**Continuing Medical Education (CME) accreditation**

The Lupus Academy Roadshow – Iloilo City, Philippines is designated for a maximum of 6.5 Continuing Professional Development (CPD) units from the Philippine Regulation Commission (PRC). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.
Welcome

Dear Friends and Colleagues,

We are delighted to welcome you to the Lupus Academy Roadshow Meeting here in Iloilo City, which we hope you will find engaging, informative and rewarding for your clinical practice.

The Lupus Academy is committed to continuing the development of high quality educational programmes, focused on providing insightful and clinically relevant content through both live meetings and eLearning environments. With this, we aim will support you as you strive to provide best-in-class patient care and improve patient outcomes in lupus.

This Roadshow Meeting is CME/CPD accredited by Philippine Regulation Commission through the Iloilo Medical Society in partnership with Rheumatology Educational Trust Foundation, Inc, and is built on content from our international Annual Meeting programmes and aims to provide latest 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 of 12 international experts in lupus, is designed to create a highly interactive forum through which we can all develop a logical approach to the management of lupus worldwide.

This meeting will give you the opportunity to meet like-minded clinicians and scientists and, through the sharing of clinical and scientific experience, develop your knowledge in this complex and multidisciplinary therapeutic area.

We sincerely hope that this meeting will provide you with new ideas for your clinical work, enriched 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 Iloilo City.

With kind regards,

On behalf of the Lupus Academy Steering Committee

Professor Sandra Navarra
Course Chair, Iloilo City

Professor Zahir Amoura
Professor Richard Furie
Professor Roger A. Levy

Professor Ricard Cervera
Professor Bevra Hahn
Professor Ronald van Vollenhoven

Professor Andrea Doria
Professor David Isenberg
Professor Murray Urowitz

Professor Thomas Dörner
Professor Munther Khamashta

†The Lupus Academy is a long-term initiative dedicated to improving patient outcomes in SLE through an interactive educational forum dedicated to sharing best clinical practice through the dissemination and discussion of clinical and basic scientific research about SLE and allied diseases.
Meeting Learning Objectives

The Lupus Academy Philippines Roadshow Meeting (Iloilo City) programme will focus on current key issues in lupus clinical practice and is designed to facilitate improved understanding of these issues and their management through both didactic lectures and shared clinical insights through case study workshops. At the end of the programme delegates should be able to:

- Discuss updates in lupus immunopathogenesis with particular applications to patient bio-profiling
- Outline key diagnostic and treatment approaches to systemic lupus erythematosus (SLE)
- Describe the spectrum of complications in SLE due to the disease and medications
- Provide optimal care of patients in special situations such as lupus nephritis and pregnancy
- Recognise and effectively manage SLE mimics, especially infections and cutaneous manifestations
- Disseminate the growing importance and impact of lupus on the patient, family, medical field and society

Supporters

The Lupus Academy's education programme is supported through financial and in-kind support.

The Lupus Academy Roadshow, Iloilo City is supported by independent educational grants from:
- GSK, Bristol-Myers Squibb and Celgene

In-kind support has been provided by:

- Lupus Inspired Advocacy (LUISA)
- of Rheumatology Educational Trust Foundation, Inc.

Lupus Academy receives financial support by means of independent educational grants or other “hands off” mechanisms whereby Lupus Academy maintains full control over the planning, content, speaker selection and execution of all the educational activities it develops and presents.

Information about the supporters for previous years can be found at the relevant meeting pages on our website www.lupus-academy.org.

There are various opportunities to support the Lupus Academy. Please contact us for further information secretariat@lupus-academy.org.
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# Programme

## Saturday 18th November

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<td>08:20</td>
<td>Plenary I: Immunopathogenesis</td>
<td>Juan Javier T. Lichauco</td>
<td>Quezon City, Philippines</td>
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<tr>
<td>08:20</td>
<td>Lupus signatures and bio-profiling: The role of interferon α in SLE pathogenesis</td>
<td>Helmar Fantilanan-Soldevilla</td>
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<td>Video-cast from the Lupus Academy: “Targeting Interferon Pathway in SLE” (Richard Furie, USA)</td>
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<td>Leonid D. Zamora</td>
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<td>Clinical-laboratory correlations in SLE</td>
<td>Michael T. E. Salvador</td>
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<td>Video-cast from the Lupus Academy: “Using lower doses of glucocorticoids: Less toxicity, same efficacy” (Guillermo Ruiz-Irastorza, Spain)</td>
<td>Jovie G. Gerona</td>
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<td>Maricar A. Bayo-ang</td>
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<td>Infections in SLE</td>
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<td>Lupus mimics</td>
<td>Helmar Fantilanan-Soldevilla</td>
<td>Iloilo City, Philippines</td>
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<td>The patient is the best teacher: Up close and personal with lupus and arthritis patients</td>
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<td>The patient is the best teacher: Up close and personal with lupus and arthritis patients</td>
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<td>15:30</td>
<td>Plenary III: Lupus is Every Clinician’s Concern</td>
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<td>Pregnancy in SLE</td>
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**Panelists:**
- Roger B. Dulos
- Caroline G. Arroyo
- Juan Javier Lichauco
- Leonid D. Zamora
Biographies

Dr. Caroline G. Arroyo, MD, FPCP, FPRA
Iloilo City, Philippines

Dr. Caroline G. Arroyo practices Internal Medicine and specialises in Rheumatology in Iloilo City, Philippines, having completed fellowship training in Rheumatology at the University of Santo Tomas Hospital in Manila, Philippines. Dr. Arroyo is a faculty member at Iloilo Doctors’ College of Medicine in Iloilo City and is the adviser of the Lupus Support Group of Panay and coordinator of the Panay Chapter Philippine Council for the Bone and Joint Decade. She was formerly President and on the Board of Directors of the Philippine Rheumatology Association and President of the Philippine College of Physicians Western Visayas-Panay Chapter. She is an experienced clinical trial investigator on various rheumatic diseases including systemic lupus erythematosus, rheumatoid arthritis and osteoarthritis.

