Career Development Series 2021
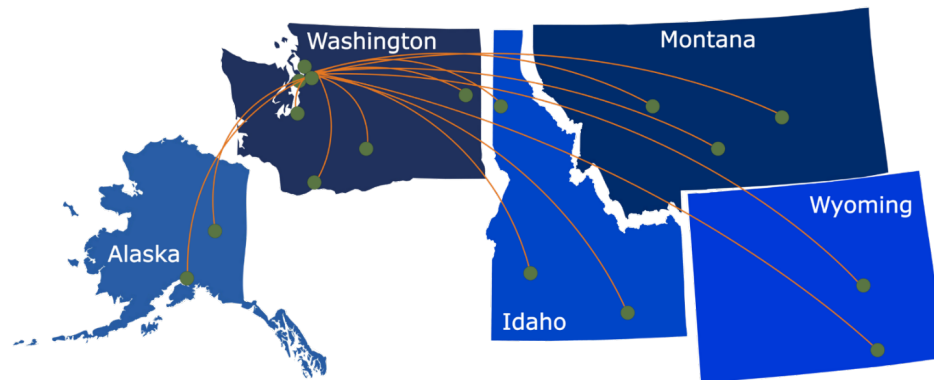
Acknowledging and Rewarding Interdisciplinary Research within Appointment, Promotion and Tenure Processes

Presentation will begin at 11:00 AM (PT)

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What We Offer:

1 **Research Support Services:** Members gain access to the different research services, resources, and tools offered by ITHS, including the ITHS Research Navigator.

2 **Community Engagement:** Members can connect with regional and community based practice networks

3 **Education & Training:** Members can access a variety of workforce development and mentoring programs and apply for formal training programs.

4 **Funding:** Members can apply for local and national pilot grants and other funding opportunities. ITHS also offers letters of support for grant submissions.

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Contact our Director of Research Development

- Project Consultation

- Strategic Direction

- Resources and Networking

Melissa D. Vaught, Ph.D.
ithsnav@uw.edu
206.616.3875

Feedback

At the end of the seminar, a link to the feedback survey
will be sent to the email address you used to register.

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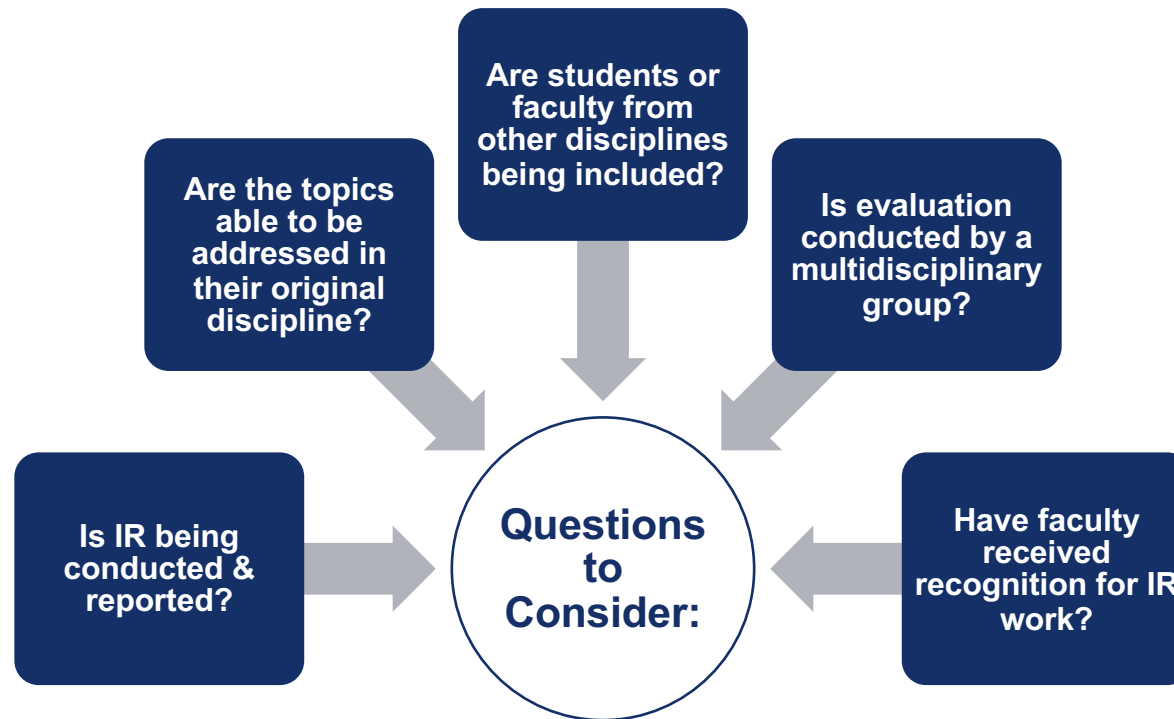ACCELERATING RESEARCH. IMPROVING HEALTH.

