TABLE OF CONTENTS

PLENARY LECTURES

Lymphology in the Second Millennium
   M Földi .......................................................... 3
The Avian Model in Studies of Embryonic and Tumor-induced Lymphangiogenesis
   J Wilting .......................................................... 14
Lymphatics Require Two Valve Systems
   GW Schmid-Schönbein ........................................ 16
Morphology and Function of Interstitial Matrix, Vessels and Cells in Chronic Lymphoedema
   P Ruck, E Kaiserling ........................................... 17
AIDS, Kaposi Sarcoma, and the Lymphatic System: Lymphologic Perspective on the Known and the Unknown/Undone: Update 1999
   MH Witte, CL Witte ............................................. 18

BASIC LYMPHOLOGY: MORPHOLOGY/PHYSIOLOGY/PATHOPHYSIOLOGY

Lymph From Inflamed Tissues Provides Information on Local Immune Reaction to Drugs
   WL Olszewski, H Galkowska, A Ziólkowska, M Zaleska ................................. 25
Simulation of Physical Treatment Modalities in a Rodent Model of Periferal Lymphedema
   M Bernas, L Lee-Donaldson, P Summers, B Kriederman, L Ortiz, BD Stea,
   MH Witte, CL Witte ............................................. 30
Effect of Vascular Endothelial Growth Factor on Microcirculatory Water and Protein Flux in the Rat Intestine
   C Martin, M Witte, M Bernas, D Way, F Travis, C Witte .................................. 32
Capillary Filtration Coefficient in Lymphoedema Patients With Normal Lymphangioscintigraphy
   CF Petlund, E Stranden ........................................... 35
Lymphatics of the Skin
   TJ Ryan .......................................................... 39
Presence of Thrombomodulin in the Human Initial Lymphatic Shown by Immunohistochemical Method
   M Ohkuma, T Nishioka ........................................... 41
Apoptosis and Free DNA in Human Peripheral Lymph
   B Interewicz, H Galkowska, WL Olszewski, NE Miller .................................... 46
High Content of Adipose Tissue in Chronic Arm Lymphedema-A Limiting Factor for Treatment Outcome
   H Brorson, M Aberg, H Svensson ........................................ 52
Liposuction of the Lymphatic System - An Anatomical Study of the Lower Legs
   RGH Baumeister, JN Hoffmann, A Frick, R Putz ............................................ 55
Detection of Tissue Fluid Changes by Bioimpedance in Arms at Risk of and with Clinically Manifest Lymphoedema Subsequent to Breast Cancer Surgery
   NB Piller, A Esterman ............................................. 58
Unexpected Histopathological Findings in Peripheral Lymphedema
   A Dellachà, F Boccardo, A Zilli, F Napoli, E Fulcheri, C Campisi ........................ 62

ANGIODYSPLASIAS AND GENETICS
Alt-2, Putative Vaccine Candidate for Human Lymphatic Filariasis

R Salbarinathan, RB Narayanan, JS McCarthy, K Jayaraman, P Kaliraj ............... 155

Immunosuppression in Microfilaraemics in Bancroftian Filariasis

RB Narayanan .......................................................... 156

Epithelial Apoptosis and NF-6B Regulated Cytokine Gene Expression in Tropical Pulmonary Eosinophilia Induced Lung Damage

B Krishnarnoorthy, K Narayanan, A Balakrishnan ........................................ 157

Characterisation of Brugia Malayi Translationally Controlled Tumor Protein (TCTP) Cloned in Escherichia Coli

M Gnanasekar, KVN Raja Rao, RB Narayanan, A Scott, K Jayaraman, P Kaliraj ....... 158

Detection of Circulating Filarial Antigen of Wuchereria Bancrofti and Brugia Malayi Patients Using Monospecific WbSXP Antibodies

D Eawaran, M Gnanasekar, RB Narayanan, TB Nutman, P Kaliraj ................. 159

Immune Response to non Parasite Vaccine Antigens in Human Lymphatic Filariasis

S Suba, P Kaliraj, S Srinivasan, TB Nutman, RB Narayanan ............................. 160

Accessory Cell Functions in Filariasis

B SasiSekhar, M Aparna, P Kaliraj, RB Narayanan ........................................ 161

Histopathology and Immunohistopathology of Skin of Different Grades of Lymphoedema (W. Bancrofti) in South India

A Elango, KP Paily, SP Pani, J Yuvaraj, MP Anand Paul Kumar .................... 162

Role of Aerobic Bacteria in the Actio- Pathogenesis of Acute Adenolymphangitis (ADL) in Filarial Lymphoedema

N Vijayalakshmi, RS Rao, MP Anand Kumar, J Yuvaraj, SP Pani ................... 163

Lymphoscintigraphic Assessment of Filarial Lymphoedema

TMR Panicker, M Paul Korath, K. Jugadeesan .............................................. 164