Dr. Maricar Aricaya-Bayo-Ang, MD, DPPS
Iloilo City, Philippines

Dr. Maricar Bayo-ang is in her second year of Pediatric Rheumatology Fellowship training at the University of Santo Tomas Hospital in Manila, Philippines. She obtained her medical degree from West Visayas State University in Iloilo City, and completed residency training in Pediatrics at Iloilo Mission Hospital, where she was also a Chief Resident. She will be returning to Iloilo City after her fellowship training to formally set up a Pediatric Rheumatology Center.

Dr. Richelle Joy Diamante-Bayson, MD, DPCP
Manila, Philippines

Dr. Richelle Joy Diamante-Bayson is currently undergoing training in Adult Rheumatology at the University of Santo Tomas Hospital, Manila, Philippines. She obtained her medical degree from Iloilo Doctors’ College of Medicine in Iloilo City and finished her residency training in Internal Medicine at The Doctors’ Hospital Inc., Bacolod City, where she also served as a Chief Resident.

Dr. Roger B. Dulos, MD, FPCP, FPRA
Iloilo City, Philippines

Dr. Roger Dulos is an active Consultant in several tertiary hospitals in Iloilo City and a Professor and Clinical Lecturer at the College of Medicine, West Visayas State University and Central Philippine University in Iloilo City, Philippines. He is Chief of Clinics of the Bone and Joint Center and Section Chief of Rheumatology at St. Paul’s Hospital in Iloilo City. Professor Dulos is also Chairman of the Department of Internal Medicine and heads the Research Committee of Iloilo Mission Hospital in Iloilo City. He is a former President of Philippine College of Rheumatology and co-Chairman of the Special Interest Group (Rheumatoid Arthritis), Philippine Rheumatology Association. He is also an experienced clinical trials investigator.
**Biographies**

**Dr. Aime De Asis-Fabila, FPCP, DPRA**
Iloilo City, Philippines

Dr. Aime Fabila completed her Rheumatology Fellowship training at the University of Santo Tomas Hospital in Manila, Philippines, where she was a Chief Fellow. She obtained her medical degree at Iloilo Doctors’ College of Medicine in Iloilo City and completed her residency training in Internal Medicine at Iloilo Doctors Hospital in Iloilo City. She is currently a practicing Rheumatologist and a Consultant at various hospitals in Iloilo City.

**Dr. Ma. Nida D. Ferrer, MD, FPRA**
Iloilo City, Philippines

Dr. Ma. Nida D. Ferrer obtained her medical degree from West Visayas State University and completed residency training in Internal Medicine at West Visayas Medical Center in Iloilo City, Philippines. She finished her Rheumatology Fellowship training at the University of Santo Tomas Hospital in Manila and returned to Iloilo City where she is currently a Rheumatology Consultant at several hospitals.

**Dr. Richard Furie, MD**
Hofstra Northwell School of Medicine, New York, USA

Richard Furie is Chief of the Division of Rheumatology at Northwell Health, New York, and Professor of Medicine at the Hofstra Northwell School of Medicine. He is a rheumatologist whose activities, for several decades, have focused on patient care, physician education and clinical research in the area of anti-rheumatic drug development. He directs The Program in Novel Therapeutics—the Health System’s clinical research programme in musculoskeletal disease. He also directs the hospital’s SLE and Autoimmune Disease Treatment Center, which has become internationally recognised for its role in the development of new therapies for SLE.

Regarded as one of the senior rheumatologists in the New York metropolitan area, Dr. Furie has been on the Boards of Directors of the local chapters of the Arthritis Foundation and the Lupus Alliance of America and is a member of the Medical-Scientific Advisory Council of the Lupus Foundation of America as well as its Lupus News Editorial Board. He has also served on the Medical and Scientific Advisory Board of the SLE Foundation as well as the Alliance for the Lupus Research Scientific Advisory Board, and continues to volunteer in the activities of the merged foundations, now known as the Lupus Research Alliance. Dr. Furie has served on many committees of the American College of Rheumatology for nearly 20 years.

**Dr. Jovie G. Gerona, MD, FPCP, FPRA**
Iloilo City, Philippines

Dr. Jovie Gerona is a practicing Rheumatologist and Consultant at several hospitals in Iloilo City, Philippines. She obtained her medical degree from West Visayas State University in Iloilo City, completed residency training in Internal Medicine at St. Paul’s Hospital, and then proceeded to complete her Rheumatology Fellowship training at the University of Santo Tomas Hospital in Manila. She is also an experienced clinical trials investigator, especially in the field of lupus.
Dr. Juan Javier Lichauco, MD, FPCP, FPRA
Quezon City, Philippines

Dr. Juan Javier Lichauco is Chairman of Internal Medicine and Section Chief of Rheumatology at St. Luke's Medical Center (SLMC) in Quezon City, Philippines. He also heads the Rheumatology, Allergy and Immunology Center at SLMC – Global City, and is an Assistant Professor of the St. Luke’s College of Medicine. Dr. Lichauco completed residency training in Internal Medicine at Englewood Hospital Medical Center, Englewood, New Jersey, USA where he was also a Chief Resident, and then proceeded to complete his Rheumatology Fellowship at Montefiore Medical Center, Bronx, New York, USA where he was also Research Fellow at the Division of Rheumatology, Albert Einstein College of Medicine. He obtained his medical degree (magna cum laude) from the University of Santo Tomas in Manila. Dr. Lichauco has received various awards including Excellence in Ambulatory Care, and Outstanding Postgraduate I and II at Englewood Hospital and Medical Center. He is an experienced clinical trials investigator, has published several papers in peer-reviewed journals, and is a well sought after lecturer in a broad range of topics in Rheumatology.

