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## 學歷

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## 研究方向

牙菌斑是人體內最常見的生物膜，而牙菌斑細菌也是引起齲齒及牙周病等慢性感染的病源。近年來多項研究顯示多種全身性疾病如冠心病、腦中風及小早產兒的發生機率及嚴重性均與牙周病感染有關，暗示口腔感染會增加全身性感染的機率及危險性。本實驗室的研究興趣在探討環境因子對口腔細菌生理、毒性分子基因表現及口腔疾病發生的影響，並藉此資訊開發可控制口腔感染的藥物療法。為達此目標，我們利用連續性發酵槽及一般批式培養系統(batch)進行細菌培養，並以多種生化及分生技術來觀察口腔細菌基因的表現。藉由突變株及報導基因等系統，我們可分析單一基因在特定環境下的表現程度，再以體學技術系統性地觀察每一突變對整體基因表現的影響。我們主要的三個研究主題是：一，探討唾液鏈球菌尿素酶基因族的調控機制及尿素水解對口腔生態平衡、疾病發展的影響；二，探討環境因子對副嗜血鏈球菌及轉糖鏈球菌在生物膜生存型態中的生理調控及致病分子表現；三，探討口腔血鏈球菌運動能力的分子機轉及其此能力對細菌生存、競爭力的影響。

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