**Dermal Literature Review**

**Period: 01/02/2025 – 01/03/2025**

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Scientific Highlights:

Burn wound Infections (infections of or preventing infections)

1. Advancing wound healing: controlled release of tannic acid via epitope imprinted antimicrobial spongy cover material.
2. Localized propranolol delivery from a copper-loaded hydrogel for enhancing infected burn wound healing via adrenergic β-receptor blockade.
3. Conflict-associated wounds and burns infected with GLASS pathogens in the Eastern Mediterranean Region: A systematic review.
4. Activity of silver-zinc nanozeolite-based antibiofilm wound dressings in an in vitro biofilm model and comparison with commercial dressings.
5. Tissue-Adhesive and Antibacterial Hydrogel Promotes MDR Bacteria-Infected Diabetic Wound Healing via Disrupting Bacterial Biofilm, Scavenging ROS and Promoting Angiogenesis.
6. Electret-Inspired Charge-Injected Hydrogel for Scar-Free Healing of Bacterially Infected Burns Through Bioelectrical Stimulation and Immune Modulation.
7. Facile and atom-economical synthesis of highly efficient chitosan-based flame retardants towards fire-retarding and antibacterial multifunctional coatings on cotton fabrics.
8. In-vitro and in-vivo studies of Tridax procumbens leaf extract incorporated bilayer polycaprolactone/polyvinyl alcohol-chitosan electrospun nanofiber for wound dressing application.

