

Session #7: Interdisciplinary Research Within the Appointment, Promotion and Tenure Processes

Presentation will begin at 12:00 PM (PT)



ITHS

Institute of Translational Health Sciences
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2023-2024 TEAM SCIENCE SEMINAR SERIES SCHEDULE

Logistics: 10 one-hour sessions occur October 2022–July 2023 from 12–1 PM on the 1st Thursday of each month. A certificate of completion is offered through ITHS to those who attend 8 or more sessions (80%) & complete the session evaluation.

Date	Topic	Date	Topic
10/5/23	Introduction to the Team Science Seminar Series 2023-2024: Collaboration & Teamwork	3/7/2024	Engaging the Community
11/2/2023	Kicking-off a New Team	4/4/2024	Interdisciplinary Research Within the Appointment, Promotion and Tenure Processes
12/7/2023	Team Writing: Opportunities & Challenges	5/2/2024	Writing Teaming Plans for Grants
1/4/24	Tools for Collaboration	5/23/2024	Leadership: Managing Up and Delegation
2/1/2024	Promoting Psychological Safety at Workplaces: Speaking Up and Listening Skills	6/6/2024	Biases, Microaggressions, and Specific Challenges

Feedback

If you registered and attended this seminar, you will automatically receive an email with a link to the evaluation after the seminar has ended. If you did not register or do not receive an email within 24 hours of the session, email Laurel Barchet at lah19@uw.edu to request a link to the evaluation.

Presenters:

Brenda Zierler, PhD, RN, FAAN



Jonathan Posner, PhD



Learning Objectives

AT THE END OF THE SEMINAR, PARTICIPANTS WILL BE ABLE TO:

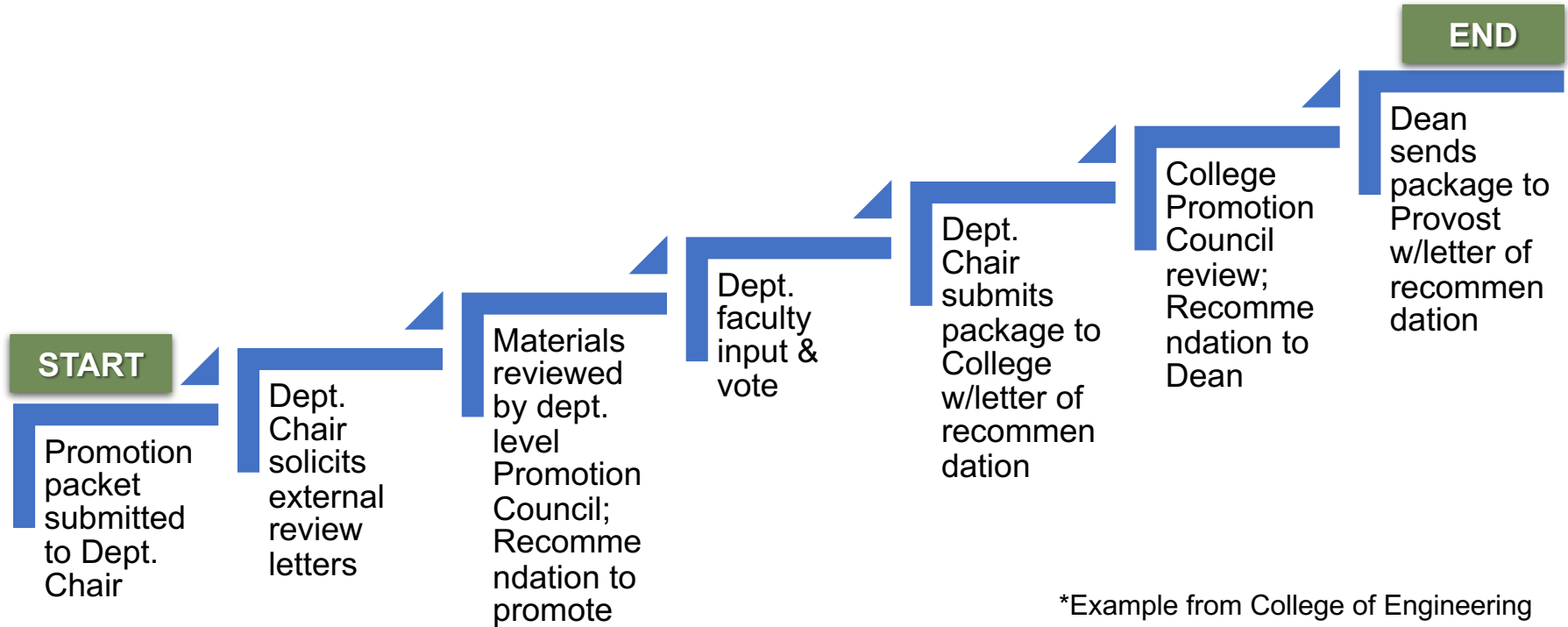
1. Describe the importance of incorporating interdisciplinary research practices and language in the promotion and tenure process.
2. Discuss current barriers and facilitators of interdisciplinary research.
3. Share best practices and ITHS Team Science APT Toolkit to aid the recognition and rewarding of interdisciplinary research in promotion and tenure.



