Virtual Grant Writing Workshop (Beginner Level)
“Writing and Preparing Competitive Clinical & Translational Research Grants”
Final Results Handbook
April 13-14, 2022
Zoom Virtual Meetings

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MW CTR-IN OVERVIEW

The Mountain West Clinical & Translational Research Infrastructure Network (MW CTR-IN) Program provides funding support and resources to help faculty at our 13 Mountain West Partner Universities interested in clinical and translational research, become more competitive for extramural funding with the aim of improving the health of the residents of the MW region.

GRANT WRITING WORKSHOP (GWW) PROGRAM LEADERSHIP & STAFF

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MW CTR-IN Program

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TABLE OF CONTENTS

Introduction 4
  ➢ Objectives
  ➢ Speakers & Consultants

Demographics of Grant Writing Workshop Attendees 5
  ➢ Academic Rank
  ➢ Primary Academic Affiliation
  ➢ Number of MW CTR-IN States Represented

Post-Workshop Survey Results 6 - 8
  ➢ Overall
  ➢ Confidence Measures
  ➢ Open-ended Responses
Grant Writing Workshops

Introduction

The Mountain West Clinical & Translational Research – Infrastructure Network (CTR-IN) Program’s Professional Development (PD) Core, successfully concluded its virtual Grant Writing Workshop (vGWW) themed, “Writing and Preparing Competitive Clinical & Translational Research Grants” on April 13-14, 2022. The vGWW was held via Zoom Virtual Meetings, the Objectives and Speakers & Consultants below:

OBJECTIVES:

1. Recruit current & potential Principal Investigators (PIs, current and unsuccessful Pilot Grant Awardees) from the Mountain West CTR-IN affiliated Universities for grants on clinical translational research, with a focus in health disparities and community engagement research.
2. Inform the PIs on the NIH updates on grant applications and new FOAs.

SPEAKERS & CONSULTANTS:

Ruben Dagda, PhD
Associate Director, Professional Development (PD) Core, MW CTR-IN Program
Chair, Grant Writing Workshops (GWW), PD Core, MW CTR-IN Program
Chair, Advance to Funding (ATF) Program, PD Core, MW CTR-IN Program
Associate Professor, Department of Pharmacology, University of Nevada Reno

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Director, PD Core, MW CTR-IN Program
Professor, University of New Mexico - School of Medicine (SOM)
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Director, Center for Healthcare Equity in Kidney Disease (CHEK-D)

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Assoc. Director, Biostatistics, Epidemiology, Research & Design (BERD) Core, MW CTR-IN Program
Director, Nevada Bioinformatics Center
Co-Director Data Science Core, NIH IDeA NV INBRE

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Associate Director - Mentoring Unit, PD Core, MW CTR-IN Program
Professor and Miners’ Colfax Medical Center Endowed Chair in Mining-Related Lung Diseases
Medical Director, Miners’ Wellness Tele-ECHO Clinic
Assist. Dean, Mentoring & Faculty Retention, UNM-SOM Office of Fac. Affairs & Career Dev.

Francisco S. Sy, MD, DrPH
Principal Investigator, MW CTR-IN Program
Professor & Chair, Dept. of Environmental & Occupational Health, Univ. of Nevada, Las Vegas – School of Public Health
Demographics of GWW Attendees

Please note that the data is based on the overall attendance of 6 Virtual Grant Writing Participants below:

**ACADEMIC RANK**

<table>
<thead>
<tr>
<th>Academic Rank</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>0</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>0</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>9</td>
</tr>
<tr>
<td>Instructor</td>
<td></td>
</tr>
<tr>
<td>Research Professor</td>
<td></td>
</tr>
<tr>
<td>Research Associate Professor</td>
<td></td>
</tr>
<tr>
<td>Lecturer</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>Other* - Affiliate / Adjunct Faculty</td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total Participants</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

