledgement)
- Transforming Pilot data (fee for service) to NIH-funded grants
- Communications, combined lab meetings, informal talks at Institute, conferences, networking
- Continuous outreach to scientist at Institute / University and outside to encourage use and to **recruit new users**

Schilling Lab 2024

Joanna Bons
Christina King
Mark Watson
Charles Schurman

Judith Campisi



Sam Shah

Charlie Schurman
Kathy Lui
Christina King
Birgit Schilling
Jordan Burton
Jacob Rose
Joanna Bons
Mark Watson
Will Chandler

Funding:
S10 OD028654
 U01 AG060906
U54 AG075932
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 P01 AG066591
 U01 AI180158
 P30 AG068345
 R21AR084303

Sims-Lucas, Goetzman
Duncan, Melov, Verdin
Koenigshoff, Phatnani



S10 reporting for Dummies: how to submit the perfect AUR every time

Simon Watkins Ph.D
University of Pittsburgh

What are the AUR's and what do I need to do

- In common with any other competitive NIH award you need to submit reports of activity.
- The goal of the report is to show the “Office for Research Infrastructure Programs” (ORIP)
 - The types of science the instrument is being used to help with
 - The productivity of the users of the device
 - The continued support for the device by the institution and its management
 - Its failures and successes
 - Essentially in my mind it justifies the continuation of the S10 program so essentially a good report is paying it forward for future applicants (including yourselves)
- Whats the point of this presentation?
 - Many awardees of S10 grants are either core managers or administrators and may never have submitted grant report to the NIH
 - Even if you have been writing reports for NIH R-, P- or U mechanisms in the past, assembling and submitting an S10 Annual Usage Report (AUR) is quite different to other mechanisms,
- The goal here is to help you prepare and assemble the perfect report.

Fundamentals

- As the award has only a one year duration there are two different reports:
 - Close out report one year after the award: Final Progress Report (FPR)
 - Annual Usage Reports, every year for 4 years following the award (AUR)
 - There used to be just one report a year after the award but for obvious reasons (it's a big investment by the NIH and its important to know that it was a good investment) this has now been extended to a full 5 year period.
- The Format for the reports is similar though you may want to tailor content differently.
- The first difference is that you are notified (by email) towards the end of the first year of the award that a report is due

1S10OD025041-01: Annual Usage Report (AUR4) Due in 30 days



s10reports@od.nih.gov

To Watkins, Simon C

Cc Offres; s10reports@od.nih.gov



1/24/2024

Dear Dr. WATKINS,

Request

The Annual Usage Report (AUR) of the instrument awarded by the grant 1S10OD025041-01, titled "Request for a Nikon A1R Multiphoton Microscope" is due on 03/05/2024. To collate all relevant information and format the report, use the ORIP online reporting system located at <https://s10reports.od.nih.gov>.

Uh... oh... what do I do?

Fortunately so in the mail is bunch of instructions and some log in details for you to follow

There is nothing wrong with getting an NCE

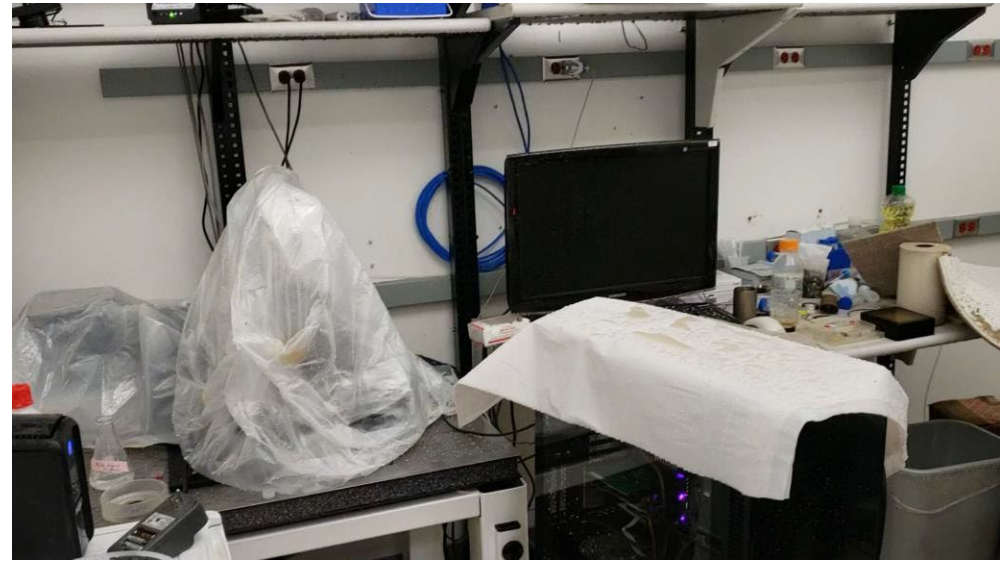
- For example....

