



### LW6 The Mystery of a 17<sup>th</sup>-Century Epidemic Solved Through Forensic Genealogy

*Colleen M. Fitzpatrick, PhD\*, Fountain Valley, CA 92708*

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**Learning Overview:** After attending this presentation, attendees will understand how multidisciplinary forensic analysis has been used to determine the cause of a devastating epidemic that plagued the residents of Sigolsheim, a village in 17<sup>th</sup>-century Alsace Lorraine, France. The only evidence that an epidemic took place at all was provided by the local church registry of village births, marriages, and deaths, indicating that from 1674 to 1684, nearly every pregnancy in the village resulted in either a miscarriage or stillbirth. Before this, the church records showed that the village had a healthy birth rate and was growing, and that afterward, the population quickly returned to its former level. It was as if a “birth-switch” was abruptly turned off in 1674, only to be turned back on ten years later. The only other telltale clue was a brief increase in death rate in 1664-1665, including the deaths of the entire 11-member Naegler family with the exception of the oldest child, their 18-year-old son, Christopher.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by illustrating how much information can be extracted by applying a multidisciplinary approach to very old mysteries where little documentation has survived. While it is exciting to see modern forensic tools applied to modern cases, it can be even more interesting to see these same tools applied to solving old historical cases in a context inconceivable to those who lived so many generations in the past.

Historical reasons for the epidemic are scant. There were no major wars in Europe at that time that would have reduced the birth rate by drawing husbands and sweethearts away from the area for such an extended period. Contaminated water could also be ruled out, as could the possibility of a communicable disease—otherwise the entire village would have perished. Changes in childbirth practices could be eliminated since there were few deaths recorded among women of childbearing age. So, what was the cause of this mysterious epidemic that seem to affect only unborn children, but hardly any other villagers?

The answer might be ergot, a fungus that grows on rye. Ergot has been suspected as the cause of the Bubonic Plague as well as the Salem Witch Trials. It was so common during the Middle Ages that it was thought to be a natural part of the rye plant. Ergot is the original source of LSD.

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**Forensic Genealogy, Epidemic, Multidisciplinary**