



Center for Transformative Research in Metabolism (“TRiM”)

Strategic Advisory Committee Meeting

Tuesday, December 14, 2021; 3 to 4 p.m.

[Virtual Meeting](#)

Draft Agenda

Meeting Objectives:

- Share updates
- Discuss preliminary plans for COBRE renewal

Meeting Desired Output:

- SAC input of the proposed EAC Action Plans (attachments)
- Guidance for implementing Action Plans of concern to SAC – Identify next steps
- Determine SAC reporting items to the EAC at the February 7-8, 2022 meeting
- Generate action items relevant to TRiM renewal planning

Welcome All: TRiM PI Kelly Drew, SAC Chair

Members include:

- Diane O’Brien, PhD, UAF Director IAB
- Brian Barnes, PhD, UAF Alaska INBRE, PI
- Kinchel Doerner, PhD, UAF Dean of the College of Natural Science and Mathematics
- Nettie Labelle-Hamer, PhD, UAF, Interim Vice Chancellor Research
- Aaron Dotson, PhD, UAA, Vice Provost for Research
- Khrys Duddleston, PhD, UAA, Director, Department Biological Sciences

3:00 p.m. Review of agenda

3:00 p.m. Old Business

- Update, NIH SuRE funding mechanism (Support for Research Excellence, R16)
- Core Capacity Updates: HaMR Core, AIMS Core, LC/MS Metabolomics Technique development (new), and Microscopy Core (new). (Note: For COBRE’s renewal, core capacities need to be housed within existing cores.)

3:20 p.m. New Business

- SAC choice for discussion topics of EAC recommendations, June 2021 (Please see attached “EAC Recommendations and SAC Meeting Discussion”) TRiM asks for SAC feedback and points to focus on from EAC Recommendations EAC June 2021



TRiM SAC Meeting Agenda (continued)

- TRiM Retreat and Draft EAC Action Plans:
 - 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 animal resource center (Action Plan attached)*
 - EAC Recommendation #5 – *Consider teaching buyout for NIH Study Section Service (no Action Plan attached as it was not discussed at TRiM’s 2021 retreat). Incentive for R01 study section service or [Early Career Research Training Program](#). (PI Drew’s input is to focus on R01 study section.)*
 - EAC Recommendations 6,7,9 (Action Plan attached) – *Recruit and groom research faculty and increase short term visits to increase external collaborations.*
- EAC interim meeting and SAC Chair Report – What do we want to relay to the EAC at the Feb. 7-8, 2022 meeting?
- Meeting outcomes with UAA administrators, December 8
- Planning for TRiM COBRE Renewal – Work to begin in January 2022.
 - COBRE’s Needs for Renewal – Institutional Support

3:50 p.m. Other discussion

4:00 p.m. Adjourn



EAC 2021 Recommendations and Strategic Advisory Committee Discussions, A Working Document

Categorized Groups of EAC recommendations:

Discussed During Retreat:

EAC Session 1:

- a) Method of informing UA Administrators (EAC Recommendation #2)
- b) Expand and utilize animal resource center (EAC Recommendation #3)
- c) Recruit and groom research faculty and increase short-term visits to increase external collaborations (EAC Recommendations #6, #8)

EAC Session 2:

- d) Encourage use of multi-PI mechanism (EAC Recommendation #8)
- e) Arctic-oriented workshops, conference sponsorship with related organizations (Gordon, Keystone) (EAC Recommendations #10, #11)
- f) Increase successful grant submission (Red team) study sections (EAC Recommendation #13)

To be addressed by the administrative group:

- EAC recommendations 1, 4, 5, 11, 13, 17, 18, & 19

To be addressed during a future journal club:

- Individual Development Plans (IDP) (#15 EAC recommendation)
- Productivity/Publication Obstacles (#16 EAC recommendation)

