

Biomedical Research as a Career and a Way of Life



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How I got here...

- Interested in biology and medicine for many years.
- Received a microscope as a gift in 6th grade.
- Finished high school with a interest in biology and chemistry.
- Received a Bachelor of Science in Chemical Engineering from Lehigh University.
- Decided that I wanted to be more “hands-on” and began graduate school in Biological Sciences at the University of Delaware.

Where I go when I leave the classroom...



Main Lab

Cell Culture Facility



Plateau in development



15 months

Rett Syndrome

Regression



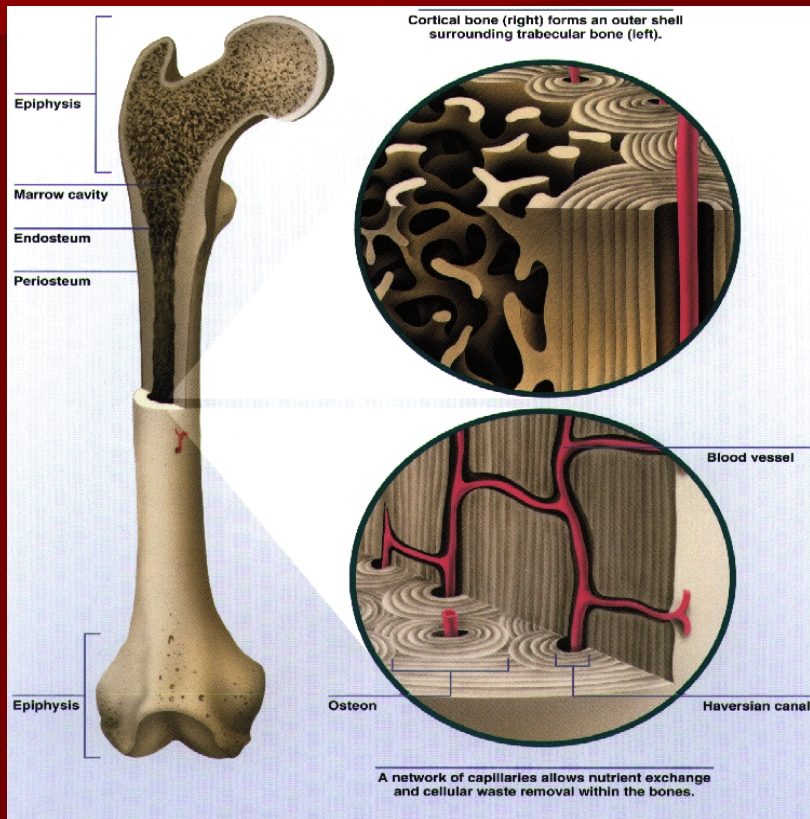
2 years

Pseudostationary



6 years

Reading the Genes in Bone-Forming Cells



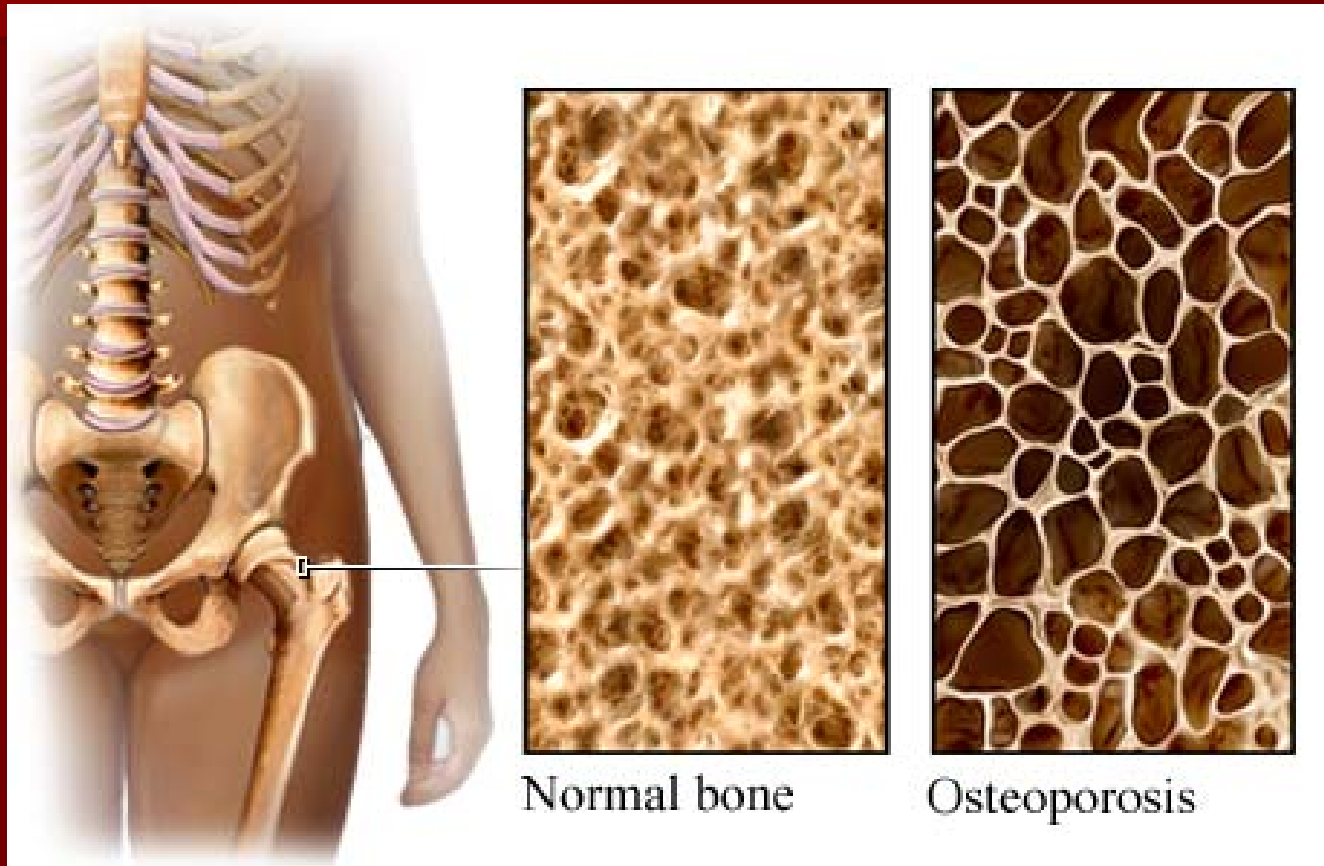
Genes important for regulating bone formation



