University of New Mexico Health Sciences Center Discovery Research Annual Report 2020

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UNM HEALTH SCIENCES CENTER

VISION
The University of New Mexico Health Sciences Center will work with community partners to help New Mexico make more progress in health and health equity than any other state.

MISSION
We will provide an opportunity for New Mexicans to obtain an excellent education in health sciences, advance health discovery and innovation in the most important areas of human health and ensure that all populations in New Mexico have access to the highest-quality health care.

CORE VALUES
The UNM Health Sciences Center’s mission is guided by our values of excellence in education; patient care and research; commitment to service; quality and safety; integrity and accountability; respect and compassion for all people; teamwork and collaboration and providing hope for those we serve.
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  *Inside back cover*
I’m very pleased to report that the UNM Health Sciences Center was awarded a record $205.8 million in external research funding during FY 2020, representing net growth in 15 of the past 16 years.

This remarkable achievement is especially significant given the epic challenges faced by academic health centers like ours in the face of the COVID-19 pandemic. I’m extremely proud of the way our faculty, staff and students stepped up to keep our research enterprise on track this year.

We recently received a third five-year renewal of our Clinical and Translational Science Award from the National Institutes of Health, and in coming months we anticipate renewal of the UNM Cancer Center’s comprehensive designation by the National Cancer Institute.

These achievements are truly a tribute to your drive and hard work. UNM HSC scientists are advancing the understanding, diagnosis and treatment of many diseases, including asthma, cancer, stroke, Alzheimer’s disease, substance abuse, heart disease and behavioral health conditions.

Our work extends beyond the lab: our faculty members conduct research in underserved and rural areas throughout New Mexico, where they are improving access to care, addressing chronic disease and increasing access to clinical trials and state-of-the-art technologies.

Research distinguishes academic health centers like ours from other health care providers. In fact, the integration of research, education and clinical care at academic health centers drives much of the innovation in the U.S. health care system. We should all be proud of our contributions to the advancement of health and health care in our nation.

Through our grant funding, the UNM HSC research mission provides tremendous economic impact and job creation for New Mexicans. New discoveries and patents stimulate business creation and support a growing bioscience industry. Most important, our research has a powerful impact on health care, both locally and nationally.

As I frequently remind friends and colleagues, research brings hope, and I’m confident that in the coming year we will play a vital role in improving health care in New Mexico, the U.S. and the world.
The COVID-19 pandemic has affected every facet of our lives, and challenges us in ways most of us have never experienced. Since becoming interim dean in July, I have been impressed with our researchers’ efforts to develop vaccines, find effective therapeutics and devise sterilization methods to preserve personal protective equipment.

The Department of Neurosciences, led by Bill Shuttleworth, PhD, has been continually funded for its Center for Brain Recovery and Repair and the New Mexico Alcohol Research Center, as well as a National Institutes of Health training grant. The department ranks 17th nationally in NIH neurosciences research funding.

The Research Education Office has fostered undergraduate, pre-doctoral and post-doctoral biomedical training and career development. Congratulations to senior associate dean Tom Resta, PhD, and his team for overcoming the many challenges imposed by the ongoing pandemic.

Jennifer Gillette, PhD, associate professor in the Department of Pathology, helped transform the Undergraduate Pipeline Network into a completely remote experience, including a virtual symposium that highlighted some of the nation’s most promising student researchers.

Laura Gonzalez Bosc, PhD, professor of Cell Biology & Physiology, assumed leadership of the Biomedical Sciences Graduate Program and led efforts to adapt to pandemic restrictions and integrate anti-racism education into the curriculum.

Justin Baca, MD, PhD, associate professor of Emergency Medicine, has been named director of the MD/PhD degree program. I’m excited by the prospects for continued growth of this program under his leadership.

I’d also like to acknowledge our NIH-funded training programs in alcohol research, infectious disease and inflammation, cardiovascular disease and academic science education and research. These programs have greatly enhanced research education for our trainees.

Finally, recognition is due to Angela Wandinger-Ness, PhD, professor in the Department of Pathology, who was honored with the 2020 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring. She also received the 2020 American Association for the Advancement of Science Lifetime Mentor Award. We are fortunate to have her as a member of our faculty.

Thanks to everyone who has made these research programs a success. They are central to our institution’s mission and promise to enhance the health and well-being of New Mexicans.

Martha Cole McGrew, MD
Executive Vice Dean, School of Medicine
The College of Nursing is adapting in the face of the COVID-19 pandemic as it prepares the next generation of nurses to address urgent health care needs and improve health for New Mexicans, the nation and the world.

Nurses, consistently rated as the most trusted health care professionals, have an obligation to develop new approaches and methods through our practice and research.

I’m pleased to welcome Patricia Watts-Kelley, PhD, RN, FNP-BC, to the College as associate dean for Research and Scholarship. She brings extensive research and mentoring experience that will grow our scholarship and research programs while increasing our extramural funding.

Dr. Watts-Kelley is a retired Navy captain who has held research and leadership positions within the federal government, including health sciences officer in the Department of Veterans Affairs Office of Research & Development. She also held the position of deputy director of Nursing and Allied Health Research at the Navy Medicine Headquarters. She served as the first Navy executive director of the TriService Nursing Research Program and she was director of research services at the National Naval Medical Center.

Her research focuses on clinical knowledge development and continuity of care for wounded service members, military and veteran caregiver burden, health promotion and self-care management for those living with complex chronic conditions.

Dr. Watts-Kelley will further our goal of being recognized as a premier Nursing Research Intensive College, as our scientific investigations look at health through a nursing lens and approach urgent health care needs with our interdisciplinary approach.

Our faculty in the Departments of Bio-Behavioral Health and Rural Health and Equity have signature strengths in health care disparities and equity, oncology and toxicology, genomics, self-management of complex chronic conditions, military and veteran health, gerontology and caregiver burden, eHealth, health services and policy research.

We are proud of our outstanding alumni, who are changing the face of health care around the world. You’ll find UNM nurses in neonatal and geriatric units across the nation and in hospitals and academic health centers around the globe. Our graduates lead military medical commands, schools of nursing, national nursing organizations, health care systems and federal agencies.

Onward and upward!
College of Pharmacy researchers are committed to improving the health of New Mexicans, including our most vulnerable populations, and tackling the world’s most challenging and public health issues. In the last fiscal year they received more than $10 million in extramural funding.

Beyond dollars, 2020 was a year that demonstrated the responsiveness of College researchers and the impact that our research has had during a global pandemic. When the COVID-19 began to spread throughout New Mexico last spring, our researchers jumped into action.

The New Mexico Poison and Drug Information Center teamed up with the Department of Health to establish the state’s COVID-19 hotline to communicate rapidly evolving information. The team also alerted the Food and Drug Administration to a rash of methanol-based hand sanitizer poisonings, which helped to prompt a nationwide warning and eventual product recalls.

Other researchers received NIH funding to explore the impact of increased COVID-19 related stress across minority communities already affected by historical trauma.

The College continued its environmental health research with the renewal of our NIH P50 center, which draws on longstanding partnerships with indigenous communities to study the health implications associated with exposure to wastes from abandoned mines, combined with microplastic and other plastic degradation products, and most importantly, to develop critical mitigation strategies.

The College also received an NIH P20 Center of Biomedical Research Excellence grant focusing on the adverse health outcomes of metal contaminants in the Southwest, as well as on harnessing the chemical properties of metals for therapeutic and nutritional purposes.

Our substance abuse disorder research focuses on prenatal alcohol exposure, epigenetic studies and naloxone distribution. We also had continued success in the both clinical and foundational research in cardiovascular disease, infectious disease (particularly HIV and vaccines) and pharmaceutical dosage formulation studies.

Clearly, the impact of our research reaches throughout New Mexico and the U.S., and I am very proud to work with such talented and dedicated faculty, staff and students across the research spectrum to translate biomedical and pharmaceutical science discoveries into improved patient care.
The COVID-19 pandemic has posed significant challenges for us this year in the College of Population Health – but the good news is we have seen significant advances in our research mission alongside the growth of enrollment in our degree programs.

I’m pleased that our signature Transdisciplinary Research, Equity and Engagement Center for Advancing Behavioral Health – the TREE Center – has received supplemental grant funding to develop COVID-related infectious disease modeling.

Assistant professor Shannon Sanchez-Youngman, PhD, received TREE Center supplemental funding for her partnership with the San Miguel Family and Community Health Council in which she helped teens in Las Vegas, N.M., write and produce digital story frameworks involving their experiences related to the risk factors associated with suicide. It’s hoped the intervention will promote new ideas for suicide prevention.

Elsewhere in the College, associate professor Francisco Soto Mas, MD, PhD, MPH, is conducting occupational safety and health research focusing on organic farmers, a subgroup of agricultural workers who have been neglected by national injury and illness surveillance systems. His team has established a new Assessment, Planning & Evaluation Unit (APEU) that provides technical assistance to community organizations and state agencies.

Assistant professor Laura Nervi, PhD, MPH, MSSc, partners with APEU in several projects, leading cooperation with a community primary clinic in Albuquerque, and a Clinical & Translational Science Center grant to address language and health literacy barriers among Spanish speakers through a smart-assisted learning program. She also continues a line of research on global health policies.

I’m continuing to develop a project I started while at the KU School of Medicine in Wichita involving the use of a smart phone app to promote healthy eating to address chronic conditions like peripheral artery disease in overweight adults. We hope to see additional testing to gauge its long-term effectiveness.

I’m extremely proud of our College’s research achievements, and I’m looking forward to seeing where they will lead in the coming year.
As the COVID-19 pandemic spread around the globe last spring University of New Mexico Health Sciences Center researchers sprang into action to study the novel coronavirus and search for lifesaving treatments.

For some, the pandemic was an occasion to revisit earlier work. Graham Timmins and Vojo Deretic posted a previously unpublished paper suggesting that the common antibiotics azithromycin and ciprofloxacin might have lung-protecting properties.

Timmins a professor in the College of Pharmacy, and Deretic, professor and chair of the Department of Molecular Genetics & Microbiology, reported on a decade-old study of azithromycin as a treatment for cystic fibrosis patients, who commonly suffer from lung infections.

Azithromycin alleviates symptoms of the disease, which inflames the tissue lining the bronchial tubes, but it appears to help even when patients don’t have an active infection. Similarly, when the coronavirus assaults the lungs, they become inflamed as the body mounts a ferocious immune response, but runaway inflammation can turn deadly, causing multiple organ failure.

Timmins and Deretic think the chemical properties of azithromycin and ciprofloxacin might be key. Both are weak bases, with a pH higher than 7.0. They suspect the drugs neutralize acids within endosomes – tiny membrane-bound compartments inside the lung cells – that can trigger inflammation.

“Even small changes in pH change the ways those sites in the cells work,” Timmins says. “We think that’s the way these drugs work.”

In another collaboration, a trio of University of New Mexico scientists turned to machine learning to cull through a “library” of thousands FDA-approved drugs to identify candidates that could be repurposed as treatments for the COVID-19 infection.

The effort was launched in late March, when the team started looking for – and testing – known drugs that might have antiviral properties, said Tudor Oprea, MD, PhD, professor and chief of the Translational Informatics Division in the Department of Internal Medicine.

Oprea and his team used sophisticated computational methods to comb through the university’s DrugCentral database, which tracks drugs approved by the U.S. Food and Drug Administration, as well as those approved for use elsewhere in the world.

Oprea classified each drug molecule according to which viral proteins it might target, enabling him to pinpoint the mechanism by which it might disable a virus – a critical first step. He partnered with Larry Sklar, PhD, distinguished professor in the Department of Pathology and director of the Center for Molecular Discovery, which maintains a collection of drug samples.

“Tudor identified molecules in the library that would be tested,” said Sklar, who screened them using a highly efficient method called assay
miniaturization. Drug candidates were then passed on to Steven Bradfute, PhD, assistant professor in UNM’s Center for Global Health, who tested them against the live virus in his Biosafety Level 3 laboratory.

The UNM team then shared its list of candidates with the National Center for Advancing Translational Sciences (NCATS) to see whether NCATS could confirm their findings.

As SARS-CoV-2 coronavirus reproduces, variations appear in its genetic code. Accumulating over time, these changes are like fingerprints, leaving a telltale trail of clues about where the virus has been – and where it might be headed.

HSC researchers Darrell L. Dinwiddie, PhD, and Daryl Domman, PhD, took on the role of genomic detectives to help crack the case.

Dinwiddie, an assistant professor in the UNM Department of Pediatrics, sequenced coronavirus samples in his molecular genomics lab.

Dinwiddie collaborated in the analysis with Domman, PhD, an assistant professor in the Department of Internal Medicine who specializes in genomic epidemiology and has had prior experience following outbreaks of cholera around the world.
They partnered with SARS-CoV-2 SPHERES, a national consortium of research universities and public health departments sponsored by the National Center for Emerging and Zoonotic Infectious Diseases (a branch of the Centers for Disease Control and Prevention) that pooled crucial information about the virus.

The coronavirus genome is encoded in strands of a molecule called RNA. Minor changes in the sequence of nucleotides within the strand provide information about how closely related one viral sample is to another.

The consortium used these samples to create a viral family tree. A preliminary analysis of samples collected in New Mexico suggested there were multiple introductions of the virus into the state, which is consistent with early reports of cases among people who had traveled abroad or domestically.

Genomic variation in viral reproduction is a natural process. “For the SARS-CoV-2 S the rate of genomic change has been fairly stable,” Dinwiddie said. “We know how quickly it changes. Based on that information we can make predictions about how far back different samples have gone.”

Meanwhile, in the Department of Molecular Genetics & Microbiology, longtime collaborators David Peabody, PhD, and Bryce Chackerian, PhD, joined the worldwide race to develop a vaccine to prevent COVID-19 infections.

Over the years they have used virus-like particles to tailor vaccines that can attack a host of different targets, including human papillomavirus, malaria and even metastatic breast cancer cells.

In this case, Peabody said, “We make a virus-like particle that displays on its surface bits of SARS-CoV-2, and if those bits of SARS-CoV-2 elicit antibodies that neutralize the virus, that’s a vaccine.” The pair partnered with Bradfute’s lab at the Center for Global Health, and Kathryn Frietze, PhD, and Alison Kell, PhD, in Molecular Genetics & Microbiology to test their vaccine candidates.
“We make a virus-like particle that displays on its surface bits of SARS-CoV-2,” Peabody said. “And if those bits of SARS-CoV-2 elicit antibodies that neutralize the virus, that’s a vaccine.”

