

Examples of UNMC's federally-funded research

- **Autism Spectrum Disorders** • analysis and treatment of autism, interdisciplinary training
- **AIDS/HIV** • effects on Central Nervous System, proteomic strategies, HIV insulin resistance, dementia, blood-brain barrier, immune system, neuroprotective immunity, nanomedicine, neural immunity, anti-retroviral therapy, drug assistance
- **Ophthalmological Sciences** • photoreceptors, gene regulation, retinal degeneration
- **Biomedical Technologies** • bioengineering, core facilities
- **Cancer** • breast, prostate, lymphoma, pancreatic, gastrointestinal, colon, oral, head and neck, ovarian, lung, cancer drug resistance, molecular gene studies, cell signaling, DNA repair, early diagnosis, improving diagnosis and outcome prediction, cancer vaccines, improved therapies, biomarkers, genome stability, human behavior factors in cancer, prevention of depression during cancer, cancer prevention, cancer progression, lymph node metastasis
- **Genetics** • gene expression
- **Biopreparedness** • protection against respiratory disease, neurotoxin mitigation, identification of biological warfare agents, nerve agent exposure, bioterrorism, pandemic influenza, surveillance
- **Cardiovascular and pulmonary diseases** • heart failure, neurocirculatory function, role of statins, aortic aneurysms, blood and marrow research, heart abnormalities, cardiac malformations, emphysema, diabetic heart disease, heart attacks, airway injury and wound repair, cilia dysfunction, immune response, alcohol consumption and respiratory function, cerebrovascular dysfunction, therapy effects on bone loss, preventing delayed diagnosis of oral cancer, nicotine smoke exposure, protection against respiratory infections
- **Diabetes** • heart disease, insulin signaling, insulin resistance, kidney transplantation, vascular risks, renal signaling, quality improvement
- **Public Health** • promoting healthy behaviors, eating, physical activity, drug assistance, behavior risk assessment, promoting healthy weight, dental hygiene, disease prevention, maternal and child health, improving adolescent safety and well being, reducing disparities
- **Rural Health** • Rural health research center, area health education centers
- **Geriatrics** • cell quality, arthritis, end of life care, educating geriatricians
- **Infectious Diseases** • staph aureus, MRSA, molecular bacteria control, responses to infectious disease
- **Surgery** • miniature robots, videolaryngoscope
- **Immunology/Transplantation** • blood and bone marrow transplantation research, immune response, liver disease, alcoholic liver disease, vascular risk in kidney transplantation, HIV/AIDS, respiratory disease
- **Nanomedicine and Drug Delivery** • drug delivery through the blood-brain barrier, gene delivery, improved therapies for cancer, drug-resistance, therapeutics and bone loss, organ system pharmacology, HIV blood brain barrier, permeability, radiosurgical dose delivery, tumors, organ system pharmacology, supercoiled DNA, AIDS, central nervous system, nanodelivery, neuroinflammation, brain abscess, cancer, nanoimaging, neurodegenerative diseases
- **Regenerative Medicine** • neuron growth and repair, adult stem cell function and aging, skin regeneration, organ repair, regulation of human growth and development
- **Mental Health** • ADHD, prevention of depression in head and neck cancer, oral care, AIDS
- **Oral Health** • palate development, preventing delayed diagnosis of oral cancer, oral carcinomas, oral care for the disabled