



Transformative Research in Metabolism (TRiM)
Internal Steering Committee Meeting (ISC)
Friday, January 14, 2022
12:00 to 1:00 p.m. by Zoom
<https://alaska.zoom.us/j/899633093>

Meeting Objectives: (1) Finalize revised EAC Action Plans; (2) Discuss TRiM renewal planning; (3) Discuss and provide input on the draft talking points for EAC #2; (4) Share announcements and updates of research projects and cores (as time allow).

- 12:00 p.m. Welcome All: Chair Khrys Duddleston
- 12:05 p.m. Review and act on ISC draft meeting agenda, 1.14.2022. Any changes?
- 12:05 p.m. Review and act on ISC draft meeting minutes, 12.3.2021. Any changes?
- 12:10 p.m. Old Business
- Discuss revised EAC action plans and take action (Note: The revised EAC action plans have been posted in the shared drive called "[Revised EAC Action Plans](#)" and included in the meeting packet. Although two were sent back for revision, #2* and #6,#7,#9*, the Admin Core revised all of the draft Action Plans using a new format.)
 - Is there anyone who would like to take the lead on an action plan, or suggest someone to take the lead on an action plan?
 - (1) EAC #2 Revised Action Plan *
 - (2) EAC #6, #7, and #9 Revised Action Plan *
 - (3) EAC #3 Revised Action Plan
 - (4) EAC #8 Revised Action Plan
 - (5) EAC #11, #12 Revised Action Plan
 - (6) EAC #13 Revised Action Plan
- 12:30 p.m. New Business
- Discuss TRiM renewal planning – What will be the vision for the COBRE Phase 2? Kelly and all for discussion
 - EAC interim meeting, Feb. 7-8 (EAC meeting agenda attached): Questions/comments?
 - Announcements
- 12:55 p.m. Share announcements and updates for research and cores - All are invited to share
- 1:00 p.m. Adjourn

Next ISC meeting, Friday, February 18, 2022 12:00 p.m. to 1:00 p.m. Note: If you would like to present an update at the February ISC meeting, please let Khrys and/or Denise know. Thank you!



Center for Transformative Research in Metabolism (TRiM)
Internal Steering Committee Meeting (ISC), Draft Minutes
Friday, December 3, 2021, 12:00 to 1:00 p.m., Virtual Meeting by Zoom

Call to order: Chair Khrys Duddleston welcomed all and called the meeting to order at 12:07 p.m.

I. Attendance: UAA representatives present included Khrys Duddleston, PhD, ISC Chair and PI, Project 2. UAF representatives were Kelly Drew, PhD, TRiM Director; Vadim Fedorov, PhD, PI Project 1; Robert “Trey” Coker, PhD, PI Project 3; Carl Murphy, PhD, HaMR Core Leader and MIF Manager; Oivind Toien, PhD, HaMR Core and Pilot Project PI; Anya Goropashnaya, PhD, Pilot Project PI; Kriya Dunlap, PhD, Pilot Project PI; Pat Rivera, Admin Core; Larry Duffy, PhD, Dept of Chemistry and Biochemistry; Sheri Coker, PhD, Project 3 lab; Brian Barnes, PhD, AK INBRE PI; and Denise Daniello, Admin Core. Nagesh Shanbhag, Postdoctoral Fellow and Assistant Researcher, Lund University and Jen Danielson, Goldstream Group, also joined the meeting.

II. Agenda, 12.3.2021: Carl motioned to approve the agenda and Kriya seconded the motion. Hearing no objections, the agenda was approved.

III. Draft Minutes, 10.29.2021: A motion to approve the minutes was made by Carl and seconded by Anya with no objections. Minutes were unanimously approved by poll results.

IV. Old Business: Discussion of draft EAC Action Plans and request for action. Denise reviewed the draft action plans based on the retreat discussion which were posted in a shared drive and included in the meeting packet. The following is a summary of the ISC discussion of the draft plans. The ISC decided to take action on each plan following the discussion instead of bringing them up again under New Business.

- EAC Recommendation #2: Inform UA administrators about noted needs and goals of the Center, how to balance compliance (e.g. teaching, IACUC vs productivity), and the short- and long-term value of a larger indirect cost recovery stream from research activities for the UA system (“Method of Educating UA Administrators,” Retreat Breakout Session, Part 2e).
Brian spoke passionately about the importance of UA hiring new junior faculty to teach STEM classes, especially molecular biology, chemistry, and biology in order to achieve TRiM’s goals. Brian noted the high demand for these courses with some students being weight-listed for biomedical classes. Faculty attract students, which increases enrollment and tuition. UA class size is small, which is another magnet for students. Over the last couple of years, UA has lost faculty due to budget cuts and retirement, Brian observed, and positions have not been replaced. UAF Dept. of Biology and Dept. of Chemistry have one and two assistant professors each respectively, and UAA Dept of Biological Sciences has no assistant professors at this time. Secondly, hiring new junior faculty will improve prospects for NIH renewal of TRiM and AK INBRE. Without hiring new faculty, NIH may question why it should invest its valuable funding in institutions that do not invest in their own faculty development. New assistant professors will teach, apply for grants, and publish papers increasing our overall productivity. Brian remarked ‘UA can attract the best and brightest new faculty, due to our research opportunities and lab facilities.’