Dr. Laniyati Hamijoyo, MD
Bandung, Indonesia

Dr. Laniyati Hamijoyo is a member of the medical staff at the Department of Internal Medicine, Faculty of Medicine University of Padjadjaran Bandung, Indonesia. She completed her fellowship training in Rheumatology at the University of Santo Tomas (UST) Hospital, Manila, Philippines. She was recipient of an International Scholarship Award from the Japan College of Rheumatology in 2007 and the Asia Pacific League of Associations for Rheumatology (APLAR) in 2008, and several research awards from the UST Hospital, Philippine Rheumatology Association, the Indonesian Rheumatology Association (IRA) and recently from the Central Java Governor for lupus in 2017. She is a member of the Asia Pacific Lupus Collaboration (APLC), the Lupus Special Interest Group of APLAR and the IRA, and also served on the Scientific Committee of APLAR (2016–2018). She actively supervises physician and lay education programmes, and co-authored the book “Hope for the butterflies”, which is now published in English and Indonesian languages. Dr. Hamijoyo is currently studying for a PhD degree at the University of Padjadjaran in Bandung, Indonesia.

Dr. Catherine Macapagal-Liwanag, MD, FPCP, FPRA
Davao City, Philippines

Dr. Catherine Macapagal-Liwanag is a practicing Rheumatologist at Davao City, Philippines, having completed Rheumatology Fellowship training at the University of Santo Tomas Hospital in Manila, Philippines. She is also a faculty member of the Department of Biochemistry at the Brokenshire School of Medicine in Davao City, and currently Chairman of the Bone Densitometry Unit at San Pedro Hospital in Davao City. She is Medical Adviser of Lupus Foundation of Southern Mindanao where she actively organises and promotes local lupus patient support group activities. Dr. Macapagal-Liwanag was a co-recipient of a special grant at the Asia-Pacific League of Associations for Rheumatology (APLAR) Congress 2014 for documentation of the “Rheumacares” project for rheumatic disease patients affected by the 2013 devastating typhoon Yolanda in Leyte and earthquake in Bohol, Philippines.
Biographies

Dr. Sandra V. Navarra, MD, FPCP, FPRA
Manila, Philippines

Dr. Sandra Navarra is Professor and Head of Rheumatology at University of Santo Tomas, Manila, Philippines. She served as Secretary-General, Head of the Education Committee, chaired the special interest group on systemic lupus erythematosus of the Asia Pacific League of Associations for Rheumatology (APLAR), and was past-President of the Philippine Rheumatology Association. She founded the Arthritis Care and Research Foundation of the Philippines, where she is currently Scientific Programs Director, and the Lupus Foundation of the Philippines, where she has served as Medical Adviser. 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. Dr. Navarra is a founding member of the Lupus Academy Steering Committee, and a founding and executive board member of both Asia Pacific Lupus Collaboration (APLC) and Asian Lupus Nephritis Network (ALNN). Dr. 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 contributions to education and research. She has organised several national and regional educational meetings including the Ten Topics in Rheumatology – Asia (November 2009), the first Asian Lupus Summit (November 2012), the Asian Lupus Summit by the Lupus Academy (March 2014), the Lupus Nephritis Forum (July 2015), and the Lupus Academy Roadshow Meetings (May 2016 and November 2017), all held in the Philippines.

Dr. Guillermo Ruiz-Irastorza, MD, PhD
Autoimmune Research Unit, Cruces University Hospital, Bizkaia, Spain

Guillermo Ruiz-Irastorza is Head of the Autoimmune Research Unit at Cruces University Hospital, Bizkaia, Spain, where he has been since 2001.

Dr. Ruiz-Irastorza received his MD from the Universidad Autónoma de Madrid, Spain in 1990 and became a specialist in internal medicine in 1996. Following his PhD from the University of the Basque Country, Spain in 1999, he spent a year as a Research Fellow at the Lupus Research Unit, St Thomas’ Hospital, London, UK, before returning to the Hospital Universitario Cruces as Consultant Physician in Internal Medicine. He became Dr. of Medicine at the University of the Basque Country, Spain in 2004.

Dr. Ruiz-Irastorza is a member of the Editorial Board of the journal Lupus, and a reviewer of several other journals in the fields of rheumatology and autoimmune diseases, including *Annals of Rheumatic Diseases, Arthritis & Rheumatology, Rheumatology, Journal of Rheumatology* and *Lupus Science & Medicine*.

He is a member of the Grupo de Estudio de las Enfermedades Autoinmunes Sistémicas (GEAS), and coordinator of the first Spanish national lupus inception cohort study. He has been member of the Systemic Lupus International Collaborating Clinics since 2008.

Dr. Ruiz-Irastorza’s clinical and research interests focus on systemic lupus erythematosus, antiphospholipid syndrome, and pregnancy and autoimmune diseases. He is author of 151 peer-reviewed publications and 20 book chapters.
Dr. Michael T. E. Salvador, MD, FPCP, DPRA
Bacolod City, Philippines

Dr. Michael Salvador practices Internal Medicine specialising in Rheumatology in Bacolod City, Philippines. He is an active Consultant and a member of residency training core at Dr. Pablo O. Torre Memorial Hospital, Bacolod City, where he also completed residency training in Internal Medicine. Dr. Salvador finished his fellowship training in Rheumatology at the University of Santo Tomas Hospital, Manila, Philippines where he also served as Chief Fellow. Dr. Salvador was co-recipient of a special grant at the Asia-Pacific League of Associations for Rheumatology (APLAR) Congress 2014 for documentation of the “Rheumacares” project for rheumatic disease patients affected by the 2013 devastating typhoon Yolanda in Leyte and earthquake in Bohol, Philippines.

Dr. Helmar Fantilanan-Soldevilla, MD, FPCP, FPRA
Iloilo City, Philippines

Dr. Helmar Fantilanan-Soldevilla is Assistant Professor II at the College of Medicine, West Visayas State University in Iloilo, Philippines, and an active Consultant practicing Internal Medicine specialising in Rheumatology in several tertiary hospitals in Iloilo City. She obtained her medical degree at West Visayas State University and completed residency training in Internal Medicine at West Visayas Medical Center, Iloilo City. She completed Clinical Fellowship training in Rheumatology at University of Santo Tomas Hospital, Manila, Philippines, where she also received a research fellowship training grant. She is currently a Research Associate at Bone and Joint Center, St Paul’s Hospital, Iloilo City, and has presented several papers in lupus and other rheumatic diseases. She is actively involved in various physician and lay educational programmes including the “patient partners” educational module of Rheumatology Educational Trust Foundation, Inc.

