

The State of UNM Research

MARCH 1, 2022



OFFICE OF THE
VICE PRESIDENT
FOR RESEARCH



Ellen Fisher, PhD
Vice President for Research
Professor of Chemistry

Today's Agenda

- Welcome from Assoc. VPR Mary Jo Daniel
- Land Acknowledgement
- Opening remarks from President Garnett Stokes & Provost James Holloway
- The State of UNM Research from VPR Ellen Fisher
- Town Hall Q & A





Land Acknowledgement

Founded in 1889, the University of New Mexico sits on the traditional homelands of the Pueblo of Sandia. The original peoples of New Mexico – Pueblo, Navajo, and Apache – since time immemorial, have deep connections to the land and have made significant contributions to the broader community statewide. We honor the land itself and those who remain stewards of this land throughout the generations and also acknowledge our committed relationship to Indigenous peoples. We gratefully recognize our history.



Opening Remarks



The State of UNM Research

Who We Are at OVPR

- Leadership (clockwise from left):
 - Mary Jo Daniel, PhD
Associate Vice President for Research
 - Melissa Emery Thompson, PhD
Interim Assistant VP for Research,
focusing on students & faculty
 - David Hanson, PhD
Interim Assistant VP for Research,
focusing on external stakeholders
 - Patrick Bridges, PhD
Special Assistant to the VPR for Research IT





Anita Grierson



Greg Trejo



Daniel Brenden



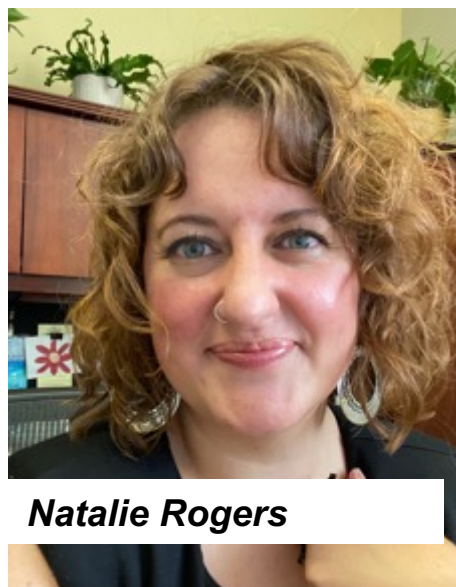
Risa Smith



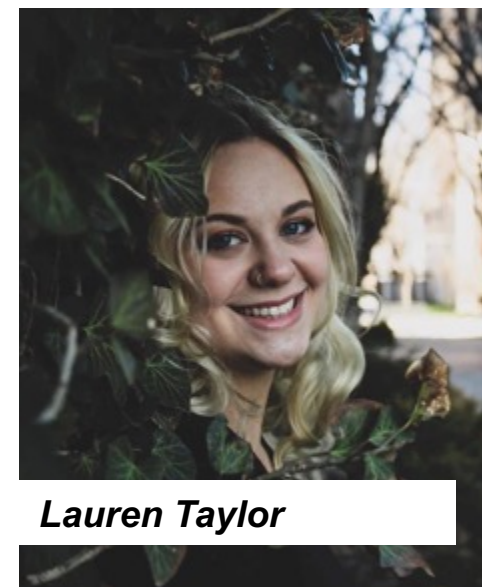
Grace Faustino



Anmol Singh Gill



Natalie Rogers



Lauren Taylor



Tabitha Thomas (formerly OVPR)

**Newest Staff Member
not pictured:**

Gloria Quintana Jimenez

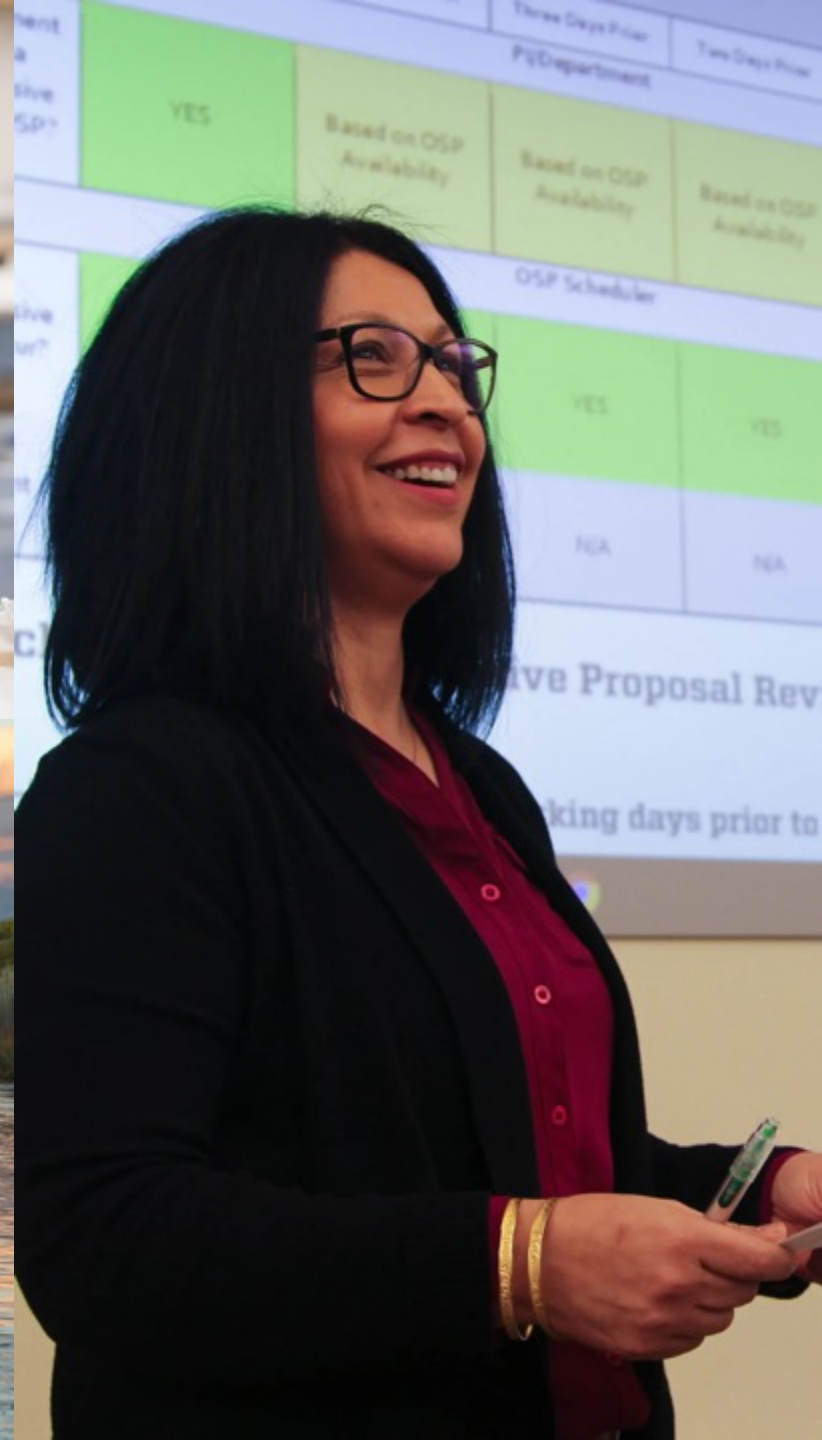


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Scholes Third Floor Staff

Key Ideas

- Transparent communication to the research community at large
- Research strength & creative excellence
- Partnerships and collaborations across campuses, backgrounds, and disciplines
- Support of researchers, students, and administrators for proposal, award, and research needs

