

Asian Lupus Summit by the Lupus Academy

Radisson Blu Hotel Cebu
Cebu City
Philippines

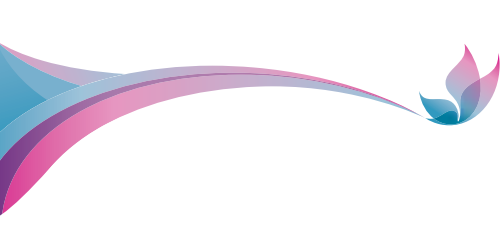
31st March to 1st April 2014

Abstract Book



LupusAcademy

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Meeting organisation

The content for this meeting has been developed under the control of the meeting Chair, Professor Sandra Navarra, Professor and Head of Rheumatology at University of Santo Tomas, Manila, and consultant Rheumatologist at St. Luke's Medical Center in the Philippines, and the Lupus Academy Steering Committee Chair, Professor Ronald van Vollenhoven, Professor and Chief, Unit for Clinical Therapy Research, Inflammatory Diseases (ClinTRID), Karolinska Institute, Sweden, taking responsibility as CME Course Director. No sponsoring or supporting companies have had any influence over the presentation of any aspects of this meeting. CME compliance, accreditation and fulfilment has been facilitated by European CME Forum, on behalf of Lupus Academy.



Financial supporters

Lupus Academy has received financial support by means of independent educational grants from GSK and UCB, neither company has had any influence over the development or presentation of any aspect of this meeting.



Welcome

Dear Friends and Colleagues,

We are delighted to welcome you to the Asian Lupus Summit (ALS) organised by the Lupus Academy.

Now in its third year, the Lupus Academy continues to grow in its commitment to providing high quality and clinically relevant education that will support you in your strive for better patient outcomes in SLE.

This commitment is reflected in this first satellite meeting, which has full Continuing Medical Education (CME) accreditation and brings a programme of cutting edge insights into advances in global research and clinical practice in lupus and allied diseases.

The scientific component of this programme, developed by our Steering Committee, is designed to create a highly interactive forum through which we can develop a logical approach to the management of lupus across Asia and the rest of the world. It will give you the opportunity to meet world-leading clinicians and scientists and, through the sharing of clinical experience, develop your knowledge in this high-profile therapeutic area.

We sincerely hope that the meeting will provide you with new ideas for your clinical work, enhanced enthusiasm for collaborative research, and fruitful discussions with your colleagues who care for patients with lupus.

We look forward to meeting and talking with you here in Cebu.

With kind regards,

The Lupus Academy Steering Committee

Professor Sandra N. Navarra

ALS Chair (2014) and Lupus Academy
Programme Director and co-Chair (2014)

Professor Ronald F. van Vollenhoven and Professor Thomas Dörner

Lupus Academy Programme Directors
and co-Chair (2014)

Professor Roger A. Levy; Professor Ricard Cervera; Professor David A. Isenberg; Professor Munther A. Khamashta;
Professor Andrea Doria; Professor Bevra H. Hahn; Professor Richard A. Furie; Professor Murray B. Urowitz; Professor Zahir Amoura

Mission Statement

The Lupus Academy is a long-term initiative committed to improving patient outcomes in SLE and allied diseases. By providing a highly interactive educational forum, the Lupus Academy is dedicated to sharing best clinical practice through the dissemination and discussion of cutting edge scientific and clinical research.



Programme

Monday 31st March 2014			Page	
13:00	Registration			
Case Study Workshops				
14:00	<i>Moderator/Facilitator: Lyndon J.Q Llamado (Philippines)</i> Difficult lupus	▲	Mo-Yin Temy Mok (<i>Hong Kong, China</i>) & Worawit Louthrenoo (<i>Thailand</i>)	20
	<i>Moderator/Facilitator: Evan Glenn S. Vista (Philippines)</i> Lupus nephritis	◐	Daniel T.M. Chan (<i>Hong Kong, China</i>) & Yingyos Avihingsanon (<i>Thailand</i>)	22
	<i>Moderator/Facilitator: Sargunan Sockalingam (Malaysia)</i> Cardiovascular disease in SLE	■	Bevra H. Hahn (<i>USA</i>) & Laniyati Hamijoyo (<i>Indonesia</i>)	24
15:30	Coffee			
Case Study Workshops				
16:00	<i>Moderator/Facilitator: Lyndon J.Q Llamado (Philippines)</i> Difficult lupus	▲	Mo-Yin Temy Mok (<i>Hong Kong, China</i>) & Worawit Louthrenoo (<i>Thailand</i>)	20
	<i>Moderator/Facilitator: Evan Glenn S. Vista (Philippines)</i> Lupus nephritis	◐	Daniel T.M. Chan (<i>Hong Kong, China</i>) & Yingyos Avihingsanon (<i>Thailand</i>)	22
	<i>Moderator/Facilitator: Sargunan Sockalingam (Malaysia)</i> Cardiovascular disease in SLE	■	Bevra H. Hahn (<i>USA</i>) & Laniyati Hamijoyo (<i>Indonesia</i>)	24
17:30	Close			

Tuesday 1st April 2014			Page
08:00	Opening Address	Roger A. Levy (<i>Brazil</i>)	
Plenary I: Moderators: Mandana Nikpour (<i>Australia</i>) & Cesarius Singgih Wahono (<i>Indonesia</i>)			
08:15	Lupus in Asia: unmet needs	Chak-Sing Lau (<i>Hong Kong, China</i>)	26
08:40	B and T cell cross-talk in SLE	Thomas Dörner (<i>Germany</i>)	28
09:05	Current concepts in antiphospholipid syndrome	Roger A. Levy (<i>Brazil</i>)	30
09:30	Discussion		
09:50	Coffee		
Plenary II: Moderators: Thomas Dörner (<i>Germany</i>) & Chak-Sing Lau (<i>Hong Kong, China</i>)			
10:35	Special concerns in children and adolescents	Christine B. Bernal (<i>Philippines</i>)	32
11:00	Pregnancy and SLE therapy	Aisha Lateef (<i>Singapore</i>)	34
11:25	Discussion		
11:50	Lunch		
Plenary III: Moderators: Ricard Cervera (<i>Spain</i>) & Shue-Fen Luo (<i>Taiwan</i>)			
13:00	Update on the diagnosis and management of neuropsychiatric SLE	Sargunan Sockalingam (<i>Malaysia</i>)	36
13:25	Update on the management of lupus nephritis	Daniel T.M. Chan (<i>Hong Kong, China</i>)	38
13:50	Treat-to-target in SLE	Mandana Nikpour (<i>Australia</i>)	40
14:15	Discussion		
14:45	Coffee		
Plenary IV: Moderators: Sandra V. Navarra (<i>Philippines</i>) & Nan Shen (<i>China</i>)			
15:10	Optimising outcomes in SLE: best practice	Bevra H. Hahn (<i>USA</i>)	42
15:35	Advances in SLE therapy	Ricard Cervera (<i>Spain</i>)	44
16:00	Discussion		
16:20	Summary and close	Sandra V. Navarra (<i>Philippines</i>)	

Biographies



Dr Yingyos Avihingsanon, MD

Chulalongkorn University, Bangkok, Thailand

Dr Yingyos Avihingsanon is a Thai nephrologist who is an expert in lupus nephritis and kidney diseases. He is currently Chief of the Lupus Research Unit, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand. He has more than 10 years' experience in conducting translational research and clinical trials on lupus nephritis and kidney transplantation. His works focus on non-invasive biomarkers using urinary gene/protein expression profiles. Recent research focuses on the relationship between B-cell related molecules (BAFF/APRIL) and the prognosis of patients with lupus nephritis. He has been commissioned to write reviews and original articles for international, well renowned journals, and to give lectures at various international conferences on the subject of lupus nephritis.

His recent publications are in *Arthritis Research & Therapy*, *Kidney International* and *Lupus*. His clinical studies include therapeutic drug monitoring of mycophenolic acid and clinical trials on lupus nephritis.

Disclosures

Grant/Research:

Novartis

Consultant/Advisor:

Astellas Pharma



Dr Christine Bernal, MD

University of Santo Tomas, Manila, Philippines

Christine Bernal is Chief of the Pediatric Rheumatology Section at the University of Santo Tomas (UST) Faculty of Medicine and Surgery, Manila, Philippines. Dr Bernal finished her degree in Medicine at the same university, where she also did her residency training in pediatrics. This was followed by a fellowship in pediatric rheumatology at Baylor College of Medicine, Houston, Texas. During her training, she received numerous awards including the honour of being one of the 10 most outstanding Fellows of the American College of Rheumatology (ACR), the Amgen Pediatric Rheumatology Research Award and the Feigin Award for the most outstanding resident in Pediatrics at Texas Children's Hospital. As a Fellow, she has presented her research papers on systemic lupus erythematosus (SLE) and Kawasaki disease at international conferences and authored a chapter in a rheumatology book.

