**XF-73 Nasal Literature Review**

**Period: 24/07/2024 – 24/08/2024**

[Scientific Highlights 1](#_Toc163992243)

[SA Decolonisation 1](#_Toc163992244)

[SA / MRSA Colonisation / Infection 1](#_Toc163992245)

[Guidelines / Prevention Practice 1](#_Toc163992246)

[Breast Surgery 1](#_Toc163992247)

[Mupirocin resistance 2](#_Toc163992248)

[Competitors 2](#_Toc163992249)

Scientific Highlights

1. Successful prophylactic measures for the eradication of Staphylococcus aureus infections in elective hip primary and revision arthroplasty.

SA Decolonisation

1. Characterising the allergic fungal rhinosinusitis microenvironment using full-length 16S rRNA gene amplicon sequencing and fungal ITS sequencing.
2. Evaluating the Diagnostic Performance of Nasal Methicillin-Resistant Staphylococcus aureus Polymerase Chain Reaction in Hospital-Acquired Pneumonia Within the Intensive Care Unit. A Retrospective Study.
3. The Oral Cavity-Another Reservoir of Antimicrobial-Resistant Staphylococcus aureus?
4. A Rare Occurrence of Methicillin-Resistant Staphylococcus aureus (MRSA) Pneumonia Complicated by Nasal Vestibulitis and Orbital Cellulitis: A Case Report.
5. High toxinogenic potential of Staphylococcus aureus from wild ungulates in Brandenburg, Germany with a low level of antibiotic resistance.
6. Author Correction: Commensal production of a broad-spectrum and short-lived antimicrobial peptide polyene eliminates nasal Staphylococcus aureus.
7. Association of Staphylococcus aureus Bacterial Load and Colonization Sites With the Risk of Postoperative S. aureus Infection.
8. Nasal Microbiome in Granulomatosis with Polyangiitis Compared to Chronic Rhinosinusitis.
9. The Impact of a Methicillin-Resistant Staphylococcus Aureus Nasal Polymerase Chain Reaction Protocol on Vancomycin Length of Therapy Among Patients With Skin and Soft Tissue Infections.
10. The microbiome-derived antibacterial lugdunin acts as a cation ionophore in synergy with host peptides.
11. Brief Report: Nasal colonization with Staphylococcus aureus and methicillin resistant Staphylococcus aureus among community-dwelling older adults with comorbidities seeking follow-up medical care in Central Sri Lanka.
12. Characterization of gelatin-oxidized riclin cryogels and their applications as reusable ice cubes in shrimp preservation.
13. Antimicrobial resistance profile of Staphylococcus aureus isolated from patients, healthcare workers, and the environment in a tertiary hospital in Addis Ababa, Ethiopia.
14. The Belgian IgE (BEIgE) study: Staphylococcus aureus toxins in adult severe asthma.
15. Two draft genome assemblies of Staphylococcus aureus strains isolated from a cheek swab of a healthy female participant.
16. Fecal Proteolytic Bacteria and Staphylococcal Superantigens are Associated with Abdominal Pain Severity in Irritable Bowel Syndrome.
17. Chlorhexidine gluconate versus povidone-iodine for nasal bacteria decolonization before transsphenoidal surgery in patients with pituitary neuroendocrine tumors: A prospective, randomized, double-blind, non-inferiority trial.