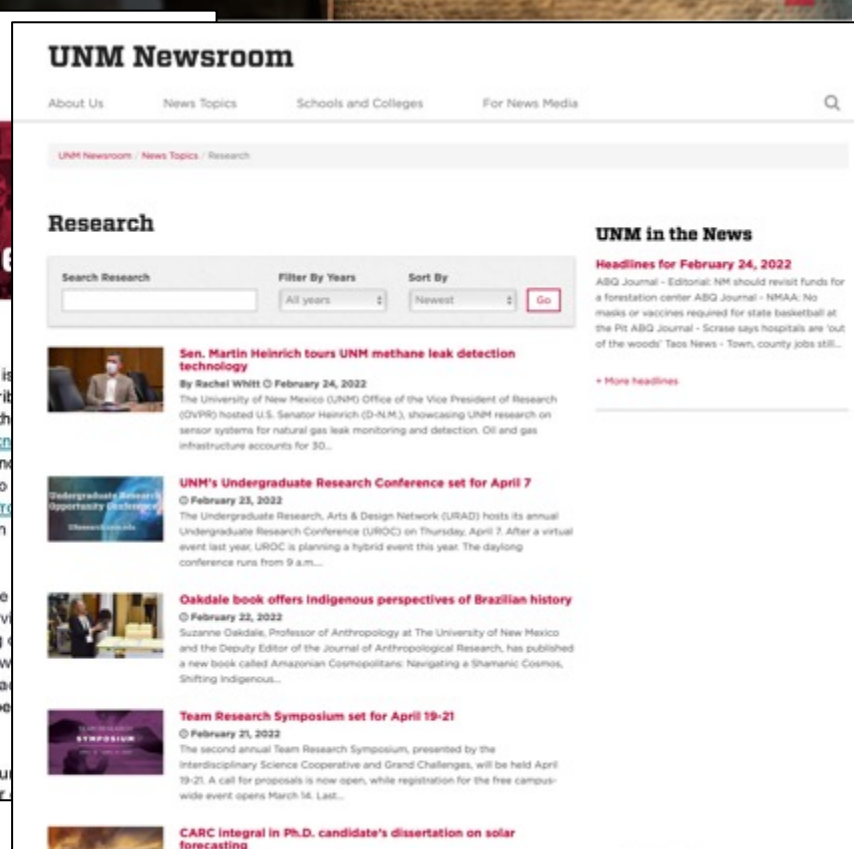
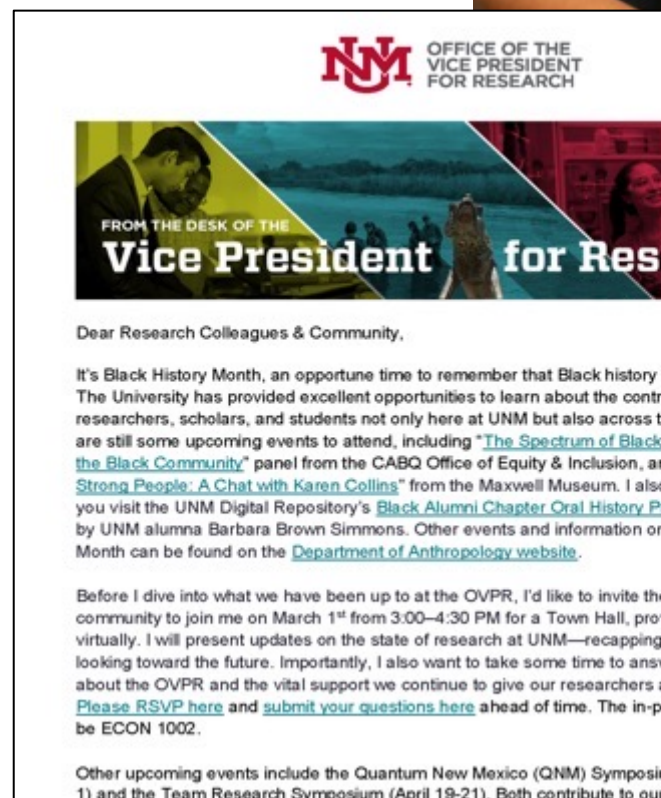
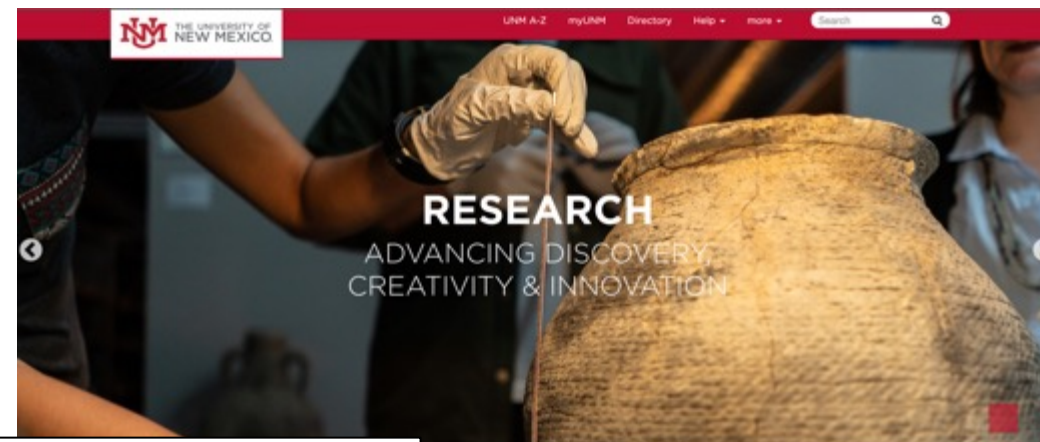


