One thing I found particularly interesting from the paper *Inhalation Toxicology of Automotive Emissions as Affected by an Oxidation Exhaust Catalyst* was how high concentrations of carbon monoxide (CO) affected blood cell production in rats exposed to TAME I exhaust. The paper notes that "high CO levels produced a rather striking increase in hemolysis-resistant red blood cells which necessitated manual determinations of white blood cell counts" (p. 60). Breaking this down, it appears that increased CO intake caused the rats' bodies to bind the inhaled CO with hemoglobin, reducing the need for hemolysis, which is the usual process of breaking down red blood cells. As a result, their bodies were forced to manually regulate red and white blood cell counts. Although the study did not investigate long-term effects, I believe that future research in this area is essential to understanding how chronic exposure to vehicle emissions may impact human health over time.

In the second paper, which provides a comprehensive overview of the health effects of particulate matter (PM), one thing that surprised me was the fact that PM affects not only the respiratory system but the entire human body. As the global population grows and mobile transportation becomes more widespread, air pollution has significantly increased over the last 50 years. The study reports that chronic exposure to PM resulted in approximately 4.14 million deaths. I think it is interesting to look at the domino effect PM exposure has on the body, including the potential for long-term or even generational health consequences. If we can better understand and address this now, we could help prevent millions of future health complications and deaths.