Interdisciplinary Research – What is It?

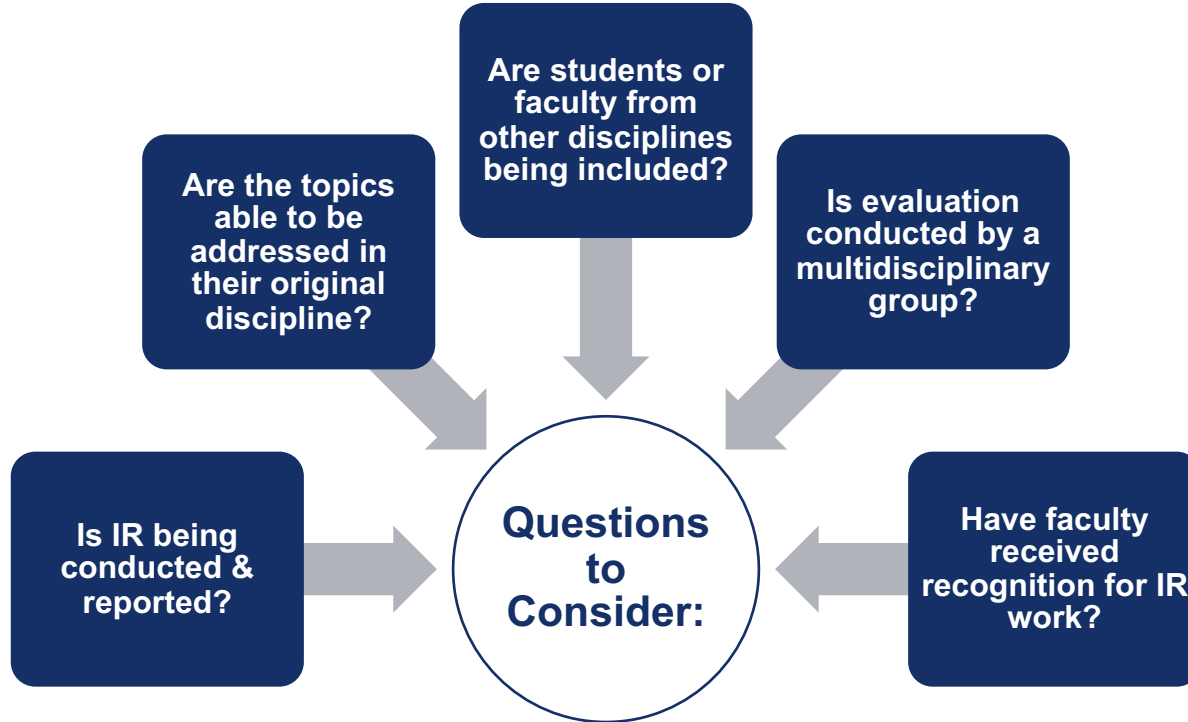
- ▶ **Multidisciplinary:** draws on knowledge from different disciplines but stays within the boundaries of those fields. A process for providing a juxtaposition of disciplines that is additive not integrative (disciplinary perspectives are not changed, only contrasted). ¹
- ▶ **Interdisciplinary:** joint, coordinated and continuously integrated research done by experts with different disciplinary backgrounds, working together and producing joint papers, reports, & recommendations. ¹
- ▶ **Transdisciplinary:** Involves scientists from relevant disciplines, as well as stakeholders, nonscientists, and non-academic participants. ¹