**PRIMARY ACADEMIC AFFILIATION OF GWW ATTENDEES BY MW CTR-IN PARTNER INSTITUTION**

<table>
<thead>
<tr>
<th>MW CTR-IN Partner Institutions</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Wyoming</td>
<td>2</td>
</tr>
<tr>
<td>University of New Mexico - Health Sciences Center</td>
<td>1</td>
</tr>
<tr>
<td>University of Nevada, Reno</td>
<td>1</td>
</tr>
<tr>
<td>University of Nevada, Las Vegas</td>
<td>1</td>
</tr>
<tr>
<td>University of Montana</td>
<td>1</td>
</tr>
<tr>
<td>University of Idaho</td>
<td>1</td>
</tr>
<tr>
<td>University of Hawaii - Manoa</td>
<td>1</td>
</tr>
<tr>
<td>University of Alaska- Anchorage</td>
<td>1</td>
</tr>
<tr>
<td>University of Alaska- Fairbanks</td>
<td>1</td>
</tr>
<tr>
<td>New Mexico State University</td>
<td>1</td>
</tr>
<tr>
<td>Montana State University</td>
<td>1</td>
</tr>
<tr>
<td>Idaho State University</td>
<td>1</td>
</tr>
<tr>
<td>Boise State University</td>
<td>1</td>
</tr>
</tbody>
</table>

MW CTR-IN Partner Institution Representation in GWW = 7 out of 12 Partner Institutions participated in this vGWW!!
## POST-WORKSHOP SURVEY RESULTS

### OVERALL

<table>
<thead>
<tr>
<th>#</th>
<th>QUESTION</th>
<th>STRONGLY AGREE n (%)</th>
<th>AGREE n (%)</th>
<th>NEITHER AGREE NOR DISAGREE</th>
<th>DISAGREE n (%)</th>
<th>STRONGLY DISAGREE n (%)</th>
<th>NUMBER OF RESPONSES</th>
<th>AVERAGE (STRONGLY AGREE = 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The objectives of the workshop were fulfilled.</td>
<td>4 (44.44)</td>
<td>4 (44.44)</td>
<td>1 (11.11)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
<td>4.33</td>
</tr>
<tr>
<td>2</td>
<td>I gained a good understanding of the concepts &amp; skills in grant writing after attending the workshop.</td>
<td>5 (55.56)</td>
<td>3 (33.33)</td>
<td>1 (11.11)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
<td>4.44</td>
</tr>
<tr>
<td>3</td>
<td>The instructional materials (Powerpoint &amp; Interactive Sessions) were relevant to the objectives of the workshop.</td>
<td>6 (66.67)</td>
<td>4 (33.33)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
<td>4.67</td>
</tr>
<tr>
<td>4</td>
<td>I was satisfied with the quality of the review &amp; feedback I received from mentors &amp; MW CTR-IN Leadership.</td>
<td>4 (44.44)</td>
<td>4 (44.44)</td>
<td>1 (11.11)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
<td>4.33</td>
</tr>
<tr>
<td>5</td>
<td>Overall, my goals for taking this workshop were met.</td>
<td>5 (55.56)</td>
<td>5 (44.44)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>9</td>
<td>4.56</td>
</tr>
</tbody>
</table>
CONFIDENCE MEASURES

(0-100 Scale with 0 = Cannot do at all; 100 = Highly certainly can do)

<table>
<thead>
<tr>
<th>Item</th>
<th>PRE</th>
<th>POST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing a Specific Aims page</td>
<td>56.67</td>
<td>83.07</td>
</tr>
<tr>
<td>Calculating sample size and power analyses</td>
<td>44.07</td>
<td>63.27</td>
</tr>
<tr>
<td>How to prepare a competitive Significance section</td>
<td>45.27</td>
<td>73.4</td>
</tr>
<tr>
<td>How to prepare a competitive Innovation section</td>
<td>43.2</td>
<td>73.87</td>
</tr>
<tr>
<td>Preparing a solid Research Approach section</td>
<td>48.73</td>
<td>70.47</td>
</tr>
<tr>
<td>Best practices for tailoring and preparing figures for a grant application</td>
<td>38.27</td>
<td>68.6</td>
</tr>
<tr>
<td>How to prepare an NIH Biosketch</td>
<td>52.27</td>
<td>82.13</td>
</tr>
<tr>
<td>Employing the appropriate research instruments/measures for your research</td>
<td>57.67</td>
<td>71.33</td>
</tr>
<tr>
<td>Preparing a budget justification</td>
<td>44.73</td>
<td>61.00</td>
</tr>
<tr>
<td>Targeting the most appropriate study section(s) for your grant</td>
<td>35.93</td>
<td>71.2</td>
</tr>
<tr>
<td>Understanding the grant review process in study sections</td>
<td>43.07</td>
<td>77.27</td>
</tr>
<tr>
<td>Understand how to deal with grant rejections</td>
<td>38.93</td>
<td>64.93</td>
</tr>
</tbody>
</table>
- What was the most helpful aspects of the workshop?

