

Abstract: Heme is essential for the growth of black-pigmenting species *Porphyromonas* and *Prevotella*. These organisms are major etiological agents in the initiation and progression of periodontal disease. When grown on blood agar, they accumulate a black pigment which is composed of forms of iron (III) protoporphyrin IX. Heme is critical to the physiology and virulence of *Porphyromonas gingivalis*. Environmental heme excess promotes its pathogenicity and survival. The main environmental source of heme is hemoglobin, derived from tissue inflammation and bleeding during periodontal disease episodes. In this seminar, I will describe my and others' biochemical work, which has led to the elucidation of the mechanisms of heme pigment formation.