Dr Bernal is a faculty member in the Department of Pediatrics of UST and works as a Consultant in most of the tertiary hospitals in Manila. She is an advocate of early recognition of pediatric rheumatic diseases and has lectured all over the Philippines to educate pediatricians, making her a very sought after speaker in the field of pediatric rheumatology. Her research interests include SLE, juvenile idiopathic arthritis and Kawasaki disease.

Disclosures

None



Professor Ricard Cervera, MD, PhD, FRCP
Hospital Clínic, Barcelona, Catalonia, Spain

Disclosures

Consultant/Advisor:

Eli Lilly, GlaxoSmithKline,
MedImmune, UCB

Professor Cervera is a member of the Lupus Academy Steering Committee.

Ricard Cervera is Head of the Department of Autoimmune Diseases (which he co-founded in 1995), at Hospital Clínic, Barcelona. He is also Group Leader of the Research Group on Systemic Autoimmune Diseases at the Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS) and Professor at the University of Barcelona where he coordinates the Master's on Autoimmune Diseases. He qualified in medicine in 1983 from the University of Barcelona and received his PhD in 1988 for his thesis on anticardiolipin antibodies. He spent 2 years at the Lupus Research Unit at The Rayne Institute, St Thomas' Hospital, London.

Professor Cervera is an Associate Editor of the journal *Lupus Science & Medicine* and is on the Editorial Boards of 20 medical journals. He is coordinator of the European Forum on Antiphospholipid Antibodies and of the European Working Party on Systemic Lupus Erythematosus (SLE) (Euro-Lupus Group). He is Chairman of the Medical Advisory Board of the Catalan Association

of Lupus Patients and Medical Advisor to Lupus Europe. He chaired the 6th and 8th International Congress on Autoimmunity, the 1st and 2nd Latin-American Congresses on Autoimmunity, the 5th Meeting of the European Forum on Antiphospholipid Antibodies and the 8th European Lupus Congress.

Professor Cervera's research interests include clinical and epidemiological aspects of systemic autoimmune diseases, particularly SLE and antiphospholipid syndrome, with special focus on its 'catastrophic' variant. He has presented over 300 invited lectures and published more than 800 scientific papers (H-factor, 57), including original articles at the *New England Journal of Medicine*, *The Lancet*, *Annals of Rheumatic Diseases*, *Arthritis & Rheumatism*, *American Journal of Medicine* and *Medicine* (Baltimore). He is co-Editor of 25 books, including 'The Antiphospholipid Syndrome', 'Vascular Manifestations of Systemic Autoimmune Diseases' and 'Diagnostic Criteria in Autoimmune Diseases'.

Biographies



Professor Daniel Tak Mao Chan, MBBS, MD, FRCP(UK), FHKCP, FHKAM, FASN
University of Hong Kong, Queen Mary Hospital, Hong Kong, China

Disclosures

None

Daniel Tak Mao Chan is currently Chair Professor, Yu Chiu Kwong Professor of Medicine, and Chief of Nephrology at the Department of Medicine, University of Hong Kong, Queen Mary Hospital, Hong Kong, China.

He graduated from the University of Hong Kong in 1985 and received training in nephrology and internal medicine in Hong Kong and at Guy's Hospital in London, United Kingdom. Professor Chan is a Fellow of the Hong Kong College of Physicians, Hong Kong Academy of Medicine, and the Royal Colleges of Physicians in the United Kingdom. He was appointed Professor of Medicine in 1999 and Chair Professor in 2005. He has served as Chief of Clinical Service at the Department of Medicine and Associate Dean of the Li Ka Shing Faculty of Medicine, and is now an elected Member of the Senate at the University of Hong Kong.

Professor Chan has previously served as President of the Asian Pacific Society of Nephrology, President of the Hong Kong Society

of Transplantation, Chairman of the Nephrology Board and Programme Director of the Advanced Internal Medicine Board of the Hong Kong College of Physicians. He is currently Chairman of the Central Coordinating Committee for Internal Medicine of the Hong Kong Hospital Authority, vice-President of the Hong Kong Kidney Foundation, Medical Subgroup Member of the Steering Committee on Strategic Review on Healthcare Manpower Planning and Professional Development of the Hong Kong Government, Council Member of the Hong Kong College of Physicians, and Honorary Treasurer of the Asian Society of Transplantation. He is recipient of the Kenzo Oshima Award from the Asian Pacific Society of Nephrology.

Professor Chan's research interests include the treatment and pathogenesis of lupus nephritis and viral hepatitis in kidney transplant recipients. He is recognised for pioneering work on the use of mycophenolate mofetil in the treatment of lupus nephritis. His research impact is ranked in the top 1% internationally by Essential Science Indicators.



Professor Dr Thomas Dörner, MD
Charité University Hospitals, Berlin, Germany

Thomas Dörner is a board certified Rheumatologist and Professor of Rheumatology and Hemostaseology at Charité University Hospitals, Berlin, and group leader at the German Research Center of Rheumatology, Berlin (DRFZ). He qualified in medicine in 1990 at Charité University Hospitals, Berlin, and received his board certification in internal medicine in 1995 before undertaking a postdoctoral fellowship at the University of Texas, Southwestern Medical Center at Dallas, where he researched delineating molecular aspects of the B-cell receptor gene usage in autoimmune diseases.

Professor Dörner has received a number of international and national awards, including the Senior Scholar Award of the American College of Rheumatology, the H Schultze Award of the German League Against Rheumatism, Randy Fischer Prize for Excellence in flow cytometry and the Schoen Award of the German Society of Rheumatology.

Professor Dörner has served as a member of Editorial Boards of leading journals in rheumatology and immunology, including *Arthritis & Rheumatism*, *Arthritis Research & Therapy*, *Annals of the Rheumatic Diseases*, *Global Arthritis Research Network (GARN)*, *Current Reviews in Rheumatology*, *Brazilian Journal of Rheumatology*, *European Journal of Immunology*, *Lupus Science & Medicine* and *Rheumatology Reviews*.

Professor Dörner has led various clinical trials of rheumatic diseases, including systemic lupus erythematosus, Sjögren's syndrome, rheumatoid arthritis and seronegative spondyloarthropathies. His research interests focus on the characterisation of disturbances of humoral autoimmunity and abnormalities of B cell subsets in the blood *versus* tissue (lupus, neonatal lupus syndromes, Sjögren's syndrome), exploring innovative therapeutic approaches with particular focus on B-cell directed therapy as well as improving diagnostic tools in autoimmune diseases.

Disclosures

Grant/Research:

Roche/Chugai, Sanofi, UCB

Consultant/Advisor:

Eli Lilly, Roche/Chugai, Takeda, UCB

Speakers' Bureau:

Roche/Chugai, Takeda, UCB

Professor Dörner is Programme Director and co-Chair of the Lupus Academy (2014).



Professor Bevra H. Hahn, MD
University of California, Los Angeles, United States

Bevra Hahn is Professor of Medicine (Emeritus, recalled for part time work) in the Division of Rheumatology at the University of California, Los Angeles (UCLA). She received her medical degree and Rheumatology training at Johns Hopkins University School of Medicine in Baltimore, Maryland. She was Chief of Rheumatology at UCLA for 30 years.

Professor Hahn has published research in clinical investigations and basic studies of immune tolerance (including the invention of a tolerizing peptide) and T cell biology as they apply to systemic lupus erythematosus. For these works she and her colleagues have received several

awards, including the Carol-Nachman International Award for Rheumatology Research, awards from the British Society for Rheumatology and the Dutch Society for Rheumatology, the James Klineberg Medal of the US Arthritis Foundation, an award from the Canadian Rheumatism Society, and the Gold Medal of the American College of Rheumatology (ACR). Professor Hahn was President of the ACR (1999–2000). She is co-Editor, with Daniel Wallace, of the 'Dubois' Lupus Erythematosus' textbook and is first author of the ACR guidelines for the management of lupus nephritis. She continues to work in clinical and basic research devoted to the study of SLE.

Disclosures

Grant/Research:

Teva

Consultant/Advisor:

Eisas, Eli Lilly, GlaxoSmithKline

Professor Hahn is a member of the Lupus Academy Steering Committee.

Biographies



Dr Laniyati Hamijoyo, MD

University of Padjadjaran Bandung, Indonesia

Disclosures

None

Laniyati Hamijoyo is on the medical staff of the Faculty of Medicine, University of Padjadjaran Bandung, Indonesia. After finishing her residency training in internal medicine and magisterial of health education at the University of Padjadjaran, Bandung in 2005, she took her fellowship training in rheumatology at the University of Santo Tomas (UST) Hospital, Manila, Philippines and graduated in 2007.