Learning Objectives

1 Describe the importance of incorporating interdisciplinary research practices and language in the APT process

2 Discuss current barriers and facilitators of interdisciplinary research

3 Acquire access to the ITHS Team Science APT Toolkit to recognize, support, and reward interdisciplinary research & collaboration

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]

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Recognition of IR: Evaluating Faculty

Are students or faculty from other disciplines being included?

Are the topics able to be addressed in their original discipline?

Is evaluation conducted by a multidisciplinary group?

Is IR being conducted & reported?

Questions to Consider:

Have faculty received recognition for IR work?

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
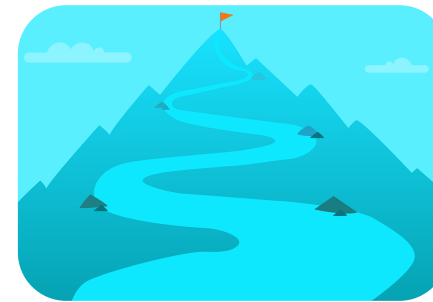- Credit for multi-author papers

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Examples of Institutional Evaluation of IR

Visit from expert committees in IR (internal/external)

Informal feedback

Assessments from PI

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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

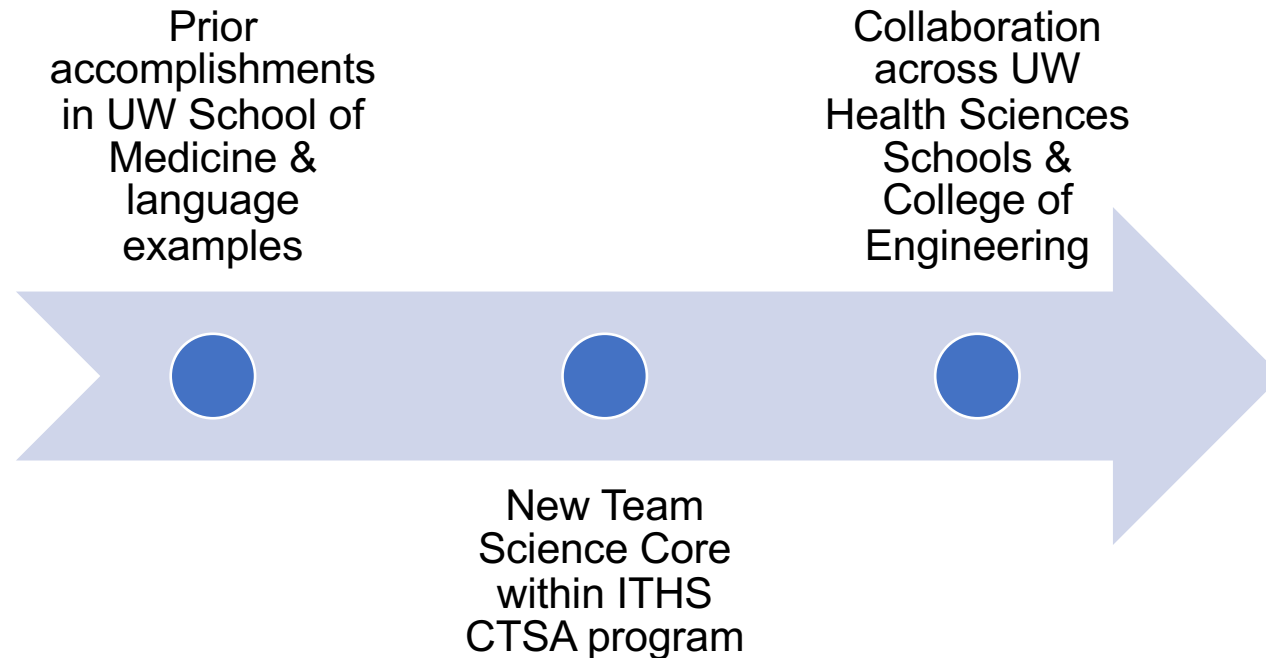► Curricular integration

► Faculty fellowships for IR proposals
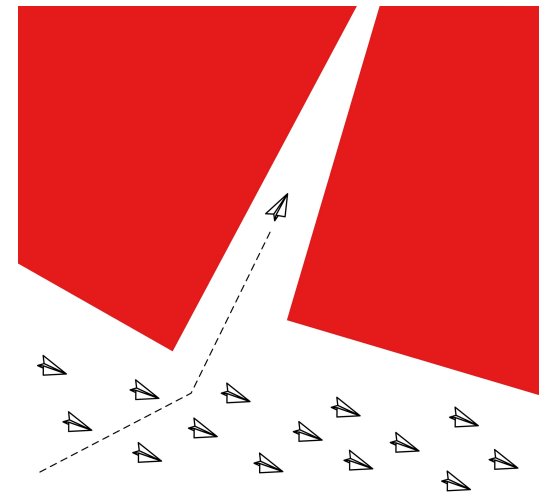
Structural Changes Needed Nationally

► Recognition of co-first or corresponding authors

► Support of collaborations & multiple-PIs from funding agencies

► List contributions, role, & value of each author on publications
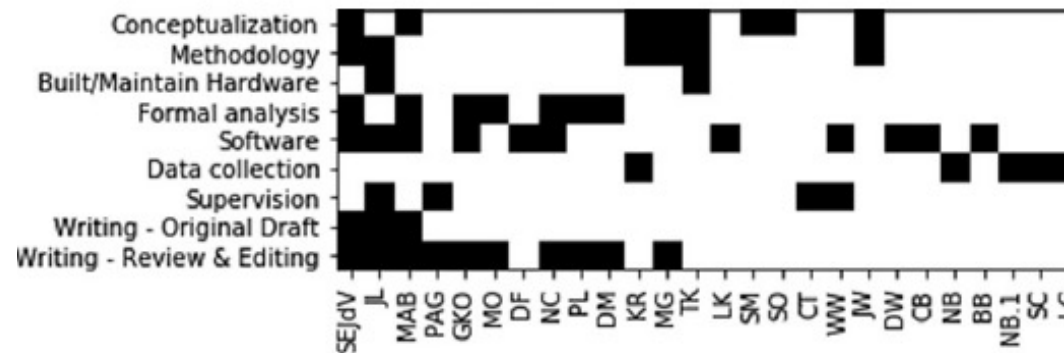
Recognizing Team Science Contributions[2]

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

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UW Promotion & Tenure Guidelines that Support IR

UW School of Public Health – September 2014
…faculty are encouraged to <u>collaborate</u> with fellow faculty…. <u>Interdisciplinary</u> contributions are encouraged. Innovative and <u>interdisciplinary</u> efforts in teaching, research, and academic Public Health Practice scholarship are encouraged and will be given <u>special recognition</u> in the promotion review.