Diabetic Foot Ulcers

1. In-hospital costs of diabetic foot infection at a national referral hospital in Jakarta, Indonesia.
2. Outcomes in Treatment of Ankle and Pilon Fractures with Retrograde Tibiotalocalcaneal Nailing Without Articular Preparation in the Setting of Diabetes Mellitus.
3. First case report of bacteremia caused by Bilophila wadsworthia in China, and literature review.
4. Risk Factors for Failed Below Knee Amputation in Patients with Diabetes.
5. Early Identification and Referral of Patients With Diabetic Foot Complications in the Emergency Department.
6. CD177, MYBL2, and RRM2 Are Potential Biomarkers for Musculoskeletal Infections.
7. Hydrogel-based therapies for diabetic foot ulcers: recent developments and clinical implications.
8. Retaining Severely Damaged Talar Body and Medial Malleolar Cartilage for Diabetic Ankle/Hindfoot Charcot Arthrodesis Using Intramedullary Nail: A Short Report.
9. [Interpretation of connotation of Simiao Yong'an Decoction based on severe cases and modern pathophysiological mechanisms and experience in treating diabetic foot with infection, sepsis, and arteriosclerosis obliterans in critical care medicine].
10. [18F]FDG PET/CT for the diagnosis of diabetic foot osteomyelitis.
11. Clonal repetitive element polymerase chain reaction patterns of Pseudomonas aeruginosa in diabetic foot ulcers, Iran.
12. Heat shock-pretreated bone marrow mesenchymal stem cells accelerate wound healing in a diabetic foot ulcer rat model.
13. Comparing perioperative outcomes after transmetatarsal amputation in patients with or without peripheral vascular disease.
14. A systematic review and meta-analysis of randomized controlled trials of systemic antibiotics for diabetes-related foot infections.
15. Ankle Arthrodesis: Epidemiology, Etiology, and Complications in Diabetic vs Nondiabetic Patients Using US Nationwide Inpatient Sample Data.
16. Predictors of Major Lower Extremity Amputation in Type 2 Diabetic Patients With Diabetic Foot Ulcers: A Cross-Sectional Analytical Study.
17. Construction and Validation of a Predictive Nomogram Model for Patients with Type 2 Diabetes Complicated by Diabetic Foot Ulcers.
18. A Case of Diabetic Ischemic Ulcer with Toe Deformity Successfully Treated with Revascularization and Surgical Offloading.
19. Plasma-Activated Water Improve Wound Healing in Diabetic Rats by Influencing the Inflammatory and Remodelling Phase.
20. The increasing prevalence of Enterobacteriaceae as pathogens of diabetic foot osteomyelitis: a multicenter European cohort over two decades.
21. Enhancement of wound healing in diabetic mice by topical use of a peptide-ionic liquid conjugate.
22. Clinical Characteristics of Inpatients with Diabetic Foot Ulcer Admitted with Non-Ulcer Complaints: A Retrospective Study.
23. Efficacy and safety of a bio-absorbable antibiotic delivery in calcium sulphate granules for the treatment of osteomyelitis in patients with diabetic foot: A randomized, double blinded, controlled clinical study The BIG D-FOOT study.
24. The role of hyperbaric oxygen therapy in the treatment of diabetic foot ulcers - A literature review.
25. Assessment of the diabetic foot in inpatients.
26. Overcoming beta-lactam resistance in Pseudomonas aeruginosa by targeting metallo-beta-lactamase VIM-1: a one-microsecond molecular dynamics simulation study.
27. Regional anaesthesia-based free flap reconstruction for limb salvage in high-risk patients with refractory lower limb infections.
28. Dellon decompression of the tarsal tunnel: An effective approach to improving blood flow, promoting ulcer healing and recovery of sensibility in diabetic patients.
29. Chlorhexidine vs Routine Foot Washing to Prevent Diabetic Foot Ulcers: A Randomized Clinical Trial.
30. Diabetic foot ulcer classification assessment employing an improved machine learning algorithm.
31. Efficacy of Dialkylcarbamoylchloride (DACC)-Impregnated Dressings in Surgical Wound Management: A Review.
32. Partial Calcanectomy: Patient Selection Process and the Secrets to Optimizing Outcomes.
33. Paeonol regulates the DDIT4-mTOR signaling pathway in macrophages to promote diabetic wound healing.
34. A feature explainability-based deep learning technique for diabetic foot ulcer identification.
35. Tracking a Fatal Disease: Lower Limb Gas Gangrene's Mortality-Related Factors.
36. Long Term Outcomes After Flexor Tendon Tenotomy of the Diabetic Foot.
37. Predictive Factors of Wound Healing and Limb Salvage After Successful Below-the-Knee Endovascular Angioplasty in Patients with Diabetic Foot Ulcer: A Retrospective Study.
38. Chronic Wound Initiation: Single-Cell RNAseq of Cutaneous Wound Tissue and Contributions of Oxidative Stress to Initiation of Chronicity.
39. Cost-effectiveness of swab versus tissue sampling for infected diabetic foot ulcers from the CODIFI2 randomised controlled trial.
40. Replicating Success in Conservative Surgery for Diabetes-Related Forefoot Osteomyelitis: A Comparative Study Between Two Diabetic Foot Units in Spain and Costa Rica.
41. Analysis of risk factors for foot ulcers in diabetes patients with neurovascular complications.

