# CONTENTS

## **Section 1: Epidemiological Studies**

1.	Antifungal Activity of Silver Nanoparticles on Fluconazole Resistant Dermatophytes Identified by (GACA)4 and Isolated from Primary School Children Suffering from Tinea Capitis in Ismailia – Egypt	1
2.	Interdigital Tinea Pedis Resulting from Fusarium Species in Dakar, Senegal	2
3.	Emergence of African Species of Dermatophytes in Tinea Capitis: A 17-Year Experience in a Montreal Pediatric Hospital	3
4.	Topical Tavaborole in the Treatment of Onychomycosis Complicated by Dermatophytoma: A Post-hoc Assessment of Phase II Subjects	4
5.	In vitro Antifungal Susceptibility Profiles of 12 Antifungal Drugs against 55 <i>Trichophyton schoenleinii</i> Isolates from Tinea Capitis Favosa Patients in Iran, Turkey and China	5
6.	Characterizing the Clinical Isolates of Dermatophytes in Hamadan City, Central West of Iran, Using PCR-RLFP Method	6
7.	A Comparative Study of the Various Patterns of Oro-cutaneous Fungi and their Sensitivity to Anti-fungals between HIV Patients and Normal Healthy Individuals	8
8.	Frequency of Fungal Species of Onychomycosis between Diabetic and Non-diabetic Patients	9
9.	Examining the Accuracy of Visual Diagnosis of Tinea Pedis and Tinea Unguium in Aged Care Facilities	10
10.	Incidence and Biodiversity of Yeasts, Dermatophytes and Non-dermatophytes in Superficial Skin Infections in Assiut, Egypt	11
11.	A Phase 2, Controlled, Dose-Ranging Study of SB208, an Investigational Topical Nitric Oxide-releasing Drug, for the Treatment of Tinea Pedis	12
12.	Treatment of Onychomycosis Using a 1064-nm Diode Laser with or without Topical Antifungal Therapy: A Single-Center, Retrospective Analysis in 56 Patients	13
13.	Epidemiological Survey of Onychomycosis Pathogens in Japan by Real-time PCR	14
14.	Onychomycosis due to Dermatophytes Species in Iran: Prevalence Rates, Causative Agents, Predisposing Factors and Diagnosis Based on Microscopic Morphometric Findings	15
	Microscopic Morphometric Findings	13

#### **XIV** Year Book of Dermatology — 2019 Fungal Infections

15.	Tinea unguium Onychomycosis Caused by Dermatophytes: A Ten-year (2005–2014) Retrospective Study in a Tertiary Hospital in Singapore	16
16.	Epidemiology of <i>Trichophyton verrucosum</i> Infection in Rennes University Hospital, France: A 12-year Retrospective Study	17
17.	Is Antifungal Resistance a Cause for Treatment Failure in Dermatophytosis: A Study Focused on Tinea Corporis and Cruris from a Tertiary Centre?	18
18.	The Association between Tinea Pedis and Feet-washing Behavior in Patients with Diabetes: A Cross-sectional Study	19
19.	Severe Dermatophytosis in Solid Organ Transplant Recipients: A French Retrospective Series and Literature Review	20
20.	A Randomized, Double-blind Trial of Amorolfine 0.25% Cream and Sertaconazole 2% Cream in Limited Dermatophytosis	21
21.	Dermatophytosis Due to <i>Trichophyton Violaceum</i> at the Parasitology-mycology Laboratory of the Military Hospital of Meknes (About Twelve Cases)	22
22.	Use of Over-the-counter Topical Medications in Dermatophytosis: A Cross-sectional, Single-center, Pilot Study from a Tertiary Care Hospital	23
23.	Tinea Faciei in a Central Portuguese Hospital: A 9-year Survey	24
24.	A Survey Among Dermatologists: Diagnostics of Superficial Fungal Infections – What is Used and What is Needed to Initiate Therapy and Assess Efficacy?	25
25.	Frequency of Mixed Onychomycosis with Total Nail Dystrophy in Patients Attended in a Guatemalan Dermatology Center	26
26.	In vitro Antidermatophytic Activity and Cytotoxicity of Extracts Derived from Medicinal Plants and Marine Algae	27
27.	Magnitude and Associated Risk Factors of Superficial Skin Fungal Infection Among Primary School Children in Southern Tanzania	29
28.	The Efficacy and Safety of Eberconazole Nitrate 1% and Mometasone Furoate 0.1% w/w Cream in Subjects with Inflamed Cutaneous Mycoses	30
29.	Study of Prevalence of Dermatophytes Among Human Immunodeficiency Virus/AIDS Patients in Shadan Institute of Medical Sciences and Teaching Hospital and Research Centre, Hyderabad, Telangana, India	31
30	Enidemiological Characteristics of Tinea Pedis in Military	32