UW School of Medicine – February 2020
"Independence: changing paradigms <u>of interdisciplinary work and "team science"</u> 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. <u>Clear enunciation of the candidate's contribution and impact on a scientific program is essential.</u> This should be described in the self- assessment, the chair's letter, and in internal referee letters."

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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 <u>interdisciplinary research.</u>"

UW Department of Global Health – May 2009
<u>Interdisciplinary research</u>: DGH aims to <u>promote interdisciplinary global health interests</u> throughout the UW. <u>Interdisciplinary research</u> can often require greater faculty time and effort; the evaluation of candidate's research productivity will therefore encompass <u>not only an individual's contribution to research</u> but also assess the extent to which the individual worked beyond the bounds of a specific discipline and <u>engaged in collaboration and cross-disciplinary activity.</u>"

DGH recognizes and assigns value to a wide range of teaching activities because of the <u>inter- disciplinary nature of global health</u> and its mission to build human and institutional capacity in resource-limited settings through education and related capacity-building activities. The critical role of <u>interdisciplinary global health education and training</u> 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<u>. DGH appointment and promotion criteria must, therefore, emphasize the value of these interdisciplinary activities and reward them.</u>

ITHS Team Science: Work to Date

Reviewed APT criteria & exemplars[1]

Surveyed faculty attitudes on IR & APT

Workshops with chairs/admins/PT committees
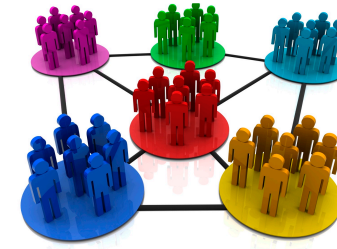
Develop & Disseminate Toolkit

