Request for Applications:

UNM Center for Metals in Biology and Medicine Pilot Project Awards

The UNM Center for Metals in Biology and Medicine (CMBM) is offering pilot project awards in support of its mission to advance basic and translational research to study adverse health outcomes (including cancer, pulmonary, neurologic, and other disorders) of metal contaminants as well as to harness the chemical and biochemical properties of metals for therapeutic and nutritional purposes.

Applications are encouraged from all UNM faculty members with an emphasis on building towards extramural proposal submissions. Proposals emphasizing multidisciplinary research, team science, and utilization of the CMBM Integrative Molecular Analysis Core will be given priority. Applications will be reviewed based on the innovation, scientific merit of the proposal, the appropriateness of the project to the overall missions of the CMBM programs and the likelihood of the research leading to new extramural funding.

The Integrative Molecular Analysis Core (IMAC) at CMBM will support the following research capabilities:

Instrument	**Capabilities**
Agilent 7900 **ICP-MS** with Single Cell Add-on	Metal elemental analysis for solution and/or single cell samples
Thermo Q-Exactive Classic **LC-MS** Orbitrap	Identification and quantitation of peptides or proteins, non-volatile organic molecules and metabolites
Sciex 5500+ **LC-MS** Triple Quadrupole	Quantitation of non-volatile organic molecules, biomarkers, etc.; Targeted metabolomics
Agilent 6890N **GC-MS**	Identification and quantification of volatile organic species in environmental and biological samples
Bruker ELEXSYS **EPR** spectrometers	Qualification and quantification of reactive oxygen and nitrogen species; Measurement of tissue oxygenation in animal models.

* Information about IMAC instrument and service scheduling can be found on the IMAC website: https://hsc.unm.edu/pharmacy/research/areas/cmbm/cores.html. There will be a presentation on the basic principles and current applications of these bioanalytical techniques and an open house event at 4-5 PM, Nov. 8.

There will be two types of pilot awards: a) Core facility utilization voucher, which will support the use of the IMAC facility for up to $5,000 billable cost, and b) Pilot research project, which will receive funding up to $20,000 (direct cost only) to complete the proposed study. It is anticipated that up to five core facility utilization vouchers and four pilot research projects will be funded in this cycle, with a start date of February 1, 2022 for a 12-month support. The funds may be used for the purchase of laboratory supplies, animals, UNM core facility fees, and/or salary for technician and graduate students, and must be expended in full within the 12-month award period, after which the remaining fund will be reversed back to CMBM.

All applicants are encouraged to discuss their proposal with either Matt Campen (CMBM Director; mcampen@salud.unm.edu; 925-7778) or Jim Liu (CMBM Deputy Director; kliu@salud.unm.edu; 272-9546) before submission to ensure that research aligns with the pilot funding objectives. Prospective voucher applicants should discuss with Jim Feng (IMAC Director; cfeng@salud.unm.edu; 925-4326)

before submission to confirm that the core facility utilization cost estimates will be appropriate to the study design.

Prospective applicants should submit all application materials (below) by **5 PM on Friday, November 12, 2021**. Send the application and cover letter through email as a single PDF attachment to: Michaela Ritz, Sr. Program Manager, CMBM (mrritz@salud.unm.edu).

The following application materials are required.

For core facility utilization voucher award:

- Biosketches for the PI and key personnel (NIH format).
- 1-page research proposal, describing the use of specific instrumentation(s) and how it will help your research project
- Estimation of the number of samples and billable core facility costs (up to $5,000)
- Brief statement (<0.5 page, does not count in page limit) of how this award will support future extramural grant applications

For pilot research project award:

- Biosketches for the PI and key personnel (NIH format).
- 4-page research proposal, describing aims and research strategy.
- References cited (does not count in the 4-page limit).
- Detailed budget and justification (up to $20,000).
- Brief statement (<0.5 page, does not count in page limit) of how this award will support future extramural grant applications.

If you propose a project with a clinical or translational research focus, additional criteria must be met for CTSC eligibility, including prior IRB approval. Please contact Drs. Campen/Liu well ahead of the deadline to ensure IRB compliance to avoid delays or disqualification.

Please use the forms below for the pilot project application.

UNM Center for Metals in Biology and Medicine
Pilot Project Application

1. TITLE OF PROJECT
3. PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR:
If needed - Faculty Sponsor:

3a. NAME (last, first, middle)	3e. DEGREE(S)	
3b. POSITION TITLE	3f. TELEPHONE, FAX and E-MAIL: TEL: FAX:	
3c. DEPARTMENT, LABORATORY OR EQUIVALENT	E-MAIL ADDRESS:	
3d. MAJOR SUBDIVISION		

4. HUMAN SUBJECTS: ☐ No IRB Approval Date: ☐ Yes	5. VERTEBRATE ANIMALS: ☐ No If 'yes' IACUC Approval Date: ☐ Yes

KEY PERSONNEL

NAME	ORGANIZATION	ROLE ON PROJECT

* Please include any letters of support from key collaborators as a separate attachment

PI BIOGRAPHICAL SKETCH

NAME	POSITION TITLE

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED 5 PAGES, PER CURRENT NIH GUIDELINES**.

BUDGET

EQUIPMENT (Itemize and include quote for major equipment request)	
SUPPLIES (Itemize by category)	
OTHER EXPENSES (Itemize by category)	
TOTAL COSTS FOR PROJECT	

RESEARCH PLAN

Please organize the research plan to include the following sections:
(1) Hypothesis and Specific Aims.
(2) Background and Significance.
(3) Preliminary Data if Appropriate.
(4) Research Design and Methods.
(5) Literature cited.

Please note that Items 1-4 should not exceed 4 pages in length and should be no smaller than 11-point Arial font single-spaced with 0.5 in or larger margins.

(6) Describe future directions of your research particularly as they apply to the work performed under this proposal. **Address how this support will help in your program or how it will help you to apply for extramural funding.** (0.5 page limit).