SA / MRSA Colonisation / Infection

1. Staphylococcus aureus associated with surgical site infections in Western Kenya reveals genomic hotspots for pathogen evolution.
2. Concomitant pyogenic spondylodiscitis and empyema following tongue cancer resection and wisdom tooth extraction: A case report and literature review.
3. Emerging and Re-Emerging Pathogens in Valvular Infective Endocarditis: A Review.
4. Halophilomyces hongkongensis, a Novel Species and Genus in the Lulworthiaceae with Antibacterial Potential, Colonizing the Roots and Rhizomes of the Seagrass Halophila ovalis.
5. Preliminary osteogenic and antibacterial investigations of wood derived antibiotic-loaded bone substitute for the treatment of infected bone defects.
6. Dilution of humoral immunity: Results from a natural history study of healthy total knee arthroplasty patients.
7. In Vivo Intra-Articular Antibiotic Concentrations at 24 Hours After TKA Fall Below the Minimum Inhibitory Concentration for Most Bacteria: A Randomized Study of Commercially Available Bone Cement.
8. Assessing the Predictive Value of Methicillin-Resistant Staphylococcus aureus Nares Colonization Among Transplant Recipients and Patients With Neutropenia.
9. A biguanide chitosan-based hydrogel adhesive accelerates the healing of bacterial-infected wounds.
10. Bacteriophage-driven emergence and expansion of Staphylococcus aureus in rodent populations.
11. Polymer-Based Hydroxyapatite-Silver Composite Resin with Enhanced Antibacterial Activity for Dental Applications.
12. Isolation and Genomic Analysis of a Case of Staphylococcus argenteus ST2250 Related to Sepsis in Italy.
13. Prosthetic Valve Endocarditis: A Retrospective Cohort Study Conducted at "Dr. Carol Davila" Central Military Emergency University Hospital in Bucharest.
14. Microbiological and Imaging-Based Evaluations of Photodynamic Therapy Combined with Er:YAG Laser Therapy in the In Vitro Decontamination of Titanium and Zirconia Surfaces.
15. The Role of Microbes in Surgical Decision Making for Infective Endocarditis: Mitral Valve Repair or Replacement?
16. Mechanical Properties, Drug Release, Biocompatibility, and Antibacterial Activities of Modified Emulsified Gelatin Microsphere Loaded with Gentamicin Composite Calcium Phosphate Bone Cement In Vitro.
17. Three-Dimensional Melted Electrowriting Drug Coating Fibers for the Prevention of Device-Associated Infections: A Pilot Study.
18. Culex quinquefasciatus Mosquitoes Resist Acquisition of Methicillin-Resistant Staphylococcus aureus: Insights from Field and Laboratory Studies.
19. Development of magnesium hydroxide-doped nanofibrous spheres for repairing infected skin wounds.
20. Bilateral Facet Joint Septic Arthritis Induced by Acupuncture: A Case Report Highlighting Diagnostic Challenges and the Importance of Early Intervention.
21. Immunohistopathological analyses of a case of pemphigus vegetans with antibodies against desmoglein 1 and desmocollins 1-3.
22. Peking University First Hospital Procedure for Culturing Pathogenic Microorganisms for Bone and Joint Infection.
23. Evaluation of White Blood Cell Count, Lymphocyte Percentage, Neutrophil Percentage, and Elevated Temperature as Predictors of Wound Infection in Burn Patients.
24. Multifunctional piezoelectric surfaces enhanced with layer-by-layer coating for improved osseointegration and antibacterial performance.
25. Panton-Valentine leucocidin gene in methicillin resistant Staphylococcus aureus isolated from tertiary care hospital in Nepal.
26. Insights Into Laparoscopic Port Site Complications: A Comprehensive Review.
27. Unveiling the value of C-reactive protein as a severity biomarker and the IL4/IL13 pathway as a therapeutic target in recessive dystrophic epidermolysis bullosa: A multiparametric cross-sectional study.
28. Retropharyngeal Abscess complicated by mediastinitis in infants.
29. Antibacterial Iodine-Releasing Coatings of Cross-Linked Poly(N-vinylpyrrolidone) Synthesized by Solvent-Free Initiated Chemical Vapor Deposition.
