Ergotism: History of a Cereal Killer
Brittany Symbol

Throughout history there have been many seemingly inexplicable bouts of hysteria. The notorious witch trials of Salem in 1692 and the 30,000 werewolf trials of France between 1520 and 1630 are two such examples. Researchers and historians today attribute these bizarre events to a disease known as Ergot of Rye, which is caused by the fungus *Claviceps purpurea.* Consumption of the toxins produced by this fungus causes its victims to have uncontrollable muscle contractions, hallucinations, rolling eyes, speechlessness and delusions. Today, the belief is that those suffering from ergot poisoning were deemed witches or werewolves by the general public. As a result, thousands of people lost their lives either to the disease itself or to persecution because of the disease’s manifestations.

Infected rye plants have the rye grain replaced with an ergot, an overwintering form of *C. purpurea.* Although the presence of the ergot was noted for many years, the effects of ingestion were unknown. When the rye is milled and ground into flour for consumption the mycotoxins produced by the ergot are released. There are 20 toxins produced by the ergot of *C. purpurea*, known as alkaloids. It was from these 20 alkaloids that the natural form of LSD, a strong hallucinogenic, was originally isolated. Some of these toxins constrict blood vessels, leading to gangrene, and others cause strong muscular contractions. Additionally, all 20 ergot toxins have some level of psychoactivity, which led to the hallucinations, delusions, and otherwise unexplainable behavior.

While food regulations and standards today have almost eliminated the disease, there is no rye plant variety that is resistant to *Claviceps purpurea.* Outbreaks are still an issue in underdeveloped countries where rye crops are not monitored closely.