Promotion Process



*Example from College of Engineering
Dept. = Department

Recognition of IR: Evaluating Faculty



Institutional Barriers to IR

Limited resources

Traditional systems within academia

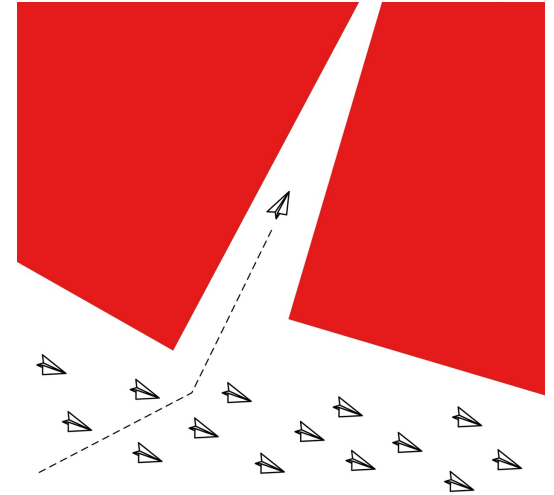
Institutional cultures

Department policies & procedures

- Control of space or capital-intensive facilities
- Allocation of indirect-cost recovery funds
- Credit for multi-author papers

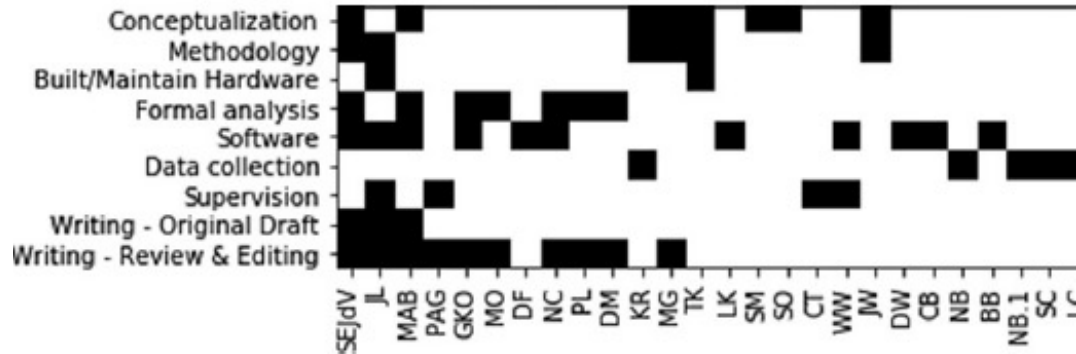
Examples of Institutional Support of Faculty

- ▶ Change reward structure
- ▶ Treat IR similar to discipline-specific work
- ▶ Publication credit outside of discipline
- ▶ Allowance for long startup times
- ▶ Curricular integration
- ▶ Faculty fellowships for IR proposals

