

SINATER X

X International Symposium on Diagnostics and Therapeutics
XIV LIKA Scientific Journey



RDIS

V International Symposium
on Rare Diseases

28th - 30th August 2019

A 10-Year Celebration of LIKA International Symposia


LIKA

Laboratório de Imunopatologia Keizo Asami



UNIVERSIDADE
FEDERAL
DE PERNAMBUCO

LIKA'S HISTORY

An aerial photograph of the Laboratório de Imunopatologia Keizo Asami (LIKA) building at UFPE. The building is a large, modern structure with a curved facade and a prominent circular glass dome on the left side. In the foreground, the concrete foundation for the building is visible on a grassy area. The surrounding campus includes other buildings, trees, and a paved road.

The **Laboratório de Imunopatologia Keizo Asami (LIKA)** of the Universidade Federal de Pernambuco (UFPE) was inaugurated in 1986 and during the following six years received significant financial funding from the Japanese International Cooperation Agency (JICA). This joint Brazil-Japan health-related project was to mark the signing in 1895 of the Treaty of Friendship, Commerce and Navigation between the two countries with Prof Keizo Asami, Dean of Keio University, Tokyo identifying UFPE as the most favorable location.



FROM 1992 ONWARDS

From 1992 onwards, LIKA began to seek funding resources from national and state development agencies such as CNPq, CAPES, FINEP and FACEPE. More recently this support has widened to include the active participation of various private scientific and non-scientific companies.

Such assistance has enabled LIKA to expand and progress so that the Laboratory now encompasses 13 research and development sectors in various fields of scientific and biomedical knowledge: Immunology, Neuroimmunogenetics, Biotechnology, Biochemistry & Nanotechnology, Molecular Biology, Health Informatics, Microscopy, Animal Facility (Bioterium), Pathology, Microbiology, Virology, Molecular Prospecting and Biological Safety (NB3 Level). A notable celebration of LIKA's contribution to Science and Innovation took place in 2016, a year that marked 30 years of achievement and also coincided with the 70th anniversary of UFPE.

See the videos:

<https://www.youtube.com/watch?v=yTKQzcPlb-Y>

<https://www.youtube.com/watch?v=KWUvX-VB4x4>

LIKA'S MISSION



The primary aims of LIKA are:

- **To promote the welfare of society at the local, national and international level**
- **To generate, develop and disseminate sustainable knowledge and technologies**
- **To train and develop professionals with excellence in all aspects of Translational, Biological and Health Sciences**

LIKA'S GRADUATE PROGRAM

In 2010, LIKA launched its own graduate program with a master's and doctorate degree and by 2019 over 85 students had enrolled. Moreover, the productivity and scientific output of LIKA continues to grow with more than 300 publications in the last 5 years, many in high-impact journals including Nature and Science.

LIKA'S INTERNATIONAL OUTREACH

Within the UFPE community, LIKA has long encouraged scientific debate and exchange of research ideas leading to much fruitful collaboration; for example, through its annual **Scientific Journey Day**. Here, students have been encouraged to actively participate in

organizing the event, to contribute to scientific discussion and to explore ways for resolving problems and introducing technical innovations. All with a view to develop and integrate their own research goals, within different areas of knowledge. The prominent success of this endeavour encouraged the Director of LIKA, Prof José Luiz de Lima Filho, MD, PhD, to widen its program of meetings, the first of which was **SINATER (International Symposium on Diagnosis and Therapeutics)** held in August 2009.

Here, the 'International' hallmark was deployed to emphasize the growing relationship of LIKA with worldwide researchers. As described below, SINATER facilitated the interaction of LIKA's undergraduate and graduate students, plus their more senior supervisors, with notable Centers and Institutes from several countries. Importantly, such meetings allowed the ready



exchange of scientific experiences between the various groupings, as well as the involvement of community and society members, private businesses and pharmaceutical companies, and entrepreneurs. All have helped provide up-to-date information to strengthen LIKA's interaction and discussion with many colleagues across various areas of knowledge.

This concept was expanded further by the launch 5 years later of **RDIS2014 (International Symposium on Rare Diseases – 2014)**, with fuller details provided below. Today, in part due to financial constraints, the two events are now held jointly and together form a tangible focus to LIKA's academic year.

SINATER: A key aim for initiating this Symposium was the demand for a broader discussion on research areas related to diagnosis and therapy. The current global epidemiological

scenario is highly dynamic, so that Brazil is simultaneously exposed to infectious diseases related to poor sanitation conditions, tropical conditions and risky sexual behavior, as well as chronic-degenerative disorders, such as cardiovascular diseases related to the population's increased life expectancy. Faced with this complex picture, LIKA's intention through this Symposium was to showcase, propagate and importantly identify new strategies to tackle the challenges of Public Health being presented in this critical period. In brief, to improve our future health prospects as we enter deeper into the 21st century.