Transparent Communication



Transparent Communication

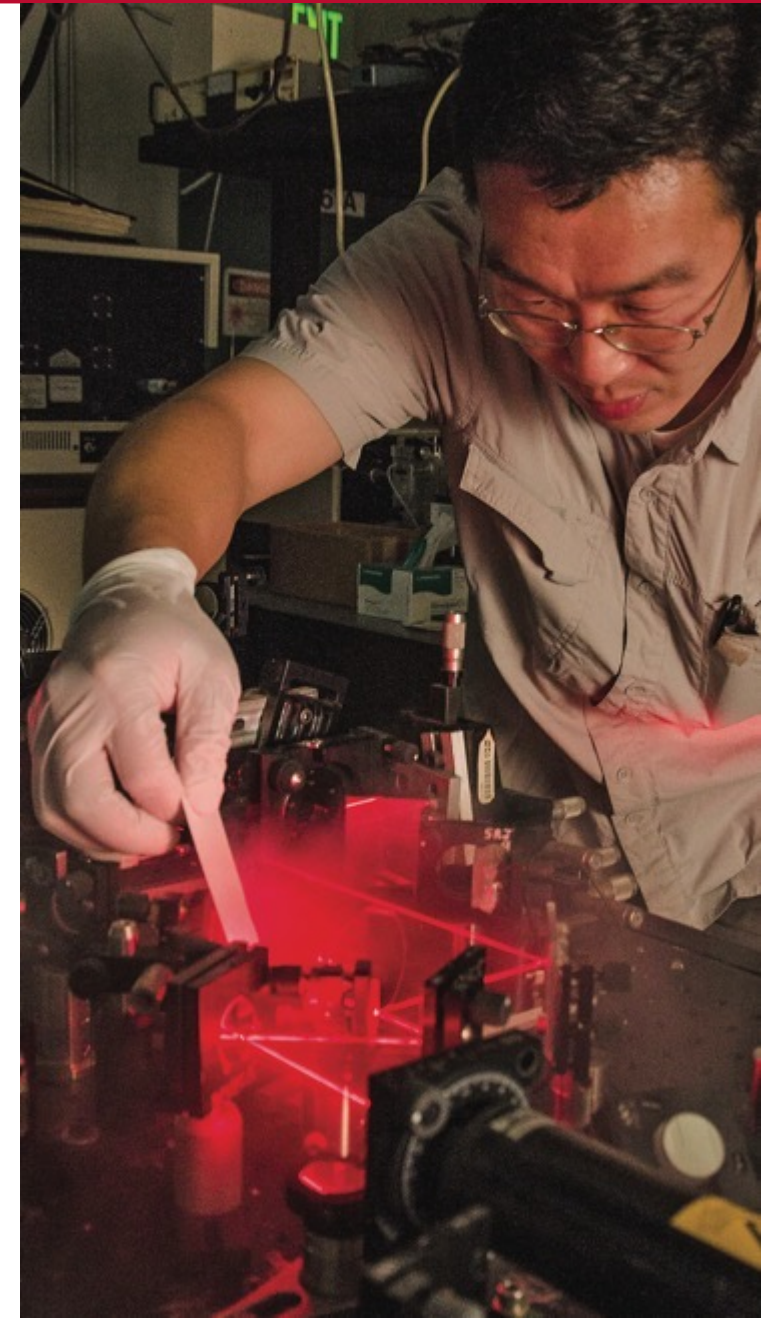
- [RESEARCH.UNM.EDU](https://research.unm.edu)
- Ellen's messages to campus
- PI & Postdoc Listservs
- Town Halls
- Faculty & RAN meetings
- Research stories at news.unm.edu
- Social Media



Research Strength & Creative Excellence

Optimizing Research Infrastructure

- InfoReady Review: Internal/limited competitions
 - Optimizes every aspect of the process
 - Faculty Senate; Schools & Colleges; Provost's office
- Qualtrics: Advanced survey platform
 - University-wide site license
 - Widely adopted beyond research enterprise
- Electronic Research Administration (eRA) system (Streamlyne)
 - Multifunctional approach (compliance, proposal management)
 - Collaboration across multiple units (OVPR, IT, Finance)
 - Questions: assocvpr@unm.edu



Program for Enhancing Research Capacity (PERC)

- **Purpose:**

- Add or augment research capacity through acquisition or upgrading of shared instrumentation

- **Funding available**

- Up to \$400K/cycle
- 2 cycles in FY22, annually thereafter
- \$25K-\$75K per award

- **Current Outcomes**

- 1st cycle: Fall 2021
 - Funded 7 proposals (~\$390K)
- 2nd cycle: proposals due **March 11, 2022**



Faculty Success Program





Strategic Areas for Growth: Leveling Up

- Create strategic focus areas
 - Build on and coordinate efforts internally across UNM
 - Create a whole greater than the sum of the parts
 - Develop leadership capabilities/resources
- Research is education
 - Opportunities for integrated approach
 - Internships / experiential learning
 - Cutting edge technologies
 - 21st century workforce

Strategic Focus Areas: Arid Climates

- UNM has unique, multi-disciplinary assets

- Sustainable Water Resources (current Grand Challenges team)
- Center for Water & the Environment
- Resilience Institute
- Utton Center (Law School)
- Water Resources Program
- Reforestation efforts (cross-institution effort)
- Drylands Ecosystems (part of NRGCC effort)
- NSF Long Term Ecological Research at Sevilleta
- Population health: NM health/environment
- Art & Ecology
- And more!

