



Transformative Research in Metabolism (TRiM)
Internal Steering Committee Meeting (ISC)
Friday, April 30, 2021
12:00 to 1:00 p.m. by Zoom
<https://alaska.zoom.us/j/899633093>

Meeting Objectives: Spotlight on TRiM Essential Personnel; Planning for TRiM’s Annual Retreat; “Dynamic Collaboration Plan” Discussion; and Sharing Program Updates

- 12:00 p.m. Welcome: Dr. Robert Coker (filling in for ISC Chair Khrys Duddleston)
- 12:05 p.m. Review and request action on ISC draft meeting agenda, 4.30.2021
- 12:05 p.m. Review and request action on ISC draft meeting minutes, 2.26. 2021
- 12:10 p.m. Old Business Announcements
- Strategic Advisory Committee Meeting Outcomes, April 21
 - External Advisory Committee Meeting, June 1-2
- 12: 15 p.m. TRiM Team Spotlight – Dr. Vadim Fedorov, Project 1 Update
- 12:30 p.m. TRiM Reporting
- Update on GY2 Reporting – Kelly and Denise
 - Discussion: How did this process work for you this year? What worked well and what did not? What would you like to see different in next year’s reporting? Discussion, Poll.
 - Did the Piestar reporting process work well for you? Yes/No
 - Were you satisfied with the process used to draft your Research Project/Core report narrative? Yes/No
 - What could we do to improve the reporting process for next year? (Please check all that apply.)
 - Allow more time to complete Piestar modules.
 - A second opportunity at 6 months to complete the Piestar modules as it is difficult to remember everything that happens over a year.
 - Other ideas – Please type in chat.
- 12:45 p.m. Planning for TRiM’s Annual Retreat (continued from 2.26.2021 meeting) – Kelly and Denise
- For the TRiM Annual Retreat, what topics would we like to cover If we hold a separate “team science” event? Discussion, Poll. Below are a few ideas:
 - Research Ethics
 - Principles of Team Science
 - Research and Core sharing
 - Other topics to explore

12:50 p.m. Research Project and Core *Snapshot* Updates – All are invited to share

1:00 p.m. Adjourn

Next ISC meeting: Friday, June 25, 2021, 12:00 p.m. to 1:00 p.m.

**Note: If you would like to present an update at the June ISC meeting, please let Khrys and Denise know.
Thank you!**

**Center for Transformative Research in Metabolism (TRiM)
Internal Steering Committee Meeting (ISC), Draft Minutes
Friday, February 26, 2021, 12:00 to 1:00 p.m., Virtual Meeting by Zoom**

Call to order: ISC Chair Dr. Khrys Duddleston welcomed all and called the meeting to order at 12:01 p.m.

I. Attendance: UAA representatives present included Dr. Khrys Duddleston (ISC Chair and Project 2 PI) and Brandon Briggs (AIMS Core Leader). UAF representatives present were Dr. Kelly Drew (TRiM Director and PI), Dr. Vadim Fedorov (Project 1 PI), Dr. Anya Goropashnaya (Project 1 & Admin Core), Dr. Robert “Trey” Coker, Project 3 PI; Dr. Carl Murphy (Leader, HaMR Core), Dr. Oivind Toien (HaMR Core), Scott Jerome (HaMR Core), Pat Rivera (Admin Core), Jen Danielson (TRiM external evaluator, Goldstream Group), Daniel Fullmer, Elizabeth Hood, and Denise Daniello (Admin Core).

II. Agenda, 2.26.2021: A motion to approve was made by Carl and seconded by Pat. There were no objections.

III. Draft Minutes, 1.8.2020: A motion to approve the minutes was made by Carl and seconded by Pat with no objections. Minutes were approved.

