

## Summary 2013 OI Foundation Science Meeting

### 13th OI Foundation Scientific Meeting

The OI Foundation's scientific meetings allow researchers who study OI and related topics to share their latest work, build relationships that encourage collaboration, and otherwise serve as an incubator to encourage new directions in OI research. This year's scientific meeting was held, April 10-12, 2013 in Chicago, IL. Forty-nine people with experience in OI and in basic research met to discuss "Mouse Models for Dominant and Recessive OI."

Animal models allow researchers to test and compare treatments, to study long term effects quicker than is possible in people, and to lay the foundation for answering questions about how OI changes bone and other tissues. Animal models also make it possible to look for unintended consequences of a treatment and seek answers to questions that are difficult to study in people such as whether increasing the amount of OI bone also increases bone strength. Not that long ago, discussions about Mouse Models for OI, focused on how to create a model of OI in mice. Today, the discussion focused on what has been learned from those models and how to use the different mouse models to learn more in the future. It is important to note that all of the studies reported on at this meeting complied with US federal ethics guidelines and followed the highest standards for care.

An outstanding group of researchers from the US, Canada and Europe were invited to give presentations. Dr. Joan Marini, Chief of the Bone and Extracellular Matrix Branch of the NICHD at the National Institutes of Health served as this year's chair. The meeting provided a cutting-edge update on OI bone pathology and what has been learned about OI mechanisms in murine models at the molecular, cellular, and tissue levels. Lessons learned from the treatment of OI mice with drug therapies that are still being developed and cellular therapies (cell transplant therapies) were explored. Discussions focused on how to best move both basic and treatment studies in new clinical avenues.

This work is important because learning more about how OI works on a basic level is one way to identify potential new targets for treatments and get a head start on testing drugs or potential drugs that are in the very earliest stages of development.

The presentations suggested a growing awareness that the specific OI mutation may be a key to understanding why people with OI respond to treatments differently. The possibility that there are male/female and age differences in response to treatment was also raised. The program ended with a look at some of the newest mouse models that may hold the key to future breakthroughs.

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