In reaching out to UA administrators, including the Board of Regents, Brian recommended that we lead with the need to hire new faculty members, focusing on those doing research in areas that are compatible with our biomedical research efforts. The emphasis on *teaching* to attract students, boost tuition, and increase extramural research funding opportunities will resonate with the chancellors, UA

administrators and the Board of Regents as justification for new faculty hires to build our instructional capacity.

Other ISC members agreed with these comments, emphasizing the critical need for hiring new assistant professors. They added comments regarding the value of research grants. He observed that large research grants generate significant indirect funding, however, most of our current funding is to support infrastructure, instead of PI-led projects funded with R01 grants and other funding sources. Effective institutions have both types of funding for individual research projects and infrastructure development. They agreed that teaching is an important focus but research comes next. The opportunity to do research also attracts students, which motivates them to enroll in graduate school.

Khrys and Kelly agreed with Brian's focus on teaching for our advocacy message to UA administrators and the Board of Regents. Khrys asked about current levels of enrollment and noted that UAA's enrollment is falling, which may be due to the pandemic but also to the loss of faculty and the inability to attract new faculty, stemming from budget issues. Teaching and relevant disciplines for research should be the focus for our message to hire new assistant professors.

Trey noted that he had a waitlist for two of his classes. He was told not to increase the number of students in those classes, because it would take students from other classes, increasing the chance of having to cancel classes due to insufficient enrollment. Trey said this strategy turns students away because we are not able to offer the classes students want and need for timely graduation in their chosen disciplines.

Khrys asked the Admin Core to revise draft Action Plan #2 to reflect Brian's recommendations and bring it back for ISC review at a later date.

EAC Recommendation #3: *Work cooperatively to expand and utilize the current animal resource center needed by COBRE investigators to develop pre-clinical animal models to facilitate translation of their findings* ("Expand and utilize the Animal Resource Center," Retreat Breakout Session 1a)

Kelly provided background about this recommendation that presents a new challenge tied to the loss of faculty and losing expertise among IACUC members for reviewing research protocols, particularly for rats and squirrels. As a result, the process is difficult and time consuming for all involved. If UAF adopted a shared governance model, Kelly noted, researchers could be collaborators in this process, able to answer questions on the spot, and provide the expertise as needed for the IACUC to make timely decisions. It was suggested that UAA and UAF IACUC members might be able to work together to manage the requests for reviews, however it was also noted that everyone is so overworked due to the budget cuts, that this proposed strategy might not be feasible.

The ISC accepted EAC Action Plan #3 to move forward.

EAC Recommendations #6, #7, #9: *Recruit and groom research faculty and increase short term visits to increase external collaborations* (Retreat Breakout Session, Part 1b)

ISC members suggested changing the word "groom" in this recommendation to *develop*, as this term is more appropriate.

Trey noted that this draft action plan is more visionary, instead of being action-oriented. Some of what is being proposed may not be possible due to reduced faculty. It was suggested that this action plan reflect the items as "proposed goals," as opposed to implementation steps to reflect a vision of what we are striving to achieve. Khrys asked the Admin Core to revise draft EAC Action Plan, #6,#7, #9 and bring it back to the ISC for another review.

EAC Recommendation #8: Utilize the multi-PI mechanism for collaborative partnerships with established NIH investigators (“Encourage use of multi-PI mechanisms,” Retreat Breakout Session, Part 2d).

ISC members approved EAC Action Plan, #8 to move forward to the EAC.

EAC Recommendations #10, #11: Arctic-oriented workshops, conference sponsorship with related organizations (Gordon, Keystone) (Retreat breakout session, Part 1 c)

Brian provided a summary about the retreat discussion and noted that TRiM should take the lead in organizing the Hibernation in the Cold, 2.0 conference in 2023 at UAF/UAA, with support from AK INBRE. Members suggested that this action plan be re-organized to include prioritized action steps at the top with information about other conferences at the end. Trey expressed his appreciation for offering CME credit to attend this conference which he viewed as an excellent strategy to raise awareness among providers about the merits of using hibernation and animal models for translational research. CME credit could be coordinated thru WWAMI.

Khrys suggested that we approve this plan with minor revisions as noted by the ISC.

EAC Recommendation #13: Utilize “red team”/virtual study sections to pre-review proposals as part of the TRiM application (“Increase successful grant submissions, Red Team study sections,” Retreat breakout session, Part 2f)

Brian noted that AK INBRE faculty would be happy to assist with proposal review. They have a budget to assist with external peer review and just needs 6 weeks prior to the due date to provide this service.

Khrys approved draft EAC Plan #13 to go forward to the EAC.

IV. New Business:

(1) *Take action (approve/disapprove) of each draft EAC action plan.*

Khrys summarized the previous discussion of the draft plans and noted the two plans needing revision for ISC follow-up review, EAC Recommendation #2 and EAC Recommendation #6, #7, and #9.