Center for Global Health faculty also turned their attention to studying patterns of SARs-CoV-2 infection under the guidance of director Douglas J. Perkins, PhD.

A team visited University of New Mexico Hospital to look for fomites: something in the environment that could carry infection. Team members swabbed surfaces around the hospital that could be contaminated with the virus, including personal protective equipment and the exposed skin of health care workers.

In the lab, Perkins and his team isolated RNA from the swabs to see if any of it was from SARS-CoV-2. If they found viral RNA, the team exposed cultured cells to that contaminated sample to see if the virus will grow.

Another team collected nasopharyngeal swabs and blood samples from COVID-19 patients hospitalized at UNMH to study their immune responses. They categorized the samples as severe or non-severe based on the patients’ symptoms and survival. Then, the samples were subjected to next-generation sequencing to discover what gene networks differed between the two categories.

“Once you find emergent pathways that are good for discriminating between the groups, you go in and look specifically at that pathway and all the genes in it,” Perkins explained. This helped researchers determine what drugs might block “severe disease genes” and test how they work in the severe patients’ blood cells.

Christina Salas, PhD, an assistant professor in The University of New Mexico Department of Orthopaedics & Rehabilitation usually focuses on biomedical engineering problems, like developing new joint replacements.

But when the COVID-19 pandemic reach New Mexico she and a team of volunteers, engineering students and research assistants manned 3D printers to produce thousands of protective face masks and face shields, most of which found their way to the Navajo Nation.

In August, Salas and flight nurse Laura Kief Shaffer, her partner on the mask-printing project, were featured among “The Badass 50, Healthcare Workers Who Are Saving the Day” in InStyle Magazine.

The mask-printing effort was launched after Shaffer, who was helping to transport patients from hospitals in Gallup, found workers there wearing bandanas instead of surgical masks and wrapping themselves in plastic bags because they lacked sufficient PPE to safely work around COVID patients. Shaffer’s plea for help found its way to Salas, who was ready with a technical solution.

The masks are made in four color-coded sizes. Each 3D printer can create multiple masks at a time, an automated process that takes 12 to 14 hours. Afterwards, the volunteers sand each mask down to remove excess filament and package it for shipping.

The soft plastic mask hugs the face, and a detachable cartridge holds commercially available air conditioning filters capable of blocking the passage of the coronavirus. The masks can be wiped down with alcohol or hydrogen peroxide – or sterilized with ultraviolet light – and are reusable.

Salas has made frequent trips to Gallup hospitals and eastern Navajo chapters to assess the need for PPE. “We bring along donations of food, water and diapers – you name it – anything someone might need a disaster relief situation.”
The University of New Mexico Health Sciences Center has received $4 million in funding from the National Institutes of Health to expand facilities at the Pete and Nancy Domenici Hall to support Interdisciplinary Substance Use and Brain Injury (ISUBI) research with state-of-the-art equipment and laboratory space.

Executive Vice Chancellor Richard Larson, MD, PhD, in collaboration with Bill Shuttleworth, PhD, professor and chair of Neurosciences, Brandi Fink, PhD, associate professor in the Department of Psychiatry & Behavioral Sciences, and Ludmila Bakhireva, MD, PhD, MPH, professor in the College of Pharmacy, applied for the Biomedical Research Facilities C06 matching funds grant to create a new core facility to further interdisciplinary research into substance use and brain injury.

Domenici Hall is already the site of ongoing brain-focused research. Construction is estimated to be completed by Summer 2022, and although there may be delays due to the COVID-19 pandemic, the prospect of new research space has already stimulated the development of new grant funding and novel research at UNM HSC.

“Brain injury and substance use are two research areas that are critical for New Mexico,” Shuttleworth said. “This facility will be invaluable for bringing together the best talent in the region, and create the critical mass needed to tackle tough problems.”

Neuroscience integrates ultrafine research at the cellular and molecular level, animal behavior, human-based brain functional studies – and ultimately, human behavior itself.

With this in mind, the grant task force sought to develop a facility where all of these levels of research could occur in the same space. “The ground floor focuses on preclinical work, while the second floor houses clinical research and ‘big-data’ analyses,” Shuttleworth said.

“Having everyone in the same building, and sharing common resources increases efficiency, but also provides the opportunity for ‘coffee pot’ talk between researchers in different neuroscience subfields,” he said. A molecular neurobiologist and a clinical MRI researcher might come up with an entirely new way of solving a research question in the course of a short conversation in between experiments.
The new facility will also allow for the seamless combination of research strategies at different levels for more holistic research projects, including “wet lab” molecular research spaces, animal behavioral facilities and novel human-focused research laboratories – some of the most state-of-the-art research spaces in the state, and possibly the Southwest.

One human behavioral suite will be an “apartment” laboratory, designed to mimic an everyday living space. It will allow researchers to study interpersonal relationships between subjects performing everyday chores or cooking.

An alcoholism-focused laboratory seeks to reconstruct a bar environment to study the effect of alcohol-related cues that could lead to relapse. This facility will be used in conjunction with a group therapy center to develop better interventions to mitigate a patient’s propensity to relapse in response to these cues.

The bar laboratory might also be used in conjunction with human brain-imaging facilities to study how activity in specific brain regions shifts in response to those cues.

The promise of this new facility has already stimulated new collaborations among UNM researchers. Development of the new facility was also integral to recent renewal of the UNM Center for Brain Recovery and Repair, an NIH-funded COBRE center grant led by Shuttleworth to develop interventions for stroke and traumatic brain injury.

“The main point of the building is to provide nationally competitive resources to attract best researchers regionally and increase the critical mass of investigators working on these two topics (brain injury and substance use) that are of such critical importance of communities around New Mexico,” Shuttleworth said.

“We want to create critical mass of the best and brightest in the region working on these important problems,” he said. “Creating a state-of-the-art physical home is a big step forward, and we’re excited to get to work.”
The National Institute on Aging has awarded a three-year $3.1 million grant to establish an exploratory Alzheimer’s Disease Research Center at The University of New Mexico that will provide care and clinical investigation for residents with cognitive decline.

The new center – one of four that are joining an existing network of 31 federally funded Alzheimer’s centers – will provide New Mexicans with access to the latest in clinical evaluation, treatment and research for cognitive disorders that will afflict an increasing number of people as the population ages.

“Our exploratory center will prioritize American Indians and other rural and underserved populations in New Mexico,” said Gary Rosenberg, MD, director of the UNM Center for Memory & Aging and the principal investigator on the new grant. “This will be one of the only Alzheimer’s centers in the Mountain West,” he added. “Except for one in Arizona, there are none in Colorado, Utah, Texas and the other states up to the Canadian border. This gives us unique opportunities to improve dementia care in New Mexico and surrounding states.”

The new centers mark a strategic expansion into areas of the country that until now have been under-represented in Alzheimer’s research. The UNM group will provide an on-site cognitive assessment clinic and use a mobile magnetic resonance imaging scanner to incorporate cognitive and dementia care for Native Americans who reside in rural areas of New Mexico.

The scanner is operated by the Mind Research Network, which shares quarters on the UNM Health Sciences campus with the Center for Memory & Aging. Once the COVID-19 threat subsides, the study will begin on New Mexico reservations and pueblos with the Mobile On-Site Screening and Testing program.

The Center will also focus on co-morbid diseases in a partnership with several pueblos established by UNM scientist Vallabh “Raj” Shah, PhD, who has spent a quarter century working with Zuni Pueblo to help mitigate health effects of diabetes and kidney disease. Shah is joining in this new initiative, as these diseases are major contributors to cognitive decline and dementia.

While UNM’s new exploratory center will enhance relationships between the School of Medicine and the state’s American Indian communities, it will also engage those with memory disorders throughout the state to participate in clinical care, treatments and research, Rosenberg said.

The grant provides funding for three years to establish and enhance cognitive care and research programs at UNM, Rosenberg said. This will pave the way for a successful competition to transition to a fully established Alzheimer’s Disease Research Center that will serve as a long-term resource for New Mexico.
B y some estimates, 600,000 Native Americans in the Southwest live within 10 kilometers of abandoned hard rock or uranium mines, where they are exposed to metals in the soil, air and water.

The University of New Mexico METALS Superfund Research Program Center, funded by a $1.3 million grant from the National Institute of Environmental Health Sciences, seeks to determine the toxic effects of metal exposure in Native American populations.

METALS Center director Johnnye Lewis, PhD, Research Professor in the College of Pharmacy, explains how metal exposure affects these communities.

“Exposure during active mining was shown to increase the risk and severity of kidney disease, while community exposure, or the exposure that occurs from waste that is left behind, increases the likelihood of developing hypertension and other chronic diseases, such as diabetes and cardiovascular disease,” she says.

Although some health impacts of metal exposure are well established, “it has not been as straightforward as we thought to figure out how the exposures are happening,” Lewis says. Laguna Pueblo and the Navajo communities of Red Water Pond Road, and Blue Gap/Tachee have partnered with UNM to gain more insight.

Studies have primarily focused on uranium exposure, but it has become apparent that “virtually every metal you can think of contaminates these sites,” Lewis says.

The METALS center takes a multidisciplinary approach, with collaborations occurring between UNM Main Campus and the Health Sciences Center. Main Campus experts are focusing on the environmental aspects of the study, including the movement and transport of mine waste, while HSC faculty are focusing on the biology.

One project looks at the toxic effects of metal exposure on a cellular level and has already unearthed some exciting discoveries.

“Uranium and arsenic, both of which are in the waste we look at, were found to inhibit the ability of the body to repair damage to DNA,” Lewis explains. Essentially, these metals can attach to pockets in DNA molecules to prevent the binding of zinc, a necessary element critical for the function of a DNA-damage repair protein.

“The interesting thing about that finding was if you had a sufficient amount of zinc in the system, it outcompetes the metals to restore the function of the protein,” she says. Unfortunately, a large percentage of the Navajo community are zinc deficient, which really “sets up the perfect storm,” Lewis says. This work is still ongoing, and researchers continue to learn more about how various metals interact in the process of DNA repair.

Another major problem that Lewis and her colleagues encounter with metal exposure in the Native American population is immune dysfunction.

“We started looking at the immune response, because clinicians saw a need to treat much more aggressively for infectious disease,” Lewis says. “Inflammation produced by these metals in various systems is one of the fundamental problems that we are seeing.”

The production of cytokines, the chemical messengers that mediate the immune response, are also believed to contribute to the reported immune dysfunction.

Lewis believes that the collaborative efforts and community involvement of the METALS Center benefits everyone.

“When you bring that many perspectives in on it, it creates a synergy that you do not get in an individual lab,” she says. The ultimate goal of the METALS project is not only to better understand how exposure is occurring, but to reduce the risk of exposure and develop an effective intervention.

“It’s not just about understanding our basic science mechanisms, but how we can use that knowledge to reduce the risk that people are facing to drive better cleanup, break exposure and reduce effects.”
Data-driven medical records analysis that promises to shed light on major health policy challenges underpins several new research initiatives launched within The University of New Mexico College of Nursing over the past year.

Dean Christine Kasper, PhD, RN, and doctoral student Lisa Marie Turk, MSN, RN, are collaborating on a study of de-identified medical records to characterize the transition to adult health care for young people with special health care needs. The work is being supported by a subaward from the UNM Clinical & Translational Science Center.

“It’s exciting because it’s a doctoral student who got this award,” said Patricia Watts-Kelley, PhD, FNP, who earlier this year was appointed Associate Dean for Research and Scholarship for the College. “It’s really a big deal, and it’s kudos to Dr. Kasper and to Lisa Marie.”

Turk, who has a sibling living with epilepsy, has a personal interest in the question of how to help young people living with chronic conditions effectively transition to health care as an adult.

“This study is aiming to characterize, model and simulate the transition of individuals, particularly adolescents and emerging adults with medical burdens and health care needs, and their transition to adult health care as opposed to pediatric health care,” she says.

“We know that poor transitions are associated with frequent visits to emergency rooms and other forms of high-intensity care, because there is a known gap that occurs between pediatrics and adulthood.”

Turk says the study, which is collecting data from more than 700 hospitals and health care facilities, has significant policy implications. “One of the known issues is the loss of the typical funding source or insurance, because that changes oftentimes in adulthood,” she says. “There is a variation in policy and clinical applications across the country.”

Children with special health care needs, such as intellectual disabilities, neurodevelopmental issues, autism, cerebral palsy, cancer, diabetes and sickle cell anemia, have better prospects than once was the case.

“Given our advances in medical treatment, children who typically didn’t live far into adulthood are now living into adulthood,” Turk says, “but the clinical applications haven’t caught up.”

In a second study, the College of Nursing is partnering with Sandia National Laboratories in a Cooperative Research and Development Agreement to bring cutting-edge artificial intelligence and machine-learning techniques to bear to study the impact of COVID-19 outbreaks on hospital surge capacity.

Associate professor Mary Pat Couig, PhD, MPH, RN, in partnership with Dean Kasper and Sandia researchers Patrick Finley and Drew Levin, is applying modeling and advanced data analytics to an electronic medical records database to shed light on the problem.

Focusing both on New Mexico and the nation as a whole, the team seeks to identify the populations known to be at higher risk. Where is the nearest access to health care and what is the capacity to provide those services?

Sandia scientists bring broad modeling and analytics expertise to the project, while Couig’s team is applying their extensive expertise in public health emergency preparedness.

One outcome, they say, is to design quantitative data-driven risk predictors to better anticipate future hospital case-loads, outcome metrics and suggested courses of treatment based on patient demographics and medical history.

This timely collaborative research agreement could also open the way for broader application of artificial intelligence, data analytics and modeling across a wide range of nursing, health care and public health issues in New Mexico.
Storytelling Solution

Developing Unique Interventions to Stem Teen Suicide in Rural Communities

By Rebecca Roybal Jones

For a year and a half, Shannon Sanchez-Youngman, PhD, worked with youth leaders in the tight-knit community of San Miguel County to learn about the stressors they face and come up with interventions to prevent teen suicide among Latinos.

The result was a series of digital stories created by the youth leaders.