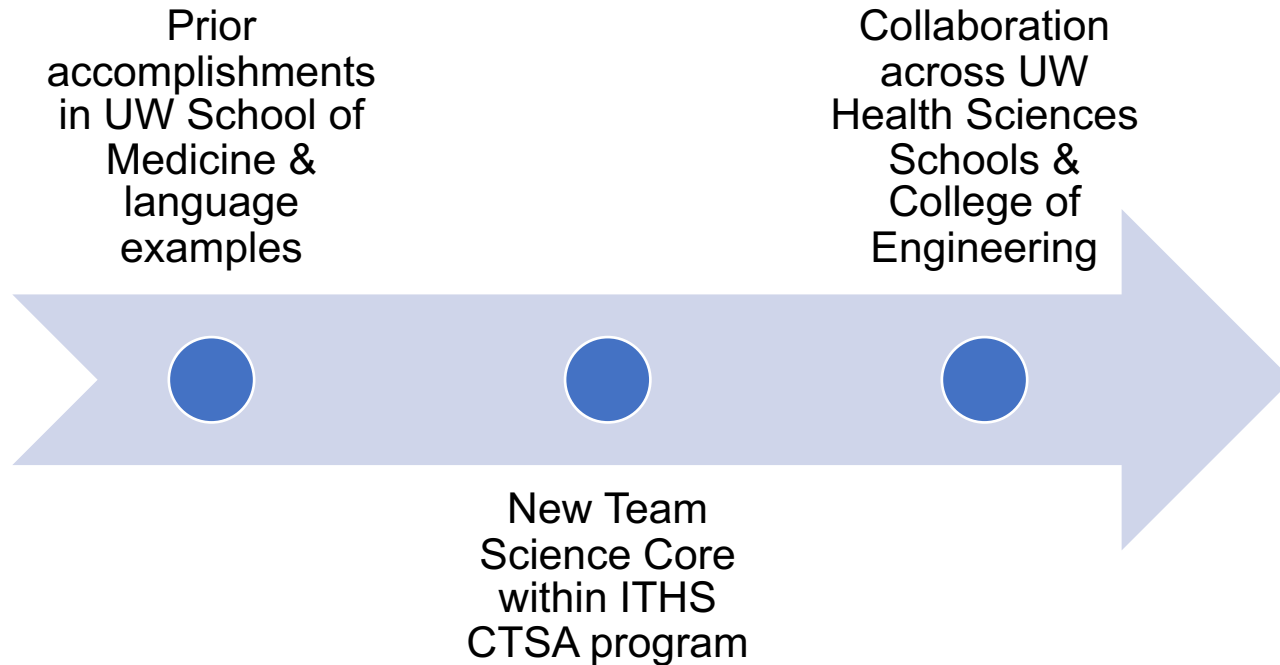


Structural Changes Needed Nationally

- ▶ Recognition of co-first or corresponding authors
- ▶ Support of collaborations & multiple-PIs from funding agencies
- ▶ List contributions, role, & value of each author on publications



Recognition of IR in APT at UW



UW Faculty Survey

Faculty Perceptions N=118

- 95%** Currently conducting interdisciplinary research¹
- 98%** Indicated interdisciplinary research is important
- 85%** Believe UW faculty code should encourage interdisciplinary research

¹Or have in the past

²25% indicated “Don’t know”

Agree or strongly agree N=118

- >80%** My department/division & school/college is supportive of interdisciplinary research
- 43%** My school/college’s promotion & tenure criteria provide examples that include participation in interdisciplinary research²

UW Department Chairs & Admins Workshop

Aspirations for recognizing IR in APT Process

- ▶ Modification of PT criteria
- ▶ Toolkit with exemplars & templates
- ▶ Support structures (e.g., training, mentorship, workshops, open forums)
- ▶ Financial assistance for interdisciplinary research (e.g., holistic funding)
- ▶ Joint appointments
- ▶ Celebration/recognition of impactful interdisciplinary teams & projects