Dr. Stamen N. Tupas, MD, FPCP, DPRA
Iloilo City, Philippines

Dr. Stamen Tupas is a practicing Rheumatologist affiliated with various hospitals in Iloilo City, Philippines. She completed her Rheumatology Fellowship training at the University of Santo Tomas Hospital, Manila, Philippines where she was a Chief Fellow during her senior year. She obtained her medical degree at West Visayas State University in Iloilo City, and completed residency training in Internal Medicine at Dr. Pablo O. Torre Memorial Hospital in Bacolod City.
Dr. Murray Urowitz, MD
University of Toronto, Canada

Murray Urowitz is Professor of Medicine at the University of Toronto and Director of the Centre for Prognosis Studies in the Rheumatic Diseases and the University of Toronto Lupus Clinic at the Toronto Western Hospital. Dr. Urowitz received his MD from the University of Toronto and completed his postgraduate training in rheumatology at the Johns Hopkins University, Baltimore and at the University of Toronto. He was a Staff Rheumatologist at the Wellesley Hospital in Toronto from 1974–1987 and Physician in Chief from 1987–1995. He has also been a Senior Staff Rheumatologist at the Toronto Western Hospital and Senior Scientist at the Krembil Research Institute since 1995.

Dr. Urowitz established the University of Toronto Lupus Clinic and Lupus Databank Research Program in 1970. This extensive longitudinal database is one of the largest such databanks in the world with over 1800 patients and has allowed for numerous findings that have changed the way lupus is diagnosed and managed. His teaching excellence is exemplified by having won the outstanding clinical teacher award in the medical school for a remarkable eight times. He was the Associate Dean of Postgraduate Medical Education at the University of Toronto between 1995 and 2005. This lifelong commitment to medical education has resulted in him being the recipient of the Royal College of Physicians and Surgeons of Canada 2004 Duncan Graham Award.

Dr. Urowitz is a founding member of the Ontario Lupus Association (now Lupus Ontario) and past-President of the Lupus Council of the American Rheumatology Association. He is a founding member of the Systemic Lupus International Collaborating Clinics (SLiCC) group and currently directs the SLiCC Registry for Atherosclerosis. In 1995 he was the recipient of the Distinguished Rheumatologist Award of the Canadian Rheumatology Association and in 2009 he was recipient of the Evelyn V. Hess Award for outstanding contributions to lupus research, awarded by the Lupus Foundation of America. In 2012 he was awarded a Queen Elizabeth Diamond Jubilee Medal (nominated by the Canadian Rheumatology Association) in recognition of his longstanding contributions to lupus research and his work in the field of rheumatology. In 2016 he was awarded a Lupus Ontario Lifetime Achievement Award “for loyal dedication and unwavering commitment to our goals”.

Dr. Urowitz has published over 300 peer reviewed papers and 40 book chapters, and has supervised the training of over 100 fellows in rheumatology, mainly in systemic lupus erythematosus. He has been an invited speaker around the world.

Dr. Elaine Veñegas, MD, FPCP
Antique Province, Philippines

Dr. Elaine Veñegas recently completed her Rheumatology Fellowship training at the University of Santo Tomas Hospital, Manila, Philippines. She obtained her medical degree from West Visayas State University in Iloilo City and completed residency training in Internal Medicine at St. Paul’s Hospital, Iloilo City. Her special research interests include lupus nephritis and burden of illness. A talented painter, Dr. Veñegas and her graphic artist sister, helped conceptualise the official logo of Rheumatology Educational Trust Foundation, Inc. She will establish her Rheumatology practice in the provinces of Antique and Iloilo.
Dr. Leonid Zamora is a fellow of Philippine College of Physicians and Philippine Rheumatology Association. He obtained his medical degree from the University of Santo Tomas (UST), Manila, Philippines, where he is currently a visiting lecturer and clinical trials sub-investigator. He completed his Internal Medicine residency at Makati Medical Center, Philippines, underwent clinical fellowship training followed by a research fellowship in Rheumatology at UST Hospital, where he also served as a Chief Fellow. Dr. Zamora underwent his observership in Rheumatology at University of Texas Health Science Center, Houston, USA and is currently completing masters studies in Molecular Medicine. He is a member of Asia Pacific Lupus Collaboration and has published several papers on systemic lupus erythematosus in peer-reviewed journals. He is a contributor of the Task Force: Clinical Practice Guidelines for the Diagnosis, Treatment, Prevention and Control of Tuberculosis in Adult Filipinos: 2016 Update, and is a lecturer in a broad range of topics in rheumatology.
Systemic lupus erythematosus (SLE) is a multi-systemic autoimmune disease with a highly variable course and characterised by a dysregulation of the innate and adaptive immune systems. Recently, the role of the innate immune system in SLE pathogenesis has been revisited. The plasmacytoid dendritic cell (pDC) is an integral member of the innate immune system. Although few in number when compared to other peripheral mononuclear cells, pDCs have the unique ability to produce high levels of interferon α (iFnα). Interferon α is a member of the Type I interferon family and its role in SLE pathogenesis has been elucidated.

Data from genome-wide association studies have strongly supported the role of certain susceptibility genes such as endosomal toll-like receptors (tLR-7 and tLR-9) and iFn-regulatory factor 5 (iRF 5) in increasing IFN-I production. IFN α promotes dendritic cell maturation, enhances T helper cell 1 response and stimulates antibody production. IFN α may serve as a marker of lupus disease activity, since high levels of IFN α, measured in sera or by mRNA expression, have been observed in patients with active SLE. In addition, IFN α-inducible genes may serve as a useful biomarker to help differentiate between a lupus flare or infection.

SLE therapies for the most part have focused on inhibiting T and B cell activation. Targeted therapies to reduce IFN α levels, with the use of monoclonal antibodies against IFN α, anti-IFN α antibodies-inducing vaccines and inhibitors of toll-like receptors, are novel and promising treatments for SLE.