Now, the research scientist with UNM’s College of Population Health is working to expand the study to include more young people in rural New Mexico. She collaborates with the Transdisciplinary Research, Equity and Engagement Center for Advancing Behavioral Health (TREE).

The research pilot aimed to uncover the causes of stigma related to suicide, particularly around Latino populations and rural communities, as well as to look beyond the usual mental health services, Sanchez-Youngman says.

“These are kids that seemingly have perfect lives, right? They’re athletes, they’re getting good grades,” Sanchez-Youngman says. “But underneath it all, they really revealed a lot of inadvertent community pressure on them to succeed because they’re under a spotlight in a rural town, and that’s really important.

“This is really about rural youth and feeling like they were under a constant microscope to sort of live out where their parents failed, and also to make the community proud.”

For teens who aren’t at the top of their class, Sanchez-Youngman expects to find different struggles involving marginalization.

“When populations experience inequities in health or disparities in health – Latino, Latina youth – (they) may be more likely to commit suicide compared to whites,” she says. “Some of the explanation has to do with their position in society. And so the expectation is that these social determinants of health explain partly how people experience mental health issues.”

For example, she says, an immigrant whose parents crossed over to the United States from Mexico may worry about deportation, hostility in the community and where the next paycheck is coming from.

“Let’s compare it back to those leaders,” Sanchez-Youngman says. “Those youth were feeling a sense of stigma and marginalization by the pressure to be perfect, which is a very different process than maybe a kid whose mom is hooked on opioids. And there’s shame associated with that. But this work is very much interested in how those social conditions impact a sense of belonging, a sense of whether I can succeed or not, which are different mechanisms.”

The San Miguel County pilot study will expand to include more youths and other communities, so that participants can share their stories with each other and work to propose ideas to community leaders on addressing their stressors.

The work is mainly done by teens for teens with professional support so that they’ll be able to reach out to other kids. “The stories are what make a difference,” she says.
The last out-of-town trip Angela Wandinger-Ness, PhD, took before the COVID-19 lockdown was to Seattle, where, on February 15, she received the 2020 Lifetime Mentor Award from the American Association for the Advancement of Science (AAAS).

Six months later, Wandinger-Ness, a professor in The University of New Mexico Department of Pathology who serves as associate director for education, training and mentoring and the Victor and Ruby Hansen Surface Endowed Professor in Cancer Cell Biology and Clinical Translation at the UNM Comprehensive Cancer Center, received the 2020 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.

Wandinger-Ness was among 12 researchers who were honored with the award on August 3 – this time virtually – in an online ceremony presided over by Robert Mayes, program director for Excellence Awards in Science and Engineering at the National Science Foundation.

The award, billed as “the Nation’s highest honors for mentors who work with underrepresented groups to develop fully the Nation’s human resources in STEM,” comes with a $10,000 honorarium.

“It’s incredibly humbling to be the recipient of these really prestigious awards this year,” she said. “It’s really with the support of the trainees and mentees who feel you’ve made a difference in their lives. It’s deeply meaningful.”

Wandinger-Ness, who joined the UNM faculty in 1998, studies GTPases, a family of enzymes that operate as molecular switches in many different cellular functions. She currently is looking for ways to translate her work into potential therapies for ovarian cancer. Her research has been funded by the National Science Foundation, American Heart Association, National Institutes of Health, Department of Defense and private foundations.

She has twice been singled out by her colleagues at the UNM Health Sciences Center for the annual Excellence in Research Award and was nominated for the Presidential award by Valerie Romero-Leggott, MD, the HSC’s vice chancellor for Diversity, Equity and Inclusion.

Wandinger-Ness has made mentorship a centerpiece over the course of her 33-year career, having personally mentored 74 students and fellows in her laboratory. Her trainees, from five continents, bring their diverse abilities, culture, educational opportunity, gender, race/ethnicity and socioeconomic backgrounds to solve complex problems. Her mentees encompass more than 370 students, postdoctoral fellows and junior faculty.

She has been honored by being elected a fellow of the AAAS, the world’s largest scientific society, in 2012.

“You become part of a network of people who are like-minded, and therefore you can connect more broadly across the country and have a bigger impact,” she said of her membership in the society. “You can use that capital to help your trainees more, to connect more, to learn more and bring new things to your work area.”

Photograph of Angela Wandinger-Ness, PhD, recipient of the 2020 Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring.
SOUND INVESTMENT

UNM’s T32 Programs Provide Critical Support for Graduate Students and Postdoctoral Fellows

By Yamhilette Licon Muñoz

Ruth L. Kirschstein made history as the first woman to direct one of the National Institutes of Health. An active promoter of training programs to mentor underrepresented scientists, she knew the importance of investing in scientists to ensure the advancement of knowledge.

The Ruth L. Kirschstein Institutional National Research Service Award – also known as the T32 award – is a major training program supported by the National Institutes of Health (NIH).

The University of New Mexico Health Sciences Center currently has three T32 training programs: The Alcohol Research Training Program, the Cardiovascular Research Training Program and the Infectious Disease & Inflammation Program.

All three programs are designed to support the careers of graduate students and postdoctoral fellows.

“The Alcohol Research Training Program in Neurosciences provides graduate students with multidisciplinary research training that prepares them for a successful career in alcohol research,” says training program director Fernando Valenzuela MD, PhD. “Currently, we have four graduate students enrolled in the program”.

This program is funded by a T32 grant from the National Institute of Alcohol Abuse and Alcoholism (NIAAA) and the research focus includes different areas of alcohol neuroscience research, such as Fetal Alcohol Spectrum disorders, alcohol craving, dependence, tolerance and withdrawal, and the stress, hormonal and cognitive effects of alcohol.

The award provides tuition, fees, insurance and stipend support from the NIH and NIAAA. In addition, students receive funds for research supplies and travel expenses to scientific meetings. “We help the students to network with other experts in the field,” Valenzuela says.

The UNM Center for Infectious Disease and Immunity has developed the Infectious Disease & Inflammation Program (IDIP) T32 training grant. Under the direction of Michelle Ozbun PhD, this program studies infectious and immunologically mediated diseases.

IDIP accepts four predoctoral students and two postdoctoral fellows and pairs trainees with mentors. Mentors are experts on the infectious diseases and immunity field at UNM, the UNM School of Medicine and the Lovelace Respiratory Research Institute.

UNM’s Cardiovascular Research Training Program (CRTP) is funded by a T32 grant from the National Heart, Lung, and Blood Institute (NHLBI). The CRTP currently funds six predoctoral and two postdoctoral trainees.

The CRTP consists of 25 mentoring faculty from 12 basic science and clinical departments and/or colleges, including 15 professors, four associate professors and six assistant professors. The areas of research include vascular biology, cardiovascular toxicology, cell signaling and clinical/translational science.

“Our CRTP provides an integrative approach to understand the mechanisms of cardiovascular disease,” says Thomas Resta PhD, current director of CRTP. “We have mentors who work both in basic science and translational research.”

The quality and variety of mentors has contributed to the success of UNM’s T32 programs. To be funded, NIH requires a strong group of...
To be funded, NIH requires a strong group of established scientists with high expertise on the field. The existence of the T32 grants has propelled the development of concentrations of coursework and journal clubs designed to ensure specialized training in the areas of cardiovascular physiology, infectious disease and inflammation and alcohol research.

To be part of the program, NIH requires trainees to be U.S. citizens or permanent residents and to work with a mentor who is part of the T32 award. The trainees themselves are huge contributors to the T32 program’s success, measured in large part by how many go on to accomplished research careers.

“We have improved the program over the years using the feedback from our students,” Valenzuela says.
The University of New Mexico Health Sciences Center
Research 2020 Training Grants

Rostin Ahmadian, PhD Candidate
T32 Scholar, NIH
Oxidant signaling in pulmonary hypertension
Mentor: Thomas Resta, PhD

Eduardo Anaya, PhD Candidate
T32 Scholar, NIAID
Infectious disease, cell signaling and biophysics
Mentor: Aaron Neumann, PhD

Elizabeth Bailey, PhD
K12 Scholar, NIGMS
Adapting single-particle techniques to interrogate receptor signaling complexes, primarily with the B cell receptor
Mentors: Diane Lidke, PhD; Keith Lidke, PhD

Victoria Balise, PhD
K12 Scholar, NIGMS
Identifying how tetraspanins regulate processes involved in hematopoietic stem and progenitor cells
Mentors: Jennifer Gillette, PhD; Alicia Bolt, PhD; Leah Freeman, PhD

Cindy K. Blair, PhD
KO7 Scholar, NCI
Developing expertise in the design and dissemination of home-based interventions that use a whole-of-day approach to physical activity in older cancer survivors.
Mentors: Sally Davis, PhD; Vernon Shane Pankratz, PhD; Carla Herman, MD; Wendy Demark-Wahmfried, PhD; Anita Kinney, PhD

Eliseo Castillo, PhD Candidate
KL2 Scholar, NCATS
Understanding the gut microenvironment, immune cells and microbiota in intestinal health and inflammation
Mentors: Judy Cannon, PhD; Hengameh Raissy, PharmD

Laura Weise Cross, PhD
T32 Scholar, NIH
Oxidant signaling in pulmonary hypertension
Mentor: Thomas Resta, PhD

Thomas DePree, PhD
K12 Scholar, NIGMS
Understanding of the interdisciplinary relationship between earth and planetary sciences, environmental health sciences and the civil and environmental engineering employed at so-called ecological “sacrifice zones” in northwestern New Mexico
Mentors: Debra MacKenzie, PhD; Johnnye Lewis, PhD; William Schaedla, PhD

Sharina Desai, PhD
T32 Scholar, NIAID
T cell trafficking during ovarian cancer disease progression in the peritoneal tumor environment
Mentor: Sarah Adams, MD
Tammi Duncan, PhD  
K12 Scholar, NIGMS  
Demonstrating that arsenite induced an oxidative stress and DNA damage response in human T-lymphocytes, while uranium had no effect  
Mentors: Laurie Hudson, PhD; Matthew Campen, PhD; Terri Koontz, MS

Daniel Falcon, PhD  
K12 Scholar, NIGMS  
Elucidating the roles of infiltrating leukocytes in the onset and disease course of vitiligo  
Mentors: Xiang Xue, PhD; Sarah Adams, MD; Judy Cannon, PhD; Michel Shuster, PhD

Máté Fischer, PhD Candidate  
T32 Scholar, NIAAA  
Stem cell culture, neurodevelopment, FASD disease modeling, gene expression, cortical patterning  
Mentor: Jason Weick, PhD

Muskan Floren, PhD Candidate  
F31 Fellow, NCI  
Identifying key regulators of chemotherapy resistance in acute myeloid leukemia and developing therapies that are directed towards the AML cell population residing within the bone marrow  
Mentor: Jennifer Gillette, PhD

Kathryn Frietze, PhD  
KL2 Scholar, NCATS  
Investigation of antibody responses to infectious diseases, developing vaccines against Chlamydia trachomatis, Dengue virus and opioids  
Mentors: Bryce Chackerian, PhD; Thomas Byrd, PhD

Kymberly Gustus, PhD Candidate  
F31 Fellow, NIAAA  
Adult hippocampal neurogenesis as a therapeutic target in Fetal Alcohol Spectrum Disorder  
Mentor: Lee Anna Cunningham, PhD

Selina Garcia, PhD Candidate  
F31 Fellow, NHLBI  
Studying the role of the acid-sensing ion Channel 1 in the systemic vasculature  
Mentor: Nikki Jernigan, PhD

Elton Jhamba, PhD Candidate  
K12 Scholar, NIGMS  
Developing super-resolution microscopy technologies to study protein-protein interactions on mast cell membranes in allergic responses, and the interplay of receptor tyrosine kinases on cancer cells  
Mentors: Diane Lidke, PhD; Keith Lidke, PhD

Benjamin Lantz, PhD Candidate  
T32 Scholar, NIH  
Pulmonary hypertension  
Mentor: Laura Gonzalez Bosc, PhD

Milindu Liyanapathirana, PhD Candidate  
K22 Scholar, NINDS  
Molecular mechanisms associated with glial development within the central nervous system  
Mentor: Tou Yia Vue, PhD

Christine Mancuso, PhD  
K12 Scholar, NIGMS  
Elucidating how dietary and environmental markers can be used to learn more about an individual’s diet and movement/migration using stable isotope ratio biomarkers  
Mentors: Seth Newsome, PhD; Heather Edgar, PhD, William Schoedla, PhD
Tye Martin, PhD  
K12 NIGMS  
Studying misfolded and disordered proteins to rapidly develop new adaptive medical technology  
Mentors: Heather Canavan, PhD; Eva Chi, PhD; Ivy Crockett, MS

Perenkita Mendiola, PhD Candidate  
T32 Scholar, NIH  
Identifying endogenous regulators of cystathionine gamma-lyase in endothelial cells  
Mentors: Nancy Kanagy, PhD; Laura Gonzalez Bosc, PhD

Emily Morin, PhD  
K12 Scholar, NIGMS, T32 Scholar, NIH  
Investigating endothelial dysfunction and finding new drug delivery methods; cholesterol regulation of vascular tone in hypertension  
Mentor: Jay Naik, PhD

Bianca Myers, PhD Candidate  
K22 Scholar, NINDS, T32 Scholar, NIAAA  
Studying the effect of adult alcohol consumption on the progression of glioblastoma multiforme  
Mentors: C. Fernando Valenzuela, MD, PhD; Tou Yia Vue, PhD

Sarah Olguin, PhD Candidate  
T32 Scholar, NIAAA  
Utilizing dura-resting EEG to evaluate prenatal alcohol exposure during rodent touchscreen tasks  
Mentor: Jonathan Brigman, PhD

Rob Oliver, PhD  
T32 Scholar, NIH  
Mechanisms of angiogenesis in glioblastoma multiforme  
Mentor: Amy Gardiner, PhD

Erica Pascetti, PhD Candidate  
T32 Scholar, NIH  
Hematopoietic stem and progenitor cells  
Mentor: Jennifer Gillette, PhD

Gabriela Perales, PhD Candidate  
T32 Scholar, NIH  
Studying angiogenic targets of miR-150-5p and investigating the role of miR-150-5p in regulating angiogenesis in the developing embryos both in vitro and in vivo during prenatal alcohol exposure  
Mentor: Amy Gardiner, PhD