Dr Hamijoyo has received several national and international awards including International Scholarship Awards from the Japanese College of Rheumatology (2007) and Asia Pacific League of Associations for Rheumatology Congress (APLAR, 2008), Research Paper Award from the

UST, Manila (2007), Philippine Rheumatology Association (PRA, 2008) and Indonesian Rheumatology Association (IRA, 2008). She serves as member of several medical organisations, such as IRA, PRA, APLAR, and the Asia Pacific Lupus Collaboration (APLC), and is actively involved in several national and international clinical trials.

Her main interest is in the field of lupus where she has conducted several studies, been author and co-author of several journal articles and has worked on the lupus database in the Philippines. She is currently developing a lupus database in Indonesia, where she also supervises physician and lay education programmes.



Dr Aisha Lateef, MBBS, MRCP, MMed

National University Health System, Singapore

Disclosures

None

Aisha Lateef is consultant Rheumatologist and Internist at the National University Health System (NUHS), Singapore. She graduated from Karachi University, Pakistan in 1992 and practiced as a primary care physician for a few years. She joined the NUHS in 2001 and completed her residency and fellowship at the same institution. She received further training as a rheumatology research fellow at Johns Hopkins Hospital, Baltimore, Maryland, United States.

Her main research interests are clinical and translational research in systemic lupus erythematosus (SLE), with a special focus on plasma microparticles and accelerated atherosclerotic risk. She is a key member of the “Lupus Microparticles Research Group”, and one of the founding members of SOCRATES (Society for Clinical Research and Translation for Extracellular Vesicles) in Singapore.

Dr Lateef has published many articles and text book chapters on different aspects of SLE management, serves as a reviewer for many rheumatology journals and plays an active role in multiple local and regional rheumatology organisations. She is enthusiastic about teaching medical students and junior doctors. Dr Lateef is a core faculty member of the rheumatology and internal medicine fellowship programmes at the NUHS, and Assistant Professor of Medicine at Yong Loo Lin School of Medicine, National University of Singapore.



Professor Chak-Sing Lau, MBChB MD (Hons) FRCP, FHKCP, FHKAM
University of Hong Kong, Hong Kong, China

Chak-Sing Lau is Daniel CK Yu and Chair Professor in Rheumatology and Clinical Immunology, Director of the Institute of Medical and Health Sciences Institute and Associate Dean (Teaching & Learning) of the Li Ka Shing Faculty of Medicine, University of Hong Kong, China.

Professor Lau's research interests include systemic lupus erythematosus, rheumatoid arthritis and related disorders. He has published over 250 articles and 400 abstracts, and delivered over 370 presentations at various meetings, including over 160 invited lectures. He is the founding Chairman of the Hong Kong Arthritis & Rheumatism Foundation, a government-approved non-profit-making charitable organisation formed in 2001 to improve the understanding and health of people

with arthritis and rheumatic disorders. From 2006 to 2008, Professor Lau served as President of the Asia Pacific League of Associations for Rheumatology (APLAR). He is also a co-founder of the Asian Congress on Autoimmunity, Huaxia Congress on the Management of Rheumatic Diseases and Ten Topics in Rheumatology in Asia.

Professor Lau is on the editorial boards of numerous peer-reviewed journals including *Arthritis Therapy and Research*, *Clinical Rheumatology*, *Inflammation and Inflammopharmacology*, *Lupus* and *Nature Reviews Rheumatology*, and was Editor-in-Chief of the *International Journal of Rheumatic Diseases*, the official journal of APLAR between 2004 and 2012.

Disclosures

Speakers' Bureau:

AbbVie, GlaxoSmithKline, Pfizer, Roche



Professor Roger A. Levy, MD, PhD
The State University of Rio de Janeiro, Brazil

Roger Levy is Associate Professor of Rheumatology at The State University of Rio de Janeiro. Graduating from medical school at the Federal University of Rio de Janeiro in 1986, he subsequently completed a fellowship programme at the Hospital for Special Surgery, Cornell Medical College, New York in 1989 and received his PhD in Biological Sciences from the Biophysics Institute – Immunology, at the Federal University of Rio de Janeiro in 1994. That same year he joined the staff at State University Hospital and started the pregnancy clinic dedicated to patients with rheumatic conditions.

Professor Levy holds positions on a number of Editorial Boards including the journals of *Arthritis and Rheumatology*, *Arthritis Care and Research*, *Clinical Rheumatology*, *Lupus*, *Lupus Science & Medicine*, *Seminars of Arthritis and Rheumatism*, *Rheumatology*, *Autoimmunity Reviews* and *The Brazilian Journal of Rheumatology* (of which he is a former Editor). He was the Scientific Director

of the XXV Brazilian Congress of Rheumatology and chaired the 2nd Latin American Congress of Autoimmunity (Rio de Janeiro, 2006). Professor Levy is past-President of the Rio de Janeiro Rheumatology Society (2007–2008) and is currently the Scientific Director. He has coordinated the Vasculitis and Thrombophilias Committee of the Brazilian Society of Rheumatology since 2009 and chaired the extremely successful XIV International Antiphospholipid Congress (APLA) and IV Latin American Congress of Autoimmunity (LACA) that was held in Rio de Janeiro in September 2013 for almost 700 attendees.

Professor Levy's research is based around the clinical and immunologic aspects of systemic lupus erythematosus, antiphospholipid syndrome, Sjögren's syndrome and pregnancy in rheumatic patients. He has published 100 articles in medical journals, over 200 abstracts, two books, 20 book chapters and has lectured in many countries.

Disclosures

Research Grants:

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Consultant/Advisor:

AbbVie, AstraZeneca, GlaxoSmithKline, Janssen, Pfizer

Speakers' Bureau:

AbbVie, GlaxoSmithKline, Janssen, Roche

Professor Levy is a member of the Lupus Academy Steering Committee.

Biographies



Dr Lyndon J.Q. Llamado, MD

University of Santo Tomas (UST), Manila, Philippines

Disclosures

Pfizer Regional Medical
Director for Inflammation-
Asia

Lyndon JQ Llamado, MD is an Associate Professor of Medicine at the University of Santo Tomas (UST), Manila, Philippines. He completed fellowship training in Rheumatology and Clinical Immunology at the UST Hospital, and further Clinical and Research fellowship training in Rheumatology and Osteoporosis at the Royal Perth Hospital, Perth, Western Australia.

Dr Llamado has helped organise several rheumatology conferences and meetings in the Philippines, which include Ten Topics in Rheumatology-Asia and the first Asian Lupus Summit.

Dr Llamado is currently a board Director of the Philippine Rheumatology Association (PRA) and Osteoporosis Society of the Philippines Foundation, and on the board of trustees of the Rheumatology Educational Trust Foundation Inc. He is the training officer of the Section of Rheumatology, Clinical Immunology and Osteoporosis of UST Hospital. His research interests include systemic lupus erythematosus, rheumatoid arthritis, spondyloarthropathy and osteoporosis. He has presented at several national and international meetings on a range of topics in the field of rheumatology.



Professor Worawit Louthrenoo, MD

Chiang Mai University, Thailand

Disclosures

None

Worawit Louthrenoo is Professor of Medicine and Chief of the Division of Rheumatology, Department of Internal Medicine, Faculty of Medicine, Chiang Mai University, Thailand. He graduated from Chiang Mai University as a Doctor of Medicine in 1981 and received his Diploma of the Thai Board of Internal Medicine in 1985. He then completed his clinical fellowships in rheumatology at Siriraj Hospital, Mahidol University in Bangkok, Thailand in 1986, and at the University of Pennsylvania School of Medicine, United States in 1990. On return to his home country, Professor Louthrenoo started to teach and research in clinical rheumatology. His main research interests include crystal-associated arthritis, systemic lupus erythematosus, systemic sclerosis, rheumatoid arthritis and spondyloarthropathies.

Professor Louthrenoo receives frequent invitations to speak at national and international rheumatology meetings. He has also received many awards, including the Prince Songkla Award in 1988, Best Internist Award from the Royal College of Physicians of Thailand in 2010, Best Researcher Award from Chiang Mai University in 2011 and Best Teacher Award from the Faculty of Medicine, Chiang Mai University in 2013.

Professor Louthrenoo is a member of several national and international professional associations. He also serves on the editorial boards of several journals, including *Chiang Mai Medical Journal*, *Internal Medicine Journal of Thailand*, *Journal of Clinical Rheumatology* and *International Journal of Rheumatic Diseases*. He has had over 80 book chapters and 120 journal articles published.



Professor Shue-Fen Luo, M.D.
Chang Gung University, Taiwan

Shue-Fen Luo is Professor of Medicine at the Department of Rheumatology, Allergy and Immunology, Chang Gung Memorial Hospital and Chang Gung University, Taiwan. She obtained her MD from National Taiwan University, where she also completed her medical residency and rheumatology fellowship. She has been working at Chang Gung Memorial Hospital and was the Director of Department of Rheumatology, Allergy and Immunology from 1986 to 1999.