Section 2: Diagnostic Studies			
	1.	Onychomycosis Infections: Do Polymerase Chain Reaction and Culture Reports Agree?	34
	2.	Morphological Effect of the New Antifungal Agent ME1111 on Hyphal Growth of Trichophyton Mentagrophytes, Determined by Scanning and Transmission Electron Microscopy	35
	3.	Development and Evaluation of Indirect Enzyme Linked Immunosorbent Assay for the Serological Diagnosis of <i>Microsporum Canis</i> Infection in Humans	36
	4.	Clinical Evaluation of $\beta$ -tubulin Real-time PCR for Rapid Diagnosis of Dermatophytosis, a Comparison with Mycological Methods	37
	5.	Polymerase Chain Reaction-restriction Fragment Length Polymorphism as a Confirmatory Test for Onychomycosis	38
	6.	Comparison of Photoinactivation of <i>T. rubrum</i> by New Methylene Blue (NMB) and Indocyanine Green (EmunDo®)	39
	7.	A Simple but Yet Novel Stain in the Diagnosis of Onychomycosis	40
	8.	Clinical Evaluation of the DermaGenius® Nail Real-time PCR Assay for the Detection of Dermatophytes and <i>Candida Albicans</i> in Nails	41
	Section 3: Management Studies		
	1.	Copaiba Oil and Its Constituent Copalic Acid as Chemotherapeutic Agents against Dermatophytes	43
	2.	Inhibition of Dermatophytes by Photodynamic Treatment with Curcumin	44
	3.	Antifungal Efficacy of Amphotericin B against Dermatophytes and its Relevance in Recalcitrant Dermatophytoses: A Commentary	45
	4.	A Review of the Most Effective Medicinal Plants for Dermatophytosis in Traditional Medicine	47
	5.	Investigation of the Antifungal Potential of Linalool Against Clinical Isolates of Fluconazole Resistant <i>Trichophyton rubrum</i>	48
	6.	Fractional Carbon Dioxide Laser Assisted Delivery of Topical Tazarotene versus Topical Tioconazole in the Treatment of Onychomycosis	49
	7.	Discovery of Antifungal Compounds from Kampo Medicine Against Dermatophytes	50

#### XVI Year Book of Dermatology — 2019 Fungal Infections

8.	Biosynthesized Silver and Gold Nanoparticles are Potent Antimycotics Against Opportunistic Pathogenic Yeasts and Dermatophytes	51
9.	Triintsin, a Human Pathogenic Fungus-derived Defensin with Broad-spectrum Antimicrobial Activity	52
10.	Onychomycosis in Children: Safety and Efficacy of Antifungal Agents	53
11.	Anti-candidal Activity of Selected Analgesic Drugs Used Alone and in Combination with Fluconazole, Itraconazole, Voriconazole, Posaconazole and Isavuconazole	54
12.	Antifungal Resistance in Dermatology	55
13.	Antibiofilm Treatment for Onychomycosis and Chronic Fungal Infections	57
14.	Newer Topical Treatments in Skin and Nail Dermatophyte Infections	58
15.	Flavonoids from <i>Plinia cauliflora</i> (Mart.) Kausel (Myrtaceae) with Antifungal Activity	59
16.	Biofilms and beyond: Expanding Echinocandin Utility	60
17.	Clinical Laser Treatment of Toenail Onychomycoses	62
18.	Evaluation of Biofilm Formation Ability in Different Candida Strains and Anti-biofilm Effects of ${\rm Fe_3O_4}$ -NPs Compared with Fluconazole: An in vitro Study	63
19.	Luliconazole, A New Antifungal Against <i>Candida</i> Species Isolated from Different Sources	64
20.	In vitro Additive Effect on Griseofulvin and Terbinafine Combinations Against Multidrug-resistant Dermatophytes	65
21.	Traditionally Practiced Medicinal Plant Extracts Inhibit the Ergosterol Biosynthesis of Clinically Isolated Dermatophytic Pathogens	66
22.	A Novel Antibiotic-like Substance Isolation from Dermatophyte, Trichophyton rubrum	67
23.	Caffeic Acid and Licochalcone a Interfere with the Glyoxylate Cycle of <i>Trichophyton rubrum</i>	68
24.	Efficiency of Newly Prepared Thiazole Derivatives Against Some Cutaneous Fungi	69
25.	Management of Dermatophytosis of Nail and Hair	70
26.	Challenges and Opportunities in the Management of Onychomycosis	71
27.	In vitro Antifungal Activity of Novel Triazole Efinaconazole and Five Comparators against Dermatophyte Isolates	72