Dominique Perez, PhD Candidate  
T32 Scholar, NIH  
Utility of small molecule inhibitors of cAMP efflux for translation as leukemia therapeutics  
Mentors: Larry Sklar, PhD; Alexandre Chigaev, PhD

Katelyn Reinhart, PhD Candidate  
T32 Scholar, NIH  
Study of spreading depolarization (SD), and the basic physiological mechanisms of SD that contribute to the progression of brain injuries, including stroke  
Mentor: C. William Shuttleworth, PhD

Melanie Rivera, PhD Candidate  
F31 Scholar, NCI  
Investigating the role of Rac1 in ovarian cancer metastasis in the peritoneal niche, including the role of immune modulation by a Rac1-targeting drug or knockout  
Mentor: Angela Wandinger-Ness, PhD

Emmanuel Rosas, PhD  
K12 Scholar, NIGMS  
Investigating the role of G-protein coupled estrogen receptor (GPER) in the development of anti-hormone resistance and whether novel therapeutic anti-hormone approaches that prevent cross-activation of GPER can reduce anti-hormone resistance in ERα-positive breast cancers  
Mentor: Eric Prassnitz, PhD
Lilliana Sanchez, PhD Candidate
T32 Scholar, NIAAA
Studying moderate prenatal alcohol exposure and its effects on the hippocampus, specifically in associative learning and memory
Mentor: Benjamin Clark, PhD

Raquela Thomas, PhD
K12 Scholar, NIGMS
Developing a clinically-relevant model for chimeric tumors that will be utilized to investigate tumor editing in response to oncolytic virotherapy
Mentors: Eric Bartee, PhD; Allison Kell, PhD; Jennifer Curtiss, PhD

Nicolle Thompson Gonzalez, PhD
K12 Scholar, NIGMS
Expanding the toolkit for field primatologists to evaluate allostatic load by validating non-invasive markers of oxidative stress, including inflammation, in wild chimpanzees
Mentors: Melissa Emery Thompson, PhD; Debra MacKenzie, PhD; Alfonso Heras-Llanos, PhD

Leslie Toledo Jacobo, PhD
K12 Scholar, NIGMS
Studying the regulatory role of Myotonic dystrophy-related CDC42-binding kinase (MRCK) proteins on migration, invasion and ultimately metastasis of ovarian cancer cells
Mentors: Angela Wandinger-Ness, PhD; Laurie Hudson, PhD; Jessica Smith, MS

Nikole Warner, PhD
K12 Scholar, NIGMS
Investigating the antibody response to Dengue virus and using this knowledge to inform vaccine design
Kathryn Frietze, PhD; Bryce Chackerian, PhD; Kathryn Hanley, PhD

Jordan Weisend, PhD Candidate
T32 Scholar, NIH
Cell and molecular mechanisms of protection induced by spreading depolarizations occurring in remaining viable brain tissues following stroke
Mentor: C. William Shuttleworth, PhD

Lea Weston, PhD Candidate
T32 Scholar, NIAID
Investigating the relationship between neuroinflammation and tau pathology. Determining the role of anti-inflammatory cytokine IL-10 in tauopathies such as Alzheimer’s disease
Mentor: Kiran Bhaskar, PhD

Xiang Xue, PhD
K01 Scholar, NIDDK
Iron metabolism and GI diseases
Mentors: Eric Prossnitz, PhD; Olga Kovbasnjuk, PhD
Excellence in Research Awards 2020

The University of New Mexico Health Sciences Center’s 12th Annual Research Day Awards Ceremony was held (via Zoom) on November 20, 2020. The event, hosted by Executive Vice Chancellor Richard S. Larson, MD, PhD, recognized six scientists who were nominated by their peers and selected for recognition by a faculty committee on the basis of their outstanding research contributions.

David Peabody, PhD (top)
Bryce Chackerian, PhD
Molecular Genetics & Microbiology
Team Science (Joint Awardees)

David Peabody and Bryce Chackerian are the very embodiment of team science. Over the past 16 years, Peabody, a microbiologist, and Chackerian, a virologist and immunologist, have partnered to use virus-like particles as a the basis for novel vaccines targeting chronic and infectious disease. They have developed new vaccine candidates against human papillomavirus, malaria, HIV, Chlamydia, influenza and Neisseria. They have also developed novel vaccines for cardiovascular disease by targeting molecules that regulate triglycerides and LDL cholesterol metabolism. And, they have collaborated with researchers throughout the Health Sciences Center and at other institutions. They were jointly named as Innovation Fellows by STC.UNM in 2017 and were both elected to the National Academy of Inventors in 2019.

Matthew J. Campen, PhD, MSPH
Pharmacy
Basic Science

Matthew Campen is internationally recognized for his research in the harmful effects of air pollutants in the lungs, as well as the cardiovascular and neurovascular systems. He conducted pioneering work on the toxicity of combustion source mixtures, such as diesel and gasoline engine emissions, and has recently expanded his research to address fundamental questions of how lung responses lead to systemic vascular injury. He has published more than 100 peer-reviewed articles in high-impact journals and is director of a new $20 million Center of Biomedical Research Excellence grant focusing on the role of metal elements in health and biology. Campen also serves as director of the KL2 Mentored Career Development program in the UNM Clinical & Translational Science Center.

Kimberly Page, PhD, MPH
Internal Medicine
Population Science

Kimberly Page has had a long career in population science research, with an emphasis on the epidemiology of viruses, particularly HIV and hepatitis C virus (HCV) infections in high-risk and under-served populations. As a tenured professor in the Division of Epidemiology, she has led some of the most significant research on HCV infection globally and recently completed the only prospective cohort study of HCV in young adults who inject drugs in the U.S. In 2014, Page and colleagues published the first study in the U.S. showing that opiate agonist treatment reduced HCV incidence by 60% in young adult injection drug users. Her expertise and experience with HCV led to successful funding as co-principal investigator on the only preventive HCV vaccine trial ever conducted.
Steven B. Bradfute, PhD
Center for Global Health
Junior Faculty

When SARS-CoV-2 came to New Mexico, Steven Bradfute was ready. An expert on emerging viral pathogens, including Ebolaviruses, hantavirus, equine encephalitis viruses and Zika, Bradfute rapidly established methods for studying the novel coronavirus in the BSL-3 facility that he directs. This has fostered multiple experimental approaches for addressing the challenges of SARS-CoV-2, including viral pathogenicity, viral replication, drug-screening and methods to measure neutralizing antibody titers in both animal models and humans. His efforts resulted in several publications for which he is the senior author and numerous grant submissions that are awaiting feedback. In addition, Bradfute’s hantavirus research has led to the establishment of an “antibody bank” that has the potential of saving the lives of those newly infected.

Hengameh H. Raissy, PharmD
Pediatrics
Clinical Science

As vice chair for research in the Department of Pediatrics, Hengameh Raissy primarily focuses on pharmacotherapy for childhood asthma. She has been the principal investigator for large network trials whose results have been published in The New England Journal of Medicine, The Journal of the American Medical Association and The Lancet. She has also participated in large multicenter asthma clinical trials, directs the CTSC’s Trial Innovation Network and is the author of more than 80 peer-reviewed papers. Raissy has also brought her expertise to bear in supporting pediatric and adult cystic fibrosis studies at UNM and she conducted the first-in-human trial to test the use of nebulized urea as a diagnostic tool for Pseudomonas in CF patients.

Rebecca S. Hartley, PhD
Cell Biology & Physiology
Scholarship of Teaching and Learning

UNM anatomy students have long benefited from Rebecca Hartley’s enthusiasm and gift for teaching. Recently, she has been developing, testing and evaluating methods to improve student success in the Phase I medical curriculum. In particular, she is gauging the effectiveness of an integrated curriculum on long-term retention of anatomical knowledge. She has also lent her extensive expertise in the scholarship of teaching and learning to other clinician educators who wish to enhance the learning experience for their clinical mentees. Hartley has also developed numerous Team-Based Learning Application Cases in Anatomy and Embryology for the Phase I curriculum and contributed to a Pilot Project for the UNM HSC Office for Diversity called “Advancing Institutional Mentoring Excellence.”
Contracts and Grants
2020

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<th>Provider</th>
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<td>Suzanne Popejoy</td>
<td>City of Albuquerque Primary Care/MSW Services Program - Continuation</td>
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<td>Peter Shin</td>
<td>Lovelace UNM Rehabilitation Services Professional Services</td>
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### OFFICE OF THE EXECUTIVE VICE CHANCELLOR

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<th>Private Gifts for Research</th>
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<td>Richard Larson</td>
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<td>Miners Colfax Medical Center Professional Services - Continuation</td>
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<td>A. Robb McLean</td>
<td>New Mexico Department of Health Locum Tenens Program DOH Physician, PA and NP Services</td>
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<td><strong>Terry Wu</strong></td>
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### OFFICE OF THE EXECUTIVE VICE CHANCELLOR FOR RESEARCH

| Richard Larson | National Institutes of Health Biomedical Research Facility | $4,000,000 |
| Larissa Myaskovsky | Dialysis Clinic, Inc. Improving Healthcare Outcomes in American Indian and Hispanic Transplant Recipients Using Culturally Tailored Novel Technology | $316,776 |
| University of Pittsburgh | Increasing Equity in Transplant Evaluation and Living Donor Kidney Transplantation - Continuation | $44,105 |
| University of Pittsburgh | Cardiac Resynchronization in the Elderly: Piloting Pacemaker v. Defibrillator Therapy - Continuation | $18,810 |
| Surojit Paul | Los Alamos National Laboratory Los Alamos National Laboratory - Contract # 56791S | $20,680 |
| **Animal Research Facility** |
| **Richard Larson** | New Mexico VA Health Care System Veterinary Services for the N.M. Veterans Affairs Health Care System - Continuation | $30,475 |

### CLINICAL & TRANSLATIONAL SCIENCE CENTER

| Justin Baca | Sensor-Kinesis Corporation Development and Testing of Surface Acoustic Wave Analytical System | $150,179 |
| Lee Brown | Ohio State University The Impact of Low Flow Nocturnal Oxygen Therapy on Hospital Readmission/Mortality in Patients With Heart Failure and Central Sleep Apnea: a Pragmatic Trial | $65,128 |
| Matthew Campen | National Center for Advancing Translational Sciences UNM Clinical & Translational Science Center K12 2020-2025 | $394,876 |
| Kathryn Frietze | National Institutes of Health Bacteriophage Virus-Like Particle Vaccines Against Dengue Virus Non-Structural Protein 1 | $189,375 |
Michelle Harkins  
Leidos, Inc  
COVID19: Adaptive COVID-19 Treatment Trial  
$120,000

Karen Hawley  
University of Utah  
A Randomized Trial to Determine the Role of Valganciclovir for Asymptomatic Cytomegalovirus Infected Hearing Impaired Infants (ValEAR) - Non-Specific Supplement  
$1,845

Richard Larson  
National Center for Advancing Translational Sciences  
UNM Clinical & Translational Science Center UL1 2020-2025  
$3,991,077

University of Nevada, Las Vegas  
Institutional Development Award Program Infrastructure for Clinical and Translational Research: BERD - Continuation  
$231,950

University of Nevada, Las Vegas  
Institutional Development Award Program Infrastructure for Clinical and Translational Research: PDC - Continuation  
$148,582

University of Nevada, Las Vegas  
CTR-IN Round 7 Subaward - Pharmacogenetics to Improve Opioid Prescribing for Native Americans: Pilot Study  
$65,580

University of Nevada, Las Vegas  
CTR-IN Round 7 Subaward - a Mixed Methods Study of Methamphetamine Use in the Context of the Opioid Epidemic  
$54,999

University of Nevada, Las Vegas  
Institutional Development Award Program Infrastructure for Clinical and Translational Research: CEO - Continuation  
$17,347

University of Nevada, Las Vegas  
Institutional Development Award Program Infrastructure for Clinical and Translational Research: T&E - Continuation  
$13,859

University of Utah  
Opioid ECHO  
$154,986

Alberta Kong  
University of Arkansas  
DCOC Leadership Committee  
$45,997

University of Arkansas  
IAMHealthy Study - ISPCTN Network  
$28,109

Jessie Maxwell  
Research Triangle Institute  
WEANING - ACT NOWS  
$182,368

Eric Prossnitz  
Virtici, LLC  
ASCEND: Accelerating Solutions for Commercialization and Entrepreneurial Development in the Mountain West Idea States  
$874,016

Hengameh Raissy  
University of Arkansas  
Data Coordinating and Operations Center for the Idea States Pediatric Clinical Trials Network - VDORA - Continuation  
$115,746

Sherry Weitzen  
Research Triangle Institute  
ESC - ACT NOWS - Eat, Sleep, Console  
$267,814

COLLEGE OF NURSING

Mary Couig  
Sandia National Laboratories  
COVID-19 Electronic Health Records  
$20,000

U.S. Department of Veterans Affairs  
VA Office of Nursing Services IPA  
$16,153

Judy Liesveld  
HRSA/Bureau of Health Workforce  
Nurse Education, Practice, Quality and Retention/Veteran Nurses in Primary Care - Continuation  
$388,648

HRSA/Bureau of Health Workforce  
COVID Nurse Education Practice Quality Retention/ Veteran Nurses in Primary Care COVID  
$64,285

HRSA/Bureau of Health Resources Development  
Nurse Faculty Loan Program  
$59,535

New Mexico Board of Nursing  
N.M. Board of Nursing-Chirle  
$17,956

Janice Martin  
City of Albuquerque  
Geriatric Education and Health Maintenance  
$67,000

Carolyn Montoya  
HRSA/Bureau of Health Workforce  
Advanced Nursing Education Workforce Program - Continuation  
$636,762

Presbyterian Healthcare Services  
ANE-NPR Program  
$139,164

El Pueblo Health Service  
El Pueblo Health Services  
$69,510

Mountain Spirit Integrative Medicine  
Mountain Spirit  
$62,646

UNM Hospital  
Professional Services  
$53,600

Sharon Ruyak  
Sigma Theta Tau  
The Effect of Prenatal Opioid and Alcohol Exposure on Key Human Placental Immune and Serotonin Factors Influenced by TLR4 Signaling Pathways  
$10,000

