The objective of Dr. Bielli’s research is to investigate the molecular mechanisms that regulate the production of collagen protein. Since the bony matrix is composed of collagen and proteoglycans, the balance of their synthesis and degradation is crucial to bone formation and repair. Her lab has developed a method in vitro that supports her hypothesis. Once there is a full understanding of the regulatory mechanisms, it may be possible to introduce new protein sorting machinery to correct the mutant proteins.

Dr. Bielli is from the Department of Cell Biology and Physiology at the University of Pittsburgh School of Medicine.

NEW PROGRAMS Continued from front page

To be successful, the OI Registry will need to involve as many people who have OI as possible. It will be important that all types of OI are represented.

Since OI is a rare disorder, the ability to contact a large number of people and study them over time increases the likelihood of successful research.

The OI Registry will be an invaluable resource for the research community as we work toward our common goal to find treatments and cures. For more information about our research program can be found online at www.oif.org/research.

Visit www.oif.org for more detailed information about OI research, grants and scientific meetings.
Stem cell research just one more avenue to be explored

The OI Foundation’s Medical Advisory Council and Scientific Review Committees have determined that Dr. Poirier’s stem cell research is in compliance with current Federal and State laws. While the moral and ethical debate on stem cell research is still underway, we believe that Dr. Poirier’s research may yield significant results in understanding and treating OI—results that will be based on the groundwork for improved treatments and a potential cure.

Stem cells have the potential to develop into many different types of cells in the body. Serving as a repair system for the body, they can divide without limits to replace other cells, as long as the body requires them.

When a stem cell divides, one of the cells often has the potential to become the same type of cell, while the other is more specialized. For example, a muscle stem cell can be used to repair muscle tissue. At the cellular level, stem cells have already been shown to differentiate into many different tissues, such as bone, muscle, and the brain. As scientists continue to learn more about how the protein osteocalcin is expressed in stem cells, the possibility of new treatments and a cure for OI will continue to grow.

Stem cells may become the basis for treating diseases—possibly even bone disorders such as osteoporosis and osteogenesis imperfecta.

Current research:

Dr. Britton

The objective of Dr. Britton’s research is to investigate whether a new osteophyte (osteopenia) inhibits the growth of the craniofacial (face and jaw) skeleton in the osteogenesis imperfecta (OI) mouse. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

Dr. Poirier’s central goal was to prove whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the en-

New!

How can we replace or regenerate healthy bone in vivo?

Stem cell researchers continue to seek new treatments and cures for OI, and may lay the groundwork for new treatments.

The objective of Dr. Bronson’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

New!

Can Forteo be an effective treatment for rare, recessive forms of OI?

The objective of Dr. Warman’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

New!

Can we identify the cause of rare, recessive forms of OI?

The objective of Dr. Sohasky’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

Current research:

Dr. Poirier

The objective of Dr. Poirier’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

Dr. Sohasky’s research is to study the cause of death associated with standing OI, and may lay the groundwork for new treatments.

Stem cell research to be funded in FY 2006:

Dr. Britton

Research to be funded in FY 2006:

Dr. Sohasky and Dr. Bronson have been funded with a 5-year grant to conduct research on a mouse model for OI that is working to match known mutations in different regions of the collagen molecule with the clinical severity of the disease. This will help in understanding the effects of different chemical interactions that affect the molecular formation, which may identify possible treatments for OI.

Stem cell research to be funded in FY 2006:

Dr. Poirier

The objective of Dr. Poirier’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

Stem cell research to be funded in FY 2006:

Dr. Bronson

The objective of Dr. Bronson’s research is to investigate whether embryonic stem cells might have a therapeutic role in treating OI. His preliminary data in vitro suggests that the enzyme bisphosphonates on inhibiting bone resorption in the mouse model.

Questions?

(Call) 800-2663 or write to bonelink@oif.org

Current research:

Dr. Anna Spagnoli

Dr. Spagnoli’s research will improve fracture repair in people with poorly healing (non-union) fractures by seeking to better understand the molecular basis for the non-healing state.

Research progress depends on your generous support

Each spring the Foundation con-

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We have very exciting results in the lab, and I fear that I’ll be a recipient of the OI Sand Grant. I hope research will improve the lives of patients with OI.

Research progress depends on your generous support

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