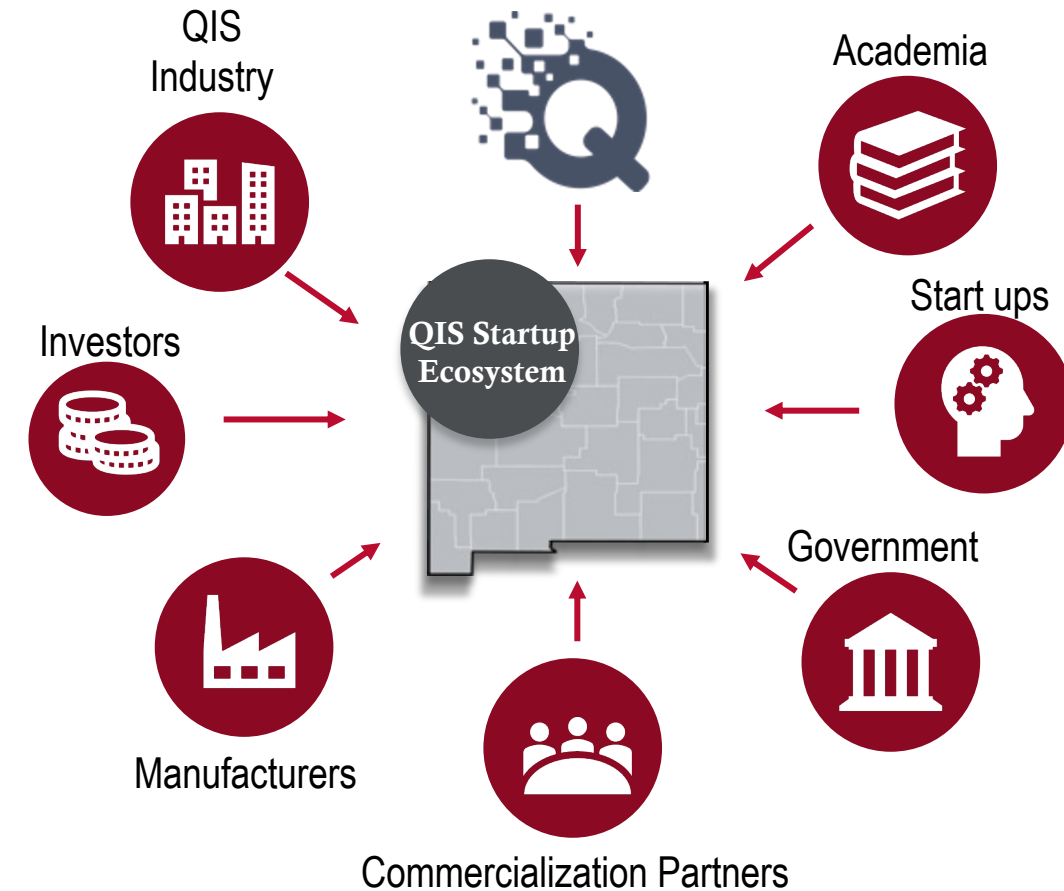
- Fostering UNM leadership

- Elevating/organizing current internal assets
- Initial discussions have begun



Strategic Focus Areas: Quantum Science

- **Center for High Technology Materials (CHTM)**
 - Instrumentation & expertise in quantum materials
- **Center for Quantum Information & Control (CQuIC)**
 - Recent \$3M NSF Award
 - IBM Quantum Hub
 - National Quantum Initiative Centers
- **Roadmap exercise with Sandia (QNM)**
 - Joint institute
 - Strategic benefits for partners



QNM-I Symposium



QNM-I Symposium
Launching the Quantum New Mexico Institute
MARCH 31-APRIL 1, 2022 • IN-PERSON & VIRTUAL*


| QUANTUM NEW MEXICO >
New Mexico is a Quantum State

 Sandia National Laboratories

 **THE UNIVERSITY OF NEW MEXICO**

Questions about the Quantum New Mexico Institute or Symposium? Email: QNM@unm.edu

*Format of UNM events dependent on state health regulations

The QNM Symposium will launch the Quantum New Mexico Institute (QNM-I), a statewide effort to establish New Mexico as a national hub for the rapidly growing field of Quantum Information Science and Technology (QIST). From the coalition comes a new QIST joint research and education institute between UNM and Sandia National Laboratories.

Stakeholders from research and education, government, and industry are especially encouraged to attend! Learn how QNM-I will launch the Second Quantum Revolution for research, education, and economic development in New Mexico.



- **March 31–April 1st, 2022**
- Launching the Quantum New Mexico Institute, a partnership between UNM and Sandia National Labs that will include numerous other statewide collaborators

Strategic Focus Areas: Information/Data Institute

- UNM has unique, multi-disciplinary assets

- Quantum information and quantum computing
- Artificial Intelligence and Machine Learning
- Data Science
- Biostatistics
- Ethics, Privacy, and Bias in Data
- Application areas (e.g., drug discovery, secure communications and cybersecurity)
- Center for Advanced Research Computing
- CTSC Informatics Core
- And more!

- Fostering UNM Leadership

- Elevating/organizing current internal assets
- Initial discussions have begun



UNM Grand Challenges (Current)



SUBSTANCE USE DISORDERS

Connecting science, community, and policy to empower New Mexicans to prevent and overcome substance use disorders



SUCCESSFUL AGING

Developing new insights and strategies to help New Mexicans live independently longer



SUSTAINABLE WATER RESOURCES

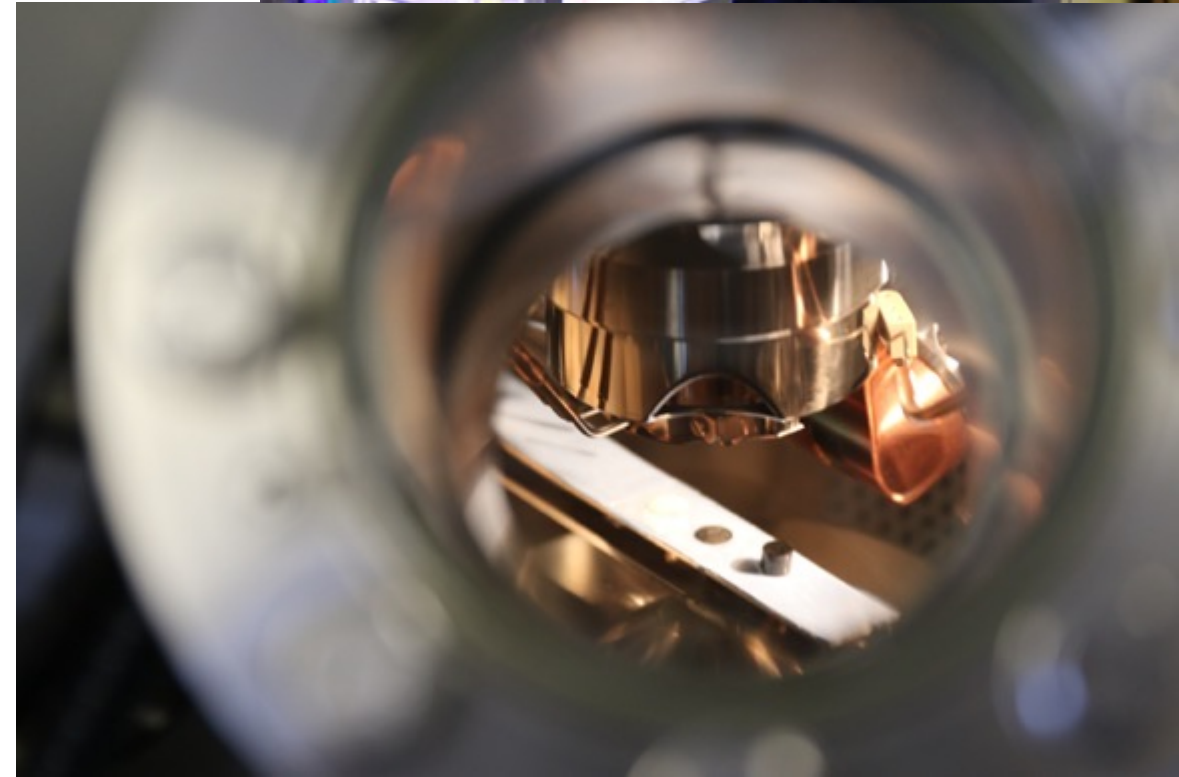
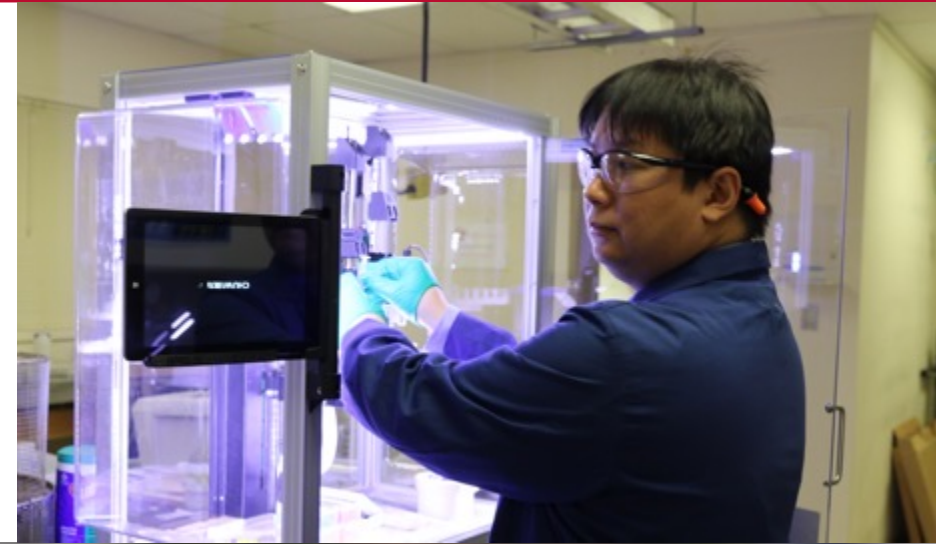
Researching resilient and innovative water usage in New Mexico