APT Toolkit

▶ <https://collaborate.uw.edu/online-training-and-resources/apt-toolkit/>

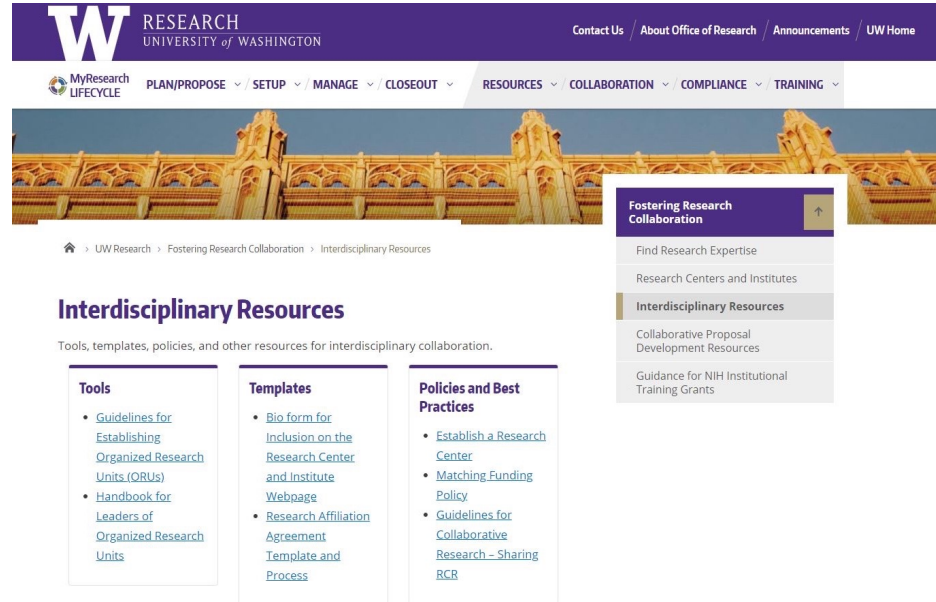


TABLE OF CONTENTS

PREFACE	2
DEFINITIONS	4
APT CRITERIA LANGUAGE	4
RESOURCES AND EXAMPLES FOR FACULTY	7
Section 1: Faculty Candidate	7
Item a: Goal or Self Advocacy Statement	8
Item b: Curriculum Vitae	8
Section 2: Promotion Letters	11
Item c: Review of Potential Letters	11
Item d: Letter to External Reviewer	12
Section 3: Institutional Structures & Policies	14
Item e: Indirect Cost Recovery and UW Office of Research Resources	14
Item f: Scholarly Identity and Digital Portfolios	16
ACKNOWLEDGEMENTS.....	17
REFERENCES.....	17

UW Office of Research Resources

- ▶ Organized Research Units (i.e. centers & institutes)
- ▶ Matching funds as required by funding agency
- ▶ Guidelines for collaborative research
 - Sharing Research Cost Recovery (RCR) funds
 - Use internal UW sub-budgets



The screenshot displays the website for the UW Office of Research Resources. The header features the University of Washington logo and navigation links for 'Contact Us', 'About Office of Research', 'Announcements', and 'UW Home'. Below the header is a navigation menu with categories like 'MyResearch LIFECYCLE', 'PLAN/PROPOSE', 'SETUP', 'MANAGE', 'CLOSEOUT', 'RESOURCES', 'COLLABORATION', 'COMPLIANCE', and 'TRAINING'. The main content area is titled 'Interdisciplinary Resources' and includes a sub-header 'Tools, templates, policies, and other resources for interdisciplinary collaboration.' The page is organized into three columns: 'Tools' with links for 'Guidelines for Establishing Organized Research Units (ORUs)' and 'Handbook for Leaders of Organized Research Units'; 'Templates' with links for 'Bio form for Inclusion on the Research Center and Institute Webpage' and 'Research Affiliation Agreement Template and Process'; and 'Policies and Best Practices' with links for 'Establish a Research Center', 'Matching Funding Policy', and 'Guidelines for Collaborative Research - Sharing RCR'. A sidebar on the right offers a 'Fostering Research Collaboration' menu with options like 'Find Research Expertise', 'Research Centers and Institutes', 'Interdisciplinary Resources', 'Collaborative Proposal Development Resources', and 'Guidance for NIH Institutional Training Grants'.

UW Promotion & Tenure Guidelines that Support IR

UW Faculty Senate passed Class A Legislation No. 99 (1999) which included specific language supporting interdisciplinary research in promotion and tenure (24.32.B).

Other important elements of scholarly achievement include involvement in and contributions to interdisciplinary research and training.

- Opened the door to recognizing and rewarding faculty who pursue IR
- Few examples of individual schools, colleges, and departments who have translated this language to specific criteria and metrics in their own promotion and tenure guidelines.

UW Promotion & Tenure Guidelines that Support IR

UW School of Nursing – May 2020

Scholarship, as described in the Faculty Code and Governance (Section 24-32) is reflected in contribution to knowledge, performance of students related to inquiry, constructive professional contributions, quality of scholarly products, impact of work, funding, and interdisciplinary research.

UW Department of Global Health – May 2009

Interdisciplinary research: DGH aims to promote interdisciplinary global health interests throughout the UW.

Interdisciplinary research can often require greater faculty time and effort; the evaluation of candidate's research productivity will therefore encompass not only an individual's contribution to research but also assess the extent to which the individual worked beyond the bounds of a specific discipline and engaged in collaboration and cross-disciplinary activity.

DGH recognizes and assigns value to a wide range of teaching activities because of the inter-disciplinary nature of global health and its mission to build human and institutional capacity in resource-limited settings through education and related capacity-building activities. The critical role of interdisciplinary global health education and training within and beyond the health sciences frequently requires greater faculty time and effort than is usually necessary for the development and delivery of the more narrowly focused didactic and experiential education in many other fields. DGH appointment and promotion criteria must, therefore, emphasize the value of these interdisciplinary activities and reward them.