Venous Leg Ulcers

1. Topical Application of Manuka Honey for the Treatment of Non-Healing Venous Leg Ulcers.

Dermal Biofilms

1. Who arrived first? Priority effects on Candida albicans and Pseudomonas aeruginosa dual biofilms.
2. Wound infection: diagnosis, treatment and prevention.
3. Macroalgal Biofilm Harbours a Wide Diversity of Parasitic Protists With Distinct Temporal Dynamics.
4. Intracellular Pseudomonas aeruginosa persist and evade antibiotic treatment in a wound infection model.
5. An In Vitro Study of the Anti-Acne Effects of Scutellaria barbata.
6. Harnessing Ultrasonic Technologies to Treat Staphylococcus Aureus Skin Infections.
7. Synergistic Anti-Helicobacter pylori Effects of Takifugu obscurus Skin Peptides and Lactobacillus plantarum: A Potential Gastric Health Dietary Supplement.
8. Niacinamide and its impact on stratum corneum hydration and structure.
9. Unravelling the hidden side of laundry: malodour, microbiome and pathogenome.
10. Microbial biofilm-based hydrovoltaic pressure sensor with ultrahigh sensitivity for self-powered flexible electronics.
11. Pressure injuries and biofilms: Microbiome, model systems and therapies.
12. Anti-Intracellular MRSA Activity of Antibiotic-Loaded Lipid-Polymer Hybrid Nanoparticles and Their Effectiveness in Murine Skin Wound Infection Models.
13. Adhesive micro-liquid for efficient removal of bacterial biofilm infection.
14. Exploration of old-age odor inhibition and reduction by Leuconostoc mesenteroides THF-10 isolated from oriental melon.
15. Self-Assembling Lauroylated Antimicrobial Peptide with Superior Antimicrobial Activity, Stability, and Selectivity.
16. A new bacteriophage infecting Staphylococcus epidermidis with potential for removing biofilms by combination with chimeric lysin CHAPSH3b and vancomycin.
17. Characterization of Rhodococcus equi isolated from pyogranulomatous lesions in cats from Brazil.
18. Antimicrobial and anti-inflammatory effects of polyethyleneimine-modified polydopamine nanoparticles on a burn-injured skin model.
19. Exploring the Effects of Sweet Potato Leaves on Skin Health-From Antimicrobial to Immunomodulator.
20. Impeding Biofilm-Forming Mediated Methicillin-Resistant Staphylococcus aureus and Virulence Genes Using a Biosynthesized Silver Nanoparticles-Antibiotic Combination.
21. Bioactive Compounds as Alternative Approaches for Preventing Urinary Tract Infections in the Era of Antibiotic Resistance.
22. What Do We Know About Bacterial Infections in Hidradenitis Suppurativa?-A Narrative Review.

Atopic Dermatitis & SA

1. Infections in Patients with Atopic Dermatitis and the Influence of Treatment.
2. Phytochemical Analysis and Biological Activities of Flavonoids and Anthraquinones from Cassia alata (Linnaeus) Roxburgh and Their Implications for Atopic Dermatitis Management.
3. Genomic epidemiology and phenotypic characterization of Staphylococcus aureus isolated from atopic dermatitis patients in South China.
4. Ablation of the deubiquitinating enzyme cylindromatosis (CYLD) augments STAT1-mediated M1 macrophage polarization and fosters Staphylococcus aureus control.
5. Effectiveness and Tolerability of an Emollient "Plus" Compared to Urea 10% in Patients With Mild-to-Moderate Atopic Dermatitis.
6. Enhanced Anti-Inflammatory and Skin Barrier Repair Effects of Nanoemulsions Supplemented with Boesenbergia rotunda for Atopic Dermatitis.

Dermal Fungal

1. Multiple cutaneous nerve sheath tumours with myxoid differentiation in farmed Russian sturgeons (Acipenser gueldenstaedtii, Brandt and Ratzeburg 1833).
2. Ethnomedicinal indices based ethno-veterinary plant profile of Yousaf Baba Hills, District Mohmand, Khyber Pakhtunkhwa, Pakistan.
3. Thiotepa-Induced Toxicity: A Clinical Mimic of Stevens-Johnson Syndrome and Toxic Epidermal Necrolysis Featuring Severe Mucositis, Diffuse Dusky Discoloration, and Skin Sloughing.
4. Oxazolone-Induced Immune Response in Atopic Dermatitis Using a Goat Model and Exploration of the Therapeutic Potential of Pomegranate Peel Extract.
5. Non-Animal Hyaluronic Acid and Probiotics Enhance Skin Health via the Gut-Skin Axis: An In Vitro Study on Bioavailability and Cellular Impact.
6. Does Cutibacterium Skin Load Impact the Outcomes of Primary Shoulder Arthroplasty?
7. Antifibrotic Function of Itaconate-Based Degradable Polyester Materials.
8. Development of nanospray loaded with ciclopirox for dermal fungus treatment: determination of pro-inflammatory interleukin IL-2 mRNA expression.
9. Synthetically programmed antioxidant delivery by a domesticated skin commensal.
10. Comprehensive Approach for Microbial Isolation from Hidradenitis Suppurativa Tunnels.
11. Fullerenes in vivo. Toxicity and protective effects.
12. Clinicopathological characteristics, long-term prognosis and follow-up recommendations of primary and secondary cutaneous angiosarcoma: A Danish nationwide population-based cohort study.
13. Saccharomyces boulardii (CNCM I-745) ameliorates Ovalbumin-induced atopic dermatitis by modulating the NF-κB signaling in skin and colon.