<p style="text-align: center;">External Advisory Committee (EAC) 2021 Recommendations</p> <p><i>Purpose: As the scientific advisory board for the Center, the EAC reviews program process, critiques scientific progress of the Center, advises the Center’s Director on scientific and policy matters, and works with the Director to facilitate development of a sustainable, collaborative research environment to support competitive R01 proposals and research programs.</i></p>	<p style="text-align: center;">Strategic Advisory Committee (SAC)</p> <p><i>Purpose: In collaboration with the Center’s Director, the SAC develops strategies and identifies resources needed to retain investigators after they attain independent status and promotes success of Junior Investigators; optimizes administrative support functions for research productivity and compliance; and develops a strategy to support the hire of three new faculty to support translational research in metabolism for the Center’s P2C.</i></p>
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<p>EAC #3 - <i>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.</i></p>	<p>SAC Meeting Notes 8.20.2020, TRiM’s SWOT Analysis Management of the UAF ARC is “autocratic and inflexible, which has been problematic for users and animal care because there is little opportunity for cross communication between PIs and veterinary care.” One-way communication undermines quality research which has a severe negative impact on faculty morale to the point of discouraging further research. In comparison, UAA’s vivarium operates under a shared governance model comprised of the veterinarian, vivarium manager, and users. This group is charged with making policies for operations. UAA animal users are responsible for the care of their own animals. It was noted that former UAA VPR, Bob White, facilitated the transition to the shared governance model at UAA’s Vivarium based on his experience with the problems at the UAF ARC. It was suggested that the ARC management issue should be brought to the attention of the UAF VCR (SWOT “Weakness”).</p>
<p>EAC #5 - <i>Consider teaching buyout for NIH Study Section Service.</i></p>	<p>SAC Meeting 4.21.2021: Action Steps</p> <ul style="list-style-type: none"> • Explore incentives to allow course buyouts for faculty to serve on NIH review panels. Encourage faculty to participate in the NIH Early Career Review Programs that teaches how to serve on study sections. • Encourage faculty to serve on NIH review panels by providing incentives, such as course buyouts, so that they have time to perform this service. By developing personal relations with other reviewers, UAA/UAF faculty can work to change negative perceptions on study sections that others may have about our research capacity from the inside out. We can engage talented adjuncts to cover course load and allow for buy-outs.
<p>EAC #6 - <i>Respond to recent faculty loss and budget cuts as an opportunity to recruit and groom research faculty.</i></p>	<p>SAC Meeting Notes, 8.20.2020, TRiM’s SWOT Analysis</p> <ul style="list-style-type: none"> • Obstacles exist for promoting senior post-docs and PhD level research professionals to research faculty. Address those barriers to make them eligible to lead research projects. This discussion led to identification of an opportunity to repurpose our existing faculty to engage in hibernation research, noting that this is less costly and more efficient than recruiting new researchers from outside UA (SWOT “Weakness”). • Engage more post docs and other faculty without tenure by using NIH K awards to provide support

	<p>for training, project funding, and salary (SWOT, “Opportunity”).</p> <ul style="list-style-type: none"> • Research Faculty Appointments – Brian Barnes, IAB Director, clarified requirements for research faculty appointments as discussed earlier in the meeting. For investigators to be considered for research faculty appointments, they need to have at minimum salary support for 4.5 months and benefits. This support can be written into their project budget. This is a UA policy mandate stemming from the union’s collective bargaining agreement. NIH allows research faculty to serve as project PIs as long as they are recognized by their institution as research faculty members. Interested investigators can apply for the research faculty appointment to IAB (SWOT “Opportunity”). • INBRE has resources to help cover start-up costs for new faculty with a bio-med focus (SWOT, “Opportunity”). • Loss of faculty leads to poor faculty moral. With reduced faculty, we lose the ability to mentor students and make appropriate graduate committees. Graduate committee members from outside the University may fill this gap (SWOT “Threat”). • Loss of quality graduate students, due to loss of TA positions and faculty mentors (SWOT “Threat”). • COBRE award could attract new postdocs however, budget cuts make it difficult to offer start-up packages. Loss of faculty leads to a loss in investment in purchase of new equipment that could become obsolete if new faculty are not hired in a timely manner. TRiM was able to support the new hire of a post doc to support the Duddleston project. UAA Department of Biological Sciences is seeking a cluster hire to replace faculty as UAA lost 5 faculty in the DBS (K. Duddleston). UAF lost 3 faculty from the Department of Chemistry and Biochemistry in FY20. Loss of faculty at UAA contributed to a loss in faculty diversity (SWOT “Weakness”).
<p>EAC #7 - Utilize Multi-PI mechanism for collaborative partnerships with established NIH investigators.</p>	<p>SAC Meeting Notes, 4.21.2021</p> <ul style="list-style-type: none"> • Improved cooperation between groups to form strategic teams resulted in the submission of two invited, independent grant applications for the