RDIS: In Brazil, 13 million people are affected by Rare Diseases (RD) and citizen pressure to reduce patient morbidity and mortality prompted the Health Ministry to instigate early and accurate diagnosis of RD. Indeed, in May 2014 a national policy established guidelines to offer treatments



**HUGO GOMES DA SILVA,
HEAD OF GLOBAL MEDICAL
AFFAIRS (GSK)**



to individuals affected by RD in the public health system (Sistema Único de Saúde, SUS), recognizing early diagnosis and genetic counseling as necessary for improving patient care. Though a relatively low incidence in the population, it is important to determine the best tools to evaluate patients, perform genetic tests, diagnose and treat. In this context, LIKA's goal is to advance national and international collaborations to meet these needs, particularly as Northeast Brazil has a much higher incidence of RD compared to the South. Such an aim is

endorsed by the Legislative Assembly of Pernambuco (ALEPE) with meetings held to identify current needs within the State and to encourage greater integration between supportive Institutions. The Pernambuco state week for awareness of Rare Diseases was also approved and now a regular and successful event.



LIKA'S INTERNATIONAL SYMPOSIA ARE SUCCESSSES

The above events organized by LIKA have stimulated and encouraged collaborative projects between national and international institutions, creating an environment conducive to developing quality science with a focus on bringing societal benefits.

In particular, the now annual **SINATER-RDIS** symposium is instructing participants in the latest scientific advances aiding diagnosis and therapeutics, which are beginning to overcome and supplant current technological limitations.

In time, these will advance new treatment paradigms in health sciences. Such partnerships also enable students to visit labs and hospitals abroad, culminating in joint research partnerships and high-quality publications.

A NETWORK OF PARTICIPANTS:

Previous LIKA symposia have attracted audiences of 100-150 people. These include researchers and professionals across various disciplines, graduate students, and members of organized societies that provide support for patients and family plus liaise with medical and scientific staff. This spectrum of participants has proved beneficial and informative for all sides, not least to basic scientists and researchers; they better appreciate the debilitating consequences of rare genetic diseases and the pressing need for a specific diagnosis and referral for personalized treatment.

(INTER)NATIONAL ACADEMICS:

At an International level, the SINATER-RDIS symposium has attracted more than 30 renowned researchers to LIKA and to Recife, Brazil. Their various home Institutes include: Pan American Health Organization, Washington| Massachusetts Institute of Technology| The Forsyth Institute, Boston| University of California| University of New York - Mount Sinai School of Medicine – all in **USA**; University of Wolverhampton| University College London| Royal Holloway University of London – all in the **UK**; Xi'an Jiaotong-Liverpool University, **China**; Institute of Tropical Medicine-Nagasaki University| National Institute of Infectious Diseases – both in **Japan**; University of Roue, **France**.

In addition to such International researchers, the Symposia have welcomed academic staff from Universities throughout Brazil, including Campinas, Ribeirão Preto, São Paulo, Rio Grande do Norte, Campina Grande, Paraíba, Ceará, Rio Grande do Sul, Pernambuco and also the Fundação Oswaldo Cruz.

PHARMA SUPPORT:

In a demonstration of the essential partnerships needed between Universities and Companies, the LIKA Symposia have greatly benefited from the participation and support of representatives from Glaxo-Smith Kline, Bristol-Myers Squibb, Merck-Sharp Dohme, and the CEOs of Recife-based Epitrack and Genomika Diagnósticos.

PATIENT SUPPORT GROUPS:

Various patient support groups and other charity organizations have also greatly contributed to the success of SINATER-RDIS Symposia. Most notably they include the *Círculo do Coração*, a paediatric cardiology network in Paraíba, State, and the *Aliança de Mães e Famílias Raras* (AMAR), a support network for relatives of patients with Rare Diseases. Both help families and mothers to cope with day-to-day life and also petition for informative diagnoses that allow suitable medical follow-up.

GOVERNMENT AND OTHER

FUNDING: LIKA gratefully acknowledge many organizations for financial support, including government agencies, societies and institutes such as CAPES, CNPq, FACEPE, FINEP, PAHO, SBPC, UFPE, UCL and Fiocruz. All believe in LIKA's Mission and Outreach ambitions and the project objectives being developed by LIKA-UFPE; their enthusiastic support and backing is crucial in the realization of this venture.