UC Davis CIRM Institute

Grant Award Details

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Grant Type: Major Facilities

Grant Number: FA1-00611

Investigator:

Name:	Larry Vanderhoef
Institution:	University of California, Davis
Type:	PI

Award Value: $20,082,400

Status: Closed

Grant Application Details

Application Title: UC Davis CIRM Institute

Public Abstract:

The proposed new CIRM Stem Cell Institute, to be located at a major public university, will be the center of scientific and clinical activity to bring stem cell therapies to patients in the State of California. This institution has a long-standing reputation for being highly collaborative, sharing resources and infrastructure, and for providing outreach and expertise to other educational and medical facilities. Our geographical location and service to diverse communities will ensure that stem cell treatments are provided to patients that desperately need them. The rapid renovation of undeveloped space in a large existing building adjacent to our medical center and clinics will establish a new home to co-locate disease teams that span basic, translational, and clinical strengths. This setting for disease team-based research will forge collaborative networks, promote communication, and accelerate development of clinical trials for the treatment of human diseases. The disease teams include, but are not limited to, investigators working together toward therapies for liver, kidney, heart, and lung diseases; bladder reconstruction; peripheral vascular disease; neurodegenerative disorders (e.g., Parkinson's, Huntington's, and Alzheimer's disease); vision and hearing loss; blood and immune system diseases including HIV/AIDS; skin diseases and burns; and cartilage and bone disorders, affecting patients of all ages (children to aging populations). Stem cell clinical trials in four of these areas are currently pending, and will be performed in a state-of-the-art 6-suite Good Manufacturing Practice (GMP) clean room facility for cell processing, currently ready for construction based on plans that are FDA-approved. This facility will be linked with an established clinical trials infrastructure that will enable researchers to readily move cellular therapies into patients after conducting safety and efficacy studies in a wide range of preclinical models unique to this institution. In this planned facility, researchers will explore the basic biology of stem cells, take these cells through preclinical testing, and perform stem cell clinical trials. This new Institute will aid in meeting the Stem Cell Program objectives of teaching and training students, fellows, and staff; and promoting synergy that will result in vast improvements in health care for patients and communities in California.

Statement of Benefit to California:

Our institution has a strong track record and aggressive plans for the development and testing of new stem cell therapies for treating a spectrum of human diseases across the lifespan, from young children with disorders that cause kidney damage prior to birth, to aging individuals in our community where health problems, such as those associated with Alzheimer's disease, hearing loss, and osteoporosis, significantly impair quality of life. Building on the depth and breadth of science and medical assets on our campus, the Stem Cell Program and the proposed new CIRM Stem Cell Institute will provide a home and coordinating location for the many scientists, physicians, students, fellows, and staff working together to develop new treatments for diseases that could be prevented, reversed, or ameliorated by stem cell therapy. Research teams will work together side-by-side to study and treat health problems related to liver, kidney, heart, and lung diseases; neurodegenerative disorders such as Parkinson's, Huntington's, and Alzheimer's disease; vision and hearing loss; infectious diseases such as AIDS; circulatory problems that result in loss of limbs and poor heart function; diseases of cartilage and bone; and skin conditions such as non-healing ulcers and burns. The new facility will serve the state and its citizens by providing unparalleled opportunities to investigators, and will establish a model for the manner in which teams can work together to advance the use of stem cell therapies for human diseases. The proposed Stem Cell Institute will remove barriers preventing the transfer of promising stem cell therapies to patients by connecting investigators with expertise and new ideas with the resources necessary to develop and to evaluate new technologies and therapies. This facility will be devoted to stem cell research, and will provide basic and translational laboratory space as well as accelerate testing of human stem cells in a variety of unique preclinical models. It will also house a large Good Manufacturing Practice (GMP) clean room facility for performing clinical trials. The GMP facility will be available for all California investigators with evidence of promising therapies. The California community will benefit from the results of this collaborative environment because it will facilitate and advance research findings, promote a culture of sharing, and educate and train a new generation of scientists in stem cell research. The facility will be home to 31 investigators and at least as many collaborating scientists as well as regional partners, and aid in meeting the Stem Cell Program and CIRM objectives of accelerating the applications of stem cell biology to clinical use, and forming teams to focus on improving health care for patients and communities in California.

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