Katherine Zychowski Bufford  
National Institute of Environmental Health Sciences  
Neurovascular Consequences of Inhaled Uranium Mine-site Dust Exposure - Continuation  
$249,000

COLLEGE OF PHARMACY

Joe Anderson  
New Mexico Department of Health  
BAA/Heart Disease and Stroke Prevention Program Health Systems Intervention Project  
$80,000

Ludmila Bakhireva  
National Institute on Alcohol Abuse and Alcoholism  
ENRICH-2: Stress-Reactivity and Self-Regulation in Infants With Prenatal Alcohol Exposure  
$672,158

National Institutes of Health  
6/6 Planning for the HEALTHy Early Development Study - Non-Specific Supplement  
$271,231

National Institutes of Health  
6/6 Planning for the HEALTHy Early Development Study  
$271,231

New Mexico Department of Health  
Enhancing Pharmacy-Based Naloxone Distribution  
$60,000

Matthew Campen  
National Institutes of Health  
New Mexico Center for Metals in Biology and Medicine  
$2,521,061

Baylor College of Medicine  
Notification of Access to Toxic Effects of E-Cigs Following Transition From Conventional Cigarettes - Continuation  
$124,368

National Institutes of Health  
Inhalation of Contaminated Mine Waste Dusts As a Route for Systemic Metal Toxicity  
$486,483

National Institute of Environmental Health Sciences  
Mechanisms of Vascular Toxicity From Inhaled Toxicants  
$335,592
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<td>Debra MacKenzie</td>
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<td>Using Silicone Wristbands as Non-Invasive Passive Environmental Monitors to Evaluate Seasonal and Within-Family Correlation for Environmental Exposures. - Continuation</td>
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<td>The Role of Adiponectin in Regulating Type 2 Innate Lymphoid Cells and Browning of Fat - Supplement</td>
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<td>American Federation for Aging Research Measurement of the Conservation in Mammalian Cells of the Effects of Lifespan-Extending TRNA Synthetase Inhibitors.</td>
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### Rita Serda
National Science Foundation  
*Pathogen Mimic Cancer Vaccines*  $50,000

### Larry Sklar
Leidos, Inc  
*BASE Project/MGMT: NCI Experimental Therapeutics Chemical Biology Consortium*  $78,410

### Alan Tomkinson
National Institute of General Medical Sciences  
*Cellular Functions of Eukaryotic DNA Ligases*  $369,502

### Rita Serda
National Institute of Environmental Health Sciences  
*Roles of Lig3 and XRCC1 Genes in Genome Stability*  $307,800

### Larry Sklar
Lovelace Respiratory Research Institute  
*DNA Repair Capacity Assays for Lung Disease Risk Assessment*  $74,567

### Alan Tomkinson
Lawrence Berkeley National Laboratory  
*Structural Cell Biology & Physiology of DNA Repair Machines Project -YR4*  $66,600

### Cosette Wheeler
Becton, Dickinson and Company  
*BDS-USHPVPC*  $5,000,000

### Charles Wiggins
New Mexico Department of Health  
*DOH BCC Surveillance & Cancer Survivorship Care Plans Project*  $14,934

### Cheryl Willman
National Cancer Institute  
*University of New Mexico Cancer Center Support Grant*  $2,246,011

### Cheryl Willman
National Cancer Institute  
*Dissemination of a Colorectal Cancer Screening Program Across American Indian Communities in Southern Plains & Southwest United States*  $1,000,000

### Cheryl Willman
National Cancer Institute  
*Colorectal Cancer Screening Program Across American Indian Communities*  $400,000

### Cheryl Willman
National Cancer Institute  
*COVID Development of Epitope-Targeted SARS-CoV-2 Vaccines*  $373,749

### Amy Gardiner
National Institute on Alcohol Abuse and Alcoholism  
*The Role of Mir-150 in Regulating Angiogenesis During Prenatal Alcohol Exposure*  $179,906

### Laura Gonzalez-Bosc
Department of the Navy  
*Biomarkers of Hypoxia Exposure*  $135,193

### Helen Hathaway
National Cancer Institute  
*Is Tumor-Adjacent Histologically Normal Tissue Primed for Tumorigenesis? Continuation*  $313,008

### Nikki Jernigan
National Heart, Lung, and Blood Institute  
*R01 Renewal Vascular Smooth Muscle Function in Pulmonary Hypertension - Continuation*  $378,750

### Nikki Jernigan
National Heart, Lung, and Blood Institute  
*The Role of the Acid-Sensing Ion Channel 1 in the Systemic Vasculature - Continuation*  $23,883

### Nikki Jernigan
National Heart, Lung, and Blood Institute  
*The Role of the Acid-Sensing Ion Channel 1 in the Systemic Vasculature - Non-Specific Supplement*  $294
**Vijay Naik**  
Exhalix, LLC  
**Dynady Breath Gas Sensor for Detection of Pulmonary Edema**  
$33,000

**Thomas Resta**  
National Institutes of Health  
**Minority Institutional Research Training Program (T32) - Continuation**  
$204,358

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**Dental Medicine**

**Gary Cuttrell**  
HRSA/HIV-AIDS Bureau  
**Dental Partnership Program, HRSA Ryan White Part F - Continuation**  
$225,128

New Mexico Department of Health  
**Basic Oral Health Services**  
$106,334

New Mexico Department of Health  
**Basic Oral Health**  
$83,259

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**Dermatology**

**Emily Altman**  
Principia Biopharma Inc.  
**PRN1008-012: A Phase 3 Randomized, Double-Blind, Placebo-Controlled, Multicenter Trial to Evaluate the Efficacy and Safety of Oral BTK Inhibitor PRN1008 in Moderate to Severe Pemphigus**  
$275,490

Lilly USA, LLC  
**14V-MC-JAIR: A Multicenter, Randomized, Double-Blind, Placebo-Controlled Phase 3 Study to Evaluate the Efficacy and Safety of Baricitinib in Adult Patients With Severe or Very Severe Alopecia Areata**  
$200,000

Principia Biopharma Inc.  
**PRN1008-012: A Phase 3 Randomized, Double-Blind, Placebo-Controlled, Multicenter Trial to Evaluate the Efficacy and Safety of Oral BTK Inhibitor PRN1008 in Moderate to Severe Pemphigus - Non-Specific Supplement**  
$450

**John Durkin**  
Lilly USA, LLC  
**Clinical Study: Ixekizumab in the Treatment of Lichen Planus**  
$211,492

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**ECHO Institute**

**Sanjeev Arora**  
Defense Health Agency  
**Telementoring Services Defense Health Agency**  
$792,283

National Network of Public Health Institute  
**Safe Opioid Prescribing ECHO**  
$750,000

Bristol Myers Squibb, Inc. Foundation  
**Leveraging the ECHO Model for International COVID-19 Response**  
$500,000

Centers for Disease Control and Prevention  
**Building U.S. Public Health Service Clinical Opioid Response Capacity**  
$490,000

Health Resources and Services Administration  
**COVID Ryan White HIV/AIDS Program AIDS Education and Training Centers Program COVID19 Response**  
$400,000

Health Resources and Services Administration  
**SC AETC End HIV Epidemic Specific Supplement**  
$395,061

Gilead Sciences  
**Improving Hepatitis C Care in Rural and Underserved Appalachian Communities**  
$300,000

New Mexico Department of Health  
**Hepatitis and HIV Clinical Consultant Project - Continuation**  
$300,000

New Mexico Department of Health  
**Opioid Rapid Response Team**  
$250,317

U.S. Department of Agriculture  
**First Responder ECHO Program for Rural EMS Providers**  
$250,000

University of California, Davis  
**ECHO Support for Multinational Health Education Networks in Africa and Southeast Asia - Continuation**  
$233,728

Northwest Portland Area Indian Health Board  
**Indian Health Service TeleECHO Clinic Support - Continuation**  
$225,000

New Mexico Department of Corrections  
**N.M. Department of Corrections Hepatitis C**  
$190,644

Health Resources and Services Administration  
**South Central AIDS Education and Training Center Program**  
$183,763

JHPIEGO Corporation  
**JHPIEGO Healthcare Workforce - Supplement**  
$180,000

High Plains Regional Education Cooperative #3  
**ECHO for Education: Graduates and Teacher Pipeline**  
$163,314

University of Maryland, Baltimore County  
**Project ECHO Immersion and Follow-Up Training in Nigeria**  
$150,000

New Mexico Department of Health  
**N.M. Opioid Rapid Response Project**  
$138,304

Armenia Ministry of Health  
**ECHO Partnership With the Global Fund for HCV-HIV Care in Armenia**  
$134,802

University of Maryland  
**Project ECHO Immersion in Tanzania**  
$128,725

Chronic Liver Disease Foundation  
**CLDF PEP Program**  
$120,000

New Venture Fund  
**ECHO/Co-Impact Partnership for Achieving Global Scale**  
$100,000

Presbyterian Medical Services  
**MCO Depression Quality Improvement Pilot**  
$65,000

Health Care Service Corporation  
**MCO Depression Quality Improvement Project**  
$65,000

Western Sky Community Care  
**Western Sky MCO Depression ECHO**  
$65,000

JHPIEGO Corporation  
**JHPIEGO Healthcare Workforce - Continuation**  
$50,000

JHPIEGO Corporation  
**JHPIEGO Healthcare Workforce**  
$50,000

Tanzania Health Promotion Support  
**Leveraging the ECHO Model to Improve Lab Services in Tanzania**  
$49,384

Stanford University  
**Stanford University T1d Support and Technical Assistance**  
$43,379

University of California, Davis  
**ECHO Support for Multinational Health Education Networks in Africa and Southeast Asia**  
$40,146

New Mexico Department of Health  
**TB Border Health 2019**  
$40,000

New Mexico Corrections Department  
**Re-Entry ECHO Program: Supporting PEP Graduates As Peer Support Workers**  
$34,740

Health Research Inc.  
**ECHO Partnership for Quality Improvement Innovations in HIV Care - Continuation**  
$25,935

CDC Foundation  
**COVID-19: Advanced HIV Disease in the Context of COVID-19 Virtual Training Series**  
$25,550
Prevent Cancer Foundation
AORTIC Conference $25,000

Four Seasons
Four Seasons Palliative Care Grant $12,500

University of British Columbia
Vancouver PEP Training $10,000

**Emergency Medicine**

**Danielle Albright**
New Mexico Crime Victims Reparation Commission
Coordination of Domestic Violence Death Review $140,000

New Mexico Crime Victims Reparation Commission
Sexual Assault & Persons With Disabilities $150,000

**Justin Baca**
Abbott Point of Care Inc.
CS-2016-0005 Clinical Evaluation of I-STAT Ctrl Nsg Test to Aid in the Diagnosis of Myocardial Infarction $490,410

**Laura Banks**
New Mexico Transportation Department
Pedestrian Safety Initiative $300,000

New Mexico Department of Homeland Security & Emergency Management
NMDHSEM Preparedness Conference $82,320

New Mexico Department of Health
Partners in Preparedness Conference $69,614

**Darren Braude**
Department of the Air Force
UNM Educational Service Agreement FY20 $518,760

Department of the Air Force
UNM Educational Service Agreement FY20 - Non-Specific Supplement $495,480

City of Albuquerque
Medical Directorship - Continuation $382,593

Valencia County
Medical Directorship $137,232

New Mexico Public Safety Department
Professional Services TEMS $82,167

Sandoval County
Medical Directorship - Continuation $54,000

City of Albuquerque
Professional Services Agreement - Continuation $50,000

Department of the Air Force
UNM Educational Service Agreement FY20 - Non-Specific Supplement $43,200

City of Rio Rancho
Medical Director Services - Continuation $37,200

Bernalillo County
Medical Directorship - Continuation $14,000

K&I Field Services
Medical Direction and Care - Continuation $12,500

City of Rio Rancho
Professional Services - Continuation $10,500

City of Rio Rancho
Professional Services $7,500

City of Rio Rancho
Professional Services - Continuation $5,000

U.S. National Park Service
Zion National Park ALS Refresher $4,481

Village of Cuba
Medical Directorship - Continuation $4,100

Sandia Crest Marathon
Medical Directorship - Continuation $1,550

**Cameron Crandall**
McLean Hospital
CTN-0099: Emergency Department-INITiated Buprenorphine VALidation Network Trial $107,918

**Joy Crook**
New Mexico Department of Health
FY20 Statewide EMS $50,000

**Douglas Dixon**
Taos County
Medical Directorship - Continuation $36,000

Taos County
Medical Directorship - Continuation $36,000

Valencia Regional Emergency Communication Center
Professional Services - Continuation $9,000

**Jon Kenneth Femling**
Light Al, Inc.
Pilot Study of StrepIC Device for the Diagnosis of Group a Streptococcal Pharyngitis - Specific Supplement $196,480

Olive View Medical Center-UCLA EMERGEncy IDnet: Emergency Department Sentinel Network for Surveillance of Emerging Infections - Continuation $7,000

**Andrew Harrell**
City of Albuquerque
Medical Director Services $55,760

New Mexico Department of Public Safety/N.M. State Police
Medical Direction $50,000

Bernalillo County Sheriff’s Department
Professional Services Medical Director and SWAT Training - Continuation $20,000

**Jonathan Marinaro**
Kindred Hospital (Transitional Hospital Corp. of NM)
Medical Director Services - Continuation $25,000

**Aaron Reilly**
High Altitude Athletics Club
Medical Director $2,000

Trans-Pecos Ultra
Medical Directorship - Continuation $2,000

**Robert Sapien**
HRSA/Maternal and Child Health Bureau
N.M. EMS for Children Program $130,000

Nationwide Children’s Hospital
C-Spine $40,200
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**Internal Medicine**

**Allen Adolphe**  
Gilead Sciences  
Clinical Trial Phase 3: GS-US-223-1017 $1,342,675

Sanofi US Services, Inc.  
SAR439954: A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter Study to Evaluate the Effects of SOtagLiflozin on Clinical Outcomes in Hemodynamically Stable Patients With Type 2 Diabetes POST Worsening Heart Failure $833,242

**Christos Argyropoulos**  
Dialysis Clinic, Inc.  
CE-IT-IS COMPLEX $673,849

Dialysis Clinic, Inc.  
COMPASS - Continuation $665,844

Dialysis Clinic, Inc.  
Grand Rounds Support - Continuation $179,250

**Soraya Arzhan**  
Dialysis Clinic, Inc.  
Implications of Hypernatremia in Hospitalized Patients Without and With Chronic Kidney Disease $329,458

