

# The Discovery and Naming of *Capnocytophaga canimorsus*

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After 1961, a number of previously unidentified Gram-negative bacilli were referred to the Centers for Disease Control and Prevention. In 1976, light was shed on these unidentified bacilli when Bobo and Newton described a man who developed septicemia and meningitis after experiencing multiple dog bites from two dogs on consecutive days. The organisms were slow-growing, fermentative, Gram-negative bacilli. In 1977, Butler et al. noticed a correlation between the timing of dog bites with the onset of symptoms and reviewed the clinical and epidemiological findings of 17 similar cases between 1961 and 1975. In all 17 of these cases, the same Gram-negative bacilli were isolated. The CDC named these bacilli 'dysgonic fermenter type 2' or DF-2 because of their slow-growing and fermentative characteristics (Greek *dys* = bad and *gon* = offspring; dysgonic = grows with difficulty on artificial media). In 1989, Weaver et al. noticed that the CDC group DF-2 organisms shared similarities to the *Capnocytophaga* species (Greek *capno* = smoke and *cytophaga* = having flexibility and gliding motility), despite being phenotypically and genetically distinct. Brenner et al. at the CDC proposed the name *Capnocytophaga canimorsus*, which is derived from its common mode of transmission through dog bites (Latin *canis* = dog and *morsus* = bite).

*C. canimorsus* naturally lives as part of the oral flora of dogs and cats, having been detected in 74% of dogs and 57% of cats through PCR sequencing methods, so a history of animal exposures is crucial for the evaluation of patients, although 10% of cases having no documented animal source. Infections caused by *C. canimorsus* are more commonly found in men, most likely due to the demographics of exposure and corresponding underlying risk factors. The mortality rates for severe *C. canimorsus* infections fall between 13% and 33%. The incubation period, from contact with an infected animal to development of symptoms, is about seven days. Symptoms most commonly present as localized skin and soft tissue infection, which may lead to localized cellulitis, pain at the site of injury, purulent discharge, lymphangitis, and regional lymphadenopathy. In more severe cases, infection may present as fulminant septicemia, peripheral gangrene, or meningitis. Such cases are often not caused by gross injury but by benign bites, scratches, or licks from animals.

## References

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