She has joined various clinical trials on treatment of SLE. Her recent research has focused on epidemiology and comorbidity of rheumatic diseases.

Disclosures

None

Professor Luo has served as Secretary General of Taiwan Rheumatology Association (TRA) from 2001 to 2004, and as President of TRA from 2007 to 2010. She was chairman of the APLAR Symposium 2011, and is currently the Vice President of APLAR (Asia-Pacific League of Associations for Rheumatology). She is also on the Executive Committee of Taiwan Rheumatology Association, Chinese Society of Immunology and Taiwan Osteoporosis Association.



Dr Mo-Yin Temy Mok, MD, FHKAM, FRCP, FRCPA
The University of Hong Kong, Hong Kong, China

Temy Mo-Yin Mok is Clinical Assistant Professor and Honorary Associate Consultant of the Division of Rheumatology and Clinical Immunology, Department of Medicine, Queen Mary Hospital, the University of Hong Kong, China. She graduated from the University of Hong Kong in 1992 and obtained the Croucher Foundation fellowship for Rheumatology training at the University College of London, United Kingdom in 1998. In addition to receiving her fellowship in Rheumatology in 1999, she also obtained her qualification as an Immunologist under the Royal College of Pathologists of Australasia in 2007.

Dr Mok's research interests include the clinical aspects and pathogenesis of systemic lupus erythematosus, and infective and vascular complications of various rheumatic diseases. She is convenor of the Scientific Committee of the Hong Kong Arthritis and Rheumatism Foundation. She is Associate Editor of the *International Journal of Rheumatic Diseases*.

Disclosures

None

Biographies



Professor Sandra V. Navarra, MD, FPCP, FPRA
University of Santo Tomas, Manila, Philippines

Disclosures

Consultant/Advisor:

Pfizer

Speakers' Bureau:

GlaxoSmithKline, Pfizer,
Roche

Professor Navarra is Programme Director and co-Chair of the Lupus Academy (2014).

Sandra Navarra is Professor and Head of Rheumatology at University of Santo Tomas and Consultant Rheumatologist at St. Luke's Medical Center in the Philippines. She served as Secretary-General, Head of the Education Committee, chaired the special interest group on systemic lupus erythematosus (SLE) of the Asia Pacific League of Associations for Rheumatology (APLAR) and was Associate Editor of the *International Journal of Rheumatic Diseases*. She is a past-President of the Philippine Rheumatology Association.

Professor Navarra co-founded the Arthritis Care and Research Foundation of the Philippines, where she is currently Scientific Programmes Director, and the Lupus Foundation of the Philippines where she has served as Medical Director. Currently President and CEO of the Rheumatology Educational Trust Foundation Inc. (RETFI), she is

the prime mover of the Lupus Inspired Advocacy (LUISA) Project for lupus education and research, and the People Empowerment for Arthritis and Lupus (PEARL) Movement for lay education and medical assistance programmes.

Professor Navarra is an experienced clinical trials investigator and has published widely in the field of lupus and other rheumatic diseases. She is a well-known lecturer in a broad range of topics in rheumatology and has received several university and national awards for her contributions to education and research.

Professor Navarra has organised several national and regional educational meetings including the Ten Topics in Rheumatology—Asia (November 2009) and the first Asian Lupus Summit (November 2012), both held in Manila.



Dr Mandana Nikpour, MB BS FRACP FRCPA PhD
St. Vincent's Hospital, Melbourne, Australia

Disclosures

Consultant/Advisor:

Eli Lilly, GlaxoSmithKline

Dr Mandana (Mandy) Nikpour is a Rheumatologist at St Vincent's Hospital Melbourne, Senior Lecturer and National Health and Medical Research Council (NHMRC) Research Fellow at the University of Melbourne.

Her research interests include risk and prognostic factors for cardiopulmonary outcomes in systemic autoimmune disease, in particular systemic lupus and systemic sclerosis, development of clinical tools for screening and prediction of outcome, measurement of disease activity and clinical trials of novel therapies in the rheumatic diseases.



Professor Nan Shen, MD, PhD
Shanghai Institute of Rheumatology, China

Nan Shen is Professor of Medicine and Director of Shanghai Institute of Rheumatology, Ren Ji Hospital Shanghai Jiao Tong University, School of Medicine, as well as a Principal Investigator, Lab of Molecular Rheumatology at Health Science Institute, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences.

Professor Shen received his medical degree from Shanghai Second Medical University in 1988. He has been a visiting scholar at Division of Rheumatology, University of California, Los Angeles (1998) and visiting scientist at Academic Medical Center, University of Amsterdam (2007).

His research mainly focuses on the molecular dissection of the disease pathways in systemic autoimmune diseases by functional genomics approach and the development of novel biomarkers and therapeutic targets in the management of systemic lupus erythematosus. His current major ongoing research projects include functional dissection of human lupus positional candidate genes; the molecular mechanism of type I interferon pathway activation in lupus; the role of

the IFN- α targeted gene in lupus autoimmunity; MicroRNA and lupus autoimmunity and development of novel biomarkers for human lupus.

He has published over 80 papers in peer-reviewed journals and has also been invited to deliver oral presentations at many high-profile international conferences. His research contributions have been recognised with several prestigious awards including Silver Snake Award for distinguished physician from Shanghai Government; Science and Technology Progress Award of Chinese Medical Association and an Award for Research Achievements of Higher Education in China. He had served as a member of American College of Rheumatology/Association of Rheumatology Health Professionals (ACR/ARHP) Annual Meeting Planning Committee and currently is serving as the member of Scientific Committee of Asia Pacific League of Associations for Rheumatology (APLAR). He is Associate Editor of *Arthritis Research and Therapy* and *International Journal of Rheumatic Disease*, an Editorial Board member of *Arthritis & Rheumatism*, *Annual of Rheumatic Diseases* and *Clinical Immunology*.

Disclosures

None



Dr Sargunan Sockalingam, MBBS, MMed
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Sargunan (Guna) Sockalingam is Associate Professor, Consultant Rheumatologist and Head of the Rheumatology Unit at University Malaya Medical Centre, Kuala Lumpur, Malaysia. Dr Sockalingam graduated from Kasturba Medical College, Manipal, India in 1996 and has worked as a Medical Officer in the city of Kota Kinabalu, Borneo. It is here that he developed a keen interest in internal medicine, and so pursued his Masters in Internal Medicine at the University Malaya where he has remained ever since. He completed his fellowship in rheumatology at the St George Hospital, Sydney.

Dr Sockalingam has headed the Unit of Rheumatology at the University Malaya Medical Centre since 2010. Today the unit is actively involved in clinical research, teaching and, importantly, high intensity clinical service. The unit is located in the heart of both urban and suburban Kuala Lumpur, with a wide patient base.

Dr Sockalingam's special interests include lupus, rheumatoid arthritis, the vasculitides and the use of biologics for rheumatic diseases. He also runs a limited private practice at the University Malaya Specialist Centre. He is currently working with the Asia Pacific Lupus Collaboration in developing a regional database of lupus patients. To date he has published 14 papers on lupus and rheumatoid arthritis in peer reviewed journals and is involved a number of clinical trials testing novel biologics in lupus and rheumatoid arthritis.

Disclosures

Grant/Research:

University Malaya

Consultant/Advisor: MSD,

Novartis, Pfizer, Roche

Speaker's Bureau: MSD,

Novartis, Pfizer, Roche

Biographies



Dr Evan Glen S. Vista, MD

St. Luke's Medical Center and College of Medicine Manila, Philippines

Disclosures

None

Evan Vista, MD is a practicing Consultant and Assistant Professor and holds a research professorial Chair in rheumatology at St. Luke's Medical Center (Bonifacio Global and Quezon City) and the College of Medicine Manila, Philippines. He is also a member of the fellowship training committee and hospital staff at University of Santo Tomas Hospital Section of Rheumatology, Clinical Immunology and Osteoporosis. He was an associate research scientist at Oklahoma Medical Research Foundation Department of Arthritis and Clinical Immunology.

Dr Vista has authored several peer reviewed journal publications and textbooks in lupus. He is an *ad hoc* reviewer for the British Medical Journal Case Reports and the International Journal of Rheumatic Diseases. He is currently a member of the American College of Rheumatology, Asia-Pacific League of Associations for Rheumatology Special Interest Group for Systemic Lupus Erythematosus and the Clinical Immunology Society.



Dr Cesarius Singgih Wahono, MD

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Disclosures

Grant/Research:
GlaxoSmithKline

Cesarius Singgih Wahono is an Internist-Rheumatologist in the Rheumatology division, Department of Internal Medicine, Faculty of Medicine Brawijaya University/Saiful Anwar General Hospital, Malang-Indonesia.

