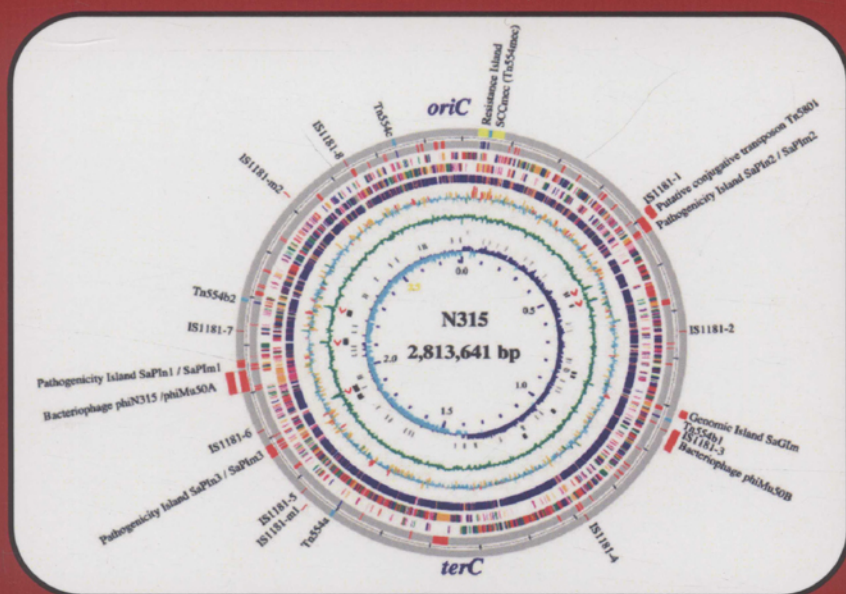


STAPHYLOCOCCUS AUREUS

Molecular and Clinical Aspects



DLAWER ALA'ALDEEN
KEIICHI HIRAMATSU

STAPHYLOCOCCUS AUREUS

Molecular and Clinical Aspects

“Like a skilful physician, who in a complicated and chronic disease, gives him keen pains and drugs to work the cure.”
Plutarch (46-120 AD), *Life of Pericles*



ABOUT THE EDITORS

Dlawer Ala'Aldeen was born in 1960 in Koya in Kurdistan, northern Iraq and educated in Erbil before studying Medicine (1977-1983) at Al-Mustansiriyah University in Baghdad. He began his career in infection in 1986 by studying clinical tropical medicine at the London School of Hygiene and Tropical Medicine. He obtained a PhD and spent four years as a post-doctoral MRC fellow before taking up a Clinical Lecturer position in 1994 at the Division of Microbiology in Nottingham's University Hospital. He trained in clinical microbiology, obtained MRCPATH and became a consultant microbiologist in the same hospital, being promoted to Reader in 1997 and Professor in 2002. He teaches clinical microbiology to undergraduate and postgraduate students and is the founder and current director of a newly established MSc course in Clinical Microbiology in Nottingham.

Professor Ala'Aldeen founded the Meningococcal Research Group in Nottingham in 1995, which later expanded into the Molecular Bacteriology and Immunology Group. His research interests include the study of bacterial pathogenesis, host genetic response to bacterial infection, vaccine development and functional genomics. He has published extensively in these areas of research and has won several awards for scientific achievements. He is on the editorial or advisory board of several journals and professional organisations. Married to Sundis, they have three children, Kardo, Aryan and Avesta.

Keiichi Hiramatsu was born in 1949 in Okayama, Japan and was educated in Tokyo where he studied medicine at Tokyo University. After graduation in 1975, he pursued a career in immunology and obtained his PhD in 1981. He studied genetics of the immune system (Tokyo and Boston) and human retrovirology (Tokyo) before settling in the field of medical bacteriology at Juntendo University, where he was promoted to professor of Bacteriology in 1992.

His current research focus is on staphylococci where he has made significant contributions (see chapter 3). He was the first to propose the concept of 'MRSA clonotyping' and a three-step molecular evolution model of MRSA. He identified the first MRSA clinical isolate with reduced susceptibility to vancomycin in 1996 and discovered staphylococcal cassette chromosome *mec* (SCC*mec*), which founded the basis for molecular epidemiology of MRSA. He later identified four allotypes of SCC*mec* in MRSA strains. *Hiramatsu et al* completed the first *S. aureus* genome nucleotide sequences in 2001 and 2002.

He is on the editorial or advisory board of several journals and professional organisations and has been awarded numerous prizes for scientific achievement, including the Lawbury Lecturer of Hospital Infection Society, UK, in 1998 and the Japan Medical Association Medical Award in 2002. In 2003, his research and education proposal for infection control was accepted as a 21st Century Centre of Excellence program by Japanese Ministry of Education and Science. He plays the violin, and conducts the Juntendo University Student Orchestra.

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