30. Antibacterial and mechanism of action studies of boxazomycin A.
31. Antibacterial properties of photo-crosslinked chitosan/methacrylated hyaluronic acid nanoparticles loaded with bacitracin.
32. Staphylococcus aureus/Staphylococcus epidermidis from skin microbiota are balanced by Pomegranate peel extract: An eco-sustainable approach.
33. Wireless Optogenetic Targeting Nociceptors Helps Host Cells Win the Competitive Colonization in Implant-Associated Infections.
34. Decoding the Decade: Exploring the Efficacy of Platelet-Rich Plasma (PRP) in Complex Wound Management - A Comprehensive Study.
35. Clinical significance of lower respiratory tract culture within 48 h of admission in patients with viral pneumonia: an observational study.
36. Effect of Topical Vancomycin on Surgical Site Infections in Ankle Fractures: A Randomized, Double-Blind, Controlled Trial.
37. Lower abdominal cyst complicated with suspected infection following INFIX internal fixation for pelvic fracture: a report of two rare cases.
38. Bacteria-responsive functional electrospun membrane: simultaneous on-site visual monitoring and inhibition of bacterial infection.
39. A case of acute purulent pericarditis due to MRSA treated with daily pericardial lavage for one month followed by pericardial fenestration.
40. Therapy of parapneumonic empyema in children: a protocol for a scoping review of the literature.
41. Hospitalizations among family members increase the risk of MRSA infection in a household.
42. Clinical features and prognosis of prosthetic valve endocarditis due to Staphylococcus aureus.
43. A Multidisciplinary Approach to Staphylococcus aureus Triple-Valve Infective Endocarditis With Multi-Organ Involvement.
44. Bioinspired oriented calcium phosphate nanocrystal arrays with bactericidal and osteogenic properties.
45. Structure of biofilm-forming functional amyloid PSMα1 from Staphylococcus aureus.
46. A Case of Significant Coagulopathy Due to Vitamin K Deficiency Caused by the Administration of Cefazolin and Rifampicin and Hyponutrition After a Postoperative Infection of the Lumbar Spine.
47. Peripheral white blood cell patterns in children with hydrocephalus as a response to ventriculo-peritoneal shunt infection.
48. Prevalence and risk factors for haematogenous periprosthetic joint infection during Staphylococcus aureus bacteraemia.
49. Mystery of the Passerini Reaction for the Synthesis of the Antimicrobial Peptidomimetics against Nosocomial Pathogenic Bacteria.
50. Photothermal Antibacterial and Osteoinductive Polypyrrole@Cu Implants for Biological Tissue Replacement.
51. Dynamical analysis of methicillin-resistant Staphylococcus aureus infection in North Cyprus with optimal control: prevalence and awareness.
52. Promoting the healing of infected diabetic wound by nanozyme-containing hydrogel with anti-bacterial inflammation suppressing, ROS-scavenging and oxygen-generating properties.
53. COMPLICATIONS OF INTRAOSSEOUS ADMINISTRATION OF VANCOMYCIN IN TOTAL HIP ARTHROPLASTY.
54. Amorphous TiO2 nano-coating on stainless steel to improve its biological response.
55. Synergistic berberine chloride and Curcumin-Loaded nanofiber therapies against Methicillin-Resistant Staphylococcus aureus Infection: Augmented immune and inflammatory responses in zebrafish wound healing.
56. Healthcare-associated infections and antimicrobial resistance in Canadian acute care hospitals, 2018-2022.
57. REGECEL (an Oxidized Regenerated Cellulose) Provides Superior Bioactivity Effect on Microorganisms.
58. Association of Helicobacter Pylori in Chronic Tonsillitis.
59. Bacterial pathogens and antimicrobial susceptibility in ocular infections: A study at Boru-Meda General Hospital, Dessie, Ethiopia.
60. Genomic characterization of methicillin-resistant Staphylococcus aureus isolated from patients attending regional referral hospitals in Tanzania.
61. The Commando procedure for mechanical double valve prosthesis endocarditis with destruction of the aortomitral continuity.