He qualified in medicine from Brawijaya University in 1993, and completed his residency in internal medicine in 2003. He had a fellowship in rheumatology in Department of Rheumatology, Shanghai Second Medical University in 2000, under the supervision Professor Chen Sun-le, and received his rheumatologist brevet in Brawijaya University in 2012 under the supervision Professor Handono Kalim.

He is a member of Asia Pacific League of Associations for Rheumatology and the Asia Pacific Lupus collaboration. He is also a member of Indonesian Rheumatology Association, in the Lupus task force. Dr Wahono's major research focus is on autoimmune diseases, especially systemic lupus erythematosus (SLE), and the role of vitamin D in SLE.

Case Study Workshops

Monday 31st March 2014

Afternoon (14:00 & 16:00) Case Study Workshops)

Moderator/Facilitator: Lyndon J.Q Llamado (Philippines)
Difficult lupus



Mo-Yin Temy Mok (*Hong Kong, China*) &
Worawit Louthrenoo (*Thailand*)

Moderator/Facilitator: Evan Glenn S. Vista (Philippines)
Lupus nephritis



Daniel T.M. Chan (*Hong Kong, China*) &
Yingyos Avihingsanon (*Thailand*)

Moderator/Facilitator: Sargunan Sockalingam (Malaysia)
Cardiovascular disease in SLE



Bevra H. Hahn (*USA*) &
Laniyati Hamijoyo (*Indonesia*)



Moderator: Dr Lyndon J.Q Llamado (Philippines)

Presenters: Dr Mo-Yin Temy Mok & Professor Worawit Louthrenoo

Difficult lupus



Dr Mo-Yin Temy Mok, MD, FHKAM, FRCP, FRCPA
Professor Worawit Louthrenoo, MD

Case 1: Non-healing leg ulcers in an SLE patient

A 38-year-old laundrywoman was diagnosed with systemic lupus erythematosus (SLE) 7 years ago presenting as alopecia, malar rash, photosensitivity, oral ulcers, arthritis, hypocomplementaemia, and high titer ANA and anti-dsDNA. She has been on prednisone and hydroxychloroquine and received cyclophosphamide pulse therapy for 6 months for active bilateral retinal vasculitis (with residual visual impairment). Four weeks before admission, she noted a fluctuant swelling on the anterior right leg, which subsequently ruptured exuding purulent discharge, then gradually enlarged to form a skin ulcer. This was accompanied by intermittent fever and dry cough. Despite several antimicrobials, the ulcer enlarged and worsened in appearance, also becoming more painful. In addition, she also had increased facial rash, oral ulcers and alopecia.



Physical exam showed a wheelchair-borne, frail, visually-impaired lady with prominent malar rash, alopecia, oral ulcers and cervical lymph nodes; BP 110/70, HR 110, RR 18, T 38.8°C, BMI 15.8 kg/m². There was a dirty-looking ulcer on the anterior aspect of right leg with irregular erythematous and tender borders and purulent discharge with areas of eschar formation; bullae were noted adjacent to the open wound. Haemoglobin was 97 g/L, leucocytes 2.9 x 10⁹/L (neutrophil 0.77, lymphocytes 0.23), platelets 288 x 10⁹/L, creatinine 0.51 mg/dl. Urine albumin was 2+, rbc 1-3/hpf, wbc 2-4/hpf. ESR 103 mm/hr, CRP 171 mg/L. Serum complement was low at 0.60 g/L. She was started on vancomycin and piperacillin-tazobactam, prednisone was increased to 30 mg/day, and hydroxychloroquine was continued. Wound debridement was performed, tissue cultures grew *Bacillus brevis* sp. Radiograph showed a radiolucency on the right distal tibia suggesting osteomyelitis, and chest X-ray revealed suspicious infiltrates at the right apex. She was started and discharged on an anti-tuberculous (TB) regimen consisting of isoniazid, rifampicin, pyrazinamide, ethambutol (HRZE), whilst awaiting mycobacterial cultures. Two weeks later, culture results reported mixed growth of TB and non-TB mycobacteria. Azithromycin was added at 250 mg/day. On follow-up 2 weeks later, she was afebrile with improved appetite and a better sense of well-being; the leg ulcers were starting to heal.

Discussion points: *importance of and risk factors for infections in SLE. Management of and preventive measures against mycobacteria infections in SLE.*

Case 2: Materno-foetal morbidity in a patient with APS and positive Ro antibody

A 30-year-old female with SLE and antiphospholipid syndrome (APS) with strongly positive anti-Ro/SSA serology has had two foetal losses each at 24 to 25 weeks gestation, with pregnancy complications of preeclampsia and postpartum cardiomyopathy. A third successful pregnancy delivered a premature but healthy baby boy following intensive anticoagulation and foetal monitoring during pregnancy. The most recent pregnancy was delivered at 31 weeks gestation because of foetal distress, with the baby showing evidence of neonatal lupus syndrome (pleuropericarditis, heart block, thrombocytopenia, anti-Ro positive), confounded by neonatal sepsis.

Discussion point: *challenges and management approach to APS-complicated pregnancy and neonatal lupus syndrome.*

Case 3: 22-year-old with complications following possible acute cholecystitis

A 22-year-old Thai female was referred to Chiang Mai University Hospital because of fever and acute abdominal pain, after being treated at a local hospital for possible acute cholecystitis, but without any response. She had a history of facial erythema and one seizure episode one month prior to abdominal symptoms. Physical examination was significant for acute fever, facial erythema, discoid rashes on both

ears, a moderate degree of anaemia, vasculitic lesions on both palms, and marked tenderness at the epigastrium with guarding, rigidity and abdominal rebound tenderness.

Laboratory tests revealed: Hb 7.7 gm/dL, Hct 23.0 vol%, wbc 23,000/mm³ (PMN 91%), normal platelet count, positive direct and indirect Coombs' tests, +1 proteinuria with a UPCI of 0.7, creatinine 0.8 mg/dL, albumin 3.0 gm/dL, AST 86 U/L, ALT 75 U/L, AP 98 U/L, bilirubin 0.8 mg/dL, ANA >1:1280 with speckled pattern, anti-dsDNA 551 IU/mL (normal <100 IU/mL). Chest X-ray showed mild cardiomegaly, and plain abdomen X-ray showed generalised small bowel dilatation.

Discussion points: *challenges and management approach to SLE patients presenting with acute abdominal complications.*

Learning Objectives

At the end of the workshop, participants will be able to:

- Reiterate the contributory role of infections in the morbidity and mortality of SLE.
- Effectively address potentially life- or organ-threatening complications including serious abdominal involvement in an SLE patient.
- Review pregnancy and neonatal complications in SLE and APS.
- Understand diagnostic and management approach to acute abdominal conditions in SLE patients.

Notes

Moderator: Dr Evan Glenn S. Vista (Philippines)

Presenters: Professor Daniel Tak Mao Chan & Dr Yingyos Avihingsanon



Lupus nephritis

**Professor Daniel Tak Mao Chan, MBBS, MD, FRCP(UK), FHKCP, FHKAM, FASN
Dr Yingyos Avihingsanon, MD**



Case 1: Lupus nephritis refractory to standard treatment

A 21-year-old female was diagnosed systemic lupus erythematosus (SLE) in 2009 presenting as malar rash, arthritis, nephritis, hypocomplementaemia, and high titer ANA and anti-dsDNA. Renal biopsy disclosed Class III-A (activity score 7, chronicity score 2) lupus nephritis. She completed six monthly infusions of pulse cyclophosphamide (Euro-Lupus protocol) and was thereafter maintained on prednisone 5 mg/day, hydroxychloroquine 200 mg/day and mycophenolate mofetil (MMF) 1.5 g/day. Two years later, she developed a renal flare as active nephritis with proteinuria (2 g/d) and active urine sediments; renal functions were normal. She received 3 days of pulse methylprednisolone, MMF was increased to 2.5 g/day and she was started on another course of pulse cyclophosphamide. Due to lack of significant improvement by the fourth infusion of cyclophosphamide, MMF was shifted to tacrolimus. By the second month of tacrolimus (trough level 4 to 5 µg/L), there was decreasing proteinuria, increasing serum albumin, and a better sense of well-being.

Discussion point: *therapeutic options for lupus nephritis resistant to standard treatment.*



Case 2: Recurrent disease flares in a patient with SLE and APS on long-term haemodialysis

A 25-year-old male was diagnosed SLE with antiphospholipid syndrome (APS) aged 18 years presenting as haemolytic anaemia, thrombocytopaenia, proteinuria, hypocomplementaemia, positive/ high titer ANA, anti-dsDNA and anticardiolipin antibodies. A renal biopsy showed lupus nephritis ISN/RPS Class IV segmental (activity score 12, chronicity score 4). Following pulse methylprednisolone therapy, he completed seven monthly infusions of cyclophosphamide pulse therapy with partial response. He was maintained on azathioprine 100 mg/day (3 mg/kg/d), prednisone 10 mg/day and hydroxychloroquine 200 mg/day.