**Cristian Bologa**  
Givaudan Flavors Corporation  
Givaudan Flavors Y12 $205,000

**Steven Bradfute**  
U.S. Department of Defense Health Program  
Effects of Passive Immunization on Immunogenicity of Filovirus Vaccines $1,201,171

Albert Einstein College of Medicine  
Prometheus: A Platform for Rapid Development of Immunotherapeutics and Immunophrophylactics Against Emerging Viral Threats - Y2 $315,758

Los Alamos National Laboratory  
Immunogenicity of Delayed Antigen Release Systems $60,000

Celdara Medical, LLC  
Blood Samples for Antibody Generation Against Hantaviruses $8,000

Cleanbox Technologies  
Bradfute Cleanbox PSA $7,500

**Mark Burge**  
Novo Nordisk, Inc.  
NV9535-4352: Long-Term Effects of Semaglutide on Diabetic Retinopathy in Subjects With Type 2 Diabetes (FOCUS) Trial Phase 3b $263,537

**Osman Dokmeci**  
AbbVie  
M18-891: A Phase 3 Randomized, Placebo-Controlled, Double-Blind Study to Evaluate Upadacitinib in Adolescent and Adult Subjects With Moderate to Severe Atopic Dermatitis - Specific Supplement $434,128

AbbVie  
M18-891: A Phase 3 Randomized, Placebo-controlled, Double-Blind Study to Evaluate Upadacitinib in Adolescent and Adult Subjects With Moderate to Severe Atopic Dermatitis - Specific Supplement $160,728

AstraZeneca Pharmaceuticals, LP  
D3253c00001t: A Study to Evaluate the Efficacy and Safety of Benralizumab Compared to Mepolizumab in the Treatment of Eosinophilic Granulomatosis in Polymangitis in Patients Receiving Standard-of-Care Treatment $25,600

**Michelle Harkins**  
Cystic Fibrosis Foundation  
Cystic Fibrosis Care Center Program 2019-20 $62,650

**Michelle landiorio**  
Health Resources and Services Administration  
Comprehensive HIV Early Intervention Services (Ryan White Part C) - Non-Specific Supplement $538,921

New Mexico Department of Health  
DOH HIV Provider Agreement W/BAA - Specific Supplement $348,046

Health Resources and Services Administration  
Comprehensive HIV Early Intervention Services (Ryan White Part C) - Continuation Y20-21 $179,640

HRSA/HIV-AIDS Bureau  
COVID Ryan White HIV/AIDS Program Part CEIS COVID $106,481

HRSA/HIV-AIDS Bureau  
COVID Ryan White HIV/AIDS Program Part D WICY COVID $36,185

**Julie In**  
National Institute of Diabetes and Digestive and Kidney Diseases  
Human Enteroids As a Model of Host-EHEC Interactions - Y6 $152,388

**Denece Kesler**  
HRSA/Bureau of Health Workforce Preventive Medicine Residency Program $399,984

HRSA/Office of Rural Health Policy  
Radiation Exposure Screening Education Program $243,923

HRSA/Office of Rural Health Policy  
Radiation Exposure Screening and Education Program $223,956

HRSA/Office of Rural Health Policy  
Radiation Exposure Screening Education Program $37,810

**Olga Kovbasnjuk**  
University of Maryland, Baltimore County  
Pathogenesis of E. Coli and Shigella Infections in Human Enteroid Models - Cont Y3 $204,139

Baylor College of Medicine  
Mediators of Intestinal Barrier Dysfunction in Inflammatory Bowel Disease $94,688

University of Washington  
A Microphysiological System for Kidney Disease Modeling and Drug Efficacy Testing $34,845

**Christophe Lambert**  
National Institutes of Health  
Deriving High-Quality Evidence From National Healthcare Databases to Improve suicidality Detection and Treatment Outcomes in PTSD and TBI $776,198

**Erin Madden**  
Utah State University  
Tribal and Rural Opioid Initiative Integrated Response Effort $19,464

Utah State University  
Translating Effective Opioid Harm Reduction and Wellness Training to Tribal and Rural Utah Y2 $18,924

**A. Robb McLean**  
The Bell Group, Inc.  
Professional Services: UNM Center for Life - Continuation $25,000

**Lana Melendres-Groves**  
Drexel University  
PRIMEX Plus CXA-10-2302 $114,944

United Therapeutics Corporation  
TDE-PH-402: EXPEDITE: A 24-Week Multicenter, Open-Label, Rapid Dose Escalation Study in Remodulin Followed by Optimal Orenitram Dose in Subjects With Pulmonary Arterial Hypertension $108,800

Pharmaceutical Research Assoc.  
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<td>Use in Diverse, Rural and Underserved Populations - Y2</td>
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<td>Improving Access and Treatment for Co-Occurring Opioid Use Disorders and Mental Illness Disorders</td>
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Akshay Sood
National Institutes of Health
Effectiveness of Innovative Research Mentor Interventions Among Underrepresented Minority Faculty in the Southwest - FY 20-21 $742,896
Miners Colfax Medical Center
Medical Consultation and Care $198,964
Miners Colfax Medical Center
An Innovative Approach to Increasing Access to Miners in the Mountain West - Continuation Y2 $21,730

Mark Unruh
Dialysis Clinic, Inc.
DCI Supplemental Funding for American Indian Chronic Renal Insufficiency Cohort Study $1,191,304
Albuquerque Area Indian Health Service
Nephrology and Rheumatology IHS Specialty Services - Continuation $232,339
University of Pittsburgh
Technology-Assisted Stepped Collaborative Care Intervention to Improve Patient-Centered Outcomes in Hemodialysis Patients $214,333
University of Washington
Treatment Options for Insomnia for ESRD - Continuation $140,634
Dialysis Clinic, Inc.
SLEEP-HD DCI Supplement $97,047
Albuquerque Area Indian Health Service
Rheumatology IHS Specialty Services - Continuation $47,656
University of Washington
Randomized ESRD Trial Comparing CBT Alone VERSus With Buprenorphine $27,881
Honeywell Aerospace
Professional Services $25,000
Loveland Respiratory Research Institute
Occupational and Environmental Health Clinical Services - Continuation $25,000
Zenith American Solutions, Inc.
Professional Services - Continuation $25,000

Molecular Genetics & Microbiology
Kiran Bhaskar
National Institutes of Health
The Role of Inflammasome Signaling in Tauopathies - Continuation $2,227,795
The Role of Inflammasome Signaling in Tauopathies $518,023
Electro Cellular Health Solutions, LLC
Determine Anti-Inflammatory and Trophic Properties of Three Different Pulsed Electromagnetic Field Stimulation $34,356
Judy Cannon
Tau Technologies
Interacting Swarms of Agents: From Immunology to Social Media - Continuation $215,456
Bryce Chackerian
National Institutes of Health
A Nanoparticle-Based Vaccine Targeting PCSK9 $487,466
Henry M. Jackson Foundation
Epitope-Based Vaccines for Neisseria Gonorrhoeae - Yr 2 $261,981
Massachusetts General Hospital
Innate-Like BCR Activity As a Template for Universal Vaccination Against Influenza Virus - Continuation $157,049
Massachusetts General Hospital
CDR3-Independent B Cell Stimulation to Selectively Expand VRC01 Lineages From a Fully Humanized Immunoglobulin Repertoire - Continuation $80,457
Henry M. Jackson Foundation
ACC STI CRC UNM Subcontract $63,785
Vojo Deretic
National Institute of General Medical Sciences
Autophagy, Inflammation and Metabolism in Disease Center $2,174,751
National Institutes of Health
Autophagy Against Tuberculosis and HIV $744,529
National Institute of Allergy and Infectious Diseases
Pattern Recognition Receptors and Autophagy in Mtbb Control in AIDS $488,425
Alison Kell
National Institute of Allergy and Infectious Diseases
Mechanisms of Intrinsic Host Responses to Hantavirus Infection $153,120
Michael Mandell
National Institute of Allergy and Infectious Diseases
Prevention of HIV-Induced T Cell Killing by Autophagy $189,375
Mary Ann Osley
National Institute on Aging
Functional Analysis of Cellular Quiescence $310,575
Michelle Ozburn
National Cancer Institute
Mechanisms of Infection by Oncogenic HPVs - Continuation Yr 4 $345,887
National Institutes of Health
Sex-Based Differences in Oral HPV Infections and Outcomes - Yr 2 $189,375
City of Albuquerque
Detection of HHV in Albuquerque
Biopark Elephants $154,080

National Cancer Institute
EGFR Signaling As the Nexus for HPV Oncogene Regulation $40,659

XueXian Yang
National Institutes of Health
The Cytokine Signal Suppressor CIS in Giant Cell Pneumonitis $378,750

National Institutes of Health
Leptin Promotes Allergic Asthma Through Unfolded Protein Responses $227,250

Neurology

Corey Ford
Genentech, Inc.
WA04094: A Phase 3b Multicenter Randomized, Double Blind, Placebo Controlled Study to Evaluate the Efficacy and Safety of OCRELIZUMAB in Adults With Primary Progressive Multiple Sclerosis $1,457,054

Genzyme Corporation
Clinical Trial Agreement - Phase 4 $54,799

TG Therapeutics
TG1101-RM303: An Open Label Extension Study of Ublituximab in Subjects With Relapsing Multiple Sclerosis $52,244

Biogen Idec
Observational Study Agreement - Phase 4 - Non-Specific Supplement $1,670

Tarun Girotra
University of Cincinnati
Anticoagulation in Intracerebral Hemorrhage Survivors for Stroke Prevention and Recovery Trial $669,930

University of Cincinnati
ARCADIA Cognition and Silent Infarcts $142,000

University of Cincinnati
Atrial Cardiopathy and Antithrombotic Drugs in Prevention After Cryptogenic Stroke - Continuation-FY20 $30,243

Monika Krzesniak-Swinarska
University of Rochester
FOR-DMD: Double-Blind Randomized Trial to Optimize Steroid Regimen in Duchenne MD AWD00001200 - Continuation FY20 $18,180

Muscular Dystrophy Association
UNM MDA and MDA/ALS Care Centers W/BAA - June 2020 $10,000

University of Rochester
Support FOR-DMD Project, Part I AWD00001193 (Industry) - Continuation FY19 $4,134

University of Rochester
Support FOR-MD Project, Part I AWD00001193 (Industry) - Continuation FY20 $4,134

Tobias Kulik
University of Cincinnati
Multi-Arm Optimization of Stroke Thrombolysis Stroke Trial - Non-Specific Supplement $232,876

University of Cincinnati
StATins Use in Intracerebral Hemorrhage Patients $108,630

Bard Medical Division
BMD-1111: Impact of Fever Prevention in Brain Injured Patients $74,560

University of Cincinnati
Multi-Arm Optimization of Stroke Thrombolysis Stroke Trial - Continuation $58,219

John Phillips
The Mind Research Network
MRN Medical Director - Continuation FY20 $34,217

Sarah Pirio Richardson
Emory University
Delineation of Individual and Temporal Variations to Botulinum Toxin Treatment $155,533

Ranjana Poddar
National Institute of Neurological Disorders and Stroke
Molecular Basis of Hyperhomocysteinemia-Induced Brain Injury in Ischemic Stroke $592,165

Stefan Posse
National Institutes of Health
Concurrent High-Speed (MRI and MRSI) (R21) - Continuation FY21 $48,702

Michel Torbey
Biogen, Inc.
CHARM TRIAL - 252LH301 - Non-Specific Supplement $259,420

University of California, San Francisco
Brain Vascular Malformation Consortium: Predictors of Clinical Course $204,525

University of Chicago
Trial Readiness in Cavernous Angiomas With Symptomatic Hemorrhage - Continuation 2020 $38,000

Biogen, Inc.
CHARM TRIAL - 252LH301 $25,600

Jennifer Vickers
New Mexico Department of Health
CMS Outreach Clinics - Neurology - Continuation FY20 $598,185

Yi Yang
National Institute of Neurological Disorders and Stroke
RO1: Sphingosine 1 Phosphate Signaling in Cerebral Small Vessel Disease $2,640,472

Atif Zafar
University of Cincinnati
Atrial Cardiopathy and Antithrombotic Drugs in Prevention After Cryptogenic Stroke - Non-Specific Supplement $63,066

Neurosciences

Andrea Allan
National Institute of Environmental Health Sciences
Prenatal Arsenic Exposure Alters Transcriptional, Post-Transcriptional and Post-Translational Programming $335,363

Jonathan Brigman
National Institute on Alcohol Abuse and Alcoholism
Prenatal Alcohol Exposure and Corticostriatal Control of Behavioral Flexibility - Continuation $335,439

University of California, San Diego
Neurophysiological Biomarkers of Behavioral Dimensions - Continuation $154,082

National Institute of Mental Health
Psychiatric Disease-Associated CircRNA Modulates Synaptic Efficacy and Cortical Function. $37,566

Kevin Caldwell
National Institute on Alcohol Abuse and Alcoholism
Sex-Dependent Effects of Prenatal Alcohol Exposure on Developmental Programming - Continuation $335,523

Lee Anna Cunningham
National Institute on Alcohol Abuse and Alcoholism
Connectivity of Adult-Generated Dentate Granule Cells in a Mouse Model of Prenatal Alcohol Exposure $45,016

David Linsenbardt
National Institute on Alcohol Abuse and Alcoholism
Repeated Binge Drinking and the Genetic Regulation of Corticostriatal Synchrony $249,000

UNM HEALTH SCIENCES CENTER 2020 / CONTRACTS AND GRANTS
Nikolaos Mellios  
National Institutes of Health  
Role of Psychiatric Disease-Associated Circular RNAs in Neuronal Function and Cognition - Continuation $370,510

Johns Hopkins University  
Placental-Mediated Mechanisms of Perinatal Brain Injury - Continuation $4,874

Erin Milligan  
National Institute on Alcohol Abuse and Alcoholism  
Prenatal Alcohol Exposure Potentiates Pain Via Lifelong Spinal-Immune Changes - Continuation $290,039

Nora Perrone-Bizzozero  
University of South Carolina  
Antagonistic Roles of Hud and KSRP for MRN Stability in Neuronal Growth $222,918