Partnerships & Collaborations

Centers & Institutes: Supporting Shared Resources

- UNM has many state-of-the-art facilities available for use by UNM researchers and industry partners including:
 - Center for High Technology Materials
 - Center for Micro-Engineered Materials
 - Center for Stable Isotopes
 - The Analytical Geochemistry Laboratory



Northern Rio Grande Corridor Consortium (NRGCC)

• Partnering Universities and Institutions

- University of New Mexico (UNM)
- New Mexico State University (NMSU)
- New Mexico Tech (NMT)
- University of Texas at El Paso (UTEP)
- Los Alamos National Laboratory (LANL)
- Sandia National Labs (SNL)
- Navajo Technical University (NTU)
- *Eastern New Mexico University (ENMU)*
- *New Mexico Energy Minerals & Natural Resources Department (EMNRD)*
- *Southwestern Indian Polytechnic Institute (SIPI)*

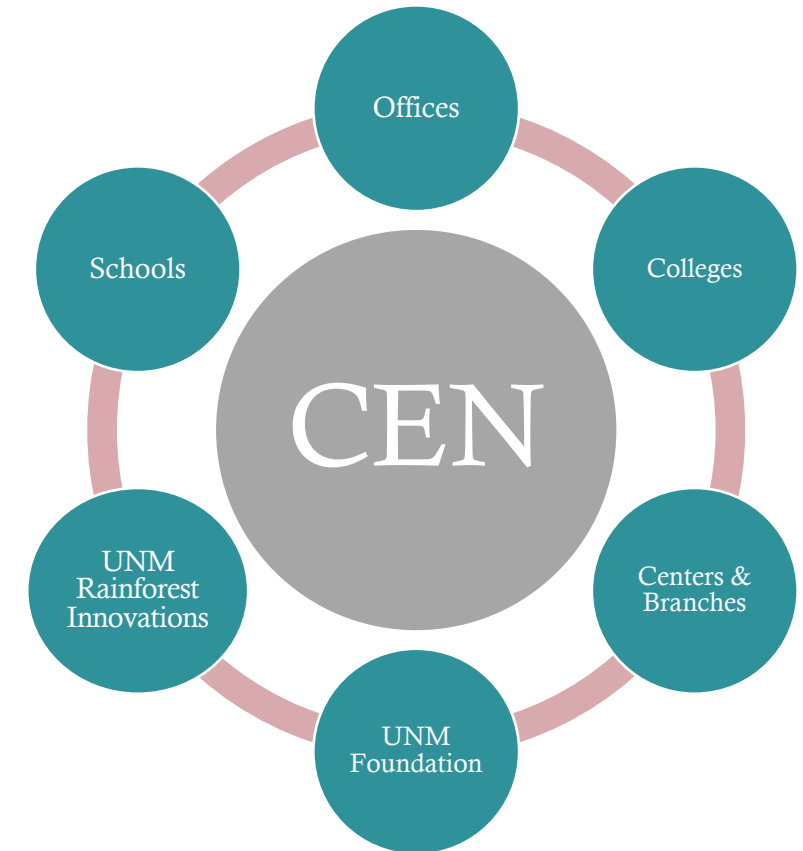


Focus Areas

- Clean Energy
- Climate Science
- Water
- Carbon Management
- Environmental Science
- H₂ Hub
- *Underserved populations*
- *Workforce development*

Building Partnerships: Corporate Engagement Network

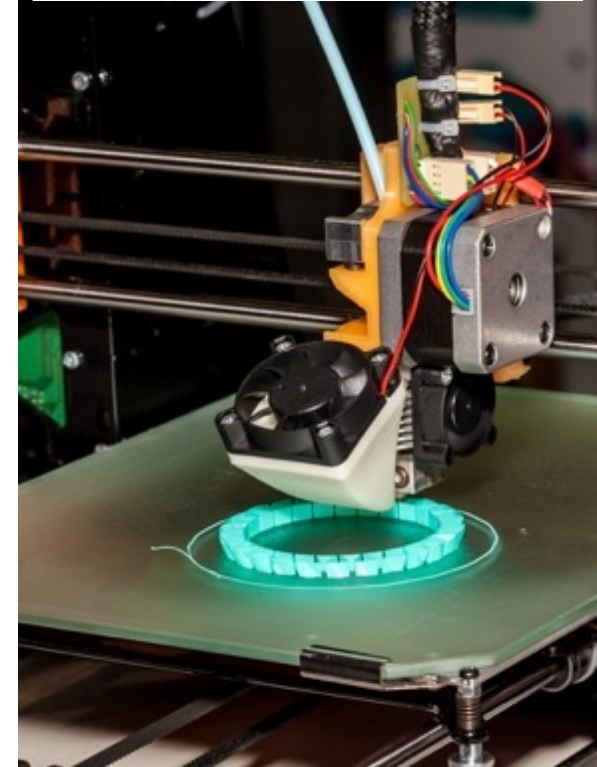
- Nascent efforts on organizing efforts for corporate engagement
 - Network across the institution
- UNM-RI, OVPR, UNM Foundation, & Anderson School of Management team
 - Systematically collect data on UNM faculty touch points with industry partners, large and small
 - Develop mechanisms for sharing data
 - Initial activities with large partners focus on new internship programs in quantum related science



OVPR contact: Asst. VPR David Hanson, dthanson@unm.edu

NM EPSCoR

- New Mexico Established Program to Stimulate Competitive Research (NM EPSCoR)
 - NSF funded
 - State-wide collaboration: NM institutions & National Labs
 - New Director, Dr. Ganesh (Gunny) Balakrishnan
- “Track 1” proposals \$24M
 - Current: Smart Grids
 - 2022 renewal focused on Advanced Additive Manufacturing (AAM)
- Diversifying EPSCoR portfolio
 - DEPSCoR proposal submitted