[1] UW's 6 Health Science Schools & College of Engineering

Workshops: 11/27/17; 3/15/18; 7/24/19; 02/06/20

UW Faculty Survey

Faculty Perceptions

N=118

95% Currently conducting interdisciplinary research[1]

98% Indicated interdisciplinary research is important

85% Believe UW faculty code should encourage interdisciplinary research

[1]**Or have in the past**
[2]**25% 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 research[2]

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UW Department Chairs & Admins Workshop

Aspirations for recognizing IR in APT Process (7/24/19):

► 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

Promotion Process

END

Dean sends package to Provost w/letter of recommen dation

College Promotion Council review; Recomme ndation to Dean

Dept. Chair submits package to College w/letter of recommen dation

Dept. faculty input & vote

Materials reviewed by dept. level Promotion Council; Recomme ndation to promote

START

Dept. Chair solicits external review letters

Promotion packet submitted to Dept. Chair

*Example from College of Engineering
Dept. = Department

APT Toolkit

► https://collaborate.uw.edu/online-training-and-resources/apt-toolkit/

UNIVERSITY *of* WASHINGTON

Interdisciplinary Research: Appointment, Promotion, and Tenure (APT) Toolkit

APT Toolkit to recognize, support, and reward interdisciplinary research and collaboration at the University of Washington

Brenda Zierler, PhD, RN, FAAN
Jonathan D. Posner, PhD
Nicole Summerside, MHA

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Highlighting IR in a Curriculum Vitae

Mentoring:

►Identify & highlight interdisciplinary contributions to all areas of scholarship (mentoring, publications, funding)

►Personal co-mentoring by PIs from different disciplines

►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	Jane Doe	PhD, Mechanical Engineering, College of Engineering, UW	2015-2020	Development of a Home-based Nucleic Acid Diagnostic Test for SARS-COV-2	Primary mentor in areas of isothermal amplification, analytical evaluation,	Co-advised by Robert Roe, MD in areas of user research, clinical feasibility,	Staff Scientist, Fred Hutch

Highlighting IR in a Curriculum Vitae (Mentee)

Mentoring:

► Identify & highlight interdisciplinary contributions to all areas of scholarship (mentoring, publications, funding)

► 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)

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| Current | Hermione Grainger | MPH Hogwarts School of Public Health & Magic | 2018-2019 | Feasibility and Acceptability of Home Based SAR-COV-2 Diagnostics Tests | Served as co-mentor and trained student on physics of operation of molecular diagnostics | Dr. Umbridge was primary mentor at University of St. Louis |

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.

Hermione Grainger, Ron Weasley, Bellatrix Lastrange, Jane Doe, Bill Jones, Robert Roe, **Dolores Umbridge**. Feasibility and Acceptability of Emergency Use Authorization SARS-COV-2 Home Based Nucleic Acid Diagnostic Tests., Journal of Molecular Diagnostics, 2020, June 5, 125:5.

This publication resulted from a multi-PI (Umbridge and Jones) NIH funded project focusing on evaluating existing COVID-19 diagnostic tests for use at home by untrained users. Jones' group provided analytical and clinical evaluation of the diagnostic tests.

Conceptualization
Methodology
Built/Maintain Hardware
Formal analysis
Software
Data collection
Supervision

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.

►Clearly articulate your role in obtaining research funding & how you & your groups' contributions made work possible.

Agency	Title	Period	PI	Role	Total Award	Jones' Award
NIH/NIAID	Evaluation of Home-based COVID-19 diagnostic tests	2019-2023	Umbridge, Jones, Multi-PI	PI for UW, expertise in operation and analytical/ clinical evaluation of diagnostic tests	$2300k	$955k
DoD	Development of HCV Rapid Diagnostic for Warefighters	2014-2018	Jones	PI	$550k	$550k

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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?

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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.

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References

1. Choi, B.C.K., & Pak, A.W.P (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness.

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.

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Acknowledgements

- ►Nicole Summerside

- ►Frances Chu

- ►APT Leads from 6 Health Science Schools & College of Engineering

- ►ITHS Team Science Core

Thank You!

Open for Questions

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Feedback Survey

A link to the feedback survey has been sent to the email address you used to register.

Please get out your device, find that email, and spend a few moments completing that survey before you leave today.

Tip: If on a mobile device, shift view to landscape view (sideways) for better user experience.

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