(2) *Discussion of draft TRiM EAC meeting agenda, February 7-8, 2022.* Denise reviewed the draft agenda that was posted on the share drive and included in the ISC meeting packet. Carl suggested providing 30 minutes additional time to allow for discussion at the end of each day. The ISC also discussed having a fall or spring EAC meeting, instead of summer, to accommodate EAC member meeting requests for next year. The draft EAC meeting agenda will remove the word “summer” for scheduling discussions of the next face-to-face EAC meeting.

Motion to approve EAC winter meeting agenda: Carl made the motion to approve the agenda, including extra time for discussion, which was unanimously supported.

V. Adjourn – The meeting was adjourned at 12:17 p.m.

Next ISC meeting: The January ISC meeting, originally scheduled for January 7th, has been moved to **Friday, January 14**, in observance of key personnel being on leave.



Center for Transformative Research in Metabolism Draft External Advisory Committee (EAC) Action Plans

These draft EAC Action Plans were developed in response to the recommendations described in the EAC 2021 report following the in-person EAC annual meeting held on June 1-2, 2021 on the UAF campus with virtual participation by UAA key personnel. The EAC Action Plans are the result of targeted discussions by TRiM's key personnel and staff at the virtual TRiM Retreat, October 1-2, 2021 when the EAC recommendations were addressed. TRiM's Admin Core worked with the Institute of Translational Health Sciences (ITHS), University of Washington to develop an interactive retreat agenda that included: (1) Training in team science principles and skill-building; (2) small group breakout discussions addressing identified EAC recommendations grouped together as integrated concepts; and (3) sharing of research being conducted by the Center and supported with Core services. The EAC report included 21 recommendations in total of which 9 items were discussed at the retreat, with others held back for future Journal Club sessions and additional meetings. Twenty investigators, core leaders, and staff attended TRiM's retreat meeting. These EAC Action Plans describe the proposed goals and action steps for TRiM to address the identified EAC recommendations going forward.

*EAC Recommendation #2: Inform UA administrators about the needs and goals of the Center, how to balance compliance (e.g., teaching IACUC vs. productivity) and the short- and long-term value of a larger indirect cost recovery stream from research activities for the UA system. ("Method of Educating UA Administrators," Breakout Part 2e) (Note: Retreat breakout participants suggested that the word *inform* be used instead of "educate," as noted in the original EAC recommendation, as a more appropriate term.)*

Discussion leaders: Brandon Briggs, PhD, AIMS Core Leader and Denise Daniello, M.A. Program Coordinator, Admin Core.

Summary: Recruitment and retention of high-quality faculty to teach biomedical classes at UAF and UAA, and have research interests that complement our programs, is *critical* to the development of our academic and research biomedical programs at UA. Stemming from UA's budget reductions, UAF and UAA are losing assistant professors with many leaving UA to take new positions elsewhere. Few positions have been replaced. This issue is a significant concern for programs up for renewal using NIH funds, such as TRiM and AK INBRE, and may be perceived as a sign to reviewers that UA is not investing in its own faculty development by hiring and retaining assistant professors. For example, UAF Biology Department has one assistant professor, UAF Chemistry Department has two, and UAA Department of Biological Sciences has no assistant professors at this time. Moreover, our faculty members are aging and preparing for retirement. Faculty members are key to the academic achievement of UA students and the productivity of UA's biomedical research supported by successful research grants, industry partnerships, and statewide stakeholder support. These diverse revenue streams build UA's infrastructure and contribute to our institution's overall cost recovery resources, enhancing the reputations of UAF and UAA as flagship research and academic institutions.

Our advocacy message must present compelling evidence demonstrating tangible and intangible benefits explaining why investment in hiring new faculty is important. A strong and well-respected faculty results in a competitive and well-regarded university as evidenced by these desired outcomes:

- (1) Increase the number of biomedical course offerings to improve student enrollment/tuition and academic success, which will reduce the need to weight-list classes (Tangible benefit);

- (2) Boost the indirect cost recovery stream by increasing the number of faculty submitting successful research proposals (Tangible benefit);
- (3) Enhance the prestige of the UA system as a whole as an academic and research institution (Intangible benefit).

Proposed Goals:

Goal 1: *Advocate to UA administrators (Department Chairs, Institute Directors, Vice Chancellors of Research, Chancellors and the Board of Regents) and key stakeholders to hire new assistant professors in the biomedical sciences (STEM in general and metabolism/metabolomics for TRiM) to build our instructional capacity, address workforce shortages, and increase extramural funding to meet the strategic goals of UAF 2027 and UAA 2025.*

Prioritized Action Steps

1. Draft and utilize a common set of talking points emphasizing the critical need to hire new faculty to increase our infrastructure teaching capacity as a strategy to attract/maintain students and recruit/maintain faculty at UAF and UAA. New assistant faculty hires are urgently needed to enhance student enrollment/tuition, achieve higher graduation rates, increase indirect funding, reduce burnout for existing faculty, and improve academic and research productivity.

Suggested Leads:

2. Implement a Joint Advocacy Strategy requesting funding to hire new assistant professors in biomedical sciences at UAF and UAA. Actively engage TRiM, Alaska INBRE, IAB, and others having a vested interest to deliver this advocacy message to UA administrators, the Board of Regents, and key stakeholders during scheduled meetings/presentations and informally through conversations.