62. Purpose-built multicomponent supramolecular silver(I)-hydrogels as membrane-targeting broad-spectrum antibacterial agents against multidrug-resistant pathogens.
63. Antimicrobial Resistance Patterns of Pathogens Isolated from Patients with Wound Infection at a Teaching Hospital in Vietnam.
64. High-throughput functional analysis provides novel insight into type VII secretion in Staphylococcus aureus.
65. Ten-year statewide cross-sectional review of pediatric sinogenic intracranial abscess and empyema in Queensland, Australia: microbial profile before and after COVID-19.
66. Lower Extremity Amputation in Fracture-Related Infection.
67. Infective Endocarditis Caused by Carbapenemase-Producing Klebsiella pneumoniae on a Prosthetic Valve: A Case Report and Review of the Literature.
68. Cryo-EM reconstruction of oleate hydratase bound to a phospholipid membrane bilayer.
69. A case report of iliopsoas abscess and literature review.
70. Trends in infection incidence and antimicrobial resistance in the US Veterans Affairs Healthcare System: a nationwide retrospective cohort study (2007-22).
71. Vaginal colonization with virulent and methicillin resistant Staphylococcus aureus among Ugandan women in Labour.
72. Distribution of virulence genes in clinical isolates of hospital-associated and community-associated methicillin-susceptible Staphylococcus aureus from Terengganu, Malaysia.
73. Rapid visual detection of Helicobacter pylori and vacA subtypes by Dual-Target RAA-LFD assay.
74. Organizational and Infrastructural Risk Factors for Healthcare-associated Clostridioides difficile Infections or Methicillin-resistant Staphylococcus aureus in Hospitals.
75. Shoulder girdle muscle abscess: potential routes of spread and surgical management by a dual anterior approach.
76. Induction of biofilm in extended-spectrum beta-lactamase Staphylococcus aureus with drugs commonly used in pharmacotherapy.
77. Unraveling the Challenges: A Compelling Case of Staph Meningitis and Graft Infection in a Bovine Brain Graft Recipient.
78. A higher area under the concentration-time curve/minimum inhibitory concentration target as a potential prognostic factor for vancomycin treatment of methicillin-resistant Staphylococcus aureus meningitis: A case report.
79. Bioactivation of Konjac Glucomannan Films by Tannic Acid and Gluconolactone Addition.
80. Selenium Bandages and Cotton Cloth That Kill Microorganisms in Wounds.
81. Staphylococcus spp. as part of the microbiota and as opportunistic pathogen in free-ranging black-tuffed marmosets (Callithrix penicillata) from urban areas: Epidemiology, antimicrobial resistance, and pathology.
82. Polydopamine-assisted smart bacteria-responsive hydrogel: Switchable antimicrobial and antifouling capabilities for accelerated wound healing.
83. Biofilm formation of Staphylococcus aureus on various implants used for surgical treatment of destructive spondylodiscitis.
84. A systematic review of diabetic foot infections: pathogenesis, diagnosis, and management strategies.
85. Microbial infection among SARS-COV-2-infected patients in a COVID-19-dedicated tertiary care hospital of Bangladesh: a cross-sectional study.
86. Tunicate cellulose nanocrystals strengthened injectable stretchable hydrogel as multi-responsive enhanced antibacterial wound dressing for promoting diabetic wound healing.
87. Population Pharmacokinetics and Pharmacodynamics of Dalbavancin and C-Reactive Protein in Patients with Staphylococcal Osteoarticular Infections.
88. Bacterial diversity in Buruli ulcer lesions in Ghana.
89. In Vitro Studies Support Clinical Trials Showing Platelet-Rich Fibrin-Mediated Local Delivery of Antibiotics Improves Outcomes in Impacted Mandibular Third Molar Surgery.
90. Mucus Mimic Hydrogel Coating for Lubricous, Antibiofouling, and Anti-Inflammatory Urinary Catheters.
91. Identification of a genetic region linked to tolerance to MRSA infection using Collaborative Cross mice.