UW Promotion & Tenure Guidelines that Support IR

UW School of Public Health – September 2014

...faculty are encouraged to collaborate with fellow faculty.... Interdisciplinary contributions are encouraged. Innovative and interdisciplinary efforts in teaching, research, and academic Public Health Practice scholarship are encouraged and will be given special recognition in the promotion review.

UW School of Medicine – February 2020

“Independence: changing paradigms of interdisciplinary work and “team science” can often make attribution of effort and the assignment of an individual’s contribution to scholarship and a research program difficult. Independence in research is a hallmark of a member of the regular faculty and some research faculty. Yet defining it by classic roles and responsibilities, such as senior authorship or PI status on a grant, may be difficult. This is especially true of faculty on the research track where team science and programmatic needs may limit time and resources for independent scholarship. Clear enunciation of the candidate’s contribution and impact on a scientific program is essential. This should be described in the self- assessment, the chair’s letter, and in internal referee letters.”

UW Promotion & Tenure Guidelines that Support IR

Example suggested language for APT criteria

UW aims to promote and recognize interdisciplinary research (IR). The National Academies defines IR as, “a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.” **The UW recognizes original research contributions in peer-reviewed publications as well as integrative and applied forms of scholarship that involve cross-cutting collaborations with business and community partners, including translational research, commercialization activities, and patents.**

IR often requires significantly more faculty time and effort. **The evaluation of a candidate’s research productivity will, therefore, encompass not only an individual’s contribution to research but also assess the extent to which the individual worked beyond the bounds of a specific discipline and engaged in collaboration and cross-disciplinary activities.**

Highlighting IR in a Curriculum Vitae

Mentoring:

- ▶ Identify & highlight interdisciplinary contributions to all areas of scholarship (mentoring, publications, funding)
- ▶ Co-mentoring of trainees on interdisciplinary projects

Past/ Current	Name	Degree / Department/ School/ University	Period	Title of Research	My Role	Co- mentoring Description	Current Position
Past	Andrew Bender	PhD, Mechanical Engineering, College of Engineering, UW	2015- 2020	Sample Preparation for Point-of-Care Nucleic Acid Amplification Testing of Bloodborne Viruses	Primary mentor in areas of isothermal amplification, analytical evaluation, diagnostic test validation	Co-advised by Dr. Drain, MD (UW School of Medicine) in areas of user research, clinical feasibility, diagnostic test validation; mentored in HIV diagnostics research by Dr. Garrett, MD (Centre for the AIDS Programme of Research in Africa	Senior Scientist, University of Washington

Highlighting IR in a Curriculum Vitae (Mentee)

Being Mentored:

- ▶ Being mentored from PIs/faculty from different disciplines

Name: Jane Doe– Interdisciplinary Implementation Science Training Program (K12) Scholar				
Position	Degree/Department/ School/University	Period	Title of Research	Mentors' Discipline & Position
Assistant Research Professor	PhD, RN/ Biobehavioral Nursing & Health Informatics/School of Nursing/UW	2018- present	Implementation and Effectiveness Outcomes Associated with Structured Interprofessional Bedside Rounds (SIBR)	Nursing; Prof (Brenda Zierler) Global Health; Prof (Bryan Weiner) Medicine; Prof (Kevin O'Brien Pharmacy; Assoc Prof (Danielle Lavallee Medicine; Prof (Randall Curtis)

Highlighting IR in a Curriculum Vitae

Publications:

- ▶ Historically trainees are first author, PI as last & senior author
- ▶ Large number of authors in IR work, often resulting in significant number of middle authors
- ▶ Denote your trainees with special fonts (bold, underline, asterisks)
- ▶ Provide a few sentences on the project, your role & your trainees role, the impact of the work, & why the interdisciplinary collaboration was critical in making the work possible.

A.O. OLANREWAJU, **B.P. SULLIVAN**, A.R. BARDON, T.J. LO*, T.R. CRESSEY, J.D. POSNER, P.K. DRAIN. 2021. Pilot Evaluation of an Enzymatic Assay for Rapid Measurement of Antiretroviral Drug Concentrations, *Virology Journal*, 18, 77.