Protein Manifestation of Lymphatic Filariasis

VR Chitale .................................................. 165

Immunomonitoring Followed by OpDEC Therapy in Management of Lymphatic Filariasis in an Endemic Area

BC Harinath, MVR Reddym VK Mehta ............................................. 166

Immunological and Histochemical Changes in Filarial Lymphoedema

P Jain, M Agarwal, U Singh, NC Arya ............................................. 167

Challenging Role of Zeneca Public Health Products, Icon@ and Acetellic@, in the Control of Malaria, Filariasis and Other Vector Borne Diseases

C Krishna Rao .................................................. 168

Molecular Characterization of Hsp70 from Human Lymphatic Filarial Parasite Wuchereria Bancrofti

V Ravi, J Kubofcik, M Geetha, RB Narayanan, K Jayaraman, TB Nutman, P Kaliraj ............................................. 170

Lymphonodovenous Shunt for Filarial Lymphedema Reasons for Success and Failure

V Govardhana Rao, N Ananthakrishnan, SP Pani, V Kate, J Yuvaraj, K Krishnamoorthy ............................................. 171

The Science and Art of Lymphatic Filariasis. Elimination in India: Hopes for the Next Millennium

NC Appavoo, SP Pani, KP Das. Department of Public Health and Preventive Medicine, Government of Tamil Nadu, Vector Control Research Centre, World Health Organization, and Indian Council of Medical Research, Pondicherry, India (Reproduced with permission) ............................................. 173

LYMPHEDEMA AND TREATMENT

Arm Morbidity After Breast Conserving Therapy for Breast Cancer

I Tengrup, L Tenvall-Nittby, I Christiansson, M Laurin .................................. 195

Does Physical Treatment of Lymphedema Reveal An Unrecognized Arterial Hypertension or Aggravate a Well Recognized Hypertension?

A Pissas, K Rzal, E Bessueille, N Salloum, O Abrieu, G Allard Latour ............ 196

The First Consultation: A Real Challenge for Lymphologist and the Cornerstone of the
Treatment of Lymphedema  
A Pissas, K Rzial, E Dautheville, J Robert, G Mialhe, S Delrieu  ................................................................. 201

Lymph Drainage Therapy (LDT): Manual Lymphatic Mapping (MLM) and its Clinical Applications to Lymphedema  
BJ Chikly  .................................................................................................................................................. 204

Management of Lymphedema in Rural Areas  
TJ Ryan .................................................................................................................................................. 208

Wishes for Lymphology in the Next Millennium  
JR Casley-Smith ........................................................... 211

A Review of Clinical Trials of Benzo-Pyrones  
JR Casley-Smith ........................................................... 213

Trial Treatment of Lymphedema by Vibration  
M Ohkuma ................................................................. 218

A Pilot Study on Prevention of Secondary Lymphedema  
F Boccardo, A Zilli, M Pianezza, E Pasero, A Macció, F Napoli, C Campisi ......................................................... 222

Early and Late Decreased Shoulder Mobility and Arm Lymphedema After Breast Cancer Treatment. A Prospective 6-Month Study With Two Year Follow-Up  
K Johansson, M Albertsson, C Ingvar, C Ekdahl ...................................................................................... 226

The Patient with Lymphedema...Our Best Collaborator?  
E Richter, H Caldevilla, J Richter ................................................................. 229

Maiquen - A New Drug for Treatment of Chronic Lymphedema  
N Liu, J Zhang, H Song, Q He, Q Liu, Z Lin ................................................................. 233

LYMPHATIC SURGERY AND MICROSURGERY

Microsurgery for the Treatment of Peripheral Lymphedema: 25 Years Clinical Experience  
C Campisi ................................................................. 239

Lymphatic-Venous-Lymphatic Plasty in Reconstructive Lymphatic Microsurgery: Long Term Outcome  
F Boccardo, A Zilli, M Pianezza, E Pasero, A Macció, F Napoli, C Campisi  ................................................................. 244

Complete Reduction of Arm Lymphedema After Breast Cancer by Liposuction-5 Year Results  
H Brorson, M Aberg, H Svensson ................................................................. 250

Microsurgery and Endoscopy in the Treatment of Lymphatic Blockades  
RGH Baumeister, A Frick, J Krumbach ................................................................. 254

REHABILITATION

Partner Training as an Effective Means of Managing Chronic Arm Lymphoedema Subsequent to Breast Cancer Surgery  
NB Piller, J Rice, R Heddle, A Miller ................................................................. 261

Quality of Life Scale in Upper Limb Lymphoedema—A Validation Study  
R Launois, F Alliot ................................................................. 266

Study of Complex Decongestive Physiotherapy Results in Patients with Lymphedema and Perception of These Results  
F Alliot, M Pascot, S Ghabboun, RV Cluzan, R Launois ................................................................. 271

The Impact of a National Lymphedema Network  
S Thiadens ................................................................. 275

Author index ................................................................. 281