Learning Objectives

- Review the key features of the innate and adaptive immune system
- Recognise the pivotal role of pDCs and IFN α in SLE pathogenesis
- Describe the role of IFN α as a marker of SLE disease activity
- Explore the potential use of interferon α-inducible genes as a biomarker to differentiate a lupus flare from infection
- Discuss the novel therapies for SLE that target the IFN α pathway

References

Video cast: Targeting the interferon pathway in SLE

It has been known for several decades that the majority of patients with systemic lupus erythematosus (SLE) have an activated interferon pathway. Although an obvious target for drug development, the initial trials with monoclonal antibodies to interferon (IFN) α were either unsuccessful or yielded modest results. However, the Phase II study with anifrolumab, a monoclonal antibody to the type 1 IFN receptor, yielded robust data and confirmed our initial hypothesis that inhibition of the type 1 IFN pathway could reduce disease activity. With heightened interest in this therapeutic strategy, many different approaches are being taken to developing drugs to inhibit the IFN pathway in SLE.

Learning Objectives

- Explain the role of type 1 IFNs in SLE
- Describe strategic approaches to inhibiting the IFN pathway
- Discuss results of clinical trials with experimental therapies that target the IFN pathway

References


Systemic lupus erythematosus (SLE) is a heterogeneous disease with patients presenting with varied clinical manifestations ranging from mild arthritis and rash to life-threatening renal, hematologic, or central nervous system involvement. SLE is characterised by immune system dysregulation such as incomplete clearance of apoptotic materials, hyperactivation of immune cells, overproduction of antibodies and abundant immune complex deposits.1

The diagnosis of SLE is generally based on clinical manifestations and laboratory data, often after excluding other more common differential diagnoses. In addition to basic tests like complete blood count and urinalysis, serologic findings are important in suggesting the possibility of SLE, with hypocomplementemia and specific auto-antibodies (eg, anti-double-stranded DNA [ds-DNA] and anti-Smith [Sm]) highly associated with this condition.2

Antibodies to ds-DNA are useful for the diagnosis of SLE, to monitor the disease activity, and correlate with nephritis, progression to end-stage renal disease and reduced survival,2 and central nervous involvements.3 Anti-Sm antibodies are highly specific for SLE. Anti-nucleosome antibodies are an excellent marker for SLE and good predictors of flares in quiescent lupus.4 Anti-histone antibodies characterise drug-induced lupus, while anti-SSA/Ro and anti-SSB/La antibodies are associated with neonatal lupus erythematosus and photosensitivity. Anti-ribosomal P antibodies play a role in neuropsychiatric lupus, but their association with clinical manifestations is still unclear. Anti-phospholipid antibodies are associated with the anti-phospholipid syndrome, cerebral vascular disease, and neuropsychiatric lupus. Anti-C1q antibodies amplify glomerular injury, and the elevation of their titers may predict renal flares. Anti-RNP antibodies are a marker of Sharp’s syndrome but can be found in SLE as well. Anti-PCNA antibodies are present in 5–10% of SLE patients especially those with arthritis and hypocomplementemia.5

Several potential serologic biomarkers for diagnosis and assessment of disease activity include miRNA, IFN α, IFN-regulated chemokines, sIL-2R, antichromatin antibody, and TAM receptors and ligands. In addition, anti-C1q antibody is a potential biomarker for lupus nephritis.6

**Learning Objectives**

- Discuss the evaluation of SLE using clinical and laboratory parameters
- Describe the correlations of serologies with clinical phenotypes of SLE
- Review the various factors influencing disease activity and monitoring
- Explore future biomarkers for diagnosis and assessment of SLE
Renal involvement is a leading cause of morbidity and mortality in systemic lupus erythematosus (SLE). Asian patients may exhibit higher rates and more severe renal involvement, though outcomes and survival rates have improved over the last decade. Several factors affect outcomes in lupus nephritis, including delayed diagnosis and treatment-related factors that reduce adherence, including cost, adverse events and infections. Poor prognostic factors inherent to the disease include nephrotic syndrome, azotemia and high activity and chronicity indices on histopathology.

The key treatment goal for patients with lupus nephritis is to achieve and maintain remission, simplified into an intensive induction phase followed by a maintenance phase. Current therapeutic guidelines include those by the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR), and the Kidney Disease improving global Outcomes (KDIGO) and Asian Lupus nephritis Network (ALNN). Consensus arising from clinical trials indicate the use of cyclophosphamide (CYC) and mycophenolate mofetil (MMF) coupled with high dose glucocorticoid for induction, and either quarterly intravenous CYC, MMF or azathioprine for maintenance.

There is now a growing trend toward the use of calcineurin inhibitors, with promising data on the role of tacrolimus in significantly reducing proteinuria and inducing remission both as a monotherapy and combination therapy. The newer generation calcineurin inhibitor, voclosporin, is currently being studied for lupus nephritis, with positive results reported for achieving remission.

B-cell directed therapies, mainly rituximab and belimumab, have shown promise for the treatment of lupus nephritis. Although the LUNAR trial failed to achieve its primary endpoint, several studies have shown rituximab to be effective in both proliferative and membranous lupus nephritis, with ongoing studies of rituximab assessing it as an effective steroid-sparing agent for lupus nephritis. Recent data on belimumab have also demonstrated good renal outcomes with regard to reduction of proteinuria and renal flares.

References

Learning Objectives
- Discuss the factors that affect treatment outcomes in lupus nephritis
- Review data on induction treatment
- Discuss outcomes of combination and multi-targeted therapies that include calcineurin inhibitors
- Discuss outcomes of B-cell directed therapy
- Provide treatment targets and treatment options for refractory lupus nephritis


Video cast: Using lower doses of glucocorticoids in SLE: less toxicity, same efficacy

Glucocorticoids have long been one of the cornerstones of the treatment of inflammatory conditions, including systemic lupus erythematosus (SLE). The use of high doses of oral prednisone/prednisolone is recommended by most guidelines in cases of moderate to high lupus activity.1, 2 However, such recommendations are based more on custom than on true evidence.