Three years ago, he developed severe renal and extra-renal flare requiring hospitalisation and high dose steroids. The hospital course was complicated by sepsis, uncontrolled hypertension and uraemia with subsequent haemodialysis. A year later, while on maintenance dialysis, he developed a lupus flare manifesting as Coombs' positive anaemia, thrombocytopaenia, hypocomplementaemia and elevated anti-dsDNA titers, which responded to high dose steroids. He has had two similar extra-renal flares in the past year, each episode responding to high dose steroids, which would eventually be tapered to prednisone 10 mg/day. He continues to be on maintenance dialysis and eagerly looks forward to undergoing kidney transplantation.

Discussion point: *renal transplant issues and prognosis in a lupus patient with APS who continues to have recurrent disease flares while on long term dialysis.*

Learning Objectives

At the end of the workshop, participants will be able to:

- Apply relevant clinical and histopathology information in the diagnosis and monitoring of lupus nephritis.
- Outline factors influencing therapeutic response and the role of newer therapies.

Moderator: Dr Sargunan Sockalingam (Malaysia)

Presenters: Professor Bevra H. Hahn & Dr Laniyati Hamijoyo

Cardiovascular disease in SLE



Professor Bevra H. Hahn, MD
Dr Laniyati Hamijoyo, MD



Case 1: Coronary artery disease in SLE with APS

A 26-year-old female is diagnosed with systemic lupus erythematosus and antiphospholipid syndrome presenting with gum bleeding, ecchymoses, melena, thrombocytopaenia, haemolytic anaemia, hypocomplementaemia and high titre ANA, anti-dsDNA, and anti-cardiolipin antibodies. She received multiple blood transfusions and pulse steroids and was started on prednisone and hydroxychloroquine. During confinement, she developed dyspnoea and pulmonary congestion with an electrocardiogram showing global ischaemia; troponin I was elevated. Echocardiogram showed segmental hypokinesia, and moderate pericardial effusion with decreased ejection fraction at 30%. She was managed as acute coronary syndrome. Additional data disclosed a strong family history of hypertension and coronary heart disease. She did not smoke but was exposed to her husband who was a heavy smoker. She has one child delivered at term and no history of pregnancy losses. She has been on oral contraceptives in the past 2 years.

Discussion point: *risk factors for acute coronary syndrome and accelerated atherosclerosis in SLE.*



Case 2: Infective endocarditis versus Libman–Sacks endocarditis in SLE

A 33-year-old nulligravid female has had stable SLE for the last 5 years while maintained on hydroxychloroquine (HCQ) and prednisone 5 mg/day. Three years ago, she was also diagnosed with antiphospholipid syndrome (APS) presenting as steroid-responsive haemolytic anaemia with thrombocytopaenia, livedo reticularis and high titre anticardiolipin antibodies. Two weeks before presentation, she developed fever and intermittent diplopia and was admitted to hospital. Pertinent medical history disclosed recurrent throat and gingival infections treated with various antibiotics. Physical examination revealed a temperature of 38.2°C, malar rash, livedo reticularis, heart murmur and right cranial nerve VI palsy. Haemoglobin was 92 g/L, leucocyte $11.4 \times 10^9/L$, platelet $241 \times 10^9/L$; ESR 130 mm/hr, C3 complement 0.70g/L (NV 0.9 to 1.8); anti-dsDNA, urinalysis, renal and liver functions were normal. Cranial MRI revealed an enhancing focus at the pontomedullary area, indicative of an infarct. Transthoracic and transoesophageal echocardiogram revealed echodense structures/vegetations on the mitral valve. Blood cultures did not grow any organism. Prednisone was increased to 20 mg/day and HCQ was continued. She completed 4 weeks of i.v. penicillin plus gentamicin, and was started on tinzaparin later overlapped/ shifted to warfarin. On clinic follow-up a month after discharge, she was well with normal blood counts, had an ESR of 36 mm/hr and no neurologic deficit.

Discussion point: *prevalence and relevance of valvular heart disease in SLE; distinguishing between active SLE versus infection (infective versus Libman Sacks endocarditis).*

Case 3: Cardiomyopathy, pulmonary arterial hypertension and fatal arrhythmia in SLE

A 35-year-old female was diagnosed with SLE when she presented with malar rash, arthritis, photosensitivity and pericardial effusion. During the months following diagnosis, she developed dilated cardiomyopathy with chronic atrial fibrillation and pulmonary arterial hypertension. She was maintained on prednisone, hydroxychloroquine, metoprolol, verapamil and clopidogrel.

She was admitted due to dyspnoea on exertion associated with palpitations and intermittent chest discomfort. Vital signs were stable and lung fields were clear. Cardiac examination revealed hyperdynamic precordium, displaced apex beat at the 6th left intercostal space anterior axillary line and heaves with no murmurs. Chest X-ray showed cardiomegaly with multi-chamber enlargement. Electrocardiogram showed low voltage complexes and 2D echo revealed moderate pericardial effusion with ejection fraction of 54%. A few hours later, the patient experienced increasing intensity of chest pain and palpitations.

The cardiac monitor showed three episodes of supraventricular tachycardia. Despite synchronised cardioversion, inotropes, adenosine, amiodarone and beta blockers, the patient rapidly progressed to shock and asystole, and could not be resuscitated.

Discussion point: *prevalence and relevance of clinical and sub-clinical pulmonary arterial hypertension (PAH) and arrhythmias in SLE; review management approach to PAH.*

Learning Objectives

At the end of the workshop, participants will be able to:

- Recognise mimics of cardiovascular involvement in SLE, which have specific treatments.
- Identify risk factors in the development of cardiovascular disease in SLE.
- Reinforce measures in the prevention of cardiovascular disease.

Notes

Abstracts

Plenary I

Moderators: Dr Mandana Nikpour (Australia) & Dr Cesarius Singgih Wahono (Indonesia)



Professor Chak-Sing Lau, MBChB MD (Hons) FRCP, FHKCP, FHKAM
University of Hong Kong, Hong Kong, China

Lupus in Asia: unmet needs

Systemic lupus erythematosus (SLE) is a prototypic autoimmune disease characterised by chronic inflammation in multiple organs. Back in the 1950s, SLE was a fatal disease: only about 1 in 2 patients would survive 5 years after diagnosis. With advances in diagnosis and treatment, 10-year patient survival approaching 90% has been reported in developed countries. Even so, mortality remains high in patients below the age of 30 years – a standardised mortality ratio of 54.2 compared to the general population – with infection being the principal cause of death. Moreover, compared to Caucasians, Asian SLE patients are reported to have increased risk of

developing lupus nephritis and higher overall damage scores. Up to 56% of patients lose the ability to work within 2 years of diagnosis. This shows that current treatments for SLE remain inadequate. Incomplete controlled or refractory disease persists in many patients, leading to end-stage organ involvement and therapies carry risk of debilitating side effects. Newer, more effective but less toxic treatment is thus required. To facilitate this, a better understanding of the underlying lupus pathogenesis, as well as the availability of clinical assessment tools that are sensitive to change are needed.



Professor Thomas Dörner, MD
Charité University Hospitals, Berlin, Germany

B and T cell cross-talk in SLE

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Given certain genetic risk factors, systemic lupus erythematosus (SLE) develops following environmental triggering and subsequent interplay of innate and adaptive immunity critically linked by antigen-presenting cells (APCs), resulting in the breakdown of tolerance. This loss of immune homeostasis includes the generation of various autoantibodies (including those against dsDNA), formation of immune complexes and cytotoxic T cells. Although the precise cellular and humoral mechanisms, and what determines which organs are involved in this heterogeneous disease, remain poorly understood, the initiating tissue is likely to provide a decisive immune microenvironment. Here tissue-resident dendritic cells that have different capacities to direct the immune response (balance of humoral and cellular components), together with invading plasmacytoid dendritic cells, define organ manifestations.

A common denominator of the autoimmune response is the utilisation of type I interferon, but other cytokine networks can be involved. Different immune pathways are likely to be driven by distinct dendritic cells in the target tissue that apparently direct heterogeneous immune activation pathways. It also appears that they provide a critical link to both the organs involved and activating innate and adaptive immunity. Promising new therapies may simultaneously and specifically target several of the critical pathways in autoimmunity. Autoantibodies (i.e. anti-dsDNA) are induced based on a genetic MHC class II predisposition and are able to fuel immunopathogenesis by formation of immune complexes, but also by activating pDCs. Thus, autoantibodies appear to be involved in a positive forward loop and, therefore, critically linking adaptive and innate immunity in SLE.