	<p>TRiSH-BRASH solicitation with one submitted by Dr. Khrys Duddleston and her mentor, Dr. Loren Buck, and a second project led by Kelly Drew and her team of UAF investigators. Both applications used hibernation science platforms. SAC members agreed that there is an enhanced level of collaboration and cooperation between UAF and UAA biomedical/health sciences and WWAMI (Progress reported to SAC).</p> <p>SAC Meeting Notes, 8.20.2020, TRiM’s SWOT Analysis</p> <ul style="list-style-type: none"> • Insufficient synergy between UAF and UAA faculty. Huge need to increase collaborations to support new research projects and funding applications for multi-PI projects (SWOT “Weakness”).
<p>EAC #9 – To develop a pipeline of researchers for future development of 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.</p>	<p>No relevant SAC meeting discussion found.</p>
<p>EAC #12 - Utilize “red team”/virtual study sections to pre-review proposals prior to submission.</p>	<p>SAC Meeting Action Steps, 4.21.2021 – SAC identified strategies to increase successful grant submissions such as:</p> <ul style="list-style-type: none"> • Continue to offer high quality grant writing workshops and make use of INBRE’s consultants who provide professional proposal reviews. • Develop closer engagement between UA Administrators with NIH Program Directors, including the NIH Science Program Officer who chairs study sections, to foster a positive perception of UAA/UAF research infrastructure and expertise. • Contract with external NIH reviewers on grantsmanship to work with interested faculty from conception/research design through writing the application and submission. <p>In addition, explore new NIH funding mechanisms (Support for Research Excellence, SuRE and SuRE First awards) to increase biomedical research funding and work with UAF administration to address barriers for UAF eligibility for these new grants by improving Pell grant undergraduate enrollment.</p>

	<p>SAC Meeting, TRiM Progress Notes, 4.21.2021</p> <ul style="list-style-type: none"> • TRiM supported grant writing workshops coordinated by AK INBRE. Kelly also provides weekly grantsmanship mentoring to TRiM Pilot Project investigators. • Dr. Robert Coker is a co-PI on renewal of an ITHS grant. Pending funding, new investigators will be able to participate in the AI- (artificial intelligence) driven matching system through the ITHS Translational Workforce Development program that will help connect potential applicants with the best mentors in the region. This strategy may help to increase our competitiveness for NIH grants.
<p>EAC #20 - Continue to partner with Alaska INBRE to develop technical cores, such as an immunohistochemistry and microscopy core that leverages existing equipment to support ongoing projects.</p>	<p>SAC Meeting Notes, 4.21.2021</p> <p>TRiM will request carry forward funds to contribute to re-establishment of capacity for cell culture and microscopy. The INBRE Exceptional Request mechanism might also be used to hire a technician to maintain technical assistance for histology and immunohistochemistry. By bringing these resources together – equipment, technique training, and workforce – we are creating the building blocks to develop a new core in cell biology and microscopy that could be shared between UAA and UAF campuses to increase research infrastructure. IAB has voiced support for this effort that could be included in their next INBRE renewal as a new core. (TRiM progress noted during SAC meeting.)</p>



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

TRiM's 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 held 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. The EAC Action Plans provide a summary of the discussion and describe the proposed goals and implementation steps for TRiM to address the identified EAC recommendations going forward. There are 6 draft EAC Action Plans in total.

Draft Action Plan for 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 regarding 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 Implementation Steps:

1. Build capacity for the vet tech as a recharge service by implementing a technical core to provide training and service – Continue to build TRiM's veterinary capacity (such as investment into training for Hoshi Sugiura) 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 technical core would be responsible for training and assisting trainees who are students, staff and faculty to acquire the level of skills desired. The goal is to hire



additional veterinary technicians, as work demands dictate. Technical expertise will be shared between UAF and UAA to build on vet tech services at both campuses. Travel needs to be budgeted to support technical exchange.

