CCTSI T32 Programs

Pre- and Post-Doc

Lisa Cicutto RN, MSc, PhD, ACNP(cert)
PI, Director

CU | AMC
National Jewish Health

cctsi.cuanschutz.edu
Integration Across CCTSI

CTS Workforce Development Element C1 (Cicotto)

Community and Stakeholder Engagement Element C2 (Nease/Tamez)

CTS Resources and Services Element D1 (Kohrt)

CTS Pilot Grant Program Element D2 (Serkova)

Health Informatics Element D3 (Haendel)

CTS Research Program Element E (Ginde/Kwan)

Planning
- BERD
- Pragmatic Trials
- Clinical Trials/TIN
- Bioethics
- Research Studios

Conduct
- CTRC Network
- RKS
- Data Management
- Natural Animal Models

Analysis
- CTRC Core Labs
- Nutrition & Exercise Cores
- Cardiovascular Imaging
- BERD

Dissemination
- D&I Core
- Communication and Marketing
Leadership Team

Amira del Pinto-Jones MD, CU|AMC, UCH
Director - Diversity, Inclusion, Health Equity

Kristen Nadeau MD, MSCS, CU|AMC, CHCO
Director- Clinician Scientists

Paul MacLean PhD, CU|AMC,
Director - Biomedical Scientists

Doug Thamm VMD, CSU
Director-Veterinarian Scientists
# Diversity of Faculty Mentors

**Pre-Doctoral Faculty Characteristics (n=96)**

<table>
<thead>
<tr>
<th>Doctoral Degrees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>54 (56%)</td>
</tr>
<tr>
<td>MD</td>
<td>23 (24%)</td>
</tr>
<tr>
<td>MD/PhD</td>
<td>14 (10%)</td>
</tr>
<tr>
<td>PharmD</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>PharmD/PhD</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>DPT/PhD</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>56 (58%)</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>32 (33%)</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>8 (8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Translational Spectrum (category overlap)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 Pre-clinical</td>
<td>69 (70%)</td>
</tr>
<tr>
<td>T2 Patients/Clinical</td>
<td>65 (68%)</td>
</tr>
<tr>
<td>T3 Clinics/Implementation</td>
<td>36 (38%)</td>
</tr>
<tr>
<td>T4 Public Health</td>
<td>15 (16%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Female</th>
<th>44 (46%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIPOC</td>
<td>13 (14%)</td>
</tr>
<tr>
<td>Both Anschutz + affiliate/ partner appointments</td>
<td>31 (32%)</td>
</tr>
</tbody>
</table>

- All UC|AMC professional schools represented
- Partners: CSU, CU Boulder, CU Denver, NJH, VAMC, DH
## Diversity of Faculty Mentors

### Post-Doctoral Faculty Characteristics (n=111)

<table>
<thead>
<tr>
<th>Doctoral Degree(s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DVM/PhD</td>
<td>12 (11%)</td>
</tr>
<tr>
<td>DVM or VMD</td>
<td>2 (2%)</td>
</tr>
<tr>
<td>MD</td>
<td>36 (32%)</td>
</tr>
<tr>
<td>MD/PhD</td>
<td>20 (18%)</td>
</tr>
<tr>
<td>Clinician, non-MD/PhD</td>
<td>8 (8%)</td>
</tr>
<tr>
<td>Clinician, non-MD</td>
<td>3 (3%)</td>
</tr>
<tr>
<td>PhD</td>
<td>30 (27%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Assistant Professor</td>
<td>6 (6%)</td>
</tr>
<tr>
<td>- Associate Professor</td>
<td>34 (31%)</td>
</tr>
<tr>
<td>- Professor</td>
<td>71 (63%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Translational Spectrum</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T.5 Shared animal-human disease</td>
<td>35 (32%)</td>
</tr>
<tr>
<td>T1 Pre-clinical</td>
<td>72 (65%)</td>
</tr>
<tr>
<td>T2 Patients</td>
<td>67 (60%)</td>
</tr>
<tr>
<td>T3 Clinics</td>
<td>64 (58%)</td>
</tr>
<tr>
<td>T4 Community/public health</td>
<td>17 (15%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Female</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46 (41%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BIPOC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12 (11%)</td>
</tr>
</tbody>
</table>

- All UC|AMC professional schools represented
- Partners: CSU, CU Boulder, CU Denver, NJH, VAMC, DH
CTS Roadblocks Addressed

1. Diversity in translational workforce, science and research
2. Misinformation and mistrust in translational research
3. Improve collaboration and team science
4. Improve rigor (study design, data collection and quality)
5. Attain funding for translational science and research
Goal 1: Weave our value, Diversity Accelerates Research and Translation (DART), into all T32 activities

1. Amira del Pino-Jones MD, SOM CU|AMC, UCH: Director, Diversity, Inclusion and Health Equity
   Available for consult, advice, mentoring, guidance any time to mentees and mentors

