



John Paul II Stem Cell Research Institute

FOR THE STUDY OF BIOETHICAL DRIVEN STEM CELL RESEARCH

# Our Mission

JP2SRI was established to overcome several barriers that prevent the advancement of adult stem cell therapies for many diseases in this country.

The Institute develops research tools and therapies for disease that utilize adult stem cells. It will increase the number of scientists and future medical practitioners that will work with adult stem cells. In addition, the Institute seeks to educate the public on medical ethics that are consistent with the dignity of human life.

# MESSAGE FROM THE DIRECTOR



Alan B. Moy, M.D. Director, John Paul II Stem Cell Research Institute.

The John Paul II Stem Cell Research Institute (JP2SRI) focuses on finding adult stem cell therapies for treating cancer, degenerative disorders like diabetes, Parkinson disease, heart and lung disease and rare orphan diseases.

To achieve this goal we need your financial support. Despite the positive advances that adult stem cells have made, there is an overwhelming ideological and scientific bias toward embryonic stem cell research in the United States. This preoccupation with embryonic stem cell research has compromised the research support necessary to find cures that can be achieved from more promising adult stem cell research. Unfortunately, our country is

falling behind other countries in the field of adult stem cell research.

JP2SRI was established to overcome several barriers that prevent the advancement of adult stem cell therapies for many diseases.

Along with our partners, the Institute is making important contributions to the field of adult stem cell research. The goal of the Institute is to develop research tools and therapies that utilize adult stem cells and increase the number of scientists and future medical practitioners that will work with adult stem cells. Also, the Institute seeks to educate the public on medical ethics that are consistent with the dignity of human life.

In order to meet this goal, JP2SRI is conducting a national capital campaign to raise 30 million dollars to meet its mission in regenerative medicine.

I welcome you to read this brochure to discover how the Institute has contributed to the field of adult stem cell research and learn more about our mission and goals.

Warm Regards,

A handwritten signature in black ink that reads "Alan Moy". The signature is written in a cursive, flowing style.

Dr. Alan Moy



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## OUR MISSION

The John Paul II Stem Cell Research Institute (JP2SRI) is a 501(c)(3) tax-exempt public charity, as defined by the Internal Revenue Service whose mission is to advance research and education on stem cell research in a manner consistent with medical ethics with the premise that all life from conception to death has dignity.

- The Institute's strategy is to reduce the barriers to translate basic adult stem cell research into clinical therapies. The Institute coordinates research activities between the Institute, academia and industry to find treatment solutions for patients with disorders that could potentially benefit from adult stem cells.
- The Institute focuses on resolving the fundamental weaknesses in this country that are impeding cures with adult stem cells:
- Increase the awareness, educate and encourage individuals to financially support adult stem cell research.
- Develop a collaborative basic and clinical research program between the Institute, private clinicians, academia and industry to satisfy requirements for the Food and Drug Administration to conduct clinical trials in regenerative medicine.
- Support high-risk research and orphan disease research.

## ENDORSEMENTS

Vatican: Cardinal Alfonso Lopez Trujillo, President of the Pontificium Consilium Pro Familia.

Vatican: Emmeince Javier Cardinal Lozano Barragan, President of the Pontificio Consiglio Per La Pastorale Della Salute.

Adult stem Cell Awareness: <http://buy-one-give-one.com/partners.html>

American Veterans Christian Alliance: <http://www.avca-usa.org/igwt/asc>

Do No Harm: <http://www.stemcellresearch.org/alternatives/>

## **ACHIEVING THE INSTITUTE'S MISSION**

- Our mission is to lower barriers to advance adult stem cell treatments by creating partnerships between JP2SRI-academia-industry and private practice.
- We will pursue solicited research to achieve scientific milestones for FDA approval. Maintain priority on therapy

## **CAPITAL CAMPAIGN TO LAUNCH THE INSTITUTE FACILITY AT THE IOWA BIOVENTURE CENTER**



- We propose to create a 16,000 square foot facility at the BioVenture Center in Coralville, IA.
- The Center will house modular wet lab space, a small-scale GMP facility, a small-scale microfabrication laboratory, a small-animal laboratory facility, administrative offices and clinical treatment rooms.
- The estimated startup cost is:~10 million and the five year cost is estimated at 30 million.

## THE INSTITUTE HELPS OREGON SIBLINGS WITH NIEMAN-PICK TYPE C DISEASE



In December of 2008, the Institute helped Peyton Hadley, 11, and his sister, Kayla, 8, who both were diagnosed with Niemann-Pick Type C, a rare orphan disease.

Niemann-Pick Type C is a rare genetic disorder that leads to toxic accumulation of cholesterol in the brain and other organs. The disease results in a progressive and fatal neurodegenerative condition that includes childhood dementia. There is

no cure or treatment for this disease.

The Institute helped the Hadley children by facilitating the harvesting and growing of their stem cells from a teaspoon of their fat. Within two weeks, tens of millions of stem cells were produced, which will be used by scientists in Canada and other centers to screen drugs that may control Niemann-Pick Type C disease. Niemann-Pick Type C disease is one of 5,000 to 8,000 rare orphan diseases of which 80 percent are based on genetic defects. “We have a process now where we can start looking at finding treatments for orphan diseases,” says Dr. Moy.

## AN INSTITUTE SCIENTIST DEVELOPS A NOVEL BIOSENSOR TO EVALUATE PROTEIN AND GENE FUNCTION IN LIVING STEM CELLS



A unique challenge in conducting stem cell research has been the difficulty is evaluating stem cell behavior. Human stem cell biology poses unique challenges compared to other types of animal or human cells. It takes several days for many stem cells to transform into specialized cells. Further, it takes very specialized and sensitive tools to monitor and measure stem cell behavior. Dr. Anthony English, an Institute Scientist, who received his Ph.D. from MIT, has developed a miniaturized biosensor that will allow scientists to study living adult stem cells with the sensitivity of electron microscopy, over a period of days and a cost that will be affordable to the average scientist.

## THE INSTITUTE HELPS CREATE AN INDUSTRIAL SUPPLY OF ADULT STEM CELLS FOR SCIENTISTS AROUND THE GLOBE



**Anant Kamath, Chief Operating Officer of Cellular Engineering Technologies (CET)**

In order to conduct adult stem cell research, scientists need adult stem cells. A barrier for scientists in conducting adult stem cell research has been the availability of adult stem cells for scientists to conduct such research, says Anant Kamath, Chief Operating Officer of Cellular Engineering Technologies (CET), a biotech company in Coralville, IA that manufactures only adult stem cells.

Providing adult stem cells for scientists to conduct research is an enormous challenge, says Mr. Kamath. For scientists to conduct adult stem cell research, industry is needed to manufacture grow these stem cells in large numbers.

Manufacturing adult stem cells pose challenges that include satisfying federal laws and it requires the cooperation of doctors, nurses and hospitals to assist in collecting adult tissues.

These tasks are very daunting for the typical scientist. The John Paul II Stem Cell Research Institute (JP2SRI) has been instrumental in administrating and coordinating tissue procurement, says Mr. Kamath. With the assistance of JP2SRI, CET has been able to create the most diverse supply of adult stem cells in the world, says Mr. Kamath.

We now can provide adult stem cells to scientists around the globe to conduct important biomedical research.

“With the assistance of JP2SRI, CET has been able to create the most diverse supply of adult stem cells in the world..”

Anant Kamath, Chief Operating Officer

## Board of Directors

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Jeanne Moy



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