Competitors

1. Assessment of Anticancer and Antimicrobial Potential of Bioactive Metabolites and Optimization of Culture Conditions of Pseudomonas aurantiaca PB-St2 for High Yields.
2. Virtual Screening and Identification of Novel Oxindole Derivatives as Potential Antimicrobial Agents.
3. Use of standardized nasal and skin decolonization to reduce rates of bacteremia in patients undergoing extracorporeal membrane oxygenation.
4. Distribution of sasX, mupA, and qacA/B genes and determination of genetic relatedness of epidemic methicillin-resistant Staphylococcus aureus strains associated with bloodstream infections in southern China.
5. Staphylococcus aureus colonization and surgical site infections among patients undergoing surgical fixation for acute fractures.
6. The flavonoid-sensing regulator AefR is involved in modulating quorum sensing through repressing the MexEF-OprN efflux pump in Pseudomonas fluorescens.
7. Clinical Features and Antibiotic Susceptibility of Staphylococcus aureus-Infected Dermatoses.
8. Implementing intranasal povidone-iodine in the orthopedic trauma surgery setting to prevent surgical site infections: a qualitative study of healthcare provider perspectives.

Dressings

1. An injectable gelatin methacrylate containing surface-imprinted chitosan-modified bioglass microspheres for potential periodontitis treatment.
2. Mechanically robust calcium alginate/polyacrylamide/tannic acid hydrogel with super toughness, adhesiveness and antimicrobial activity for pork freshness monitoring.
3. Doxycycline-integrated silk fibroin hydrogel: preparation, characterizations, and antimicrobial assessment for biomedical applications.
4. Curcumin-laden hydrogel coating medical device for periprosthetic joint infection prevention and control.
5. Investigation of physicochemical, morphological and biomedical properties of network hydrogels derived from arabinogalactan of acacia-tragacanth gum.
6. Preparation and characterization of multifunctional cellulose-based materials modified by hyperbranched polyamide.
7. Injectable iodine-containing peptide hydrogel for treatment of MRSA infection.
8. Double-network hydrogel dressing regulated by cationic polymer-grafted bacterial cellulose for promote rapid healing of infected wounds.
9. Konjac glucomannan/xanthan gum hydrogels loaded with metal-phenolic networks encapsulated probiotic to promote infected wound healing.
10. Integrated degradation of bacteria, organic pollutants, total phosphorus, and antibiotics in food wastewater through immobilization of Bacillus velezensis on polyethylene glycol-polyvinyl alcohol/sodium alginate/nano-TiO(2) microspheres.
11. Construction of 3D-fabric-based triple-decker agar/sodium alginate/Ca(2+) dual-network composite for wound dressing.
12. Investigation of biocompatibility and antibacterial properties of electrospun chitosan/ polyethylene oxide -based scaffolds containing propolis extract against Enterococcus faecalis, Pseudomonas aeruginosa, Staphylococcus aureus and Staphylococcus epidermidis.
13. Molecular Modification of Queen Bee Acid and 10-Hydroxydecanoic Acid with Specific Tripeptides: Rational Design, Organic Synthesis, and Assessment for Prohealing and Antimicrobial Hydrogel Properties.
14. The Influence of Basil and Cinnamon Essential Oils on Bioactive Sponge Composites of Collagen Reinforced with Hydroxyapatite.
15. Graphene Quantum Dots in Bacterial Cellulose Hydrogels for Visible Light-Activated Antibiofilm and Angiogenesis in Infection Management.
16. Silver Cross-Linking of Silk Sericin-Based Hydrogels for Improved Stability and Broad-Spectrum Antimicrobial Properties.
17. Development of Vitis vinifera nanoemulgel and evaluation of its potential anticancer, antimicrobial and anti-inflammatory.
18. Photoinitiated Nitric Oxide Release as an Antibacterial Treatment for Chronic Wounds.
19. Synthesis of magnetic bio-nanocomposite hydrogel beads based on sodium alginate and β-cyclodextrin: Potential pH-responsive oral delivery anticancer systems for colorectal cancer.
20. Autonomous, Moisture-Driven Flexible Electrogenerative Dressing for Enhanced Wound Healing.
21. Evaluation of hydrogel loading with curcumin and silver nanoparticles: biocompatibilities and anti-biofilm activities.
22. Multifunctional dynamic chitosan-guar gum nanocomposite hydrogels in infection and diabetic wound healing.
23. pH-responsive and self-adaptive injectable sodium alginate/carboxymethyl chitosan hydrogel accelerates infected wound healing by bacteriostasis and immunomodulation.
24. Novel injectable self-healing bifunctionalized chitosan hydrogel with cell proliferation and antibacterial activity for promoting wound healing.
25. A multifunctional hydrogel of cellulose nanofiber/microfibrillated cellulose hierarchical network for photothermal antibacterial and all-solid supercapacitor assembly.
26. Antibacterial and Biodegradable PLA-based Nanofibers Loaded with Natural Phenolic Monoterpenes for Sustainable Biomedical or Food Application.
27. Biomedical Engineering on Smart Polymeric Nanoparticle-Hydrogel Platforms for Efficient Antibiotic Delivery against Bacterial-Infected Wounds.
28. Corrigendum to "Lauric acid-mediated gelatin/hyaluronic acid composite hydrogel with effective antibacterial and immune regulation for accelerating MRSA-infected diabetic wound healing" [Int. J. Biol. Macromol. 290 (2025) 138792].
29. Electrospun Collagen-Coated Nanofiber Membranes Functionalized with Silver Nanoparticles for Advanced Wound Healing Applications.
30. Doxycycline-Loaded pH-Sensitive Microparticles as a Potential Site-Specific Drug Delivery System against Periodontitis.
31. Antimicrobial and Antibiofilm Activity of Chitosan Nanoparticles Against Staphylococcus aureus Strains Isolated from Bovine Mastitis Milk.
32. Investigation of the Antibacterial Activity of ZnO-Loaded Alginate/Hyaluronic Acid Aerogels for Wound Dressing Applications.
33. Fabrication and Characterization of a Stretchable Sodium Alginate Hydrogel Patch Combined with Silicon Nitride and Metalized Halloysite Nanotubes to Develop a Chronic Wound Healing Treatment.
34. NIR-Responsive ZIF-8 Metal-Organic Framework Nanohybrids with Photothermal, Antimicrobial, and Osteoinductive Properties to Prevent Implant Infection.

