



### B107 The Mystery of the Mummified Baby

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This presentation will highlight a multidisciplinary investigation performed over a two year period in a case from Toronto, Ontario, that involved the Office of the Chief Coroner, the Toronto Police Service, and the Centre of Forensic Sciences, working together to manage a major case from both the scientific and investigative perspectives.

This general interest presentation, involving different scientific disciplines, including forensic pathology and biology, will demonstrate the value of working in partnership to solve a challenging case.

On July 16, 2001, the mummified remains of an infant were discovered in the storage locker of a Toronto waterfront condominium by the 150-year-old adopted daughter of its female owner. The infant was found inside a garbage bag, clothed in a diaper and shirt, and wrapped in blankets. The condominium owner, a successful business woman, had succumbed to a seven year battle with cancer two weeks prior. Several questions required an answer: Who was the child? When and how did the child die? Why were the remains in the locker? Had a crime been committed?

Due to the mummification of the remains, the sex of the child and the cause of death could not be determined at autopsy. The question of identity was answered by DNA profiling of the bone marrow from the left and right femurs of the infant. DNA typing was performed using the AmpFISTR® Profiler Plus and COfiler Amplification Kits, and a 13 STR loci female DNA profile was obtained. The DNA profile of the condominium owner proved elusive, and attempts were made to obtain it from personal effects, as well as two bladder biopsy samples. The full profile was eventually determined by analysis of a bloodstain in a pair of underwear that had been worn at the hospital during the last few days of her life. It was determined that she could not be excluded (LR = 520,000) as the biological mother of the infant. The adopted daughter, on the other hand, was excluded.

The question of when the child died remained unanswered. A U.S.- based expert estimated that mummification had taken approximately 69 days, based on an analysis of the infant's clothing and an assessment of various factors in the decomposition of human remains; however, this information was of no assistance in establishing the time of death. The condominium owner's ongoing medical treatment for the past seven years meant that it was not likely that the infant could have been born during this period of time. Another clue to the year of the birth was provided by an assessment of the age of the diaper. Photographs of the diaper were sent to a manufacturer (Kimberly-Clarke) and it was determined that the particular style had been discontinued in 1984.

With the time frame narrowed down to the mid 1980s, investigators questioned the relatives, friends and work colleagues of the owner as to who the father could have been. None of these individuals had any idea that she had been pregnant at any time; however, the identity of a potential father was determined. The ex-boyfriend, who had moved to England since their involvement, had no knowledge of the pregnancy and did not think that the infant could be his. DNA profiling was carried out and it was determined that the ex-boyfriend could not be excluded (LR = 61,000) as the biological father of the mummified child, and the year of the birth was thus established as the year in which the relationship ended, 1985.

No cause of death could be established, due to the condition of the body, and therefore no charges were laid.

#### **Mummification, Familial DNA, Major Case Management**