Dear Dr. WATKINS,

Your grant award [1S100D025041-01](#) titled "Request for a Nikon A1R Multiphoton Microscope" expires in a month, on 02/28/2019, and soon afterward you will be requested to submit a Final Research Performance Progress Report (Final RPPR, FRPPR) in NIH eRA Commons According to NIH policy, a Final RPPR must be submitted within 120 days after an award end date – see <https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgrants.nih.gov%2Fgrants%2Fguide%2Fnotice-files%2FNOT-OD-15-111.html&data=02%7C01%7Csimon.watkins%40pitt.edu%7Cd3229d16d2214c60f51908d686e1f835%7C9ef9f489e0a04eeb87cc3a526112fd0d%7C1%7C0%7C636844702424070215&data=Q8kovlaCJm%2F0WIBVOaFPoUS7BJeMKRbRe0VJZAm5eY8%3D&reserved=0> and <https://na01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgrants.nih.gov%2Fgrants%2Fguide%2Fnotice-files%2FNOT-OD-17-022.html&data=02%7C01%7Csimon.watkins%40pitt.edu%7Cd3229d16d2214c60f51908d686e1f835%7C9ef9f489e0a04eeb87cc3a526112fd0d%7C1%7C0%7C636844702424070215&data=07UgWQsuodnYJrYpc1hKZgvO%2BI2JZYMeiP3nEnBIQ1k%3D&reserved=0>. However, you cannot submit this Final RPPR until after the awarded instrument has been installed and is fully functional for your user group.

In the case the instrument is not fully functional by the end date of the grant, you need to apply for a No Cost Extension (NCE) before the grant expiration date. To do so, work with your institutional Signing Official to enter an extension request on the NIH eRA Commons portal.

- In this case we had just had a major lab catastrophe
- And then... Covid
 - Be direct
 - Explain the issues
 - Getting an extension is not a problem
 - Most importantly do not try to rush the install.



What goes into the report

- Some parts of the report are very easy... others less so
- Very very simple
- Also very simple unless its got problems.. Be direct, be clear in the report
- Probably very easy.. See above
 - Having and advisory committee was an essential part of the original proposal so it should be easy to do but!
 - You do need to ensure this committee meets and performs its function
 - I always include the minutes of meetings in the report.
 - If there are problems or issues you should include the details of the discussions.
 - Having a functional advisory committee is an important and essential step.
 - If you are running a facility with an advisory committee then its easiest to use the same committee for any S10 grants so that we can cover any other business as well as discussing

Annual Usage Report 1 (AUR1)

Generated Date: 2/17/2021

* Required Field

Grant Number:

Application Title:

Principal Investigator's Last Name, First Name, Middle Initial: C

Principal Investigator's Email:

Principal Investigator's Phone Number:

Principal Investigator's Organization:

Signing Official's Last Name, First Name, Middle Initial:

Signing Official's Email:

Program Officer's Last Name:

Project Start Date: 03/01/2018

Project End Date: 02/29/2020

Reporting Period Start Date:

Reporting Period End Date:

Amount of Award:

Total Money Spent*:

NIH Total Money Spent (Cannot Exceed Award)*:

Generic Name of the Instrument*:

Model*:

Manufacturer*:

Date of Installation*:

Status of the Instrument:

Confirm that you still need the instrument?* Yes No

Is it functioning?* If no, please include an explanation in the AUR Narrative. Yes No

* If you select yes below, please provide an explanation in the AUR Narrative.

Any changes in the administrative and technical operation of the equipment from the original application?* Yes No

Any updates to or modifications of the instrument?* Yes No

Any changes to the financial plan?* Yes No

Any changes in the institutional support, especially changes affecting the institutional back-up of the financial plan?* Yes No

Members of Advisory Committee

First Name	Last Name	Title	Affiliation	Role
				Member
				Member
				Member
				Member
				Chair

Total number of Advisor Members: 5

Now to the tricky bits

Accessible Usage Time for Biomedical Research (in hours per year) (AUT hours may be limited by the times an instrument is available, estimated or scheduled maintenance, start-up and standardization, and any other factors that take time away from the instrument.)