According to the pharmacological basis of the effects of glucocorticoids, the genomic pathway is almost fully saturated at doses of prednisone over 30 mg/d, which means that toxicity associated with transactivation is close to maximum above those levels. On the contrary, the non-genomic pathway is responsible for a rapid and powerful anti-inflammatory response, mostly free from the secondary effects of the genomic pathway; this pathway is activated at doses over 100 mg/d, being fully active over 250 mg/d.3

Results from clinical studies corroborate these data. It has been consistently shown that glucocorticoid-related damage is dose-dependent, with doses below 5–7.5 mg/d being probably safe and doses >30 mg/d being associated with a sharp increase in the frequency of side effects. The use of pulses of methylprednisolone has been also free from secondary damage in most studies.4,5

Moreover, recent data from observational studies and a small clinical trial support the fact that lower doses of oral prednisone are as effective as high doses in treating active lupus, particularly, but not only, renal disease.6–8 Thus, a door has been opened to a more rational use of glucocorticoids, taking advantage of their unquestionable anti-inflammatory and immunomodulatory properties whilst reducing the risks for the also unquestionable toxicity.

In our experience, combination therapy with hydroxychloroquine, immunosuppressive drugs and, especially, pulses of methylprednisolone (no need to exceed 500 mg per pulse; a 250 mg pulse is usually enough) help reduce the initial doses of prednisone to less than 30 mg/d with very rapid tapering, and offer high efficacy minimising short- and long-term secondary effects.

Learning Objectives

- Understand the role of the genomic and non-genomic pathways in the therapeutic and toxic effects of glucocorticoids
- Review published data in SLE patients showing the association of different doses of glucocorticoids with side effects including damage
- Discuss the results from recent studies on the efficacy and toxicity of therapeutic schemes using lower doses of prednisone in severe lupus
- Use practical guidelines for using lower doses of prednisone in the setting of active lupus


# Case Study Workshops

## Saturday 18th November

### Morning (11:00) Parallel Case Study Workshops

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<tr>
<th>Moderator</th>
<th>Topic</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>Leonid D. Zamora (Manila, Philippines)</td>
<td>Infections in SLE</td>
<td>Maricar A. Bayo-ang (Iloilo City, Philippines)</td>
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<tbody>
<tr>
<td>Ma. Nida G. Ferrer (Iloilo City, Philippines)</td>
<td>Lupus mimics</td>
<td>Richelle Joy Diamante-Bayson (Manila, Philippines)</td>
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<tbody>
<tr>
<td>Roger B. Dullos (Iloilo City, Philippines)</td>
<td>Up close and personal with lupus RA patient partners</td>
<td>Helmar Fantilanan-Soldevilla (Iloilo City, Philippines)</td>
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### Afternoon (13:30) Parallel Case Study Workshops

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<tr>
<td>Laniyati Hamijoyo (Bandung, Indonesia)</td>
<td>Infections in SLE</td>
<td>Elaine T. Veñegas (Antique Province, Philippines)</td>
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<tr>
<td>Catherine M. Liwanag (Davao City, Philippines)</td>
<td>Lupus mimics</td>
<td>Aime D. Fabila (Iloilo City, Philippines)</td>
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<td>Michael T. E. Salvador (Bacolod City, Philippines)</td>
<td>Up close and personal with lupus RA patient partners</td>
<td>Helmar Fantilanan-Soldevilla (Iloilo City, Philippines)</td>
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**Please Note**

These workshops will be held in breakout rooms. Please follow the appropriate signs corresponding to the workshops you are registered to attend.
Infections are a leading cause of morbidity and mortality in systemic lupus erythematosus (SLE) and are due to both inherent immune abnormalities as well as the immunosuppressive therapies. Systemic infections also tend to mimic exacerbations of SLE leading to diagnostic and therapeutic challenges. SLE patients are highly susceptible to both common and uncommon infections caused by a broad range of etiologic agents including S. pneumoniae, H. influenzae, E. coli and other exotic/opportunistic infections, with the respiratory tract as the common site of infection. Salmonella infections are of particular interest among Filipino patients with SLE where organ involvement goes beyond the gastrointestinal tract, and tuberculosis wherein extra-pulmonary involvement may be the more predominant manifestation.

Case 1: 18F SLE with Salmonella arthritis
An 18-year-old female on prednisone and cyclophosphamide pulse therapy for lupus nephritis presents with acute onset right knee pain and swelling. Arthrocentesis yielded grossly purulent synovial fluid with a white cell count of 65,600/mm³ predominantly neutrophils. Both synovial and blood cultures grew Salmonella typhi. She was given antibiotics, underwent arthrotomy and was discharged having improved.

Case 2: 34F SLE on pulse steroid for haemolytic anemia develops Salmonella sepsis
A 34-year-old female with SLE, given pulse steroid therapy for haemolytic anemia, presented with fever, chills, cough and chest pain. Blood and sputum cultures grew Salmonella sp. She developed acute respiratory distress syndrome and eventually succumbed to septic shock.

Case 3: 32F SLE with soft tissue abscess caused by methicillin-resistant Staphylococcus aureus (MRSA)
A 32-year-old female whose SLE was in remission developed a left thigh abscess. Needle aspiration yielded purulent fluid which grew MRSA. Blood cultures and swabs from axilla, nasal and inguinal areas likewise grew MRSA. Repeat blood cultures and swabs were negative after a full course of vancomycin. The patient and household members also underwent a decolonisation regimen.

Case 4: 22F with active SLE presents with soft tissue abscess on the ankle
A 22-year-old female with SLE has been maintained on hydroxychloroquine and prednisone 5 mg/day for the past 2 years. At 24 weeks of her second pregnancy, she was seen at the emergency department because of fever and a soft tissue abscess on her right ankle. Needle aspiration of the abscess was positive for acid-fast bacilli (AFB); cultures grew Burkholderia cepaciae and Mycobacterium sp.