Partnerships with National Labs

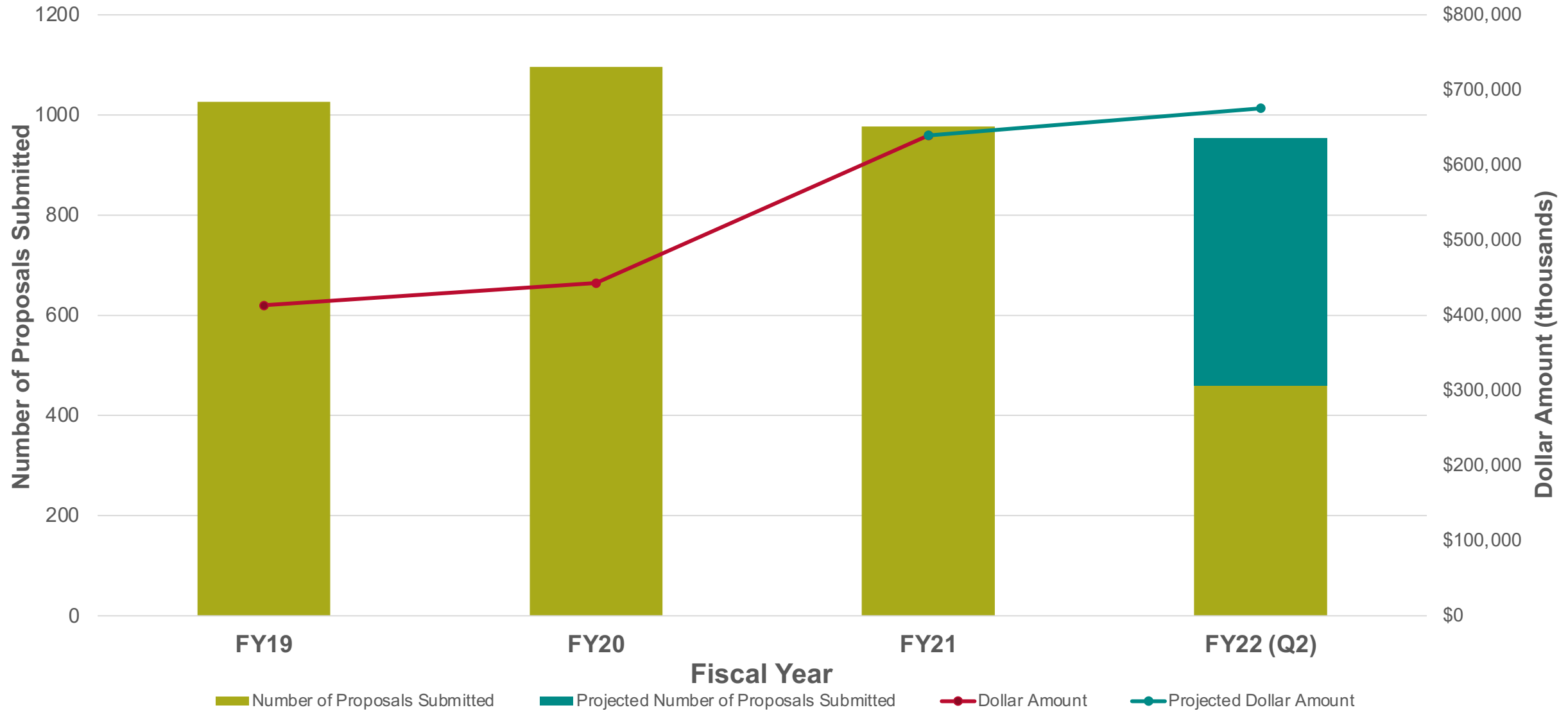
- Directed Energy Center & AFRL
- SNL LDRD / ACORN
- Faculty Loan Program
- Workforce Development
- Center for Integrated Nanotechnologies
- New Mexico Consortium / LANL
- Sandia Academic Alliance
- Quantum New Mexico Institute



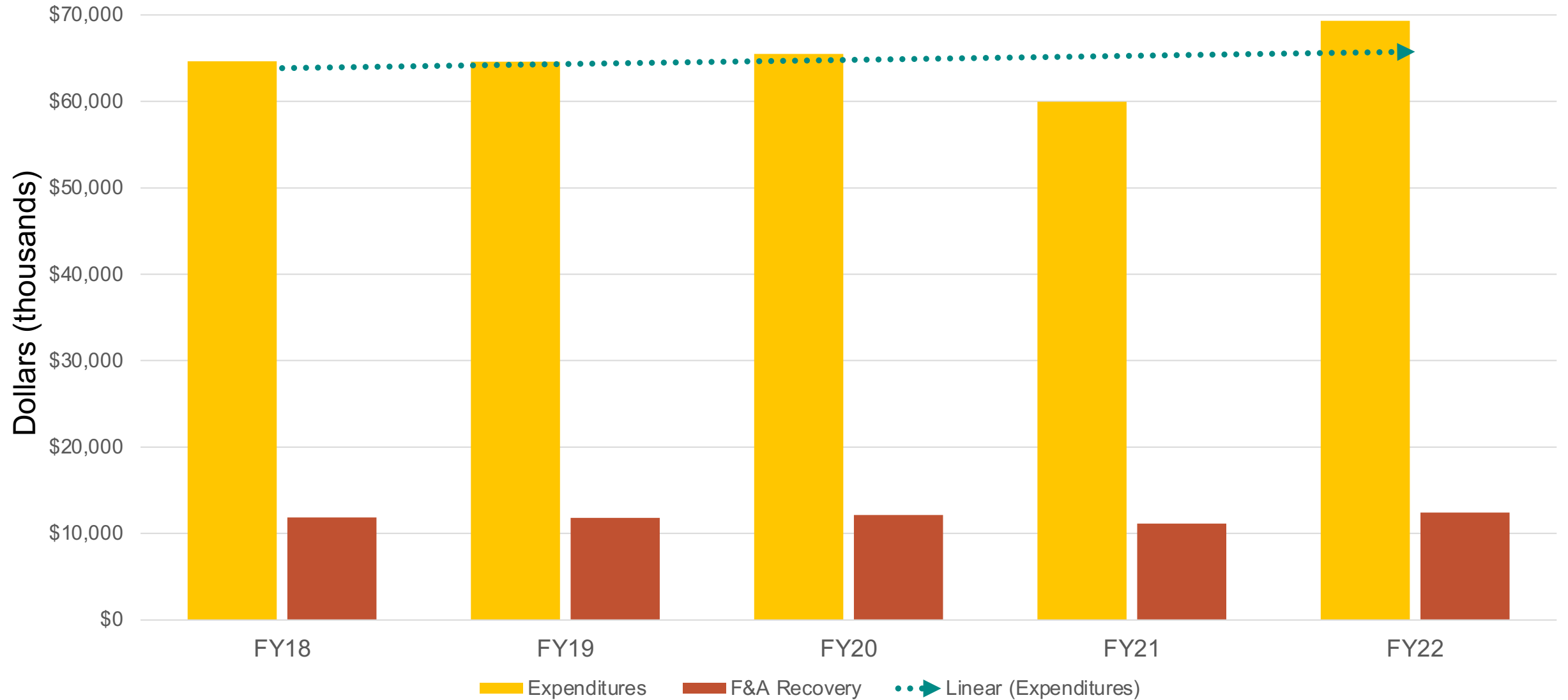


Researcher Support

Research Metrics (Main/Branch Campuses)