IV. Old Business, Announcements: Kelly congratulated TRiM’s Pilot Project investigators whose proposals were approved by TRiM’s External Advisory Committee to go forward to NIH. Kelly recognized Dr. Oivind Toien for his proposal titled *Adaptations of Sleep and Cardiac Rhythms in the Hypometabolic State of a Human-Sized Hibernator*; Dr. Kriya Dunlap for her proposal titled *Vitamin D and Healthy Aging: Establishing the Sled Dog Sentinel for the Circumpolar North*; and Dr. Anya Goropashnaya for her proposal titled *Molecular Mechanisms Underlying Skeletal Muscle Temporal Dynamics in a Hibernating Mammal as a Pathway to Peripheral Artery Disease Intervention*. Kelly also noted that with NIH approval, Oivind and Anya can go forward with their requests for Faculty Research positions. They will be invited to do a seminar as part of their requirements for the position.

V. Spotlight on TRiM’s Essential Personnel: Pat Rivera and Scott Jerome were invited to make brief presentations about their backgrounds and work with the TRiM program.

As TRiM’s Research Technician, Pat Rivera is assisting with establishing the technique for cryosection and Immunohistochemistry (IHC) tissue sampling to build capacity for the Center. Currently, Pat is working with Dr. Fedorov and his research using this technique for AGS muscle tissue sampling. Pat described this process in detail and shared images using the technique. She also talked about her previous work in tissue processing and staining in a variety of contexts at the UAF, Castle Medical Center in Kailua Hawaii, and during her work with the Exxon Valdez Oil Spill Project.

Scott Jerome, PhD is the Research Navigator in TRiM’s HaMR Core. As the Research Navigator, Scott assists investigators with troubleshooting their study designs; providing guidance through the IRB/IACUC applications; connecting investigators with appropriate university personnel and gaining access to equipment; identifying funding resources; offering help with publication preparation; data collection; and other needs as approved by Dr. Drew. Scott discussed his PhD dissertation in biochemistry from UAF and research focused on ‘athlete overtraining’ (aka “athletic burnout”) and the possible role for vitamin D to address this condition. Scott also talked about his work on the canine model with Dr. Larry Duffy and Dr. Dunlap. Scott is also a trained phlebotomist.

VI. Planning for TRiM's Annual Retreat (Denise and Kelly): Denise described possible plans for holding a TRiM annual retreat that would occur either before or after the INBRE retreat scheduled for October 2-3, 2021 in Talkeetna, depending on the will of the ISC to promote collaboration among investigators. Denise also mentioned that TRiM planned to hold an annual retreat in 2020 at Chena Hot Springs however, that plan was cancelled due to COVID. Kelly added that the retreat would promote synergy between investigators and allow us time to focus on research ethics so talk more specifically about collaboration planning. We could also plan for some fun activities, such as a hike, to facilitate bonding among TRiM's personnel. Kelly also noted that we would do TRiM's retreat separate from INBRE's retreat by spending an additional day or two at the Talkeetna Lodge.

Khrys expressed support for the idea however, noted that the amount of time for TRiM's annual retreat would depend on the topics we would cover.

Trey also voiced support however cautioned that the focus for INBRE and TRiM is unique and the distinction should be recognized. While TRiM is focused on metabolism specific and translational research, INBRE is more focused on basic science. Both groups need to remain distinct but open to collaboration. Trey also recommended that TRiM's retreat occur before INBRE's event. He also liked the hike idea as it has been a long time since we have all been together.

Following discussion, the ISC members were polled on the following question: "Do we want to hold our retreat in conjunction with INBRE's October 2-3 Annual Retreat in Talkeetna?"

- Strongly Agree – 40%
- Agree – 30%
- No preference – 10%
- Disagree – 20%
- Strongly Disagree – 0%

Following the poll, the ISC discussed the results. Pat explained her vote to "disagree" was due to her misunderstanding that TRiM's retreat would be held separate from INBRE's and that we would not stay for the INBRE retreat. Pat said that she supports the idea now knowing that TRiM personnel would stay for the INBRE retreat.

For now, Khrys suggested that we hold off planning the details of TRiM's retreat as we have a lot of time for advanced planning and today's ISC meeting has a full agenda.