Case 5: 24F with lupus nephritis develops disseminated tuberculosis
A 24-year-old female was on prednisone and pulse cyclophosphamide for lupus nephritis when she developed fever, chills and an abscess on her right hand. Needle aspiration was positive for AFB and grew Mycobacterium tuberculosis. During hospitalisation she developed intractable seizures and cranial CT scan disclosed a left temporal abscess; she could not be resuscitated. Post-mortem brain abscess aspirate grew Mycobacterium tuberculosis.
Learning Objectives

- Appreciate the significant burden of infections among SLE patients
- Describe the role of steroids and immunosuppressive agents in increasing susceptibility to infections
- Identify clinical and laboratory features that may help distinguish infection from lupus activity
- Outline the principles in the management and prevention of infections in SLE

Notes

References


Case Study Workshop

**Moderator AM Workshop:** Dr. Ma. Nida D. Ferrer, (Iloilo City, Philippines)
**Moderator PM Workshop:** Dr. Catherine M. Liwanag, (Davao City, Philippines)

**Presenters:** Dr. Richelle Joy Diamante-Bayson, (Manila, Philippines) & Dr. Aime D. Fabila, (Iloilo City, Philippines)

**Lupus mimics**

Systemic lupus erythematosus (SLE) is a chronic, autoimmune, multisystem inflammatory disease, with a wide range of manifestations that evolve insidiously over time. As such many other conditions, especially infections, can mimic SLE and potentially impact on management decisions. Diagnosis rests on adept recognition of clinical and laboratory clues that can help distinguish SLE from mimics.

**Case 1: 41F SLE with dizziness, anemia, bradycardia and a junctional rhythm**
A 41-year-old lady with active lupus presents with dizziness, anemia, bradycardia and a junctional rhythm. Further history disclosed prior thyroidectomy (with accidental parathyroidectomy) and laboratory investigations documented severe hypocalcemia. Intravenous calcium immediately reversed her signs and symptoms, with cardiac rhythm returning to normal. **Caveat:** Arrhythmias and conduction disturbances may complicate SLE, with sinus tachycardia closely associated with clinical and laboratory features of lupus activity. However, other more common causes such as electrolyte abnormalities must be ruled out, as these conditions respond to specific therapies.

**Case 2: 28F SLE with end stage kidney disease, drowsiness and confusion, and herpes zoster**
A 28-year-old lady with SLE has been on regular hemodialysis for end stage kidney disease, when she presents with drowsiness and confusion. There is incidental note of herpes zoster for which she took valacyclovir. Discontinuation of the drug immediately resolved the neurologic manifestations. **Caveat:** The SLE international collaborating clinics (SLiCC) 2012 neurologic criterion includes seizures, psychosis, mononeuritis multiplex, myelitis, peripheral or cranial neuropathy and acute confusional state. However, the criterion also reiterates that primary vasculitis, infection, and toxic/metabolic or drug causes should be ruled out.

**Case 3: 32F with thrombocytopenia and SLE develops fever, dyspnea and new lung infiltrates**
A 32-year-old female who recently received multiple blood transfusions for severe anemia and bleeding due to severe thrombocytopenia, is eventually diagnosed with SLE and started on high dose steroid. She develops fever, dyspnea and new lung infiltrates. **Caveat:** In this patient, the differential diagnoses broaden to include causes other than those directly related to lupus, such as infection, transfusion associated congestion (TACO) or transfusion related lung injury (TRALI) following multiple blood transfusions.

**Case 4: 27F with prolonged fever, lesions, oral ulcers pancytopenia and hypocomplementemia**
A 27-year-old female is diagnosed SLE presenting as prolonged fever, scaly and crusty skin lesions, oral ulcers, pancytopenia, hypocomplementemia, positive ANA and anti-dsDNA. Skin biopsy showed parakeratosis, aggregates of neutrophilic cells on stratum corneum, regular acanthosis, microabscesses and, dilated dermal papillary vessels, and superficial perivascular lymphohistiocytic infiltrates consistent with psoriasis vulgaris. **Caveat:** Some cutaneous lesions of SLE may have a psoriasiform appearance. Although there are reports of idiopathic psoriasis co-existing with SLE, histologic findings further aid the clinician in determining the exact nature of the skin lesion as some therapies for cutaneous SLE may not be effective for (or may worsen) psoriasis.

**Case 5: 30F with quiescent SLE and secondarily infected skin lesion**
A 30-year-old female with quiescent SLE, presents with a secondarily infected skin lesion, which improved with antibiotics. A month later, she was hospitalised due to fever, chills, diarrhoea and worsening Raynaud’s, which rapidly progressed to digital gangrene. Hospital course was further complicated by shock, renal and respiratory failure, managed with antibiotics, vasopressors, mechanical ventilation and dialysis. She eventually improved, albeit with residual digital gangrene. **Caveat:** Cutaneous manifestations

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of systemic infections range from the recalcitrant leg ulcer of pyoderma gangrenosum to symmetric peripheral gangrene (purpura fulminans) of septic shock. The astute clinician must constantly evaluate and effectively address contributory factors including hypovolemia, cytotoxic medications and vasopressors, in order to prevent irreversible consequences.

### Learning Objectives

- Recognise co-morbidities other than SLE that can explain the patient’s primary manifestations
- Distinguish cutaneous manifestations of SLE from non-SLE causes, especially infections and drugs
- Identify and effectively address contributory factors to an individual patient’s manifestations

### Notes

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### References


Case Study Workshop

The Patient Partners Program is a special educational program wherein systemic lupus erythematosus (SLE) patient partners are invited to share personal stories of their battle with lupus, providing a unique opportunity for non-rheumatologists to have a first-hand encounter with the “many faces of lupus”. In addition, patients with multiple joint deformities of chronic rheumatoid arthritis (RA) who have been trained and formally certified in the performance of musculoskeletal examination, actually teach participants physical examination of the joints. Administered by the University of Santo Tomas (UST) Section of Rheumatology, this program has been well received by general practitioners and medical students throughout several years of its implementation.

