



University of Pittsburgh

What Happens When Heme Gets Out of the Hemoglobin?

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Heme gets out of hemoglobin



**Breakdown
of red blood
cells**

**Hemoglobin
Heme**



**Too
Much
Iron**



**High
Blood Pressure
In Lungs**



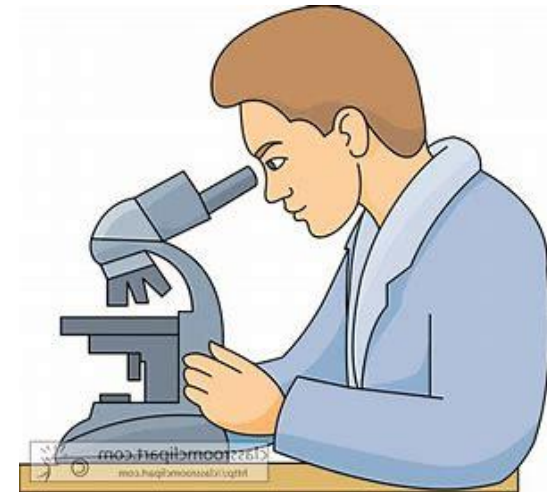
Heme gets out of hemoglobin



Hemoglobin
Heme

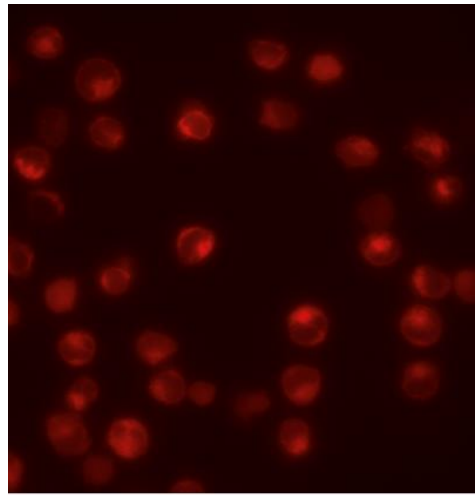
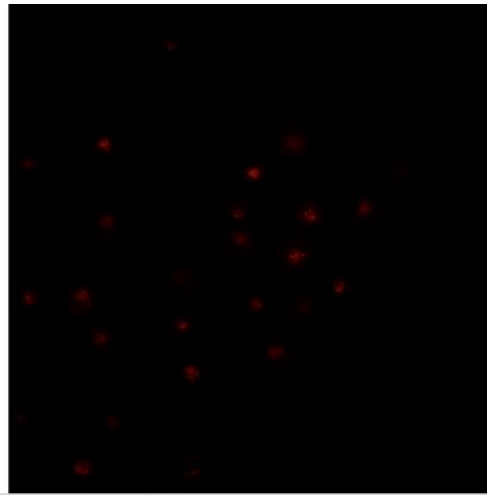