VII. Sharing Program Updates for Research Projects and Cores (Denise and Kelly): While sharing program updates is important to ensure that ISC members are kept current with new research activities and program developments, it can take up too much time during ISC meetings when everyone is invited to make presentations. The Admin Core offered suggestions for ISC members to consider going forward to share program updates while still allowing some time for brief updates. These options were discussed and members were polled using the following question:

"How do we share program updates going forward? Check as many of the options that apply."

- Invite Research PIs and Core Leaders to provide *brief* written updates for the ISC meeting packet – 89%
- Ask one Research PI and/or one Core Leader to present updates at ISC meetings – 56%
- Ask one or two essential TRiM personnel to share their work at the ISC meeting – 11%
- Other ideas?

The poll results were discussed. The group favored inviting all TRiM personnel to present to the group. PIs and Core Leaders are invited to submit written brief updates to Denise to include in the meeting packet. Khrys suggested that the Admin Core create a schedule for people to sign up in advance as speakers and that everyone remains flexible to allow changes in scheduling. Denise offered to create the schedule that will be shared with TRiM personnel (PIs, Core Leaders, and Other Essential Personnel).

VIII. “The Dynamic Collaboration Plan” (Kelly): Now that we have plans for holding a TRiM retreat, Kelly said that we will talk more about collaboration planning at that time.

IX. Program Snapshots (brief updates): Trey reported that 6 people have been screened for his project’s clinical trials and deemed eligible. Trey noted that he received his first vaccine and that Sheri has received her second vaccine, which will help to reduce the risk of transmitting the virus to older adults enrolled in their clinical trials.

Khrys shared that her project has completed all sampling of AGS tissue and it will take time to analyze the data. She also noted that a few AGS aroused early, which accelerated the time frame to finish the sampling.

Trey also shared news about the acceptance of Sheri Coker’s paper for publication in the *International Journal of the Circumpolar North*. The paper discusses Sheri’s doctoral research comparing the nutritional value of domestic beef to reindeer. Her dissertation is scheduled for April 28.

X. Feedback requested on ISC meeting: Members were polled for their opinions regarding the updated structure for ISC meetings using polling to measure opinions and limited meeting time spent on reporting.

How useful was today’s ISC meeting for you?

- Very useful – 80%
- Somewhat useful – 10%
- Little usefulness – 10%
- Not at all useful – 0%

IX. Adjourn – The meeting adjourned at 1:00 p.m.

Next meeting: Friday, April 30, 12:00 noon to 1:00 p.m.



ISC Meeting, April 30, 2021 – Core and Research Project Updates

Project 1 Updates, April 30 2021 (Submitted by PI Vadim Fedorov)

SA1: MicroRNAs were extracted from muscle of 12 arctic ground squirrels (8 hibernating, 4 summer active). MiRNAs sequencing has been completed. Data analysis is in progress.

SA3: Ribosomal footprints and RNAs were extracted from muscle of 12 arctic ground squirrels (8 hibernating, 4 summer active). Libraries were constructed and test Miseq sequencing run was conducted. Yield and quality of ribosomal footprints were satisfactory and full-scale Illumina sequencing is in progress.

IDEA Proteomic screen in muscle hibernating and summer active bears was completed. Total of 2300 proteins were identified, 115 proteins demonstrated significant differences in expression. Michell Johanssen conducts pathway analysis.

Dr Goropashnaya submitted an abstract for the One Health, One Future virtual conference at UAF and delivered virtually (on 4.7.2021). The abstract was titled “Modulation of gene expression and bone preservation in hibernating black bears.”

PI Fedorov, with Drs. Goropashnaya, Toien, and Barnes, submitted an abstract for a poster presentation titled “Transcriptional Changes and Preservation of Bone Mass in Hibernating Black Bears” for the virtual Experimental Biology 2021 Conference, which was presented (on 4.27.2021).