- The feedback from a number of individuals was helpful.

- 1) Breakout sessions - Individualized and targeted feedback from leadership and peers. 2) Guidance on identification of appropriate SRGs. Thank you for demystifying this process! I know this is an important part of developing your proposal, but it is never covered in workshops. The specific suggestions and tools provided were so helpful. Again, thank you so much for covering this! 3) Breakdown/anatomy of the specific aims page. Reiterating how this may be the only page that many reviewers will ever read. Suggestion to include a figure to clarify your model.

- I was not able to attend the second session on the first day although I wanted to learn about 'Dealing with Rejection.' Other than that two topics --- Specific aims and significance sections --- were more helpful than other sections.

- The breakout sessions with other participants and with mentors. Also, hearing the presenters' personal experiences with grant writing and overcoming obstacles.

- The feedback and discussion on our working proposal in multiple settings and audiences was the helpful for me! Also, the positive tone, encouraging mentors and overall organization were very strong for a grant writing workshop.

- The detailed framework provided for specific grant sections was very helpful. I also appreciated comments on my grant components by the experienced investigators.

- I really appreciated getting direct feedback on my submitted materials. That was the first time I've had someone review the non-research strategy sections of my grant applications and I think it was a really great dive into these other critical sections of NIH grants. I also really appreciated the
'thought process' of how to formulate the grant materials and learning what reviewers are looking for - and how to make it easy for them to find it.

- Hearing from reviewers about what makes them likely to favorably score a grant or not.

- I liked the use of breakout rooms. Reviewing other's papers. Interactions between presenters and audience. The sense of care and attentiveness the presenting team had toward wanting the audience to learn and grow to be more effective. Liked having it virtually. My hope is I could have another shot at the training. If I could be prompted in an in-your-face way on products to send ahead of time, I could do my part to get more out of the training. Thanks, Team!

- The specific formulas provided for writing each section were helpful, as well as the individualized feedback.

- The breakout sessions to go over each participant's Specific Aims and biosketch were the most helpful. It was valuable to get feedback of my work from two different moderators. It is helpful that moderators also provided written comments on my Specific Aims and biosketch so that I will have a record of them after the breakout sessions. Research environment breakout rooms: I have never written one so I didn't have anything to share. My experience was not unique as only one workshop participant had written something for the research environment portion. It was good to go over samples written by the moderators in the breakout rooms and have them available to workshop participants after the class. Dr. Sood's presentation was helpful as it contained a lot of Specific Aims examples, some of which were color coded. The lively-colored examples kept me interested in the presentation because they were easy to follow. His presentation transitioned well into the Specific Aims breakout sessions. The workshop was well organized, and Joseph kept events and breakouts flowing smoothly. We adhered well to the time schedule at least for day 1. Perhaps when speakers go over their allotted time, they should get a reminder to stop. The topics and presentations were all relevant to the grant workshop.

- I enjoyed having both didactic and break-out spaces. It was incredibly helpful to see others' documents and to have the feedback occur in a group setting.
Especially applying the skills we learned in the didactic to our break-out groups. I really appreciate everyone's help and support. I am very early career (recently graduated) so I learned a lot. Thank you all!

- The presenters were all very knowledgeable and kept me engaged. I liked being able to see other participants materials (always good to see different ways of presenting materials). Seemed like a good blend of experts across the translational field but I wonder if that would be helpful to group participants for breakout sessions in that way as well.

- Thanks for the workshop. It helped us learn more on how to prepare a bio sketch and write a SA page.