Arizona State University  
Role of Circhomer1 in Synaptic Plasticity and Cocaine-Seeking Behavior $161,058

Georgia State University  
Mining the Genome-Wide Scan: Genetic Profiles of Structural Loss in Schizophrenia $24,954

Georgia State University  
Mining the Genome-Wide Scan: Genetic Profiles of Structural Loss in Schizophrenia - Continuation $16,544

Jessica Dawn Richardson  
New Mexico Governor’s Commission on Disability  
Health Extension Rural Offices $25,000

Daniel Savage  
National Institute on Alcohol Abuse and Alcoholism  
Fetal Ethanol-Induced Behavioral Deficits: Mechanisms, Diagnoses and Intervention Competing Renewal $1,508,352

National Institute on Alcohol Abuse and Alcoholism  
Fetal Ethanol-induced Behavioral Deficits: Mechanisms, Diagnoses and Intervention Competing Renewal - Continuation $1,495,477

Bill Shuttleworth  
National Institute of General Medical Sciences  
UNM CBRR - Continuation Yr 5 $2,097,553

National Institute of Neurological Disorders and Stroke  
Spreading Depolarizations and Neuronal Vulnerability $293,975

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence $253,763

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence - UNM HSC-Continuation $160,116

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence - Mishra Specific Supplement $151,500

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence ACOMA, Bouchonville - Continuation $68,175

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence $59,443

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence - Specific Supplement $51,342

National Institute of Neurological Disorders and Stroke  
Spreading Depolarizations and Neuronal Vulnerability $32,665

New Mexico State University  
New Mexico IDEA Networks of Biomedical Research Excellence - Supplement $22,725

Carlos Valenzuela  
National Institute on Alcohol Abuse and Alcoholism  
Alcohol and Developing Neuronal Circuits (MERIT Award) $378,750

National Institute on Alcohol Abuse and Alcoholism  
Alcohol Research Training in Neurosciences $150,713

Jason Weick  
Clemson University  
RII Track-2 FEC: The Creation of Next-Generation Tools for Neuroscience $143,487

National Institute of Neurological Disorders and Stroke  
Directing Corticospinal Motor Neurons for Cell Replacement in Stroke - Continuation $50,016

Tou Yia Vue  
National Institute of Neurological Disorders and Stroke  
Underlying Molecular Mechanisms of Gliogenesis and Gliomagenesis in the CNS - Continuation $240,594

Neurosurgery

Denis Bragin  
National Institutes of Health  
Brain Injury Treatment by Modulation of Hemodynamics With Blood-Soluble Drag-Reducing Molecules $334,869

Andrew Carlson  
Los Alamos National Laboratory  
LANL Collaboration $50,000

Polyganics BV  
ENCASE II: Randomized, Two-Arm, Multicenter Study to Evaluate the Safety and Effectiveness of Dura Sealant Patch in Reducing CSF Leakage Following Elective Cranial Surgery $20,638

IRRAS AB  
Professional Service Agreement $15,400

Muhammad Chohan  
NX Development Corp  
5-Aminolevulinic Acid (5-ALA) to Enhance Visualization of Malignant Tumor in Patients With Newly Diagnosed or Recurrent Malignant Gliomas - Non-Specific Supplement $7,200

William Rivers  
Lovelace UNM Rehabilitation Services  
Pain Management Program Director $49,500

A. Robb McLean  
Holy Cross of Taos  
Hospital Service Agreement (ACCESS) - Continuation $125,000

Lea Regional Medical Center  
Settlement Agreement $114,480

Paradigm-Catastrophic Care Management  
Medical Directorship $25,000
Peter Shin  
Presbyterian Healthcare Services  
Professional Services/Consultations - Continuation  
$402,000

DP Clinical  
Mitsubishi MT-3921-G01  
$84,032

Huy Tran  
University of Arizona  
Brain Oxygen Optimization in Severe Traumatic Brain Injury – phase 3 (BOOST-3)  
$102,381

Nicholas Andrews  
AbbVie  
Protocol #m16-837: Phase 2 Multicenter, Double-Blind (Sponsor-Unblinded), Randomized, Placebo-Controlled Study of the Safety and Efficacy of Elagolix in Women With Polycystic Ovary Syndrome  
$776,820

Conrad Chao  
New Mexico Department of Health  
High-Risk Prenatal Care  
$82,460

Gena Dunivan  
Viveve, Inc  
Protocol VI-15-01: VIVEVE II: Viveve Geneveve Treatment of the Vaginal Introitus to Evaluate Safety and Efficacy - Continuation  
$6,400

Viveve, Inc  
Protocol VI-15-01: VIVEVE II: Viveve Geneveve Treatment of the Vaginal Introitus to Evaluate Safety and Efficacy - Non-Specific Supplement  
$3,753

Eve Espey  
First Choice Community Healthcare  
Midwifery Services  
$89,244

Albuquerque Area Indian Health Service  
OB/GYN IHS Specialty Services  
$72,490

New Mexico Department of Health  
Provide Risk-Appropriate Prenatal Medical Services to Medically Indigent Women in New Mexico With Obstetrical and/or Medical Complications - Continuation  
$54,960

New Mexico Perinatal Collaborative  
Director of Maternal Health Initiatives  
$50,000

New Mexico Department of Health  
Certified Nurse Midwife Contractor Project W/BAA  
$25,500

Planned Parenthood of the Rocky Mountains  
Planned Parenthood of the Rocky Mountains - Continuation  
$25,000

Lisa Hofer  
RAD  
RAD CRH Equipment  
$160,480

Society of Family Planning  
Hofer Post Fellowship  
$60,000

Society of Family Planning  
COVID-19 Survey SFP  
$300

Yuko Komesu  
Cook MyoSite  
Protocol 15-06: CELLEBRATE: An Adaptive Two-Stage, Double-Blind, Stratified, Randomized, Controlled Trial Comparing the Safety and Efficacy of AMDC-USR With Placebo in Female Subjects With Stress Urinary Incontinence - Non-Specific Supplement  
$108,334

Research Triangle Institute  
PFDN Capitation  
$93,141

Eunice Kennedy Shriver National Institute of Child Health and Human Development  
Innovations in Treatments for Pelvic Floor Disorders: PFDN Center Grant - Continuation  
$18,180

Eunice Kennedy Shriver National Institute of Child Health and Human Development  
Innovations in Treatments for Pelvic Floor Disorders: a Southwestern PFDN Site Center Grant - Continuation  
$18,180

Felicia Mancini  
Michigan State University  
ROSES - The ROSE Sustainment Study  
$2,160

Sarah Martinez  
New Mexico Department of Health  
Provide Risk-Appropriate Prenatal Medical Services to Medically Indigent Women in New Mexico With Obstetrical and/or Medical Complications - Continuation  
$54,960

Sarah Lathrop  
New Mexico Department of Health  
FY20 - FY23 Opioid Mortality Surveillance  
$720,038

New Mexico Department of Health  
FY20 Opioid Mortality Surveillance  
$59,280

U.S. Consumer Product Safety Commission  
MECAP Reports  
$1,008

Ian Paul  
U.S. Department of Justice  
USA v. Xavier Z  
$5,217

Lori Proe  
New Mexico Crime Victims Reparation Commission  
FY20 Grief Services Program  
$104,643

National Center for Chronic Disease Prevention and Health Promotion  
OMI-UNM SUID SDY Application  
$60,775

Marybeth Barkocy  
Move Together Inc.  
Move Together  
$2,000

Thomas Decoster  
Arthrex, Inc.  
Arthrex Trauma Fellowship  
2019-2020  
$5,000
Gilbert Duxbury  
Johnson & Johnson  
Adolescent Spinal Deformity Tutorial  $1,395

Beth Jones  
Langford Consulting, Inc.  
Professional Services Agreement - Continuation  $35,044

Dustin Richter  
Arthrex, Inc.  
Arthrex Sports Medicine Fellowship 2019-2020  $20,000

Robert Schenck  
Smith & Nephew, Inc.  
Smith & Nephew Consulting Agreement  $15,500

University of Pittsburgh  
Surgical Timing and Rehabilitation for Multiple Ligament Knee Injuries: A Multicenter Integrated Clinical Trial  $8,014

University of Pittsburgh  
Surgical Timing and Rehabilitation for Multiple Ligament Knee Injuries: A Multicenter Integrated Clinical Trial - Continuation  $6,838

University of Pittsburgh  
StaR-RedCap Qtrly Report March 20  $5,363

University of Pittsburgh  
Surgical Timing and Rehabilitation for Multiple Ligament Knee Injuries: A Multicenter Integrated Clinical Trial - Specific Supplement  $4,689

Pathology

Margaret Alba  
American Society for Clinical Pathology  
Real-Time Interactive Lab Experience to Increase Emotional Intelligence and Problem Solving Skills in Medical Lab Science Students  $2,000

Cory Broehm  
TriCore Reference Laboratories  
PSA_TriCore_Roche_Notify Mutation Profiler Early Evaluation Program Alphas Site  $11,600

Devon Chabot-Richards  
TriCore Reference Laboratories  
PSA_TriCore_Roche_Notify Mutation Profiler Early Evaluation Program Alphas Site  $11,600

Nadja Falk  
TriCore Reference Laboratories  
Task Order # 5 Ventana Molecular Systems, Inc. _PDL-1 (SP142) BC ILR Study  $10,400

Edgar Fischer  
TriCore Reference Laboratories  
Task Order #1_Ventana Medical Systems, Inc. _Ventana PDL1 GEJ ILR  $4,800

Jennifer Gillette  
National Institutes of Health  
Functional Role of Tetraspanin CD82 in Hematopoietic Stem Cell Interaction  $378,750

National Cancer Institute  
The Impact of CD82 Expression on Acute Myeloid Leukemia Chemosensitivity and Disease Relapse - Continuation  $33,900

National Institutes of Health  
Functional Role of Tetraspanin CD82 in Hematopoietic Stem Cell Interaction - Specific Supplement  $4,045

Nancy Joste  
TriCore Reference Laboratories  
Medical Directorship and Professional Services - Continuation  $2,569,091

Diane Lidke  
National Institute of General Medical Sciences  
Academic Science Education and Research Training  $1,062,838

Imaging the Early Events in Membrane Receptor Signaling  $420,193

Dennis McCance  
University of Virginia  
Biospecimen Procurement and Tissue Microarray Manufacture for the CHTN  $128,337

University of Virginia  
Biospecimen Procurement and Tissue Microarray Manufacture for the CHTN - Continuation  $128,337

Jay Raval  
Anonymous  
Clinical Trial Agreement  $61,356

Market Therapeutics AG  
Plasma Adsorption in Patients with COVID-19 Infection  $35,840

Samuel Reynolds  
TriCore Reference Laboratories  
Task Order # 3 Hamamatsu Photonics K.K. _Hamamatsu Study  $54,800

TriCore Reference Laboratories  
Task Order # 2 Ventana/Roche CIINtec Plus Slide Reads  $6,790

Larry Sklar  
University of Miami  
Illuminating the Druggable Genome Resource Dissemination and Outreach Center - Continuation  $372,727

National Institutes of Health  
A High-Throughput Chemical Screen to Identify Inhibitors of the Azole Transporter Cdr1p in Candida - Continuation  $178,678

Boston Children’s Hospital  
Compounds That Block a Novel Candida Albicans Target  $73,106

Gilead Sciences  
Evaluation of Novel Probes - Supplement Continuation  $73,100

University of Pittsburgh  
Purposing Pharmacological Agents for Inherited Mast Cell Disorders in the Gut  $66,660

University of Miami  
Illuminating the Druggable Genome Resource Dissemination and Outreach Center Supplement  $56,840

Gilead Sciences  
Evaluation of Novel Probes  $51,733

Angela Wandinger-Ness  
National Institute of General Medical Sciences  
Academic Science Education and Research Training  $1,062,838
National Cancer Institute  
The Role of Rac1 in Ovarian Cancer Metastasis and Niche Interaction  $34,494

Jain Zhou  
TriCore Reference Laboratories  
Task Order #4 Hamamatsu Photonics  
K.K._Hamamatsu Study  $54,800

Pediatrics

Shirley Abraham  
Oregon Health & Science University  
Community Counts - Continuation  $26,407

American Thrombosis and Hemostasis Network  
ATHN Data Quality Counts  $1,000

Novo Nordisk, Inc.  
NN7415-4322: A Prospective Multi-National, Non-Interventional Study in Haemophilia A and B Patients With or Without Inhibitors Treated According to Routine Clinical Treatment Practice - Non-Specific Supplement  $961

Tanya Baker-McCue  
New Mexico Division of Vocational Rehabilitation  
DVR School to Work Project  $400,000

Anthony Cahill  
American Association on Health & Disability  
Project Accessibility USA: Health Promotion for Women With Disabilities  $20,000

Glenda Canaca  
New Mexico Human Services Department  
Social Marketing - Continuation  $465,150

Loretta Cordova De Ortega  
New Mexico Department of Health  
CMS Outreach  $1,520,513

Comagine Health  
In-Home Assessments for Medically Fragile Waiver W/BAA - Continuation  $102,125

Ben Archer Health Center, Inc.  
Professional Services - Continuation  $25,000

Northern Navajo Medical Center  
IHS Service Contract - Genetics  $4,800

Río Rancho Public Schools  
PSA - Río Rancho Public Schools  $3,000

Theresa Cruz  
New Mexico Human Services Department  
SNAP-Ed Evaluation  $259,281

New Mexico Department of Health  
Youth Risk and Resiliency Survey  $190,000

Thornburg Foundation  
Sustaining Home Visiting Referrals  $85,000

Presbyterian Healthcare Services  
REACH  $72,000

Albuquerque Public Schools  
APS 1807  $69,000

Albuquerque Public Schools  
APS 1807  $45,471

New Mexico Coalition of Sexual Assault Programs, Inc.  
CAC Needs Assessment  $35,000

National Dance Institute - N.M. ATP Evaluation  $15,500

Presbyterian Healthcare Services  
Mobile Food Market FY20  $10,000

New Mexico Public Education Department  
PED Evaluation - Specific Supplement  $10,000

Sally Davis  
Centers for Disease Control and Prevention  
PRC Research  $440,253