This publication resulted from a multi-PI (Posner and Drain) NIH funded project focusing on the development and validation of an assay to measure adherence to HIV antiretroviral therapy. The assay will be translated to a CLIA lab where it will be validated. The acceptance of the lab test will be evaluated in the clinic. Posner's group is developing and validating the assay and Drain's group is evaluating the utility and acceptance of assay in the clinic. Olanrewaju is a postdoctoral scholar in the Posner lab and is co-advised by Dr. Drain, MD. Sullivan is a PhD candidate in Mechanical Engineering, advised by Posner and mentored by Dr. Drain. Bardon is a PhD student in Drain's group and also mentored by Posner for this project. Lo is a Chemical Engineering master's student in Posner's lab.

Highlighting IR in a Curriculum Vitae

Research Funding:

- ▶ Funding enables research to be conducted, the publication of manuscripts, training of students, & facilitates collaboration.
- ▶ Serving as the PI of IR grants demonstrates leadership in team-based research (may not be needed at assistant professor level)
- ▶ Clearly articulate your role in obtaining research funding & how you & your groups' contributions made work possible.

Agency	Title	Period	PI	Role	Total Award	Posner Award
NIH/NIAD	A novel REVerSe Transcriptase Chain Termination (RE- STRICT) assay for near-patient, objective monitoring of long- term PrEP adherence	2020-2025	Drain, Posner, Multi-PI	Expertise in assay development and validation diagnostic tests	\$3500k	\$1250k
DoE	Multidisciplinary Design of an Innovative Natural Draft, Forced Diffusion Cookstove for Woody and Herbaceous Biomass Fuels in East Africa	2013-2017	Posner	PI, lead development of clean cookstove for Kenya. The stove is now sold commercially.	\$900k	\$900k

Highlighting IR in a Goal or Self Advocacy Statement

- ▶ Include a statement that describes scholarly activity & contributions to your field/discipline
- ▶ Connect your activities to the specific IR promotion & tenure guidelines in your school/college
- ▶ Highlight collaborative mentoring of trainees, publications, community engagement, & research grants

Questions to consider:



- What are the important challenges & why is an interdisciplinary team critical?
- What was your role in identifying this challenge and in assembling or leading the team?
- How are you and your trainees contributing to solving these challenges? What are your specific contributions?
- How was the project funded? What publications results?

Chair's Request for Letters from External Reviewers

EXAMPLE:

Of note, Dr. XXXXX has described herself as an interdisciplinary researcher. She has been a major scientific contributor on several funded research grants, but not necessarily as the principal investigator.

Interdisciplinary research is highly valued at the University of Washington, and we intentionally seek reviewers with experience in interdisciplinary research. We recognize that the challenge of solving complex unmet challenges and its scholarship as an intellectual pursuit may not be limited to one discipline. In order to assist in the evaluation and assessment of interdisciplinary scholarship and how it integrates with the candidate's scholarly portfolio, all candidates for promotion who identify as interdisciplinary researchers are required to provide additional materials.

References

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2. Cline, H., Coolen, L., deVries, S., Hyman, S., Segal, R., Steward, O. (2020). Recognizing team science contributions in academic hiring, promotion, and tenure. *The Journal of Neuroscience*, 40(35): 6662-6663).
3. Disis, M.L. & Slattery, J.T. (2010). The road we must take: Multidisciplinary team science. *Science Translational Medicine*, 2(22), 22-29, doi: 10.1126/scitranslmed.3000421.
4. Mazumdar, M., Messinger, S., Finkelstein, D.M., Goldberg, J.D., Lindsell, C.J., Mortaon, S.C., & ... (2015). Evaluating academic scientists collaborating in team-based research: a proposed framework. *Academic Medicine*, 90(10), 1302-1308
5. National Research Council (U.S.). Committee on the Science of Team Science., et al. (2015). Enhancing the effectiveness of team science. Washington, D.C., The National Academies Press.

Acknowledgements

- ▶ Nicole Summerside
- ▶ Frances Chu
- ▶ APT Leads & champions from 6 Health Science Schools, Health Sciences Library, College of Engineering, Population Health, & College of Built Environments
- ▶ ITHS Team Science Core

Thank You!

Open for Questions & Discussion

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