Main & Branch Campus Research Expenditures Cumulative through January



Summer Research Funding (SuRF)

- Summer 2021: Focused on alleviating impact of COVID-19

- Junior faculty & those with major research interruptions
- 87 faculty funded
- ~\$280K awarded

- Faculty impact statements

- Small funds can have major impact
- Support for students
- Recharge of scholarly activities

- Summer 2022 – Deadline March 25, 2022

- Improved process: ensure access by diverse faculty
- Up to \$5K per award



Faculty Success Program



Faculty Scholarship Time (FaST)

- Focused on alleviating impact of COVID-19
 - Requires short proposal on scholarly activities
 - Junior faculty and/or major research interruptions
 - One semester course release or graduate assistant
 - Program spans 3 semesters (~\$100K/semester)
- Current status
 - Spring 2022: 21 faculty received awards
 - 43% to underrepresented minority faculty
 - Fall 2022: 24 faculty will receive awards
 - Spring 2023: call for proposals May 2022



Faculty Success Program



Pilot Program: Fostering Research Expansion in the Social Sciences and Humanities (FRESH)

- Establish a diverse cohort of Social Sciences & Humanities faculty
 - Collaborative project with College of Arts & Sciences (others welcome)
- Develop research concepts & proposals
 - Federal agencies & foundations (NSF, NEH)
 - Mentoring, small group, and peer review activities
- Focus on:
 - Awareness/utilization of internal resources
 - Targeted training for opportunity scoping
 - Concept and proposal development
 - Building community for Social Sciences/Humanities research



Faculty Success Program

22 faculty selected for first cohort
8 mentors



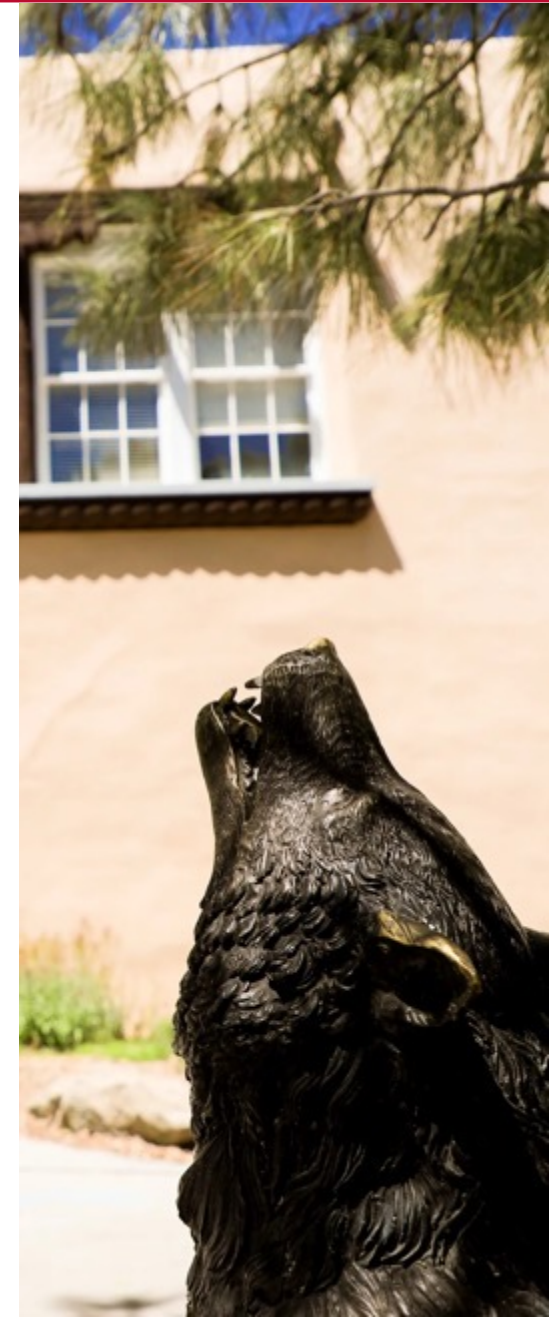
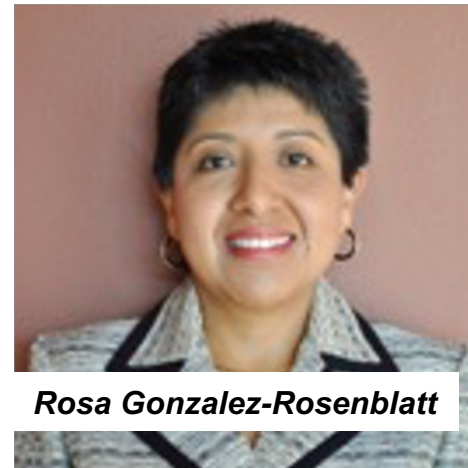
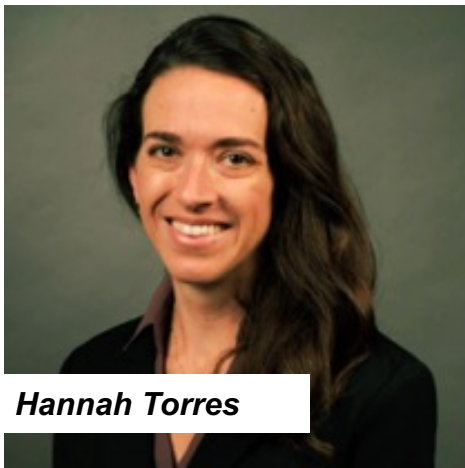
Recognizing & Supporting Postdoctoral Scholars

- Partnership across campuses
 - Joint steering committee, funding
 - University membership in National Postdoctoral Association
- Postdoc Appreciation Week (September)
 - National event
 - Inaugural year at UNM (2021)
- Developing postdoc association at UNM
 - Community building and networking opportunities
 - Build collaborations across campuses
- Address specific needs of postdocs
 - Professional development & social connection
 - HR resources/structures



Research Administration

- Office of the Vice President for Research: research.unm.edu
- Faculty Research Development Office : frdo.unm.edu
- Office of Sponsored Projects, now under the direction of the OVPR : osp.unm.edu
- Contract & Grant Accounting, Main Office: cgacct.unm.edu
- Center For Advanced Research Computing: carc.unm.edu



Research Administration

- Office of Research Integrity & Compliance (ORIC): researchcompliance.unm.edu
 - Formerly the Office of Research & Compliance
 - Includes the Institutional Review Board (IRB)
 - Dr. Linnea Ista, new Director of Conflict of Interest in Research and Research Misconduct Programs





The Future of UNM Research

Strategic Planning

- UNM Research Strategic Plan
 - Working in conjunction with President Stokes' **UNM2040** initiative: opportunity.unm.edu
 - Will set long-term goals, objectives and metrics
 - OVPR units developing aligned strategic plans
 - Cross-campus research planning