New Mexico Human Services Department  
CHILE Plus  $335,251

Centers for Disease Control and Prevention  
Healthy Places - Healthy People  $309,483

New Mexico Department of Health  
Implementing Evidence-Based Recommendations in Community Projects - Continuation  $41,940

New Mexico Department of Health  
Implementing Evidence-Based Recommendations in Community Projects  $34,940

Walter Dehority  
Syneos Health  
Pfizer Peds CAZ-AVI Nosocomial Pneumonia Study #c3591025  $24,814

Medpace Inc  
MDA 2013-0039: A Phase 3 Multi-Center Study to Evaluate the Efficacy and Safety of Mino-lok Therapy in Combination With Systemic Antibiotics in the Treatment of Catheter-Related or Central Line-Associated Bloodstream Infection - Specific Supplement  $12,800

Infectious Disease Society of America  
G.E.R.M Mentorship Award  $4,000

Medpace Inc  
MDA 2013-0039: A Phase 3 Multi-Center Study to Evaluate the Efficacy and Safety of Mino-lok Therapy in Combination With Systemic Antibiotics in the Treatment of Catheter-Related or Central Line-Associated Bloodstream Infection  $1,500

Sara Del Campo de Gonzalez  
Harvard Graduate School of Education  
HERO II  $69,908

Harvard Graduate School of Education  
Health’s Early Roots & Origins - Continuation  $28,952

Darrell Dinwiddie  
National Institutes of Health  
The Effect of 17q21 Locus SNPs on Targeted Host Immune Responses in Children With Rhinovirus-Induced Exacerbations of Asthma  $240,794

Timothy Dionne  
HRSA/Bureau of Health Professions  
HRSA Scholarship for Disadvantaged Students  $650,000

Sandra Heimerl  
HRSA/Maternal and Child Health Bureau  
NM LEND Program  $699,000

Association of University Centers on Disabilities  
Focused Assistance to Support Training  $8,000

New Mexico Developmental Disabilities Planning Council  
NM LEND Interdisciplinary Advocacy Workshop  $2,500

Andrew Hsi  
New Mexico Department of Health  
DDSD FIT (FOCUS)  $116,000

Alberta Kong  
New Mexico Department of Health  
School-Based Health Center Services  $1,797,200

Oregon Research Behavioral Intervention Strategies, d/b/a Influents Innovations  
A Mobile/Web-Based Training Curriculum for Disseminating Best Practices for the Care of Newborns With Neonatal Opioid Withdrawal Syndrome  $84,077

Klein Buendel  
Web App Technology for Boys and Parents: Improving HPV Vaccine Uptake - Continuation  $30,000

Albuquerque-Bernalillo County Community School Partnership Professional Services  $27,900

Brindle Foundation  
UNM Envision/Optimizing Care for Neonatal Opioid Withdrawal Syndrome in Rural New Mexico  $25,000
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<th>Name</th>
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<th>Title</th>
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<td>Health Effects After Anthracycline and Radiation Therapy - Dexaxoxane and Prevention of Anthracycline-Related Cardiomyopathy (ALTE11C2 Study) (NIH R01) - Specific Supplement Amendment 1</td>
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<td>Logitudinal, Multimodal Assessment of Neuro (HR-ALL) ALTE07C1 (Nonindustry R01CA212190)</td>
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<td>Michael Marble</td>
<td>New Mexico Department of Health</td>
<td>CMS Newborn Screening</td>
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Early Childhood Education and Care Department
CDD Preschool Development Grant - Specific Supplement $30,000

Brindle Foundation
Brindle - Clinical Consultation for Rural Providers $25,000

Administration for Community Living
University Center for Excellence in Developmental Disabilities $23,000

New Mexico Department of Health
DDSD Statewide Training Database $2,849

Martha Muller
Merck, Sharp & Dohme, Inc.
Merck MK1439-066 & MK8591A-028 $500

Dawn Novak
New Mexico Department of Health
Developmental Care Continuity Program - Fee for Service - Continuation $179,400
New Mexico Department of Health
Developmental Care Continuity Program - Fee for Service $147,400
New Mexico Department of Health
Developmental Care Continuity Program - Cost $32,000

Julia Oppenheimer
Association of University Centers on Disabilities
Children's Mental Health Champions $6,000

Patricia Osbourn
New Mexico Public Education Department
PED Prek Consultation $947,685
New Mexico Public Education Department
PED Prek Consultation $440,990
New Mexico Public Education Department
PED Contract - SET & DB $429,950
Region IX Education Cooperative
Region IX Education Cooperative $215,153
U.S. Department of Education
Project for New Mexico Children Who Are Deaf-blind $107,912
Socorro Consolidated Schools
Socorro School Consultations $14,850
Silver Consolidated Schools
Silver Consolidated Schools Consultations FBA $14,586
Belen Consolidated Schools
Belen Consultations - Specific Supplement $13,420
Cuba Independent Schools
Cuba Consultations $10,175

Silver Consolidated Schools
RBT Supervision - Continuation FY20 $9,545
Estancia Municipal Schools
Estancia Consultations $5,775
Moriarty-Edgewood School District
Moriarty-Edgewood School District $5,765

Hengameh Raissy
Savara Pharmaceutical
Phase 3 Randomized, Double-Blind, Placebo-Controlled Study of Aerovanc for the Treatment of Persistent Methicillin-Resistant Staphylococcus Aureus Lung Infection in Cystic Fibrosis Patients - Continuation $74,999
Duke University
Pharmacokinetics and Safety of Anesthetics and Analgesics in Children - Continuation $48,480
Vertex Pharmaceuticals Incorporated
A Phase 1/2 Study of VX-445 in Healthy Subjects and Subjects With Cystic Fibrosis - Continuation $32,000
Vertex Pharmaceuticals Incorporated
A Phase 1/2 Study of VX-445 in Healthy Subjects and Subjects With Cystic Fibrosis - Non-Specific Supplement $11,947
Savara Pharmaceutical
Phase 3 Randomized, Double-Blind, Placebo-Controlled Study of Aerovanc for the Treatment of Persistent Methicillin-Resistant Staphylococcus Aureus Lung Infection in Cystic Fibrosis Patients - Non-Specific Supplement $6,695
Vertex Pharmaceuticals Incorporated
Phase 3 Clinical Trial - Non-Specific Supplement $126

Mary Ramos
County of Bernalillo
Professional Service Agreement - Continuation $200,000

Pacific Institute for Research & Evaluation
Implementing School Nursing Strategies to Reduce LGBTI Adolescent Suicide - Continuation $51,809
Pacific Institute for Research & Evaluation
Implementing School Nursing Strategies to Reduce LGBTI Adolescent Suicide - Continuation $43,681

Health Resources and Services Administration
Continuation $40,826

Albuquerque Public Schools
Marketing Material for School-Based Health Centers $15,000

A. Robb McLean
Albuquerque-Bernalillo County Community School Partnership Professional Services - Continuation $40,000

Leslie Strickler
New Mexico Crime Victims Reparation Commission
CVRC - SAS State Grant $352,600
New Mexico Crime Victims Reparation Commission
ACCESS - VOCA Federal Grant $72,064
U.S. Department of Justice
Expert Witness Contract - Lewis $6,898
New Mexico Coalition of Sexual Assault Programs, Inc.
NMCSAP - Educational Delivery $650

Monique Vallabhan
Health Resources and Services Administration
Telehealth Network Grant $355,554

Jennifer Vickers
New Mexico Department of Health
CORE $1,501,100
New Mexico Department of Health
CORE $1,501,100
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Opening Doors for Homeless $46,088

Lucas Dunklee
Massachusetts General Hospital
Augmentation Versus Switch: Comparative Effectiveness Research Trial for Antidepressant Incomplete and Non-Responders With Treatment-Resistant Depression - Continuation $271,035

Dawn Halperin
Otsuka Pharmaceutical Development & Commercialization, Inc.
Otsuka-Halperin $681

Brian Isakson
New Mexico Children, Youth & Families Department
System of Care Expansion and Sustainability $1,600,000
First Choice Community Healthcare
First Choice Community Healthcare $25,000
First Choice Community Healthcare
First Choice Community Healthcare - Continuation $25,000

Avron Kriechman
New Mexico Department of Health
Mesocerlo Suicide Prevention $55,000
Hidalgo Medical Services
Hidalgo Medical Services $25,000

Rhoshel Lenroot
Otsuka Pharmaceutical Development & Commercialization, Inc.
Otsuka-Lenroot $636

Christopher Morris
Falling Colors Corporation
Systems of Care III - CYFD - UNM Medical Group $375,000

Judith Pentz
The Weil Foundation
Integrative Psychiatry for Residents and Child Fellows $15,000

Davin Quinn
ICON Clinical Research
RECOVER Study $154,048

Paul Romo
Friends Research Institute, Inc.
Facilitating the Implementation of Interim Methadone to Increase Treatment Access: A Multi-Site Implementation Trial $5,000

Julie Salvador
Agency for Healthcare Research and Quality
ECHO-F Model to Expand Medication-Assisted Treatment in Rural Primary Care $387,524

Mauricio Tohen
County of Bernalillo
Psychiatric Services - Continuation $89,000
Otsuka Pharmaceutical Development & Commercialization, Inc.
Otsuka-Tohen $1,125

Ann Waldorf
Center for Substance Abuse Treatment Provider’s Clinical Support System (PCSS-Universities) - Continuation FY20 $150,000
Center for Substance Abuse Treatment Provider’s Clinical Support System (PCSS-Universities) - Continuation FY21 $150,000

Radiology
Brad Cushnyr
U.S. Attorney’s Office
Expert Witness $19,294

Gary Mlady
New Mexico Department of Health
BCC Early Detection Program $126,941
Santo Domingo Health Center
Physicist Services $50,000

Indian Health Service
Albuquerque Indian Health Service $35,000
X-Ray Associates of New Mexico
Medical Physicist Services - Continuation $25,000

Indian Health Service
Albuquerque Indian Health Service - Continuation $7,000

Student Services
Sheila Hickey
Health Resources and Services Administration
School of Medicine M.D. Scholarship for Disadvantaged Students $650,000

Surgery
Steven Bock
Ethicon
Ethicon Travel Award $1,235

Arup Das
National Eye Institute
Novel Biomarkers & Genetics of Diabetic Retinopathy $535,606

New Mexico Commission for the Blind
Emergency Eye Care Program - Continuation $125,000

Dusanka Deretic
National Eye Institute
Rhodopsin Trafficking & Photoreceptor Membrane Renewal $378,750

John Marek
W.L. Gore & Associates
Vascular Surgery Support Program - Continuation $4,000

John Russell
Eye Associates of New Mexico
Professional Services $172,500
Presbyterian Medical Services
On-Call Surgical Services - Continuation $25,000
Anil Shetty  
New Mexico Department of Health  
Cleft Palate Clinic Services  
$8,400

Joaquin Tosi  
Genentech, Inc.  
GR40550: Phase 3 Study of the Port Delivery System With Ranibizumab in Patients With Diabetic Macular Edema  
$3,447,720

**UNM HOSPITAL**

Eve Espey  
New Mexico Department of Health  
Provide Prenatal and Postpartum Clinical, Health Education - Continuation  
$149,968

New Mexico Department of Health  
Provide Prenatal and Postpartum Clinical, Health Education - Continuation  
$320

Wendy Hine  
New Mexico Department of Health  
Breast and Cervical Cancer Early Detection Program - Continuation  
$85,000

Jill Klar  
Bernalillo County  
Adverse Childhood Experiences - Continuation  
$614,804

Bernalillo County  
CONNECT (OCCS) - Continuation  
$347,287

New Mexico Department of Health  
Breast and Cervical Cancer Early Detection Program - Continuation  
$85,000

**Alberta Kong**  
Albuquerque-Bernalillo County Community School Partnership  
Professional Services  
$223,522

**Sarah Martinez**  
New Mexico Department of Health  
Provide Prenatal and Postpartum Clinical Health Education - Continuation  
$180,000

**Rodney McNease**  
Bernalillo County  
CONNECT (OCCS)  
$1,389,148

Bernalillo County  
CONNECT (OCCS) - Continuation  
$1,148,584

City of Albuquerque  
Assertive Community Treatment Program - Continuation  
$713,330

Robert Perry  
New Mexico Department of Health  
Emergency Preparedness  
$54,267

**Suzanne Popejoy**  
City of Albuquerque  
Scope of Services-Gang Prevention - Continuation  
$239,378

City of Albuquerque  
Early Intervention for Children Services - Continuation  
$215,632

**A. Robb McLean**  
New Mexico Department of Health  
Provide Services for Hospital Preparedness - Continuation  
$23,448

**Mauricio Tohen**  
County of Bernalillo  
Provide Housing to Homeless in Criminal Justice System - Continuation  
$498,726

**UNM MEDICAL GROUP, INC.**

David Rakel  
Bernalillo County Juvenile Detention Center  
Professional Services - Continuation  
$140,973
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Join Us on Our Journey of Discovery

Our research programs are focused on critical health problems affecting New Mexicans and bridging the gap to more rapidly deliver discoveries to the clinical setting. Often, the benefits of our innovations and discoveries are recognized and shared beyond our state borders to institutions in other states and in countries around the world.

Your contributions will help us meet new challenges and seek solutions to help people lead longer and healthier lives. Donations are accepted through the UNM Foundation, the university-based nonprofit that can accommodate almost any giving interest. Options include support of health research in general, work in a particular disease category, one of our signature programs for scholarships or facilities, or a legacy gift customized to fit the wishes of you as an individual, your family or your company.

For more information on how you can contribute to the UNM Health Sciences Center’s discoveries and innovations of the future, contact Bill Uher, Vice President of Development, UNM Foundation, at bill.uher@unmfund.org or 505-277-4078.

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The University’s Board of Regents established the UNM Foundation in 1979 as a nonprofit corporation. Ten years later, the Regents delegated the responsibility of overseeing University of New Mexico assets and investments to the UNM Foundation Investment Committee. These assets total more than $400 million today.

In 2008, the Foundation became a stand-alone organization with expanded fiduciary duties to include fiscal, human resources and treasury functions. All private gifts to the Health Sciences Center are received through the UNM Foundation, which manages contributions to all university programs. The Foundation’s funding model ensures that 100 percent of gifts are directed to the donor’s designated purpose.