Suggested Leads:

3. Identify a “Champion” advocate from the community, such as an UA alum in the biomedical field. Consider recruiting a student(s) in the biomedical fields to serve as advocates who can share their academic and research experiences involving UA faculty and how this life experience made a lasting impact in their chosen path. Champions put a “face” on our advocacy message.

Suggested Leads:

4. Schedule meetings with UA administrators for TRiM and INBRE key personnel to advocate passionately for this need to reverse institutional migration trends and increase indirect funding/ICR through successful grant submissions.

Suggested Lead:

5. Request time to make a presentation requesting funds to support new faculty hires at a scheduled Board of Regent meeting.

Suggested Leads:

Goal 2: Make the Ask: Request an increase of UA funding to support new assistant professor hires to teach biomedical courses with a focus on recruiting faculty having an interest in biomedical sciences, hibernation and metabolism/metabolomics research. Identify the number of new faculty needed at UAF and UAA and desired funding.

Suggested Leads: TRiM key personnel, identified champions, and all with a vested interest

Long-term Action Step:

1. *Improve Cost Recovery of COBRE Recharge Centers* - COBRE recharge centers offer another source of indirect cost recovery for UAF and UAA. To be most effective, funding generated by these cores must be directed to

the host department where research is being conducted. Consider revisiting and updating the indirect cost recovery system working with administrators to ensure that funds go to the right department.

Suggested Leads:

EAC Recommendation #3: Work cooperatively to expand and utilize the current animal resource center needed by COBRE investigators to develop preclinical animal models to facilitate translation of their findings (“Expand and utilize animal resource center,” Breakout Part 1a).

Discussion leaders: Kelly Drew, PhD, Center Director; Hoshi Sugiura, B.S., Vet Tech; and Oivind Toien, PhD, HaMR Core and TRiM Pilot Project Leader

Summary: Improving communications with the UAF IACUC Committee was identified as a central concern to increase research productivity for UAF COBRE investigators utilizing animal models at the Animal Resource Center (ARC) that require IACUC approval. Group members expressed frustration with the animal resource plan at UAF, working relations with the IACUC, and the communication style used by the ARC and IACUC with the ARC and IACUC. Examples cited included long delays for requested items being added to the IACUC’s meeting agenda, lack of follow-up to investigators’ queries regarding status of IACUC deliberations for their projects, being left out of the conversation loop concerning complications resulting from proposed protocols (e.g., necropsies), and overall poor customer service that stem from ineffective communication. It was noted that IACUC members are volunteers, with the exception of the Attending Veterinarian and Director ARC. Group members discussed the merits of implementing a shared governance model for the UAF Animal Resource Center based on the model being used by UAA’s vivarium. Discussion also included the need to further develop technical capacity for veterinarian services, as a recharge service, by increasing the number of staff technicians and training offered in order to increase revenues and keep up with demand for services.

Proposed Goals

Goal 1: Build capacity for vet tech services as a recharge service in the HaMR Core by continuing to invest in training and to hire additional veterinary technicians as work demands dictate.

Prioritized Action Steps:

- (1) Continue to build TRiM’s veterinary technician capacity such as training investment for Hoshi Sugiura, TRiM’s vet technician, with the goal of establishing a well-trained technical team to perform surgeries and limit risk of new students, faculty and staff performing surgeries they have not yet mastered. The technician team would be responsible for training and assisting trainees as students, staff, and faculty acquire the level of skill desired.
- (2) Hire additional veterinary technicians, as needed, to build capacity using ICR to help offset salary support.
- (3) Share technical expertise between UAF and UAA to build vet tech services at both campuses. Budget for travel to support technical exchange.

Suggested Leads:

Goal 2: Advocate to adopt a Shared Governance Model at UAF’s Animal Resources Center.

Prioritized Action Steps

- (1) Continue discussions with the Strategic Advisory Committee and the VCR regarding merits of adopting a shared governance model of animal resources as used by UAA’s vivarium. This transition would require a restructuring of the current UAF IACUC and engage users as collaborators. The proposed benefit would lead to an open and interactive process resulting in timely and fair decision-making of protocol reviews.

Recommended Lead:

- (2) Establish an Animal Resource Center (ARC) working group to address issues involving logistics and resources needed to meet research demands. Specifically, the working group would address issues such as: (a) delays in

IACUC reviews; (b) IACUC structure including use of subcommittees with specific expertise; (c) need for more frequent designated member review to decrease review time and approve modifications; (d) allocation of space and other resources needed; (e) and to advise TRiM about needs for technical expertise that could be supported through the HaMR core. This working group, to be chaired by an animal user, would include the IACUC Chair, attending veterinarian, animal husbandry manager and designated ARC staff, and all ARC users. Recommended Lead:

EAC Recommendations 6, 7, and 9. Recruit and develop research faculty and increase short term visits to increase external collaborations. (Retreat Breakout Part 1b).

