

Researcher's name: _____ Date: _____ Class: _____

Osteopontin Research Activity

Your research team has successfully developed a new prescription medication called “**Outstandix**,” which is designed to slow or stop the process of inflammation that causes pain in patients for a variety of reasons. Animal testing has gone smoothly and seems to provide relief from inflammatory pain. So far, no negative side effects have been seen in the animals, but this drug has been shown to drastically reduce the levels of a protein called **Osteopontin** in the blood, urine and joint (synovial) fluid.

Although no side effects have been seen in the test animals, it is important to research all effects of Outstandix before beginning human testing. Today, we will research what others have already learned about Osteopontin. Read the following article excerpts and take notes on the effects of Osteopontin in the body.

Notes:

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We are going to focus on the effect that Osteopontin has on inhibiting the precipitation of calcium salts out of solution in three areas of the body: the blood, urine and joint fluid.

Your first step is to observe what this actually means. Although we cannot observe this directly since we cannot obtain Osteopontin for experimentation, we can observe what it looks like when calcium salts precipitate out of solution and apply our observations to our understanding of the human body.

1. Mix the solution of calcium chloride with the solution of potassium phosphate. Record your observations:
2. Record class discussion and explanation of this phenomenon
3. Record your research and class discussion of calcium phosphate deposition in the following body fluids. Make sure to record common diseases and symptoms associated with each.

Blood:

Urine:

Synovial (joint) fluid:

4. Is this drug ready for human testing? Why or why not?