



<b>Title</b>	<b>16S rDNA PCR detection of Actinobacillus actinomycetemcomitans from periodontitis-free plaque</b>
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<b>Citation</b>	<b>The 19th Annual Scientific Meeting of the International Association for Dental Research (Southeast Asia Division), Koh Samui, Thailand, 3-6 September 2004. In Journal of Dental Research, 2004, v. 83 Sp Iss B</b>
<b>Issued Date</b>	<b>2004</b>
<b>URL</b>	<b><a href="http://hdl.handle.net/10722/53710">http://hdl.handle.net/10722/53710</a></b>
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# **16S rDNA PCR detection of *Actinobacillus actinomycetemcomitans* from periodontitis-free plaque**

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Objective: 16S rDNA PCR assisted detection and isolation of *Actinobacillus actinomycetemcomitans* was studied. Methods: Prevalence of *A. actinomycetemcomitans* in subgingival plaque samples (2/person) of 47 20-24 year-old periodontitis-free dental students was independently assessed by 16S rDNA PCR (Ashimoto *et al* 1996) or TSBV culture. Presumptive cultural identification of *A. actinomycetemcomitans* was based on colony morphology and positive catalase test. For samples 16S rDNA PCR positive but culture negative, representative colonies were selected and PCR screened. Identity of presumptive *A. actinomycetemcomitans* isolates was confirmed by partial 16S rDNA gene sequencing. Results: 11 (11.7%) sites or 8 (17.0%) subjects were 16S rDNA positive, while 4 (4.3%) sites or 3 (6.4%) subjects were culture positive for *A. actinomycetemcomitans*. From the 7 PCR positive but culture negative plaque samples, gram-negative coccobacilli strains weakly reactive to *A. actinomycetemcomitans* 16S rDNA PCR primers were identified: 3 *Neisseria subflava*, 2 *Haemophilus segnis*, 1 each of *Campylobacter showae*, and *Haemophilus paraphrophilus*. Conclusions: Prevalence of *A. actinomycetemcomitans* was low in subgingival plaque of periodontitis-free adults. The Ashimoto *et al.* 16S rDNA PCR protocol is specific but did not assist *A. actinomycetemcomitans* isolation. Rather, false positive PCR signal from non-*A. actinomycetemcomitans* isolates was observed.

[Microbiology / Immunology and Infection Control](#)

[The Preliminary Program for Annual Scientific Meeting, 19th International Association for Dental Research-Southeast Asia Division and 13th Southeast Asia Association for Dental Education \(September 3-6, 2004\)](#)