Accessible Usage Time for Biomedical Research
(in hours per year)*:

In this table, list PIs' names and information about their projects. For "New Projects" (which were not described in the SRS), enter the PI's name, project title, and a brief description of the project. For "Existing Projects" (which were described in the SRS), enter the PI's name, project title, and a brief description of the project. Enter NIH grant numbers for "Active" projects. For "Inactive" projects, delete it from the table. It is important that you select a "Yes" flag if a project conducts HIV/AIDS-relevant research.

NIH grants must be Active for the entire reporting period or its portion.

List all projects and their actual usage time in hours.

- Accessible user Time.
 - You predict this in the proposal but you never know and it can vary from year to year.
 - This is for the Multiphoton microscope above and was originally predicted to be used around 2000 hours each year
 - Clearly it now far exceeds this which is great
 - BUT.....

- To get this number... you need to
- Track use hour by hour
- You need to also track the use by each user.
- A decent tracking software really helps

August 2024



Not only do you need to know

- how much the instrument has been used...
- Who has been using it
- What their funding is
- What they did with the data ? (did they publish it and is there a citation?)
- This is relatively easy for an instrument like this multiphoton
- Lots of intense use by a small(ish) group of users

Tricky part #2

Users/Projects										
New Project	User Type	Research Area	Source of Funding	Grant Number	Grant Status	PI First Name	PI Last Name	HIV/AIDS	Usage Hours	% Usage
No	Major	vascular biology	NIH		Active			No	2305	68.56
No	Major	sickle cell disease	NIH		No Cost Extension			No	731	21.74
No	Minor	cancer biology	NIH		Active			No	89	2.65
No	Minor	Urinary tract	NIH		No Cost Extension			No	77	2.29
No	Minor	cell biology	NIH		Active			No	8	0.24
Yes	Major	ocular biology	NIH		No Cost Extension			No	125	3.72
Yes	Minor	immunology	NIH		Active			No	19	0.57
Yes	Minor	cell biology	NIH		Active			No	4	0.12
Yes	Minor	lung biology	NIH		Active			No	4	0.12

Total number of Users: Minor: 6 Major: 3 Total: 9

Total number of Distinct Users: 9

Actual Usage Time: 3362 Usage for NIH Projects: 3362 Percentage of usage for NIH projects: 100.00 % Percentage of usage for HIV/AIDS projects: 0.00 %



However, for some instruments this is very difficult.....

- This is a conventional confocal funded 8 years ago
- Used 2600 hours each year by over 100 NIH funded groups
- This is average monthly use
- Many many independent users and groups
- How to deal with this.
- We have built our own software platform fortunately for anyone attending ORIP is releasing a new tool that will allow you to manage and track use easily.
- I will discuss this product in a minute.

The MOST tricky part...

- Getting people to Cite the grant in papers..
 - And if people do cite the grant to find those Citations.
 - Again, easy for a small user group.. Just email each user... much much harder for devices with many users....
 - This has been the most common reason my reports have been sent back for editing
 - My Tips.
- The obvious
 - Signs on doors which house the instruments
 - Constant reminders (on the login page for reservations)
 - If your user group is part of a P30 or other many other programmatic mechanisms these data are already collected by the organizers
 - For example:
 - Cancer Center Support Grants,
 - Obrien Kidney Centers
 - Diabetes research Centers
 - Etc etc.
 - Ask the leaders for this information.

Suggestions from ORIP

These were from Alena Horska who recently retired from ORIP

- Posting a sign on an instrument that it was awarded by an S10 grant and that the grant has to be referenced.
- If scheduling/billing/sending info/.. is done by e-mail, the Contact information section can also include a list of all grants (Program Project/S10 grants/..) that have to be referenced. I have seen this a few times in e-mails.
- In some centers, before the Users can start using the instrument, they have to sign an agreement, which also contains information about the S10 grant.
- S10 info can be included on invoices.
- Reminders at user/departmental/... meetings (for example, after a presentation that is based on the usage of the instrument).
- Rewards to users for published papers (free scan time, posting of papers on institutional/core websites,...).
- Backup plan: If there is a publication in which a User forgot to cite the grant, the paper should be associated with the S10 grant in My NCBI. Linked publications will also show up in the NIH RePORTER under the S10 grant.
- One of our most successful (in terms of the number of publications) grantees told me that, in their core, they don't do anything special except creating an "environment of understanding" that the supporting NIH grants have to be referenced in the papers.