Guidelines / Prevention Practice

1. The burden of antibiotic resistance of the main microorganisms causing infections in humans - review of the literature.
2. Viewpoint: The impending pandemic of resistant organisms - a paradigm shift towards source control is needed.
3. Long-lasting Effects of Control Measures on Trends in Incidence in Neonatal Late-onset Sepsis due to Multiresistant Bacteria in a Brazilian Neonatal Unit.

Breast Surgery

1. Examining the Association Between the COVID-19 Pandemic and the Rate of Diagnostic Tests for Breast, Cervical, and Colorectal Cancer in Manitoba, Canada.
2. BREAST-Q Analysis of Reduction Mammaplasty: Do Postoperative Complications of Breast Reduction Surgery Negatively Affect Patient Satisfaction?
3. Experience in Post-Bariatric Abdominoplasty for Patients with Significant Weight Loss: A Prospective Study.
4. In Silico Prediction of BRCA1 and BRCA2 Variants with Conflicting Clinical Interpretation in a Cohort of Breast Cancer Patients.
5. What did we catch? Predictors of infection after tissue expander-based breast reconstruction in a safety-net system.
6. Long-Term Biodegradation of Polyacrylamide Gel Residues in Mammary Glands: Physico-Chemical Analysis, Chromatographic Detection, and Implications for Chronic Inflammation.
7. Efficacy of axillary dead space closure after mastectomy, axillary clearance and prosthetic reconstruction: a single-center preliminary experience.
8. Granulomatous lobular mastitis treated by a combined internal and external treatment of traditional Chinese medicine: A case report.
9. Bacterial Biofilm on Tissue Expander and Acellular Dermal Graft After Breast Reconstruction.
10. Unveiling the Potential of Drain Tip Cultures: Impact on Surgical Site Infections in Implant-Based Breast Reconstruction.
11. Prophylactic absorbable antibiotic beads for prepectoral implant-based breast reconstruction: A single institution early experience.
12. Aqua Breast Augmentation (ABA): Hydrodissection Breast Augmentation Technique.
13. Time trend analysis and impacts of the COVID-19 pandemic on mammography and Papanicolaou test coverage in Brazilian state capitals.
14. Severe capsular contracture in a patient with a history of multiple malignancies - Hematoma or neoplasm recurrence?: A case report.
15. PET/CT Recognition of Costal Cartilage Infection After Breast Implant Surgery.
16. A Comparative Study on Aesthetic and Pain Outcomes in Flap Versus Implant Breast Reconstruction After Mastectomy.
17. Evaluation of Morphometric Measurements on Preoperative CT Angiograms to Determine Risk of Abdominal Donor Site Complications-A Retrospective Review of 174 Patients.
18. Reduction Mammoplasty in the Pediatric Population: An Analysis of Pediatric NSQIP Data From 2012 to 2019.
19. Development of pectin/chitosan-based electrospun biomimetic nanofiber membranes loaded with dihydromyricetin inclusion complexes for wound healing application.
20. Antibiotic Prophylaxis in Breast Cancer Surgery: A Multicontinental Survey Study.
21. Addressing Emotional Stress for Men Seeking Gynecological Care: A Call for Inclusivity and Sensitivity.
22. Clinical best practices in interdisciplinary management of human epidermal growth factor receptor 2 antibody-drug conjugates-induced interstitial lung disease/pneumonitis: An expert consensus in China.
23. Minimal Access vs Conventional Nipple-Sparing Mastectomy.
24. Low muscle mass-to-fat ratio is an independent factor that predicts worse overall survival and complications in patients with colon cancer: a retrospective single-center cohort study.
25. Complex chest wall reconstruction after failure: a literature review.
26. Sterile Draping of Operative Microscopes in Breast Free Flaps and Surgical Site Infections.
27. Breast reconstruction with TiLOOP® Bra: Another arrow in plastic surgeons' quiver?
28. Immediate Latissimus Dorsi Flap Reconstruction: Assessing Aesthetic Outcomes Following Mastectomy in Breast Cancer Patients.
29. The efficacy of prolonged antibiotic prophylaxis in total breast reconstruction with Autologous Fat Transfer (AFT): A retrospective cohort study.
30. Learning curve for robot-assisted nipple-sparing mastectomy: A single institution experience.
31. The Combined Bra-Line Back-Lift Latissimus Flap (BLBL-LAT Flap) for Aesthetic Breast Reconstruction and Simultaneous Back Contouring.
32. The use of incisional negative pressure wound therapy on high-risk breast cancer mastectomy patients.
33. Marijuana's Impact On Implant-based Breast Reconstruction: A Retrospective Cohort Study.
34. Factors associated with the length of breastfeeding during the COVID-19 pandemic: a survival study.
35. Breast cancer patients' postoperative outcomes in nipple-sparing mastectomy and reconstruction with subpectoral implant placement: a single center experience.
36. Early Experience with Mesh Suture for DIEP Flap Abdominal Site Closures.