2. Workshops
   - 3/year for Leadership Advisory Council
   - T32 seminars
   - Mentoring³: Mentors, Mentees, Peers
   - Teaming and Leading

3. Attract, Recruit, Select, Retain Trainees
   - Declare our value on all materials
   - Support for applicants
   - Applicants respond to question: How do you contribute to DART
   - Holistic review
   - Work to create pathways
Strategic Goals

   • Roadblocks addressed: All roadblocks identified on previous slide

2. Objective: Apply evidence informed mentoring practices to support developing trainees from all backgrounds for career persistence and success in CTSR.
   • Roadblocks addressed: Improve Rigor and Collaboration

3. Objective: Develop trainee’s ability to communicate effectively (writing, speaking, listening) with diverse target groups.
   • Roadblocks addressed: Clinical trial participant representation, Health equity, Misinformation and mistrust in translational research
Strategic Goals

4. Objective: Engage trainees with a new translational community and network that brings new insights, perspectives, and skills through immersion experiences with translational mentors.

5. Objective: Approach CTSR as a team endeavor and foster trainees’ teaming and leading skills for high performing teams.
   - Roadblocks addressed: Improve collaboration and team science

6. Objective: Apply the One Health Framework to culminate the integration of translational scientist competencies. (Post Doc program)
   - Roadblocks addressed: Improve collaboration and team science

7. Objective: Identify, monitor, track, review and respond to, as necessary, indicators and metrics of an effective and successful program through continuous quality improvement.
   - Roadblocks addressed: Skilled workforce
Year 1 Progress & Impact

- New RFA released for T32 Pre- and Post-Doctoral programs
  - **Pre-doctoral program** designed for biomedical, bioengineer, clinical PhD students (2 years) and students in professional doctoral programs for one year.
    - Filled all pre-doctoral slots: 8
      - Biomedical: cancer biology, integrative physiology, microbiology, neuroscience, cell biology
      - Bioengineer:
      - Clinical: epidemiology
      - Clinician: MD student
  - **Post-doctoral** collaborative program b/t CSU and CU for clinicians (veterinarians and human)
    - Filled 2 of 4 Post-doc slots: 1 surgeon and 1 veterinarian
  - Challenges
    - Learned likely receiving funding in July/August and grant started in September
    - Medical and Veterinary fellows start July so the Sept/October start date problematic
    - Altering the start date moving forward
Year 1 Progress & Impact

- **Obj. 1: Developing characteristics of Translational Scientist**
  - All trainees completed with their mentors Individualized Career Development Plan (ICDP) that includes translational scientist domains
    - For each domain, identify
      - Goals
      - Milestones
      - Resources
        - Courses/workshops
        - People
        - Experiences
    - Presented and reviewed by T32 directors and peers
      - Repeated 1- and 2-year anniversary
  - T32 seminars
    - What is: Translational Scientist, Translational Research, Translational Science
Year 1 Progress & Impact

**Obj. 2: Mentoring**
- Developed and piloting Mentoring\(^3\): Mentors, Mentees, Peers
  - Workshops held for mentees only, mentors only and as dyads
- Initiated process to evaluate mentoring relationships: dyads and as mentors and mentees
  - Assessments:
    - Upon program entry, 1 year and 2 years
    - Mentor: self-reflection and mentee
    - Mentee: self-reflection and mentor
  - Review by T32 directors and IAC

**Obj. 3: Communication**
- Participated in *Effectively Communicating your Science to the Public* program
- Writing Accountability Group (6 weeks for 1.5 hrs) held this summer

**Obj. 5: Teaming and Leading**
- Participated in *Teaming and Leading* program
Year 2 Plans

**Obj. 3: Communication**
- Holding 2 Café Scientifique events in community
  - Aim to engage people in a conversation about science and technology that affect our lives and promote the cultural examination of the work.
  - Conducted in informal and friendly atmosphere (Cafés)
  - Some evidence suggesting improve the image of scientists and people interested in careers in science
  - Each trainee will present their research

**Obj. 1, 5, 6: Translational Scientist, Teaming, One Health**
- “One Health Translational Team-athon” event
  - Interdisciplinary teams will use a OneHealth approach to address a common issue across the translational spectrum
Year 2 Plans

• Obj. 2: Mentoring

  • Review mentoring (mentee-mentor) data as dyads and aggregate mentors and mentees
  • Develop reporting back templates
  • Follow-up with mentoring dyads that are at-risk or struggling
National Representation

- CTSA Consortium Training Program Directors
  - Conference planning
  - Abstract review
1. Integration of TL1 and KL2 with partners:

- Post-Doc T32 is split 50-50 with CSU and CU clinicians
- Pre-Doc T32 open to PhD students and professional doctorate students for a 1-year leave - open to partners through translational immersions and research projects
Questions for EAC

1. How are you weaving in translational science and the domains of translational scientists into your T32 programs (or proposed programs)?