- *EAC #6 – Respond to recent faculty loss and budget cuts as an opportunity to recruit and develop additional research faculty.*
- *EAC #7 – Increase productivity through more collaborations, both internally and externally.*
- *EAC #9 – To develop a pipeline of researchers for future development of the UA system, UA should exploit its unique geographic, climatological and research resources as an asset to attract researchers at all levels – from undergraduate to established researchers – for short-term visits that may result in recruitments and create more external collaborations.*

Discussion leaders: Vadim Fedorov, PhD, PI Project 1 and Carl Murphy, PhD, HaMR Core Leader and MIF Manager

Summary: Responding to recent faculty loss due to budget cuts is an immediate problem to address because it impacts our ability to attract, teach, and mentor students as well as to conduct both preclinical and clinical biomedical research. The UAF Biochemistry Department, for example, was described as a “shell” due to significant faculty loss in recent times. As a result, faculty are being pressed to increase their teaching responsibilities without added compensation. Faculty loss also impacts TRiM’s ability to develop a pipeline of investigators, particularly in clinical research. UAF is both a research facility and teaching institution. Faculty are required to teach, conduct research, and be involved in service. We need to better support faculty engaged in both teaching and research, and to actively recruit clinical investigators in order to advance the translational aspects of TRiM for Phase 1 and Phase 2, COBRE’s renewal.

Proposed Goals

Goal 1: Engage more students in biomedical sciences. Increase undergraduate biomedical research opportunities that will enhance critical thinking, provide effective mentoring, explore career directions, and offer opportunities for contributing to scientific knowledge in order to grow our own Alaskan-based biomedical scientists.

Prioritized Action Steps:

1. Pursue extramural funding opportunities that provide research opportunities for undergraduate students and support junior faculty (e.g. NIH SuRE funding mechanism)

Suggested Lead: Admin Core.

2. Advocate to the SAC and VCR to maintain a BLaST tiered mentoring model that provides research assistantships to graduate students who mentor undergraduates. These experiences were found to contribute to graduate student training, research productivity, and subsequent employment.

Suggested Lead: TRiM PI

Long-Term Action Step:

Advocate to UA administration and stakeholders regarding the need to increase STEM faculty at UAF and UAA to teach, mentor, and provide research opportunities for students (relates to EAC recommendation #2).

Goal 2: Increase biomedical faculty.Prioritized Action Steps:

1. Meet with UA administrators using a shared set of talking points (as described under EAC Action Plan #2) to “put a face on and a voice” to our advocacy efforts and how they address UAF’s Strategic Action Plan 2027.

Suggested Leads:

2. Inform targeted stakeholders about the benefits of increasing biomedical faculty that will lead to increased student enrollment, tuition, graduation rates, and indirect funding to support the UA system and how they further Strategic Plans for UAF 2027 and UAA 2025. .

Suggested Leads: TRiM key personnel and identified champions (UA biomedical graduates in the community and students).

Goal 3: Increase recruitment of clinical researchers to develop a pipeline of researchers.Prioritized Action Step:

Meet with Dean Andre’ Rosay, UAA College of Health Sciences, to convey the importance of providing research training and experience to strengthen translational research capacity at UA.

Suggested Lead: Admin Core

Long-term Action Steps:

(1) Build WWAMI Relationships with clinicians and students. Collaborate with INBRE to build interest for clinical studies among nurse practitioners and other medical students in the WWAMI program.

Suggested Leads:

(2). Engage Community Health Providers as Stakeholders. Develop a survey for health care providers asking about their most pressing health care needs to identify intersections between patient needs with UA’s biomedical research. Target FMH, TVC, Chief Andrew Isaac, and Providence. Reach out to ITHS for possible survey templates. Present the findings to providers to promote interest in translational research being conducted by UA’s biomedical activities.

Suggested Leads:

Goal 4: Increase collaborations with outside researchers.Prioritized Action Steps:

1. Target relevant speakers for Journal Club having expertise in TRiM’s focus areas including metabolomics, hibernation, and translational research.

Suggested Leads:

2. Implement a virtual President’s Professors as a virtual program, due to Covid restrictions, to advise TRiM’s faculty researchers in the development of their professional products such as writing successful grant proposals and manuscripts, as well as to advance ideas for future research and collaborations. When in-person visits become an option, TRiM has funding to bring up scientists to work with investigators for as long as two weeks.

Suggested Leads:

3. Actively participate in conferences and seminars to create a network of researchers and pursue potential collaborations.

Suggested Leads: All TRiM key personnel

4. Implement a virtual President Professors program by asking each TRiM investigator to invite a virtual President’s Professor for a two-week visit.

Suggested Leads:

Long-term Action Step:

Leverage external collaborations to increase promotions with foundations and corporations that will increase funding opportunities for TRiM’s researchers.

Suggested Leads: All TRiM key personnel

Ideas for further discussion to increase recruitment of research faculty

- Consider leveraging institutional support to hire new faculty to manage technical cores, such as a new cell and microscopy component to the HaMR Core. The Core's equipment and technical staff are used to leverage limited availability of start-up funds for new faculty. COBRE and INBRE could share salary support of new hires with ICR contributing to institutional support of these positions. The plan would need backup strategies, such as opportunities for tenure-track positions when hiring is reinstated, and incorporating salary support into recharge center business plans. To capture shared support through teaching, positions should also be recruited while being mindful of teaching needs.
- Utilize INBRE's resources to help cover start-up costs for new faculty with a bio-med focus.