Genes important for regulating bone formation

Which genes are being regulated by the Mecp2 protein?

Osteoporotic Bone Structure

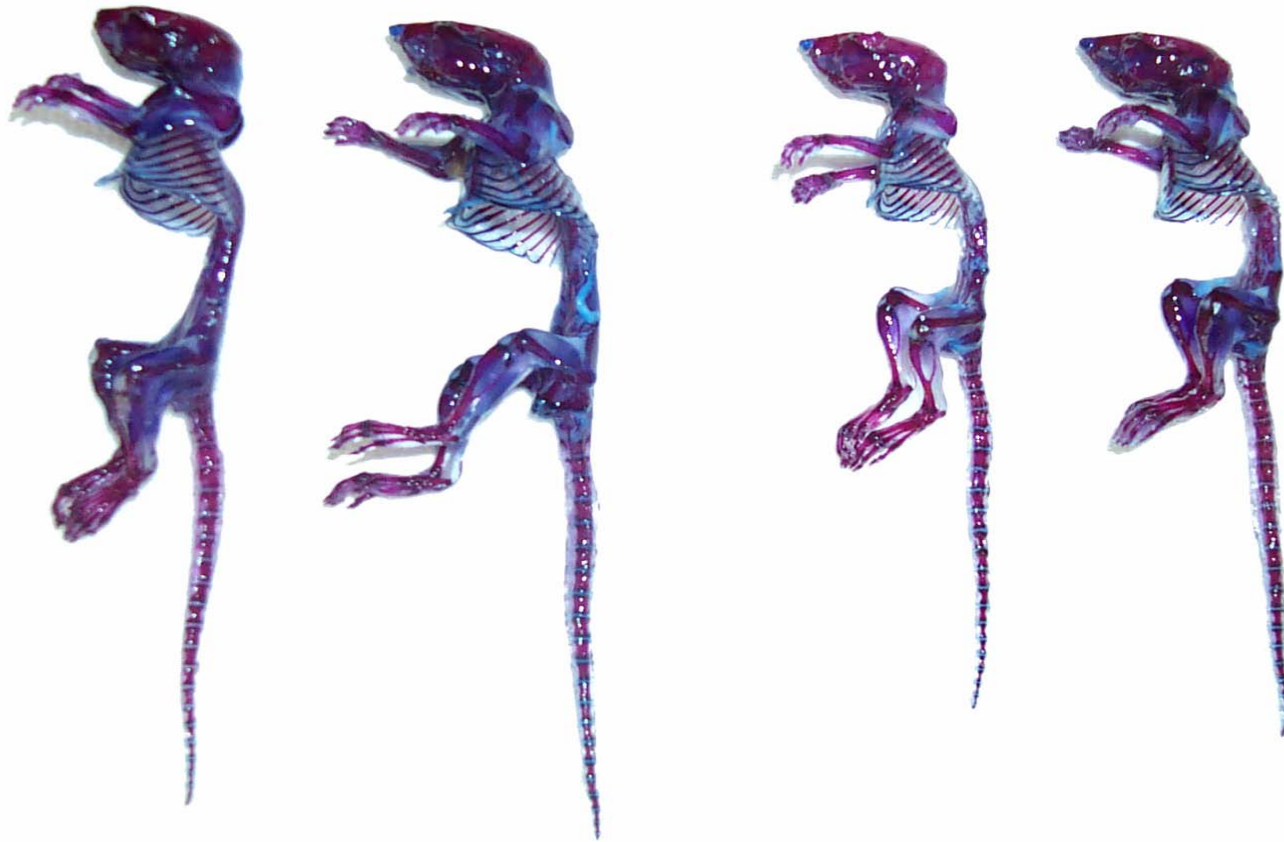


28 Day Old Mecp2 -/y Mouse



Loss of *Mecp2* leads to reduced skeletal size and kyphosis

8 Week Old C57BL/6J Littermates



Normal Mice

*Mice Without *Mecp2**

Summary

- Loss of *Mecp2* leads to differences in the skeletal size and shape of mice
- Primary dysregulation leads to changes on the molecular level
- Questions remain:
 - Which bone formation genes are regulated by *Mecp2*?
 - What happens to bone formation when these genes are dysregulated?

Where I am going...

- Will pursue a traditional biomedical research post-doctoral fellowship.
- Interested in either career in research or in promoting the importance of scientific research.
- Want to stay involved with science education at the high school and college level.