Learning Objectives

At the end of the presentation, participants will be able to:

- Appreciate the currently accepted interaction of innate and adaptive immunity driving SLE pathogenesis.
- Understand the genetic background of SLE linked to immune pathways.
- Describe the heterogeneous immune consequences of increased type I interferons and other cytokine networks considered to be involved in SLE.
- Realise that immune memory provided by lymphocytes is important for the maintenance of autoimmunity.
- Understand pathways of how autoreactive B cells are likely to be selected to differentiate in plasma cells producing autoantibodies.

Notes



Professor Roger A. Levy, MD, PhD
The State University of Rio de Janeiro, Brazil

Current concepts in antiphospholipid syndrome

References

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Antiphospholipid syndrome (APS) comprises of a wide spectrum of manifestations linked to the presence of antiphospholipid antibodies (aPL). APS was described in the context of lupus and later as an isolated syndrome. Control of all classic thromboembolic risk factors is advisable in people with aPL. If left unrecognised they may lead to recurrent events, including catastrophic APS. The Classification Criteria were designed for definite APS in epidemiologic and clinical studies, and are generally misused for clinical diagnostic decisions on an individual basis.

Triple test positivity is known to be of higher predictive risk of recurrence, as is the presence of lupus anticoagulant for arterial events. Pathogenic mechanisms are various, beyond the inhibition of anticoagulant reactions of beta 2 glycoprotein I (b2GPI) and other anticoagulants, including cell-mediated events involving endothelial and dendritic cells, monocytes and platelets. The mechanisms are not mutually-exclusive and may in fact be related, offering different targets for potential future therapies. The oxidation of the free thiol form of b2GPI seems to be crucial for its pathogenic action and is the form found in APS patients.

In one third of the patients presenting with clinical signs of APS, and other causes ruled out, the classical tests are negative. If transient consumption is ruled out, another non-classical test may be found. These patients may be called “seronegative APS” and require advice and sometimes treatment. Important clinical features that are not part of the criteria include superficial vein thrombosis, thrombocytopenia, livedo reticularis, heart valve disease and chorea. Renal microangiopathy should be investigated by obtaining a biopsy specimen when there is clinical presentation with new onset hypertension, proteinuria or renal failure. Current treatments include oral anticoagulation with warfarin. Oral direct thrombin or anti-Factor Xa inhibitors are not yet studied and, like indirect anti-Factor Xa (fondaparinux) and non-oral direct thrombin inhibitors, their use is not currently recommended. Other agents that target the immune system are being studied.

Learning Objectives

At the end of the presentation, participants will be able to:

- Understand that the Sapporo/Sydney classification criteria were designed for epidemiologic and clinical studies, and that making diagnostic and therapeutic decisions on a daily basis involves a broader concept.
- Review the wide clinical spectrum of APS.
- Outline the current concepts in the pathogenesis of aPL and the upcoming laboratory tests that may aid the investigation.
- Review the current treatment recommendations and preview the trends in APS therapy.

Notes



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University of Santo Tomas, Manila, Philippines

Special concerns in children and adolescents

References

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Paediatric onset SLE (pSLE) accounts for 10–20% of all lupus cases. Comparison studies have shown that pSLE presents with more acute and severe disease features than adult SLE (aSLE), and with higher frequency of renal, neurologic and haematologic manifestations at disease onset. Similarly, there is evidence showing more active disease over time in pSLE. As a result, most children with SLE received higher doses and longer durations of immunosuppressive medications.

Over the past decades, there has been a considerable improvement in the survival rates of patients with childhood onset SLE, which has also led to a change in the long term health issues arising from SLE in children and adolescents, including cardiovascular outcomes and bone health.

The disease and its treatment have a significant impact in all fields of physical and psychosocial development of a child/adolescent with SLE and certainly may affect their quality of life. Caring for these patients remains a challenge in respect of controlling the disease activity, obtaining patient's adherence to treatment and preventing damage related to the medications.

Learning Objectives

At the end of the presentation, participants will be able to:

- Identify the unique features of paediatric systemic lupus erythematosus.
- Know the long term outcome of childhood onset systemic lupus erythematosus.
- Recognise the morbidities related to the disease and medications.
- Distinguish the issues on health-related quality of life.
- Identify the challenges in the care of paediatric patients with SLE.



Dr Aisha Lateef, MBBS, MRCP, MMed
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Pregnancy and SLE therapy

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Pregnancy in the setting of systemic lupus erythematosus (SLE) is increasingly common but remains a high-risk situation with higher maternal and foetal mortality and morbidity. Ideally, pregnancy in the setting of SLE should be planned during periods of disease quiescence. The patient should receive pre-conception counselling with maternal and foetal risk assessment and discussion. A complete set of autoantibodies should be obtained as certain specific maternal antibodies in the mother pose unique foetal risks. Anti-Ro antibodies place the foetus at risk of developing neonatal lupus syndrome, which may manifest as rash, haematologic and hepatic abnormalities, or cardiac complications in the newborn child. Antiphospholipid antibodies are associated with higher rates of pregnancy loss and morbidity. Specific management strategies are required in these settings. In a limited number of patients, pregnancy may pose an unacceptably high maternal risk, justifying advice to defer or avoid pregnancy.

One of the biggest challenges in SLE management is the use of appropriate medications during pregnancy. The efficacy and maternal benefits have to be balanced against foetal safety. Although the majority of SLE therapeutics are potentially harmful and contraindicated, safe options exist and should be continued during pregnancy. Steroid exposure should be minimised but short courses of high dose steroids for flares are acceptable. Hydroxychloroquine should be continued during pregnancy in all SLE patients. Beneficial effects of hydroxychloroquine in SLE, including during pregnancy, have been well documented. Other safe immunosuppressants include azathioprine and the calcineurin inhibitors, tacrolimus and cyclosporin. Heparin is the drug of choice, if anticoagulation is required during pregnancy and calcium supplementation should be provided to all pregnant women with SLE, especially those receiving corticosteroids and heparin.

In summary, safe treatment options exist and should be used judiciously during SLE pregnancy. A multidisciplinary approach, with close monitoring, is essential for optimal foetal and maternal outcomes.

Learning Objectives

At the end of the presentation, participants will be able to:

- Understand that pregnancy in the setting of SLE is increasingly common but remains high-risk.
- Appreciate that a pre-conception assessment should be done prior to the planned pregnancy.
- Understand that SLE therapy during pregnancy needs careful consideration to balance efficacy and maternal benefits against foetal safety.
- Realise that, although the majority of SLE therapeutics are potentially harmful and contraindicated, safe options exist and should be judiciously used.
- Know that hydroxychloroquine is beneficial during SLE pregnancy and should be continued in all patients.



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Update on the diagnosis and management of neuropsychiatric SLE

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The prevalence of neuropsychiatric systemic lupus erythematosus (NPSLE) has been estimated to range from 14% to 80% in adults with SLE, and the American College of Rheumatology (ACR) case definitions have described 19 NPSLE syndromes.¹ It has been reported that neurological involvement may be more severe in children who may develop higher rates of permanent brain damage than adults.² Similar methods of evaluation are performed when both SLE and non-SLE patients develop signs and symptoms of neuropsychiatric disease, the important aim of which is to exclude secondary causes, such as infections, metabolic or endocrine disturbances, or even adverse drug reactions.³ Both immunological factors and brain structure are important in the pathogenesis of NPSLE. The mechanisms are likely to be disruption of the blood-brain barrier, potentially neurotoxic autoantibodies and microvasculopathy.

Structural magnetic resonance imaging (MRI) is widely used to aid in the diagnosis of NPSLE. Functional MRI has been used to assess cognitive function in SLE. Between 40% and 80% of abnormalities in NPSLE are multiple discrete lesions concentrated in periventricular and subcortical white matter. In patients with normal MRI who present with psychiatric manifestations, metabolic neuroimaging and perfusion imaging can detect abnormalities.^{4,5}

Glucocorticoids are the primary therapeutic agents in the management of SLE and adjunctive symptomatic treatments are added. Immunosuppression of the continuous inflammatory process with agents such as cyclophosphamide, mycophenolate mofetil, azathioprine and methotrexate play an important role along with the traditional antimalarial therapy with hydroxychloroquine. Treatment with anticoagulants is indicated in the presence of antiphospholipid antibodies.

Refractory NPSLE is treated with intravenous immunoglobulins, plasmapheresis, and more recently anti-CD20+ B-cell depleting therapy. These therapeutic approaches are based on empirical findings. More recently the inhibition of the B lymphocyte stimulator (BLyS) with a human monoclonal antibody (belimumab), gene therapy and stem cell transplantation are gradually being introduced for the treatment of SLE. However, prospective multicentre studies are greatly needed as is emphasis on tailoring therapy to the individual case, particularly in NPSLE.⁵

Learning Objectives

At the end of the presentation, participants will be able to:

- Recall the ACR-described 19 NPSLE syndromes that range across a wide variety of manifestations.
- Understand the methods of evaluation and pathogenesis (blood-brain barrier disruption, auto-antibodies and microvasculopathy).
- Recognise the developments in neuroimaging with both structural and functional MRI, and the role of metabolic and perfusion neuroimaging.