EAC Recommendation #8: Utilize the Multi-PI mechanism for collaborative partnerships with established NIH investigators ("Encourage Use of Multi-PI mechanism," Breakout Part 2d)

Discussion leader: Vadim Fedorov, PhD, PI Project 1

Summary: NSF and NIH look favorably on multi-collaborator projects that benefit from integrated project teams having multiple areas of intellectual and technical expertise, as well as the resources to address complex and challenging research questions that cannot be addressed by individual investigators working alone. While the potential for funding may be higher, the multi-collaborator mechanism requires a high level of synergy and managed team interactions. For this reason, some funders now require a team science approach to maximize collaborative efforts to achieve a unified project goal. Creating a network of researchers to identify potential collaborators was identified as a critical step in developing a multi-PI project. The proposed benefits of collaborations add to the collective knowledge, skills, and resources of the proposed project and TRiM. Recruiting external collaborators was a strategy emphasized by this group as they provide opportunities to combine expertise and leverage external resources in biomedical research that extend beyond our Center.

Potential collaborators identified were Heiko Jansen, Washington State University (work on brown bear adipose); the European Brown Bear Group; Roelof Hut, University of Groningen (sleep homeostasis); and the University of Kentucky (Esther Dupont-Versteegden, PhD for regulating muscle and muscle physiology). (Note: The pandemic has limited travel for some investigators to AK.)

Proposed Goal: Encourage use of multi-PI mechanisms for TRiM research personnel.

Proposed Implementation Steps:

1. Develop a template of the required Multi-PI Leadership Plan that investigators can use for their projects. Utilize ITHS resources for sample plans and for plan review prior to submission. Identify the requirements of a multi-PI mechanism specific to the funder's FOA for the proposed project. What resources can TRiM provide and what are needed in expertise and resources for a successful multi-PI project are questions to be considered when developing a multi-PI project.

Suggested Leads:

2. Create a Network of Researchers – Attend conferences, symposiums, meetings and other professional development opportunities to find potential collaborators who share common research interests. Look at publications of speakers and attendees to find out who is citing your research and reach out to establish contacts prior to the meeting.

Suggested Leads: All TRiM key personnel

3. Utilize President's Professors as a virtual program. With Covid restrictions, use we should employ a virtual approach until in-person is an option. When in-person visits become an option, TRiM has funding to bring up

scientists to work with investigators on their projects for as long as two weeks. Explore use of funding to support a stay in Denali Park, for example, to have focused writing time with a scientific mentor/collaborator for grant proposals.

Suggested Leads:

4. Develop a Collaboration Plan. This plan can be used as a roadmap that describes various issues pertaining to how work will be conducted and by whom including expectations, commitments, timelines, etc. to support smooth collaboration efforts. Depending on the FOA, collaboration plans may be required for multi-PI projects. Suggested Leads: TRiM Director with support from all key personnel

EAC Recommendation #10: Consider creation of nationally/internally-advertised week to month-long courses on Arctic oriented research to attract both students and faculty.

EAC Recommendation #11: Consider sponsorship of conferences in collaboration with organizations such as the Gordon Research Conference, Keystone Symposia, etc. or with professional societies with interest in day-length or environmental factors affecting human biology

Breakout Session Title: Arctic-oriented workshops, conference sponsorship with related organizations (Gordon, Keystone) (Breakout Session Part 1c)

Discussion leader: Brian Barnes, PhD, Director Alaska INBRE

Summary: UA has a strong tradition of hosting meetings in Alaska which deserves to be reinvigorated. How can we make hosting a conference feasible regarding logistics as it requires significant amounts of planning and resources, an effort that should be initiated at least 1.5 years prior to the scheduled event? The group discussed the possibility of hiring an organizer to assist with conference planning in collaboration with IAB, INBRE, TRiM and other programs interested in hosting an event. Although sponsoring a conference requires significant resources, the value of bringing scientists to the state with the possibility of developing new long-term research collaborators was deemed a worthwhile investment by this group.

Another option discussed was participating in conferences/meetings that are already scheduled or in the planning stages where we could bring a focus of hibernation research and metabolic adaptations as a program theme. Several conference options were identified and described below. This breakout group discussed the ideas of both playing off conferences already in the works while planning an Alaskan-based conference for 2023.

Proposed Goals

Goal #1: Register and participate in conferences relevant to TRiM's research.

Prioritized Action Steps:

Register for the [Gordon Research Conference](#). This conference, "Biology of Winter, Biological Responses to Winter Climate Change," is scheduled for June 5-10 2022. This conference would be open to hibernation research, including topics of human biology and impacts of climate change on arctic environments.

Presentations focus solely on unpublished data. If we registered and participated as a group of presenters, we could have an impact and make important connections with future research collaborators. Applications for this meeting must be submitted by *May 8, 2022* to be eligible. Dr. Brian Barnes has taken the lead to advertise this conference and exploring funding opportunities for our researchers/students to attend.

Recommended Leads: Dr. Brian Barnes and all TRiM key personnel

Goal #2: Organize an Alaskan-based conference for the Hibernation in the Cold 2.0 in March 2023 sponsored by UAF and UAA.