Fortunately our friends at ORIP are good at finding papers you miss....

- From another grant

The revisions required are as follows:

Minor revision:

Thank you for submitting a detailed AUR2 with interesting research highlights. Two publications are reported in AUR2 but the NIH RePORTER already lists a total of 7 papers (congratulations!). Please update the Publication table.

After submission of your revised AUR report, you will receive an e-mail indicating either further revisions are required or that the AUR report is complete. In the latter case, the e-mail will include an attached PDF version of the report and instructions for its official submission by your Signing Official (SO) to the NIH eRA commons site.

Success!!!!

•Mail, for the FPR

Your Program Official (PO) has reviewed your Final Progress Report (FPR) of the grant award **1S100D025041**-01, titled "Request for a Nikon A1R Multiphoton Microscope" and found that it is complete and ready to be submitted officially to the NIH via the eRA Commons website. Please upload the attached PDF file, without any alterations, to your Final Research Performance Progress Report (Final RPPR, FRPPR) in eRA Commons, Section B – "Accomplishments", Part B2 "What was accomplished under these goals". In other fields, simply enter "See Part B2".

The Final RPPR report is not considered official until a complete PDF version of the entire report is submitted by your Signing Official (SO), so please work with your SO to make your submission official.

Dear Dr. WATKINS,

•Mail for the AUR

Your Program Official (PO) has reviewed your Annual Usage Report (AUR) of the grant award **1S100D025041**-01, titled "Request for a Nikon A1R Multiphoton Microscope" and found that it is complete and ready to be submitted officially to the NIH by your Signing Official (SO). The PDF version of your AUR is attached to the email. (The SO is copied on this message.) Please request the SO to send this AUR attachment without any alterations to your PO, to indicate the institutional approval of the report.

Other parts in the Narrative are quite simple and direct:

- What research that this instrument supported has largest impact on health or scientific discovery and why?
- Highlights of research and/or publications using the instrument during the reporting period, as applicable.
 - I often put little vignettes in this part
- Describe accomplishments or challenges with the instrument during day-to-day operation and its usage in this reporting period, as applicable; plans to boost the usage if there is a substantial reduction in instrument usage.
 - Be direct, state all the problems this will be easy from the advisory committee
- Improvement on using scheduling system for instrument and training of users.
 - This is next in the discussion

Other parts in the Narrative are quite simple and direct: part 2

- Descriptions of all new projects that were added during the reporting period.
 - This is very very hard for very active instruments.
 - I always limit this to heavy users (50 hours/year or more).
 - I get information from Grant reporter on the project.
- Activities pertaining to the administration and Advisory Committee during the current reporting period.
 - See above
- Were the strategies to encourage users acknowledging S10 grant in their publications effective? If not, what improvements have/(will) you implement(ed)?
 - See above

ORIP is providing a booking solution that will be extremely useful
There will be a demonstration later in the meeting

iSMART System Overview

- Integrated into the S10 reporting system
- Allows for easy importing of time usage into annual S10 reports
- Allow for easy scheduling across many users
- Delegation of PI to authorized users to manage instrument usage
- Can be used for non-S10 instruments
- Free of charge

The screenshot displays a web-based form for instrument booking. The form is organized into two columns of input fields. The left column includes fields for Grant Number, Application ID, Application Title, Principal Investigator's Last Name, First Name, Middle Initial, Principal Investigator's Email Address, Principal Investigator's Phone Number, Principal Investigator's Organization, Signing Official's Last Name, First Name, Middle Initial, Signing Official's Email, and Program Officer's Name (Last Name Only). The right column includes fields for Generic Name of Instrument, Model, Manufacturer, Date of Installation, Application Requested Budget, Amount of Award, Project Start Date, Project End Date, Designee Last Name, First Name, and Designee's Email. At the bottom right of the form, there are two buttons: 'iSMART' and 'Assign Designee'. The 'iSMART' button is highlighted with a red circle.