		Contents	xvii
28.	Pediatric Onychomycosis: The Emerging Role of Topical Therapy		73
29.	Tacrolimus, not Triamcinolone Acetonide, Interacts Synergistically with Itraconazole, Terbinafine, Bifonazole, and Amorolfine against Clinical Dermatophyte Isolates		74
30.	Efficacy and Tolerability of Amorolfine 5% Nail Lacquer in Combination with Systemic Antifungal Agents for Onychomycosis: A Meta-analysis and Systematic Review		75
31.	Promising Antifungal Activity of <i>Croton tricolor</i> Stem Essential Oil Against <i>Candida</i> yeasts		76
32.	Diffuse Dermatophytosis Occurring on Dimethyl Fumarate Therapy		77
33.	In vivo Antifungal Activity of Dipyrithione Against <i>Trichophyton rubrum</i> on Guinea Pig Dermatophytosis Models		78
34.	Antifungal Therapeutic Failures in India: An Important Issue being Overlooke	d	79
35.	Utilization of Lichen Metabolites as Natural Antifungal Drug against Dermatophytosis		81
36.	Investigation of Ethyl Cellulose Microsponge Gel for Topical Delivery of Eberconazole Nitrate for Fungal Therapy		82
37.	A Comparative Study of Efficacy and Safety of Eberconazole versus Terbinafin in Patients of Tinea Versicolor	e	83
38.	Antifungal Drug Susceptibility Profile of Clinically Important Dermatophytes and Determination of Point Mutations in Terbinafine-resistant Isolates		84
39.	The Role of Shoe and Sock Sanitization in the Management of Superficial Fungal Infections of the Feet		85
40.	Eberconazole—Pharmacological and Clinical Review		86
41.	Propolis for the Treatment of Onychomycosis		87
42.	A Comparative Study of Quality of Life of Eberconazole versus Terbinafine in Patients of Tinea Versicolor		88
	Section 4: Miscellaneous Studies		
1.	Tinea folliculorum Complicating Tinea of the Glabrous Skin: An Important yet Neglected Entity		90
2.	Coexistence of Fungal Infections in Psoriatic Nails and their Correlation with Severity of Nail Psoriasis		91

### xviii Year Book of Dermatology — 2019 Fungal Infections

3.	A Novel Dermatophyte Relative, <i>Nannizzia perplicata</i> sp. nov., Isolated from a Case of Tinea Corporis in the United Kingdom	92
4.	PRP8 Intein in Dermatophytes: Evolution and Species Identification	93
5.	In silico Characterization of Tandem Repeats in <i>Trichophyton rubrum</i> and Related Dermatophytes Provides New Insights into their Role in Pathogenesis	94
6.	The Frequency, Antifungal Susceptibility and Enzymatic Profiles of <i>Candida</i> Species in Cases of Onychomycosis Infection	96
7.	IL-17-mediated Immunity Controls Skin Infection and T Helper 1 Response during Experimental <i>Microsporum Canis</i> Dermatophytosis	97
8.	In vitro Biofilms and Antifungal Susceptibility of Dermatophyte and Non-dermatophyte Moulds Involved in Foot Mycosis	98
9.	Microstructural Alterations in the Onychomycotic and Psoriatic Nail: Relevance in Drug Delivery	99
10.	Majocchi's Granuloma: Current Perspectives	100
11.	Superficial Fungal Infection among Patients with Immune Bullous Diseases	101
12.	Emerging Atypical and Unusual Presentations of Dermatophytosis in India	102
13.	Onychomycosis Secondary to Onychomadesis: An Underdiagnosed Manifestation	103
14.	Quantitative and Structural Analyses of the in vitro and ex vivo Biofilm-forming Ability of Dermatophytes	104
15.	Clinicopathological Features and Course of Cutaneous Protothecosis	105
16.	Pustular Tinea Manuum from Trichophyton Erinacei Infection	106
17.	Tinea of Vellus Hair: A Diagnostic and Therapeutic Challenge	107
18.	Relationship of Amino Acid Concentrations in Blood with Occurrence of Dermatophytosis	109
19.	Assessment of the Subtilisin Genes in <i>Trichophyton rubrum</i> and <i>Microsporum canis</i> from Dermatophytosis	110
20.	Tinea Corporis Caused by <i>Trichophyton equinum</i> in a Rider and Review of Literature	111
21.	In vitro Models of Dermatophyte Infection to Investigate Epidermal Barrier Alterations	112
Index		113