Abstracts

Plenary III

Moderators: Professor Ricard Cervera (Spain) & Professor Shue-Fen Luo (Taiwan)



Professor Daniel Tak Mao Chan, MBBS, MD, FRCP(UK), FHKCP, FHKAM, FASN
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Update on the management of lupus nephritis

Lupus nephritis is an important cause of acute renal injury and chronic renal failure in Asia. With prompt treatment, the majority of patients with severe lupus nephritis can achieve a favourable clinical response. Effective treatment options have increased considerably over the past two decades. In addition to corticosteroids, cyclophosphamide and azathioprine, which have been standard therapies since the 1980s, mycophenolic acid and calcineurin inhibitors have demonstrated unequivocal efficacy and are used increasingly in clinical practice. A plethora of new treatments targeting specific molecules on immune cells or cellular pathways in immune responses are being tested. The increasing number of treatment choices and permutations facilitates the tailoring of treatment according to the clinical and histopathological characteristics and the tolerability

profile of individual patients. Appropriateness of the hitherto popular, though empirical, clinical approach of induction *versus* maintenance treatment as distinct entities may need to be re-examined. Enhancing treatment response rate, minimising treatment-related adverse effects, and improving long-term renal and patient outcomes are the major objectives of current and future clinical trials. However, in respect of improving response rate compared to standard-of-care therapies, it has become technically more demanding to demonstrate the therapeutic impact of new agents. The costliness of clinical trials in lupus nephritis and new treatments could also threaten new drug development programmes and treatment accessibility, especially in developing countries.

Learning Objectives

At the end of the presentation, participants will:

- Have been presented with a synopsis of the clinical trial data on currently available treatments for lupus nephritis.
- Understand the merits and limitations of the various treatments for lupus nephritis.
- Appreciate the salient issues in the interpretation of clinical trial data on lupus nephritis.
- Know about the emerging treatments for lupus nephritis.



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Treat-to-target in SLE

The application of a “treat-to-target” approach is now routine in many areas of medicine, including rheumatic diseases such as rheumatoid arthritis. However, to take such an approach in systemic lupus erythematosus (SLE), the definition of a treatment target is required. The heterogeneity of lupus, and the lack of universal agreement over methods to measure both disease activity and treatment responses, have posed a challenge in defining a treatment target in SLE. While ideally “remission” should be aimed for, a more achievable treatment endpoint of minimal disease activity may still confer a favourable outcome. If we wish to significantly reduce the burden of morbidity and mortality in SLE, we need to define not only meaningful change in disease activity (“treatment response”), but also a desirable “state” that represents a destination or “target” to ultimately aim for. In this presentation, we will present preliminary work done to define a lupus low disease activity state and future plans for its validation.

Learning Objectives

At the end of the presentation, participants will be able to:

- Understand the variable course of disease in SLE.
- Review existing knowledge regarding disease activity states in SLE.
- Appreciate the need for treatment targets in SLE.
- Understand the concept of a low disease activity state in SLE.



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Optimising outcomes in SLE: best practice

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Since systemic lupus erythematosus (SLE) in most individuals is chronic, with either persistent disease activity or one or more flares annually in 85%, the physician should treat with three goals in mind: (1) induce improvement, (2) maintain improvement, (3) minimise damage. In mild cases, induction of improvement includes treatment with hydroxychloroquine (OHQ), topical dermatologics, and/or analgesics as needed. In cases that impair quality of life, but are not life threatening, low dose glucocorticoids and/or belimumab may be added. In life-threatening disease, including nephritis, the physician should consider following guidelines of Asia, EULAR or ACR.^{1,2} The guidelines recommend induction with high dose glucocorticoids plus either mycophenolate mofetil (MMF up to at least 2 g per day) or cyclophosphamide (low dose 500 mg every 2 weeks i.v. for 6 doses, then maintenance with daily MMF or azathioprine (AZA); high dose 750 mg/M² i.v. once monthly for 6 months), then maintenance with MMF or AZA. For maintenance in those who improve (approximately 75%), either AZA (2 mg/kg/day) or MMF (2 g/day) plus OHQ is recommended, along with strict control of hypertension (BP 138/80 target) with ACE inhibitors or ARBs. In poor responders, consider switching between induction regimens of MMF or CYC, or addition of rituximab or calcineurin inhibitors. It is important to remember that MMF, CYC and methotrexate are teratogenic: prednisone and/or AZA can be used if necessary during pregnancy.

Prevention of damage in SLE is a major challenge. The primary causes of death among SLE patients are renal disease (hazard ratio [HR] for mortality 8.0), infection (HR 5.0) and cardiovascular disease (CVD) (HR 2.5). Prevention and treatment of

infections should be a major priority, including addition of preventive treatments for pneumocystis and recurrent herpes species, administration of vaccines (especially influenza and pneumococcal), and high awareness that early symptoms of infection should be treated promptly. For CVD, the best preventive strategies probably are to control SLE disease activity, diabetes mellitus, hypertension, and dyslipidemias. Whether statin therapies reduce the risk of CVD in SLE is controversial; cohorts studied to date may be too small to be definitive.³ Physicians should also give attention to prevention of bone loss, which is multifactorial and includes reduced physical activity, glucocorticoids, and low levels of vitamin D (measured as 25-OH vit D). All individuals should have adequate supplementation of calcium and vitamin D. Men older than 50 and women past child-bearing age, particularly if prednisone is 7.5 mg daily or higher, or bone density is less than -1.0, or fractures have occurred, should be protected from osteoporosis with bisphosphonates (or denosumab).^{4,5} The safety of bisphosphonates in young women has not been studied in large numbers of individuals. For prevention of damage, reducing the prednisone dose, if possible, is recommended. The hazard ratio for damage starts to increase with daily prednisone doses >6 mg, and climbs dramatically above 18 mg/day. In a recent study, patient and physician educational efforts allowed 55% of SLE patients to reduce prednisone daily dose to 5 mg or less for at least a year.⁶ Efforts are in progress to treat-to-target in SLE, as in rheumatoid arthritis, with low disease activity as the most likely "target". This strategy will allow physicians to induce improvement and maintain it in a majority of patients, with minimal accrual of damage over time.

Learning Objectives

At the end of the presentation, participants will be able to understand that:

- Strategies for management of SLE patients include induction of improvement, maintenance of improvement and minimization of damage over the long term.
- Patients with SLE, that is not life-threatening, may be managed with hydroxychloroquine plus analgesics plus topical agents if quality of life is adequate.
- Patients with unacceptably low quality of life, but not life-threatening SLE, may be managed with OHQ plus low dose prednisone and/or belimumab.
- Patients with life-threatening disease should be managed according to guidelines for lupus nephritis from Asia, EULAR and ACR.
- The major killers in SLE are, in order, renal disease, infections and CVD. Therefore, prevention of damage should be directed toward these problems and include minimising disease activity with the smallest possible dose of glucocorticoids, controlling blood pressure and diabetes, and treating dyslipidemias.
- Since osteoporotic fractures are a major contributor to disability in SLE, supplemental calcium and Vit D, as well as bisphosphonates in patients at high risk, should be used.
- Prednisone doses greater than 6 mg daily are associated over time with increased damage, so efforts should be made to reduce doses to that range when possible. However, controlling disease activity is usually the most important aspect of improving survival.

Notes



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Advances in SLE therapy

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Prognosis in systemic lupus erythematosus (SLE) has improved in the last 50 years. From a mortality rate higher than 50% 5 years following SLE diagnosis in the 1960s, recent prospective studies show that survival has now risen to more than 90% after 10 years. The challenges for the future are to increase the quality of life of these patients and to further reduce mortality. In order to achieve these objectives, physicians should improve administration of some existing drugs

as well as introduce new drugs, from therapeutic trials, to clinical practice. This presentation reviews the therapeutic perspectives for SLE patients with special emphasis on the most relevant advanced treatment regimens – the Euro-lupus sequential regimen of low-dose pulse cyclophosphamide followed by azathioprine; the use of mycophenolate and tacrolimus, alone or in combination; and the new biologic therapies.

Learning Objectives

At the end of the presentation, participants will be able to:

- Understand the most advanced immunosuppressive regimens that have been used to treat patients with systemic lupus erythematosus.
- Analyse the most representative trials performed to assess the safety and efficacy of immunosuppressive drugs in systemic lupus erythematosus.
- Critically select different options to treat lupus patients with immunosuppressive drugs.

