Anton V. Persikov, Ph.D., University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, Piscataway, NJ, was awarded a New Michael Giesman Research Fellowship; for “Bioinformatics and Peptide Approaches to the Molecular Basis of Osteogenesis Imperfecta.”

His study is designed to examine mutations in the genetic structure of collagen. It is thought that certain areas in the collagen molecule are more stable than others, and that any irregularity in these stable areas can develop into a more severe form of OI.

Dr. Persikov’s work will test this idea, and will attempt to clarify how changes within specific areas of the collagen molecule translate into different severities of OI. The results may develop into new treatment methods for OI.

“This fellowship gives me the great opportunity to apply my knowledge and expertise in biophysics and the growing field of bioinformatics to help people with OI.”

Zana Kalajzic, M.D., Univ. of CT Health Center, Farmington, CT, was awarded a Second-year Michael Geisman Research Fellowship for “Transportation of Osteoprogenitor Cells into Murine Models.”

Kalajzic has focused on a problem that is directly relevant to the treatment of OI, which will also have widespread therapeutic application. The goal of her research is to test various strategies, using the mouse model, to optimize conditions for grafting bone marrow stromal cells to the bone when performing transplants or transporting curative genes. Successful transplantation and engraftment has not yet been achieved in OI patients. The project examines conditions that may make the host more receptive to transplantation. Results of her research will provide insight into the effectiveness of bone marrow transplantation and gene therapy as a method of therapy in OI patients.

“I first learned about OI in medical school. Following graduation, I joined Dr. Rowe’s lab and became more fully aware of the affect of OI on humans... My work may contribute to the treatment of patients through cell and gene therapy.”
Anna Bielli, Ph.D., University of Pittsburgh, Pittsburgh, PA. was awarded second-year funding for her William G. McGowan Fellowship; “Phosphoinositides as Regulators of COPPII Mediated ER Export.”

Bielli’s study is designed to uncover information about collagen. Her proposal asks “How are abnormal molecules recognized within cells and targeted for degradation?”

Her research will help determine which protein complexes and/or molecular functions provide “quality control analysis” during the assembly of collagen. For some reason abnormal collagens are not eliminated during the sorting or editing processes. Understanding why is key to understanding and managing collagen quality in OI patients.

“...my basic research today will have a significant impact on people who suffer from OI in the future...”

Two additional projects that seek new treatment strategies and a greater understanding of OI await a funding decision. They are:

Donna King, Ph.D., northeastern Ohio Universities College of Medicine, Rootstown, OH. Seed Grant pending; for “Anabolic Therapies for OI.”

King’s project looks at two different therapies for the treatment of OI using a mouse model, but with a clear goal of a future application in children.

David Rowe, M.D., University of Connecticut Health Center, Farmington, CT. Clinical Seed Grant pending; for “Complementation of Anti RNA Vectors for OI.”

Rowe’s work proposes a way to stop the production of deformed collagen by “turning off” the gene that produces it.

Two new research meetings to sharpen future strategies

The OI Foundation is pleased to announce two new scientific meetings on OI. These meetings bring together the best and the brightest researchers to look at what we know, what we need to know, and where we can go with shared information and resources. The result is a clear map of where to focus research efforts in the coming years and how to reach our goal of better treatments and a cure for OI.

New Research Strategies in OI, chaired by Leon Root, M.D., Adele Boskey, Ph.D., and Cathleen Raggio, M.D., will be held at the New York Hospital for Special Surgery, October 17-18, 2003. This meeting has been expanded to two days to cover multiple research and clinical issues related to all aspects of OI, with a focus on bone biology, genetics, new therapies, and new clinical applications.

New Strategies in Type I OI, chaired by Peter Byers, M.D. and Michael Whyte, M.D., will be held in Chicago, IL in Spring, 2004. This meeting, the first to focus solely on Type I OI, is being funded by the family of a child who has Type I OI. The focus will be on what is known, what strategies should be followed to find treatments and a cure, and how these strategies may differ from those for Types II-IV.

The OI Foundation looks forward to approving these projects for funding. Please consider making a generous contribution to the Research Fund so these researchers can join the search for effective treatments or a cure for persons with OI.

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