Prioritized Action Steps:

1. Establish a committee to discuss logistics of organizing this conference by June 2022 with a focus on student participation.
2. Hold the conference as an international meeting that would be open to international students mirroring the objectives of the main conference which is limited to the U.S.
3. Organize the conference as a two-day event with basic instruction offered on the first day and hands-on training in mammalian hibernation and therapeutic applications for the second day, based on the recommendation by TRiM EAC member Dr. David Lathrop (“Chilkoot Retreat for Chechakos”). Actively market the conference to WWAMI medical students and clinical scientists. The purpose of the hands-on training workshop is to stimulate more conversation between researchers and clinicians about translational medicine and its application to address emergency healthcare medicine, providing TRiM with direction for translational applications. Possible workshop instructors include Sandy Martin, Matt Andrews, Brian Barnes, Elena Gracheva, Hannah Carey, Greg Florant, Tom Kilduff, and interested TRiM investigators.
4. In collaboration with the organizing committee, explore and respond to funding opportunities for the conference.

Suggested Leads:

Goal 3: Identify a means to provide CME credit for physicians and veterinarians.

Prioritized Action Step:

Coordinate with WWAMI and Vet Med to offer CME credit for clinicians/veterinarians attending the conference as a strategy to raise awareness among providers about the merits of using hibernation and animal models for translational research.

Suggested Lead: Admin Core

Descriptions of other conferences/workshops discussed at the Retreat:

1. [International Hibernation Symposium](#) – The International Hibernation Symposium (IHS) happens every four years and held in different locations, with the most recent occurring during summer 2021 in Groningen, the Netherlands. Alaska hosted this conference in 2004, which began in Vancouver BC and participants traveled to Alaska via a cruise ship. A book was published, based on the conference proceedings, and the conference participants are publishing in peer review journals. The group brainstormed ideas to possibly recruit investigators working in the field of exercise physiology from Norway, Sweden, Canada and other circumpolar countries as well as researchers working with indigenous people and metabolic issues within those communities. Planning for the next conference (2023 or 2024) is underway for Ontario and may include human translational research topics, which would be a good fit for TRiM. Alaska could be a potential site for a future IHS conference. TRiM and others could organize a mid-term meeting focused on student participation held at UAF and/or UAA. These meetings are hosted by the International Hibernation Society and everyone is encouraged to join the society to generate awareness. Membership is free.
2. [Keystone Symposia](#) – ‘Keystone Symposia on Molecular and Cellular Biology convenes approximately 50-60 open, peer-reviewed conferences annually across diverse life-science topics that bridge basic and clinical research to promote translational advances with medical impacts,’ according to its website. Brian noted that this Symposia is mostly related to diseases and did not see any upcoming topics in TRiM’s field but will continue to monitor.
3. [Wild Clocks](#) – This conference features research focused on chronobiology, including topics on biological rhythms, to study timing in natural systems and free-living animals. Their first meeting happened four years

ago and the most recent scheduled meeting in August 2021 was cancelled due to Covid. This conference could be an option to host in AK with hibernation as a main theme and would attract those interested in metabolism as well.

4. Summer AK INBRE Workshop – INBRE could sponsor a workshop focused on seasonal fluctuations in which TRiM and other hibernation investigators could present and attend.

EAC Recommendation #13: Utilize “red team”/virtual study sections to pre-review proposals as part of the TRiM application. (Increase successful grant submission, Red Team study sections, Breakout Session 2f)

Discussion leader: Kelly Drew, PhD, Director, Center for TRiM

Summary: Utilizing a “Red Team” approach was proposed by the EAC to improve successful grant submissions for TRiM’s investigators. This review occurs when the proposal is in near-final draft form. To benefit from an effective external review, reviewers should represent diverse perspectives and be independent of the proposal team; however, member selection is up to the investigator’s discretion. The review team evaluates and scores the proposal using an evaluation committee format and identifies strengths and areas in need of improvement. In general, proposers should not be present during the review team’s discussion of the proposal. Barriers identified were mostly time-related due to having preliminary data available for review as well as working with complex schedules involved in a multi-PI proposal. Another challenge is receiving effective/constructive feedback, as quality has varied, particularly if the review is conducted by one reviewer alone. Advantages of a team review include the opportunity to receive better feedback from a group discussion as opposed to individual feedback.

The group’s discussion focused on the logistics of establishing a review study section that would be coordinated through the Admin Core with relevant information posted on TRiM’s website. Other pre-proposal review resources were also identified such as IAB/INBRE’s support for pre-submission reviews, the ITHS Scientific Success Committee, and the MWCTR-IN (Mountain West IDeA Clinical and Translational Research-Infrastructure Network) which provides pre-proposal reviews using their Advance to Funding Committee. (Note: MWCTR-IN has partnerships with UAA, UAF and 11 other universities in the 7 western IDeA states.)

This group also discussed the advantages of using pre-review committees in reviewing aims sections and providing feedback earlier in the process as another strategy to improve successful outcomes. The *NIH Grant Application Writer’s Workbook*, Robertson et al, was also cited as an excellent resource for writing winning grant proposals. The group also offered ideas how TRiM could help support multi-PI investigations by providing template information and hosting Journal Club discussions on this topic.