Mupirocin resistance

1. Comparative Antimicrobial Resistance and Prevalence of Methicillin Resistance in Coagulase-Positive Staphylococci from Conventional and Organic Dairy Farms in South Korea.
2. Genomic profiling of methicillin-sensitive Staphylococcus aureus (MSSA) isolates in Kuwait hospitals.
3. ESCMID/EUCIC clinical guidelines on preoperative decolonization and targeted prophylaxis in patients colonized by multidrug-resistant Gram-positive bacteria before surgery.
4. Recurrent skin and soft tissue infections (SSTIs) in three family members caused by methicillin-resistant Staphylococcus aureus (MRSA) with Panton-Valentine leukocidin (PVL) exotoxin.

Competitors

1. Integrated Analysis of Patient Networks and Plasmid Genomes to Investigate a Regional, Multispecies Outbreak of Carbapenemase-Producing Enterobacterales Carrying Both blaIMP and mcr-9 Genes.
2. Electrospun Gelatin Scaffolds with Incorporated Antibiotics for Skin Wound Healing.
3. Humanized Mouse Models of Bacterial Infections.
4. New Insights into Pseudomonas spp.-Produced Antibiotics: Genetic Regulation of Biosynthesis and Implementation in Biotechnology.
5. Investigation of cross-opsonic effect leads to the discovery of PPIase-domain containing protein vaccine candidate to prevent infections by Gram-positive ESKAPE pathogens.
6. Using contact network dynamics to implement efficient interventions against pathogen spread in hospital settings: A modelling study.
7. Immunoinformatic prediction to identify Staphylococcus aureus peptides that bind to CD8+ T-cells as potential vaccine candidates.
8. A randomized controlled trial on hair follicular-derived microtissue for promoting wound healing and alleviating postoperative complications after hair transplantation.
9. Human milk antibodies to global pathogens reveal geographic and interindividual variations in IgA and IgG.
10. The World Needs a Staph Vaccine-New Research Could Bring It a Step Closer.
11. Hypoxia-inducible factor-1α/vascular endothelial growth factor signaling pathway-based ulcer-healing mechanism of Astragalus Aqueous extract in diabetic foot rats.
12. An Integrated Module Performs Selective 'On-Line' Epoxidation in the Biosynthesis of the Antibiotic Mupirocin.
13. Vaccines and monoclonal antibodies to prevent healthcare-associated bacterial infections.
14. Potential antivirulence and antibiofilm activities of sub-MIC of oxacillin against MDR S. aureus isolates: an in-vitro and in-vivo study.
15. Polygonum bistorta Linn. as a green source for synthesis of biocompatible selenium nanoparticles with potent antimicrobial and antioxidant properties.
16. VacSol-ML(ESKAPE)(:) Machine learning empowering vaccine antigen prediction for ESKAPE pathogens.
17. Staphylococcus aureus adapts to exploit collagen-derived proline during chronic infection.
18. A path forward for Staphylococcus aureus vaccine development.
19. Education program for caregivers in congenital central hypoventilation syndrome: Initiation and experience families.
20. Microbiological analysis of tunneled hemodialysis catheters isolated from patients receiving hemodialysis in Saskatchewan.
21. A rationally designed antigen elicits protective antibodies against multiple nosocomial Gram-positive pathogens.
22. Whole-of-Life Inclusion in Bayesian Adaptive Platform Clinical Trials.
23. Australian Group on Antimicrobial Research surveillance outcome programs - bloodstream infections and antimicrobial resistance patterns from patients less than 18 years of age, January 2020 - December 2021.