Staphylococcal skin infection

1. rpoB mutations and their association with rifampicin resistance in clinical Staphylococcus epidermidis.
2. [Dermatological conditions requiring intensive care treatment].
3. Epidemiology of skin infections in Auckland, New Zealand.
4. Diabetes potentiates the emergence and expansion of antibiotic resistance.
5. Formulation of topical gel contains a novel benzoic acid derivative for skin infection treatment: in vitro and in vivo evaluations.
6. Protection of Mice Vaccinated with a New B Cell and T Cell Epitopes Cocktail from Staphylococcus aureus Challenge in Skin Infection Model.
7. Metabolic analysis of the mode of action and mode of resistance of fusidic acid against Staphylococcus aureus.
8. Antimicrobial photodynamic therapy using gold nanoparticles conjugated with 1,9-dimethyl-methylene blue for treating Staphylococcus skin infections.
9. Neck Abscess as a Rare Sequela of Pediatric Varicella-Zoster Infection: A Case Report.
10. Complete genome assemblies and antibiograms of 22 Staphylococcus capitis isolates.
11. Worker risk from ultrasonicator aerosolization in medical device reprocessing, a particulate and bio-burden approach.
12. Molecular Epidemiology Clinical Manifestations, Decolonization Strategies, and Treatment Options of Methicillin-Resistant Staphylococcus aureus Infection in Neonates.
13. Inactivation of Staphylococcus aureus by antimicrobial photodynamic therapy using 1,9-Dimethyl-Methylene Blue: in vitro and in vivo studies.
14. Staphylococcal skin infection isolates from dogs without recent antibiotic exposure are 100% susceptible to clindamycin.
15. Surgical and microbiological characteristics that influence the probability of reoperation to promote bone healing after fracture-related infection diagnosis.

Other news of possible interest