Goal: Every proposal submitted by TRiM investigators will be peer-reviewed and revised prior to submission.

Proposed Implementation Steps:

1. Establish a structure for a virtual review. The Admin Core will coordinate this effort by:
 - (1) Posting a link on TRiM’s website with a list of resources that are available to conduct reviews such as IAB/INBRE, ITHS, and MW CTR IN and their respective contact information.
 - (2) Setting up a link on TRiM’s website to go to a google doc to initiate the process of establishing a virtual study section.Suggested Lead: Admin Core

2. Provide information about the multi-PI process on TRiM’s website.
 - (1) Post a template timeline for completing project tasks.
 - (2) Post an easy-to-use template for writing multi-PI proposals.
 - (3) Offer a template plan that addresses roles and responsibilities of investigators, how to address

conflict, confirm how decisions are made and other relevant information using team science concepts and the collaboration planning tool for guidance.

(4) Provide boilerplate description of facilities that investigators can download and craft a project specific narrative around the boilerplate text.

Suggested Lead: Admin Core with support from HaMR and AIMS Cores for facility descriptions

3. Host Journal Club sessions devoted to discussion of the multi-PI process and discussion of developing effective facilities statements.

Suggested Leads:

Note: Nicole Summerside, ITHS trainer, commented that NIH and other funding agencies require multi-PI proposals in their FOAs and some proposals are incorporating team science approaches (such as using a “Teaming Core”) into their study designs.

**Center for Transformative Research in Metabolism
External Advisory Committee Virtual Meeting (EAC)
February 7 and February 8, 2022
9:00 a.m. to 12:30 p.m. ([AST Day 1](#)) and 9:00 a.m. to 1:15 p.m. ([AST Day 2](#))
EAC Meeting Agenda**

Meeting Objectives:

1. Presentation updates from the Center's Research PIs, Core Leaders, and Pilot Project Research Project Leaders; review/discuss TRiM EAC Action Plans in response to the EAC June 2021 report; and share reports from TRiM committees
2. Improved understanding of the perspectives and challenges for the EAC and TRiM key personnel as we work towards the common goal of TRiM's growth and sustainability.

Meeting Desired Output:

1. EAC input of the proposed Action Plans and guidance for implementation
2. EAC response to TRiM presentations and sharing recommendations for future progress

Monday, February 7

- 9:00 a.m. *Welcome and update of TRiM's Overall Aims, Accomplishments, and Path Going Forward*
Dr. Kelly Drew, Center Director
- 9:30 a.m. *Post-Transcriptional Mechanisms of Muscle Atrophy Prevention in Hibernating Mammals, Project 1, UAF.*
PI Vadim Fedorov, PhD
Advisor/Collaborator: Dr. Esther Dupont-Versteegden
- 10:15 a.m. Break
- 10:30 a.m. *Microbial Provision of Essential Amino Acids: Protein Conservation in Hibernation, Project 2, UAA*
PI Khrys Duddleston, PhD
Advisor/Collaborator: Dr. Loren Buck
- 11:15 a.m. *EAC Action Plans – Who, What, How, and Why*
Director Kelly Drew, PhD and all for discussion
- 12:30 p.m. Break for the day

Tuesday, February 8

- 9:00 a.m. Welcome back and debrief of Day 1
Dr. Kelly Drew
- 9:15 a.m. *Advanced Instrumentation in Microbial Studies (AIMS Core), UAA*
Dr. Brandon Briggs, Core Leader
AIMS Core Key Personnel: Eric Henderson, Lab Manager
- 9:45 a.m. *Health and Metabolism Research Core (HaMR), UAF*
Dr. Carl Murphy, Core Leader and Molecular Imaging Facility Manager
HaMR Core Key Personnel: Oivind Toien, PhD Animal Instrumentation Manager and
Scott Jerome, PhD, Research Navigator
- 10:15 a.m. Break
- 10:30 a.m. *Admin Core, UAF*
Kelly Drew, PhD Center Director and Denise Daniello, M.A. Program Coordinator
- 11:00 a.m. *Adaptations of Sleep and Cardiac Rhythms in the Hypometabolic State of a Human Sized Hibernator, Pilot Project*
PI Oivind Toien, PhD
- 11:20 a.m. *Molecular Mechanisms Underlying Skeletal Muscle Temporal Dynamics in a Hibernating Mammal as a Pathway to Peripheral Artery Disease Intervention, Pilot Project*
PI Anya Goropashnaya, PhD
- 11:40 a.m. *Vitamin D and Healthy Aging: Establishing the Sled Dog Sentinel for the Circumpolar North, Pilot Project*
PI Kriya Dunlap, PhD
- 12:00 p.m. *TRiM Committee Chair Reports*
Strategic Advisory Committee – Kelly Drew, PhD, Chair
Translational Advisory Committee – Robert Coker, PhD, Chair
- 12:30 p.m. EAC meeting wrap-up, set upcoming meeting dates, concluding remarks and discussion
- 1:15 p.m. Adjourn