**Give heme to
Cells in the lab**





Heme gets into cells



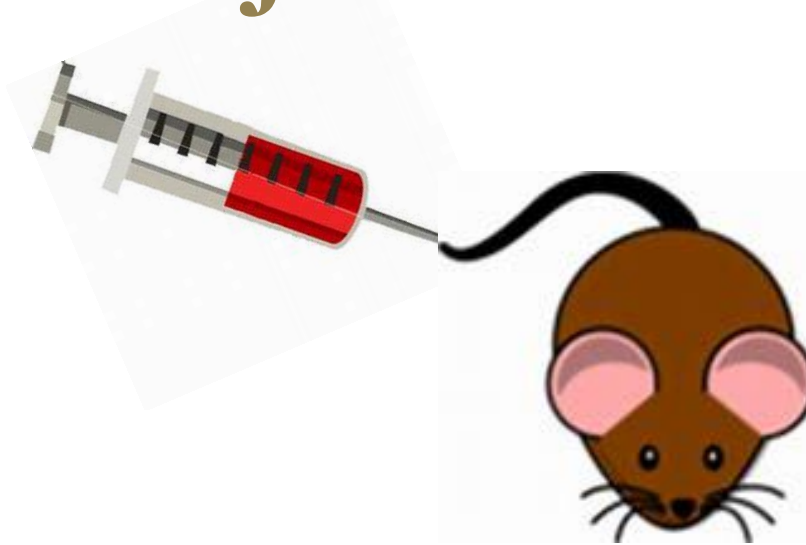
Hormone
PLGF



High
Blood Pressure
In Lungs



Heme injection in mice



Hormone
PLGF



High
Blood Pressure
In Lungs



Heme gets out of hemoglobin



**Breakdown
of red blood
cells**

**Hemoglobin
Heme**



**Jadenu
Or Exjade or Desferal**



**High
Blood Pressure
In Lungs**

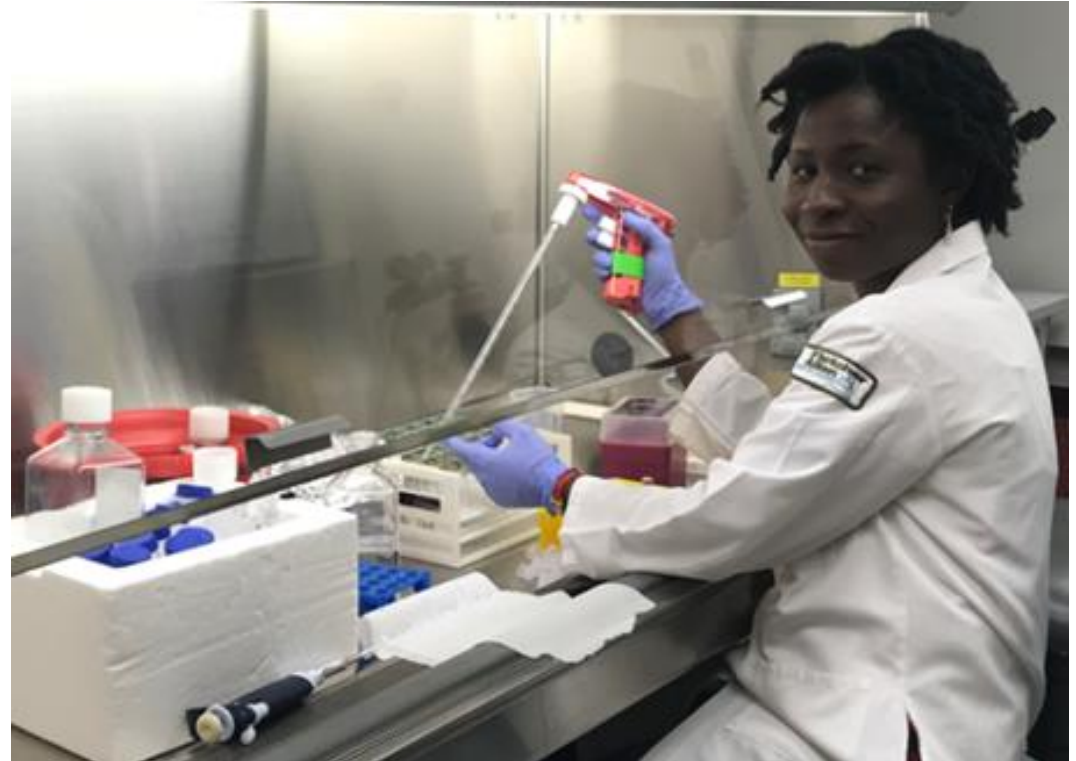


Lessons we learned

- Red blood cell breakdown is part of sickle cell disease
- This releases iron out of the cells
- Enough iron is good, but too much iron is BAD
- Jadenu and other iron removal drugs can fix the problem



Dr. Kapetanaki



Dr. Gbotosho