Publication: *Transcriptional Changes and Preservation of Bone Mass in Hibernating Black Bears.* Fedorov, Vadim; Anya Goropashnaya; Øivind Tøien; Thiruvarangan Ramaraj; Anitha Sundararajan; Faye D Schilkey; Brian M Barnes; Seth. W Donahue. Journal Name: Scientific Reports, Volume 2021, Issue 11, page 8281. Pub Date: 4.14.2021. TRiM Award acknowledged. Journal article.

AIMS Core Facility (submitted by Eric Henderson, Lab Manager):

- The gas is now hooked up to the Eppendorf Bioreactors and we went through the system checks with an Eppendorf representative. I’ve been learning to use the system and I’ll be helping an undergraduate culture some samples under anaerobic conditions using the Bioreactors.

- We received the BioTek plate reader and a representative will be helping us install it and training us on how to use it next week.

- We're still monitoring wastewater for Covid -19 in communities across Alaska.
- There has been a number of opportunities to provide MiSeq and Minlon sequencing mentoring and completing several sequencing runs including ITS and 16S amplicon sequencing.

HaMR Core Update (Submitted by Dr. Carl Murphy, Core Leader):

Vet MRI scans going well enough that we have hired an incoming vet student to assist during the summer, and we are looking to start working with other veterinarians to help with the workload.

The MIF has taken over the liquid nitrogen plant in the Reichardt building and adopted it into the recharge center for FY22.

The MIF has updated its policies which are now available on the TRiM website.

New survey forms have been made using REDCap for the Project Registration and other forms.

Admin Core (Submitted by Denise Daniello, Program Coordinator)

- NIH Reporting - Completing RPPR and SIRS reporting at this time which will be submitted by May 1. We are submitting reports for all 3 research projects, 3 cores, and the overall, including financials. *Thank you* everyone for assisting with this effort!
- Budgeting - Working with Project PIs and Core Leaders to develop their FY03 budget projections; planning TRiM's Overall GY03 budget; processing payments for EAC and TAC external members; and monitoring GY02 overall budget including tracking labor, transactions, and purchase orders to ensure transactions are allocable and allowable. We will be working with OGCA to establish new fund orgs in GY03 for the Center's budget soon.
- Pilot Project Application Submissions: Submitted completed application packets for TRiM's Pilot Projects (Toien, Goropashnaya, and Dunlap) to OGCA that were forwarded to NIH for approval (on 3.19.2021). NIH approval of the pilots are pending at this time.
- EAC Meeting, June 1-2: Developing meeting materials, coordinating activities as well as travel/lodging logistics for EAC members. All are invited and encouraged to attend this important meeting. Three of TRiM's four EAC members will be traveling to UAF for this meeting.
- TRiM's Strategic Advisory Committee (SAC), 4.21.2021: Meeting outcomes will be shared at the ISC meeting.
- Facility Descriptions: Developed and posted descriptions of TRiM's Core facilities on TRiM's website to assist investigators who are applying for grants using TRiM's core resources. The descriptions detail existing capacities of our core resources. Many thanks to Carl, Brandon and Kelly who assisted the Admin Core with this effort.

- NIH Alternate Funding Mechanisms: Compiled information about new NIH funding mechanisms in addition to data describing UAF student enrollment/graduation rates in biomedical and NIH funding awards to UAF investigators. This information was recently presented at the SAC (4.21.2021) and Synergy (4.22.2021) meetings.
- Fundraising: Spearheading a fundraising effort to establish a UAF Foundation Support Donor Fund on behalf of the Center to raise funds for an endowed Director for the Center, per TRiM's grant application to NIH. We are financializing paperwork with the UA Foundation to establish this fund and thank IAB for investing \$500 to establish TRiM's donor fund. When everything is approved, we will post a giving button on TRiM's website for public members to contribute.
- New Funding Applications: PIs Kelly Drew (with Drs Fedorov and Podlutsky, and Bernard Laughlin, DO) and Loren Buck (with Dr. Khrys Duddleston) submitted two independent proposals in response to an invited solicitation from the Biomedical Research and Space Health (BRASH) sponsored by the Translational Research in Space Health Program (TRiSH). The solicitation targets both hibernation and gut microbiome science (submitted on 3.30.2021).