Outside of the academy, the patient partners further provide vital psycho-emotional support for other patients with chronic autoimmune diseases during “Living well” workshop sessions and support group forums.

Moderator AM Workshop: Dr. Roger B. Dulso, (Iloilo City, Philippines)
Moderator PM Workshop: Dr. Michael T. E. Salvador, (Bacolod City, Philippines)

Presenter: Dr. Helmar Fantilan-Soldevilla, (Iloilo City, Philippines)

The patient is the best teacher: Up close and personal with lupus and arthritis patients
Systemic lupus erythematosus (SLE) is an autoimmune disease predominantly affecting females in their reproductive years. Every lupus pregnancy poses a management challenge, as this may trigger SLE activity and adversely affect materno-fetal outcomes. Active lupus disease, as well as the presence of antiphospholipid syndrome, increases the risk of poor maternal and fetal outcomes including miscarriages and preterm delivery, low birth weight, intrauterine fetal death, and neonatal morbidity. In a national study comparing SLE pregnancies and those without lupus, maternal mortality was 20 times higher for SLE patients, with a three to seven times higher risk for thrombosis, infection and thrombocytopenia among SLE patients.1 Pregnant patients with SLE were also more likely to have other medical conditions like diabetes, hypertension, and thrombophilia, which are associated with adverse pregnancy outcomes.1

Pregnancy in SLE requires a multidisciplinary approach and close monitoring of both mother and fetus from the start of conception. Immunosuppressives such as cyclophosphamide and mycophenolate, and antihypertensives such as angiotensin-converting enzyme inhibitors, need to be modified because of teratogenic effects. Conversely, corticosteroids, azathioprine, and calcineurin inhibitors are considered compatible with gestation. Lupus activity, thrombotic risk due to antiphospholipid antibodies, and nephritis and/or PIH need to be closely monitored and effectively addressed. Planning of pregnancy is just as important to increase the probability of successful pregnancies, with best outcomes achieved if SLE is in remission for at least 6 months prior to conception.4, 5

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Pregnant patients with SLE were also more likely to have other medical conditions like diabetes, hypertension, and thrombophilia, which are associated with adverse pregnancy outcomes.1

One difficult but usual challenge is to distinguish lupus nephritis flare from pregnancy induced hypertension (PIH), since the treatment approach to either condition differs and may potentially aggravate the other; for example, increasing steroid dose for lupus flare may worsen pre-eclampsia / eclampsia. Mothers with a history of nephritis have higher rates of preterm delivery (<37/40, 30% vs 11%, p=0.029) and earlier onset of pre-eclampsia (median 34.5 weeks [IQR 32–37] vs 37.5 weeks [IQR 35–38, p = 0.047] than those without a history of nephritis).2 Premature birth, pre-eclampsia and hypertension are also significantly associated with current or previous active nephritis.3

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References
Systemic lupus erythematosus is a complex multisystem disease with diverse phenotypes among patients, which are variable over time and have variable response to standard of care. Thus, hard specific goals for the management of lupus are difficult to define. However, general principles of management both ‘thou shalt’ and ‘thou shalt not’ can be developed.

My ten commandments in the management of lupus are as follows:

1. Classify/diagnose the patient properly
   a. Merits of ACR & SLICC criteria
2. Phenotype the disease
   a. Clinically
   b. Disease activity state
   c. Pathogenic mechanism
   d. Biomarkers
3. Establish a treatment target
   a. Choose a target
4. Prescribe an antimalarial
   a. For all
5. Consider a defined corticosteroid dose/duration approach
   a. Define a treatment algorithm
   b. Beware of damage accrual
6. Add an immunosuppressive agent
   a. When? Which? How long?
   b. Combination therapy
   c. Withdrawal possibilities
7. Consider the newer biologics
   a. A newer possibility
8. Monitor for and treat the comorbidities
   a. Cardiovascular comorbidities
   b. Cognitive dysfunction
   c. Bone disease
9. Don’t forget patient-related outcomes
   a. SF-36 and LUPUSQoL
10. Monitor patients regularly: How often? What measures?
    a. Guidelines

Professor Urowitz shall present commentaries to be considered for each of the commandments.
Systemic lupus erythematosus is a chronic multisystem autoimmune disease with a wide spectrum of manifestations ranging from cutaneous involvement to severe threatening life situations. The clinical features may be similar across regions, but disease severity and comorbidities vary appreciably in the developing and industrialised worlds. Literature reports incidence rates ranging from 0.9–3.1 (per 100,000 per year), and prevalence rates from 4.3–45.3 per 100,000 in Asia-Pacific countries, whereas other literature report the prevalence from 3.2–70 per 100,000 in Asia. Renal involvement was observed more often among Asians than whites, (21–65% at diagnosis and 40–82% over time), and was a major cause of morbidity and mortality.

Reported survival rates for SLE in developing countries, including Asia, were lower than in industrialised countries, with infections including tuberculosis, active SLE, and genetic factors significantly contributing to poorer outcomes. Limited access to earlier diagnosis, as well as appropriate management of disease, continue to pose barriers in some countries. Despite the availability of newer medications, the majority of patients still suffer inadequate disease control and are at risk of permanent organ damage over time. Thus, there is a need to develop active collaboration among Asia-Pacific countries to achieve better outcomes for patients with lupus.

The Asia-Pacific Lupus Collaboration (APLC) is a partnership of expert lupus clinicians and researchers from Australia, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, Thailand and the United Arab Emirates. The APLC was formed in 2012 to improve outcomes for patients with SLE. This group has developed the potential treatment target known as lupus low disease activity status (LLDAS). LLDAS has shown better quality of life among lupus patients. The Asia-Pacific League of Associations for Rheumatology (APLAR) also helps promote lupus awareness, education and collaboration among its member countries by supporting a special interest group on SLE – tailored to the heterogeneous healthcare systems and resources in the region.

Learning Objectives

- Describe the situation and burden of lupus in the Asia-Pacific region
- Describe current and potential collaborative activities in the Asia-Pacific region
- Recognise the importance of collaboration among individuals, institutions and countries in improving lupus outcomes