Successful
Aging



Substance
Use
Disorders



Sustainable
Water
Resources

NM Grand Challenges

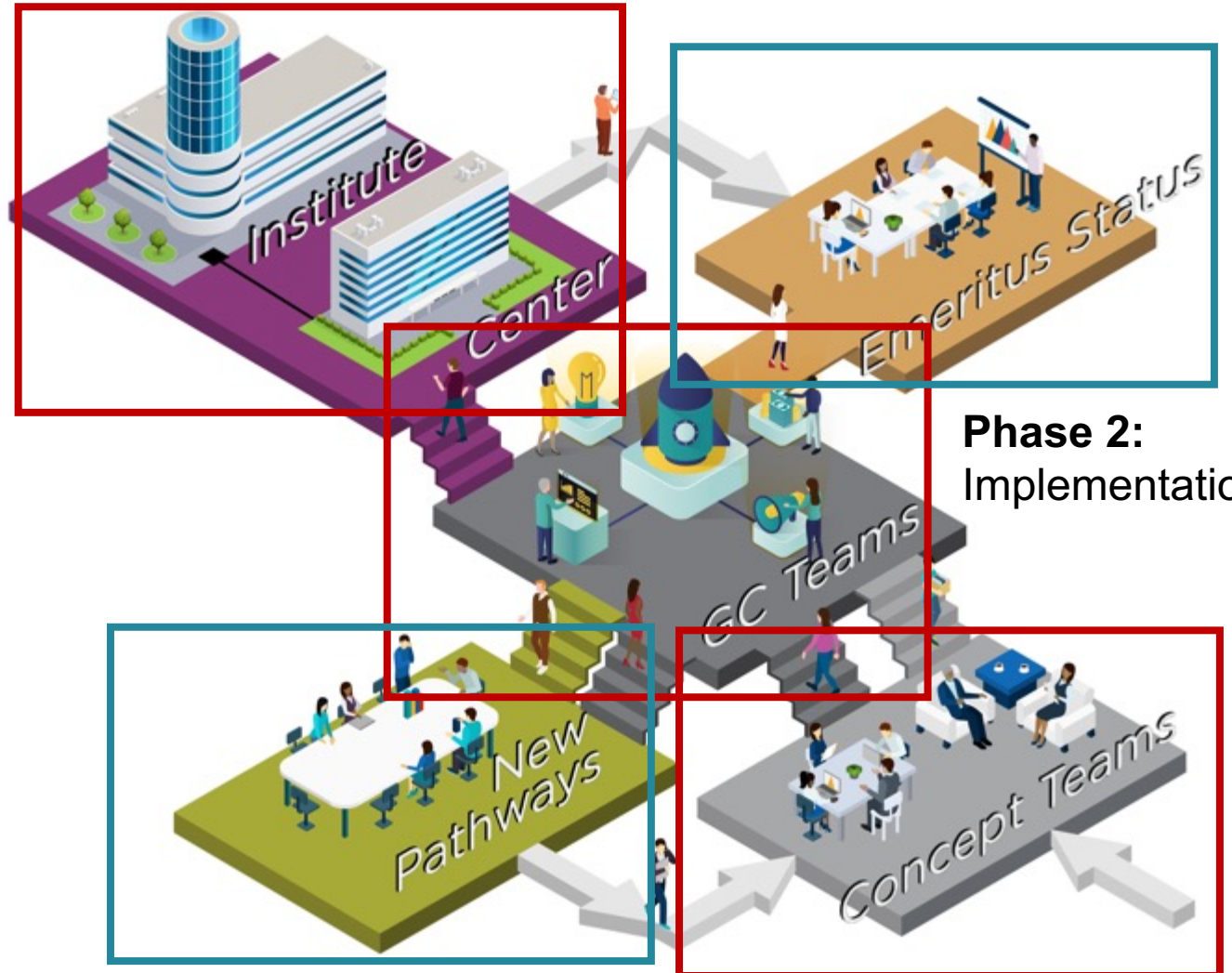
Re-imagining Our Future

Re-imagined GC Conceptual Framework

- Creates 3-phase program:

- Phase 1: *Spring 2022*
Creation of Concept Teams
- Phase 2: *Spring 2023*
Selection of new GC Teams
- Phase 3: *2025 and beyond*
Next Steps / Leveling up

Phase 3: Translation



Phase 2: Implementation

Phase 1: Development & Conceptualization

Grand Challenges: Getting Involved

- Human Rights Research: Basic Needs in Higher Education
 - First virtual meeting: Tuesday, March 8, 2022 at 4:00 PM
- Improving STEM Education and STEM Education Research
 - First virtual meeting: Wednesday, March 9, 2022 at 12:00 PM
- Team Research Symposium
 - April 19–21, 2022: kickoff of a re-envisioned Grand Challenges program

GC Director: Anita Grierson: agrierson@unm.edu

NM Grand Challenges

Zancada Graduate Student Fellowship

- Support the next generation of leaders, innovators, explorers and thinkers
 - Vital to UNM's mission to improve our world through enlightened citizenship
 - Raise visibility and celebrate UNM's intellectual capital
 - Engage inclusive, diverse participation
- Year-long program
 - Supports graduate research excellence
 - Promotes interdisciplinary collaboration
 - Emphasizes the importance of communicating across sectors (public, legislators, etc.)
- First cohort fall 2022
 - Applications due: **April 4, 2022**

OVPR Contact: Melissa Emery Thompson memery@unm.edu



Globally Engaged Research Award

- Joint effort: OVPR and Global Education Office (GEO)
- Highlights UNM's dynamic international research
 - Promotes incorporation of cross-cultural perspectives & international relevance
 - Emphasizes UNM's commitment to intentional international partnerships to solve global issues
 - Prepares students for interconnected & rapidly evolving world
- Inaugural award in 2022 focused on faculty—
Deadline: March 4, 2022
 - Graduate and undergraduate student awards to be developed

OVPR Contact: Melissa Emery Thompson memery@unm.edu





Research & Discovery Week

- Fall 2022 (Week of November 7)
 - Raise visibility and celebrate UNM's intellectual capital
 - Engaging broad participation
- Emphasis on research & scholarly activities
 - Curated list of activities
 - High profile colloquia
 - Hands-on activities
 - Scavenger hunt – resources and opportunities
 - Museums and libraries
 - Social media, et al.
- Ideas, suggestions, and participation welcome!



OVPR Contact: Melissa Emery Thompson memery@unm.edu

Engage and Celebrate UNM Research

Upcoming Spring 2022 Events

- Hack-a-Thon (SOE / HSC partnership): [March 25–27](#)
- Quantum New Mexico Institute (QNM-I) Symposium: [March 31–April 1](#)
- Community Engaged Research Lecture (CERL): [April 2022](#)
- Undergraduate Research Opportunity Conference (UROC): [April 7](#)
- Team Research Symposium: [April 19–21](#)

Upcoming Fall 2022 Events

- National Research Administrator Day: [September 25](#)
- National Postdoc Week: [September 26–30](#)
- Research Week & Annual Research Lecture (ARL): [November 7–12](#)
- Museum Research Traineeship: [Launching Fall 2022 with first cohort](#)

Send us your amazing research stories, events, and projects! unmresearch@unm.edu or message us on social media [@unmresearch](#)



Town Hall Q & A



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