

細菌学 (森川 一也)

Bacteriology (MORIKAWA Kazuya)



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病原細菌の生存戦略・薬剤耐性・病原性

黄色ブドウ球菌は主にヒト鼻腔に常在する日和見感染菌ですが、「毒素のデパート」と呼ばれるほど多様な病原因子を備え、食中毒、膿瘍、敗血症、毒素性ショック症候群など多様な感染症を引き起こします。乾燥、高食塩濃度、リゾチウム等に耐性でヒトの上皮環境に適応しているだけでなく、我々の免疫系に対しても抵抗手段を持ち、これにより慢性疾患や再発を繰り返します。当研究室では「細胞集団の不均一性」や「核様体のダイナミクス(図)」の視点から適応・薬剤耐性・病原性やその制御についての研究を行っています。

Survival Strategies, Antibiotic Resistance, and Pathogenicity of Pathogenic Bacteria

Staphylococcus aureus is an opportunistic pathogen that colonizes primarily the human nasal cavity. It possesses a diverse array of pathogenic factors and is often referred to as a “department store of toxins,” causing a wide range of infections including food poisoning, abscesses, sepsis, and toxic shock syndrome. Not only is it adapted to the human epithelial environment—being resistant to desiccation, high salt concentrations, and lysozyme—but it also has defenses against our immune system, leading to chronic disease and recurrent infections. Our laboratory conducts research on survival strategies, drug resistance, pathogenicity, and their regulation from the perspectives of “cell population heterogeneity” and “nucleoid dynamics (Figure).”