2. Advocate to adopt a Shared Governance Model at UAF’s Animal Resource Center – TRiM’s Director should continue discussions with the Strategic Advisory Committee and the VCR about the merits of adopting a shared governance model of animal resources as used by UAA’s vivarium. A shared governance model was viewed positively by the group as an open and interactive process, resulting in timely, fair decision-making. Specific attributes noted for UAA that are absent at UAF included IACUC members being composed of vivarium users and the vivarium manager. (This new model would call for a restructuring of UAF’s IACUC). An ARC working group, chaired by an animal user, would include the IACUC Chair, attending veterinarian, vivarium manager and designated ARC staff, and all vivarium users. The group would address issues regarding logistics and resources needed to meet research demands. The working group would also address issues such as delays in IACUC reviews and discuss IACUC structure including use of subcommittees with specific expertise or more frequent designated member review to decrease time to review and approve modifications. The working group would also discuss allocation of space and other resources including technical expertise, training and supervision and play an important role in informing TRiM about what technical expertise is needed that could be supported through the HaMR core.

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

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 that needs to be addressed because it impacts our ability to teach and mentor, attract students, and conduct both preclinical and clinical research. The UAF Biochemistry Department, for example, is now a “shell” due to its significant faculty loss. 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, in the renewal.

Proposed Goals:

1. Engage More Students – By increasing research opportunities for undergraduate students, students will be inspired to continue this interest at the graduate and postdoc levels. This tactic may help to advance our long-term goal of increasing and sustaining Alaskan-based biomedical research scientists. (Note: TRiM’s Admin Core is actively working with the Provost and the PAIR office regarding UAF’s institutional eligibility for the NIH SuRE Award, Support for Research Excellence, which has a priority on engaging undergraduate students in biomedical science research for qualifying institutions.)

The TRiM PI will advocate to the SAC and VCR directly for support of graduate student positions following a BLaST tiered mentoring model. Undergraduate students tax faculty time, often with no or reduced benefit on research

productivity. A model that did work, was research assistantships for graduate students who then mentored undergraduates (this is the BLaST model). Support for graduate students contributed to research productivity.

Graduate student mentored experience with undergraduates contributed to their training and subsequent employment.

2. Increase recruitment of clinical researchers to develop a pipeline of researchers – The group proposed several strategies to meet this goal:

- Build WWAMI Relationships - Develop more relationships with the WWAMI Program to engage their students in doing clinical research. Engaging with WWAMI compensates for the lack of physician researchers doing clinical research in Alaska. WWAMI can provide research training and experience that will result in an increased number of new clinical researchers, including physicians and nurse practitioners. Educate administrators, such as the new Dean of the UAA College of Health Sciences, about the importance of providing research training and experience, in order to enhance translational research capacity at UA.
- Engage Community Health Providers as Stakeholders – Build more productive relations with hospital administrators by involving TRiM investigators in meetings with administrators and health care providers. In addition to describing the research being conducted, emphasize the value of partnering with UA regarding clinical research for both their organization to further workforce retention and recruitment to address workforce shortages as well as to improve patient health outcomes through clinical trial participation.
- Increase Engagement with UA Administrators – Advocate for increasing research faculty by involving TRiM and other biomedical investigators as leads to meet with UA administrators that will “put a face” on and a voice behind our advocacy efforts.
- Increase Collaborations with Outside Researchers – To further TRiM’s development, we need to recruit more people from outside the University who would like to support our COBRE’s research. TRiM utilizes Journal Club and Visiting Professors as strategies to increase external collaborations. To keep us on track, we need to develop a strategy for selecting outside speakers for Journal Club who can build on the COBRE’s focus areas. TRiM’s focus areas need to be further defined.
- Leverage external collaborations to increase promotions with foundations and corporations that will increase our funding opportunities for COBRE research endeavors.

Ideas for further discussion

- 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 for 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.