- **What was the least helpful aspects of the workshop?**

  - All components were helpful

  - 1) For me, the power analysis section was least helpful. I've taught grad-level statistics and research methods before, so was already familiar with these concepts. I regularly conduct my own power analyses for basic statistics (G*Power). I could use more training in advanced power analysis strategies (for multilevel modeling, SEM, etc). However, I know that different workshop attendees have different needs. 2) I also struggled somewhat with peer feedback. Misunderstandings of my proposal ideas from peers who were all clearly very intelligent scientists helped me to learn that I'm targeting an audience that is too specialized. However, when peers provided suggestions for specific revisions and changes, I wondered whether I should follow through with them. I know we were limited in time in these breakout rooms, but it could be helpful if leadership/moderators weigh in on whether they agree/disagree with peer feedback. As someone being reviewed, this would have helped me figure out which suggestions to follow through with. As someone providing a review, this would have helped me figure out whether I was on the right track with my evaluation of the proposal, providing another opportunity for learning more about grantsmanship.

  - As all topics are important, I appreciate all sections. Thank again for all presenters and their time.
• Power calculations (because I've already done tons of those)

• Hard to say. I valued most of it...

• It would have been very helpful to have the materials ahead of time. Having access to the slides ahead of time would have been helpful for taking notes. I felt like I was scrambling to write down/screen shot what was on the slides so I could contribute to the breakout session discussions. It would also have liked to know that we were critiquing others' grants- while this was a great help, I would have submitted documents I had already submitted rather than something I was currently working on. I would have also chosen something for an NIH submission so the format was familiar to others. It would have been helpful to read through the others' grants days before the workshop to feel more prepared and able to provide more meaningful comments.

• One of the challenges for me was that the whole program seemed pretty disorganized. The breakout sessions didn't ever seem to be what they were intended to be and because different documents had different ending times, I wound up having to miss two of the sections that I really wanted to attend. I know it takes a lot of work to pull these off, and I do appreciate all the work that the hosts put in, but the disorganization made it hard to figure out what was happening and when. Also, while I really appreciated the feedback on my specific aims page, the breakout was structured so that a formula was presented on what was "right" and then the documents I submitted a few weeks ago was compared to that formula and found lacking. I think it would have been more effective to get that "formula" beforehand and then evaluate how well we (i.e., the participants) executed against those criteria. Those two points above also echo the big challenge I've faced in applying to MW CTR-IN grants in the past - the criteria of evaluation aren't clearly spelled out (or, as I experienced, some criteria aren't noted at all in the RFA but the feedback severely criticizes me for not addressing these points) and it doesn't seem to be well organized as a whole. I definitely feel more confident applying in the future, but the feedback I got in the past really discouraged from wanting to apply to another RFA. If I hadn't attended this workshop, I wouldn't have applied for MW CTR-IN funding in the future, even though my work is all translational research in an area that is a rather severe health disparity.
Grant Writing Workshops

- Not receiving materials far enough in advance to fully participate in critical review breakout sessions.

- Nothing the team could do but the timing was terrible for me. I had a major grant due that had a very short turnaround time. It distracted from my full participation. I don't recall getting prompts to submit examples far enough ahead of the training. Although I don't think I would had much time to give to them, I just don't remember getting cues to push different products in a timely manner.

- I wish there had been more time for review and perhaps having the materials/powerpoints ahead of time.

- I found that discussing MY OWN Specific Aims and biosketch in the breakout session useful. However, I didn't find me discussing my partner's Aims and biosketch useful, because I only briefly scanned her Aims and biosketch when they were emailed to me (my breakout room partner didn't even have time to read mine before we met in the breakout room). Also, since I got her documents BEFORE the presentations on Specific Aims and biosketch, I didn't know enough about these subjects to read them critically. In the breakout room, I think it would be more useful for me to critique MY OWN Specific Aims and biosketch with the moderator (while my partner listens in), and then I listen when my partner discusses her documents with the moderator. Some of the presentations were so long and contained lots of texts. It was like reading slides instead of listening to a talk. It would be helpful if they have less texts and more examples.

- This isn't about the workshop exactly. I wonder if having the workshop advertised much earlier in the semester would allow for space in our schedules and more time to prepare document drafts. More bio breaks are helpful for me, too (so a longer workshop, but with more breaks).

- I felt like there was some miscommunication about when materials needed to be submitted by-- (i.e. confusion over application to participate deadline over deadline to turn in specific aims and biosketch). For these reasons I didn't have my materials reviewed in the breakout session which was fine as I still learned a lot but future courses may benefit from some clarity over the timeline and specifics of application. My computer died at the end of day 2.
and when I tried to log back into zoom I was never admitted back into the session (maybe use a passcode instead if that happens?).

- Some of the interactive sessions could have been shorter in time or more prepared