Benefits to S10 PI

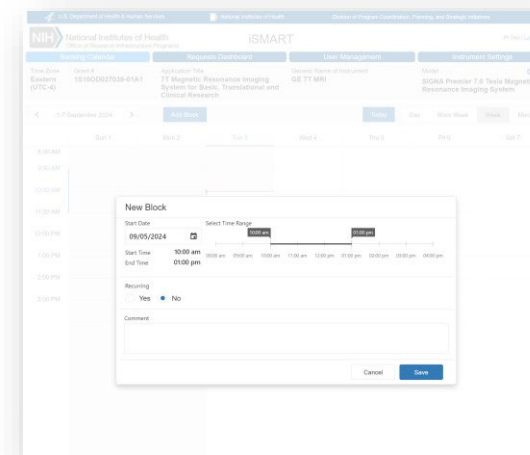
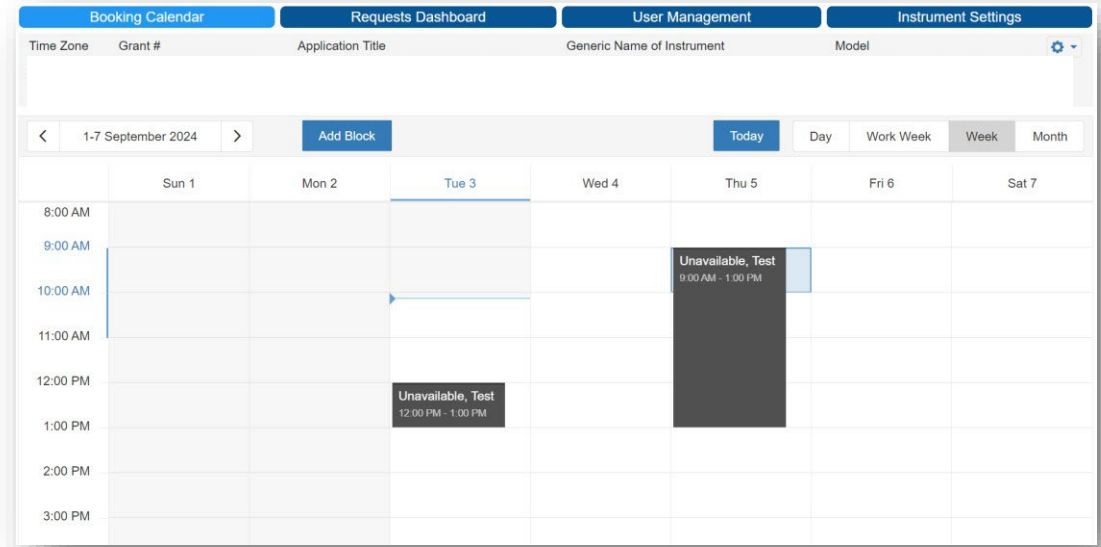
- Provides PIs and instrument operators with an easy-to-use module to manage instrument's operation schedules
- Users can be imported from JIT; PI can add other users
- Downloadable reports of usage
- Encourages acknowledgement of S10 grant in publications
- Reduces S10 PI's administrative burden by delegation

Status	Request	Submitted On	Operator	Grant #/Project ID	Request Detail	Last Update	Action
Unavailable	000005	09/03/24			09/05/2024, 09:00am - 01:00pm	09/03/24 10:06am	Cancel
Unavailable	000004	09/03/24			09/03/2024, 12:00pm - 01:00pm	09/03/24 10:06am	Cancel
Unavailable	000003	08/27/24			08/29/2024, 08:00am - 10:00am	08/27/24 03:54pm	
Unavailable	000002	08/27/24			08/28/2024, 09:00am - 10:00am	08/27/24 03:50pm	
Canceled	000001	08/27/24			08/28/2024, 08:00am - 09:00am	08/27/24 03:50pm	

Last Name	First Name	Email	Active	Imported	Auto-Approve	Last Update	Link
			(All)	(All)	(All)	08/26/24 02:53pm	View Delete
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		08/26/24 02:52pm	Activate
				<input checked="" type="checkbox"/>		08/26/24 02:52pm	Activate
				<input checked="" type="checkbox"/>		08/26/24 02:52pm	Activate

Benefits to Users and Navigation

- Schedule time on instrument
- See overall availability to allow for planning
- Similar interface to Outlook calendars to allow for intuitive scheduling



iSMART Future Enhancements

- Billing capability
- Allowing S10 PIs to manage team members of instrument users
- Centralized user management, associate users with multiple instruments
- Allow instrument booking requests to span multiple days
- Develop mechanism to allow S10 PIs to login without main S10 system access
- System announcements that can be set by PI

Access and Contact

- Once you have access to your instrument in the S10 system, you will automatically also have access to iSMART
- For questions or feedback please contact:
s10reports@od.nih.gov
vadim.fuks-rabinovich@nih.gov and leo.fox-rabinovitz@nih.gov

iSMART Demonstration