



Impact Statement

Mia Tsoi, Grade 11

The Hidden Element: Alice Hamilton, 2026

Colored pencil, oil, acrylic, polyvinyl alcohol (hydrodip) on canvas, 24 x 15.8 inches

J Art Studio, Chantilly, Virginia, USA

Unsung Hero: Dr. Alice Hamilton

Not only was her bravery being featured in smelters, but Alice Hamilton went on to become America's first physician to specialize in industrial medicine, and later being the first woman on Harvard's faculty. However, I doubt she would have cared about such titles. What made me choose her was her methods and unwavering curiosity: she'd walk into the factories companies swore were safe, interview workers everyone else passed, and documented the dark side of industrialization like "phossy jaw," the disfiguring bone rot phosphorus produced in match workers, with detailing that reads more like testimony than science. In writing her book, *Exploring the Dangerous Trades*, she illustrates how tracing benzene poisoning symptoms back through dye and rubber workers meant undoing years of previously unknown illnesses that had everything to do with their occupations. What separates her from a lot of the other unsung heroes I came across while researching is her audacity to challenge huge systems through her talents in science—most of them broke into a field that already had rules, even if those rules were unjust. On the other hand, Hamilton was an underestimated female who had to invent the field first, since industrial medicine barely was a concept before she proved case by case that it needed to be. As a female who wants to pursue medicine and art, I can't help but be inspired.

My artistic choices aimed to portray all her efforts at once—the internal and the industrial, the invisible and undeniable. I painted Hamilton's portrait and the elements, but I hydro-dipped the canvas so that the background carries a marbled, chemically swirled appearance before any brushstroke touches it, contaminated in a sense before her portrait. Behind her is a cross-section of a human head in acrylic, packed with tiny researchers, workers, and machinery like a camera in the eyes. This represents her main purpose in that poisoning didn't stop at the lungs or the skin, but they also reached an individual's vital nervous system and mind. On the left side of the creation is an old brass faucet and a Ford Model T car, anchoring the painting in her era while exhibiting dangerous examples of lead-emitting objects. Solid lead is shown right next to them. A flask of benzene floats near the periodic squares for lead and phosphorus like evidence she's still holding onto and waiting on getting someone to take it seriously. Smoke fills areas only behind Alice Hamilton, leaving her sharp during periods

where factory noises fog the view. My interpretation to depict Alice Hamilton was also meant to drop the viewer into her era, make them feel what she was up against, and present them with someone worth admiring.

Somewhere between research and painting, Hamilton transformed into someone I think about when I'm cutting corners in a chemistry lab or telling myself being careful isn't worth the time. Hamilton's narrative proved no time is wasted during the process. I'm planning to use this piece to showcase to people in the future, ensuring they know her name. If nothing comes from this painting, I'd think of it as what her own work did—make something invisible a little harder to overlook.