

**International Conference on Chronic Kidney Disease of Unknown Etiology: Current Aspects and Future Prospects**

*Organized by the*

FACULTY OF SCIENCE, UNIVERSITY OF PERADENIYA, SRI LANKA

In collaboration with the

Postgraduate Institute of Science, University of Peradeniya

**8<sup>th</sup> and 9<sup>th</sup> December 2018**

**PROGRAMME**

**8<sup>th</sup> December 2018**

**09.00-09.45**

**Inauguration**

**9.45-10.30 TEA**

10.30-11.00	<b>Keynote Speech - Chronic Kidney Disease of unknown etiology in Sri Lanka.</b> Professor Kamani Wanigasuriya (Professor in Medicine, Department of Medicine Faculty of Medical Sciences, University of Sri Jayewardenepura).
-------------	---

**Introductory Session**

<b>Chair</b>	<b>Dr. TilakAbeysekera</b>	CERTKID, University of Peradeniya
<b>Co-Chair</b>	<b>Prof.Christoph Daniel</b>	Department of Nephropathology, University of Erlangen-Nürnberg, Germany

11.00-11.15	<b><i>Sri Lanka-Australia Collaborative Research Project:</i></b> <b>Investigating CKDu: Advancing a Hypothesis-Agnostic Approach</b> Prof. Richard Banati
11.15-11.30	<b><i>Sri Lanka-US Collaborative Research Project:</i></b> <b>CKDu In Wilgamuwa Sri Lanka - the kidney progression project (KIPP)</b> Prof. Penny Vlahos
11.30-11.45	<b><i>Sri Lanka-China Collaborative Research Project:</i></b> <b>Tackling the Chronic Kidney Disease of unknown etiology (CKDu) through cooperation between China and Sri Lanka.</b> Prof. YS Wei
11.45-12.00	<b>CKDu in Sri Lanka: an introductory report from the Sri-Kid-H<sub>2</sub>O initiative</b> JAC Barth, C Daniel, C Zwiener, KU Eckardt, K Amman, R Chandrajith and N Nanayakkara
12.00-12.15	<b><i>Invited Lecture- Natural history and pathophysiological pathways of Chronic Kidney Disease of uncertain etiology</i></b> Dr. Nishantha Nanayakkara
12.15-12.30	<b><i>Panel Discussion: Research on CKDu: Possible international collaborative efforts.</i></b>

## Session 1- Medical Aspects of CKDu

<b>Chair</b>	<b>Prof. SuchiAnand</b>	Director, Centre for Tubulointerstitial Kidney Diseases, Stanford University School of Medicine, USA.
<b>Co-Chair</b>	<b>Prof. Marie-Claude Gregoire</b>	Leader, Health Research, ANSTO, Australia.

13.30-13.45	<b>Potential link between groundwater hardness with fluoride and chronic kidney disease of unknown etiology (CKDu) in Sri Lanka using rats as an experimental model</b> <u>WTR Perera</u> , JGS Ranasinghe, N Alles and R Waduge
13.45-14.00	<b>A preliminary investigation on geographical distribution of CKD/CKDu patients in Northern Province</b> G Kalaivani, S Prabagar, S Rajendra and J Prabagar
14.00-14.15	<b>Urinary changes of CKDu patients in Girandurukotte and Wilgamuwa, Sri Lanka</b> <u>WBNT Fernando</u> , HTK Abeysundara and N Nanayakkara
14.15-14.30	<b>Characteristics features of patients with CKD and CKDu in Girandurukotte and Wilgamuwa regions, Sri Lanka</b> <u>WBNT Fernando</u> , SHT Sudeshika, TW Hettiarachchi, JGS Ranasinghe and N Nanayakkara
14.30-14.45	<b>Alternative diagnostic criteria for early detection of CKDu in Sri Lanka</b> <u>L Meng</u> and M Zhao
14.45-15.00	<b>Characterization of CKDu in renal biopsies using morphological and immuno-histological methods.</b> C Daniel, V Schmidt, NVI Ratnatunga, KU Eckardt, P Enghard, R Chandrajith, JAC Barth, C Zwiener, N Nanayakkara and K Amann
<b>15.00-15.15</b>	<b>Tea</b>
15.15-15.30	<b>Prevalence of hyperuricemia and associations with cardiovascular events in chronic kidney disease of uncertain etiology (CKDu) in Sri Lanka</b> <u>TW Hettiarachchi</u> , <u>WBNT Fernando</u> , <u>SHTSudeshika</u> , HTK Abeysundara, S Wijetunge, and N Nanayakkara
15.45-16.00	<b>Evaluation of chronic kidney disease of unknown aetiology in Moneragala district of Sri Lanka</b> <u>DND Liyanage</u> , RMG Rajapakse and R Chandrajith
16.00-16.10	<b>Comprehensive assessment of recent risk behaviors and exposures of Sri Lankan patients with CKDu having symptoms of acute interstitial nephritis.</b> <u>OSS Premarathne</u> , N Nanayakkara, N Ratnatunga, R Chandrajith, CD Gamage, HTK Abesundara, N Elladeniya, KPS Madushan, HPMA Shanthi, MZ Badurdeen and DPGS Kumudumali
16.15-16.30	<b>Chronic Kidney Disease of unknown etiology (CKDu) in Sri Lanka: do we need to turn a topology of risk into a topology of resilience?</b> <u>KV De Ven</u> and RB Banati

9<sup>th</sup> December 2018

**SESSION 2- WATER QUALITY ASPECTS OF CKDu**

<b>Chair</b>	<b>Prof. Oliver Ileperuma</b>	University of Peradeniya
<b>Co-Chair</b>	<b>Prof. Penny Vlahos</b>	Departments of Chemistry and Environmental Engineering, University of Connecticut, USA

09.00-09.15	<b>Invited lecture: CKDu in Sri Lanka - some geochemical aspects</b> Professor CB Dissanayake
09.15-09.30	<b>A comprehensive hydrogeochemical investigation in a village with environmentally induced chronic kidney disease</b> <u>BMRS Balasooriya</u> , H Munasinghe, OA Ileperuma and R Chandrajith
09.30-09.45	<b>Environmental factors impacting drinking water sources in CKDu-affected regions in Sri Lanka: an isotope tracer approach</b> <u>C Nikagolla</u> , KT Meredith, RB Banati and J Rajapakse
09.45-10.00	<b>Assessment of groundwater quality in chronic kidney disease unknown (CKDu) prevalence area using groundwater indices</b> <u>WAC Udeshani</u> , HMKP Dissanayake, SV Gunatilake and SK Gunatilake
10.00-10.15	<b>Fluoride and total hardness in drinking water in CKDuprevalentWilgamuwa in Matale district and non- prevalentJaffna district</b> PM Manage, <u>I Abinaiyan</u> and KM Mohotti
10.15-10.30	<b>Non-labile organic carbon fraction in shallow groundwater sources of chronic kidney disease affected areas in North-Central Province</b> <u>M Makehelwala</u> , YS Wei, SK Weragoda and R Weerasooriya

**Session III: Environmental aspects of CKDu**

<b>Chair</b>	<b>Prof. YS Wei</b>	Chinese Academy of Sciences, Beijing, China
<b>Co-Chair</b>	<b>Dr. Karina Meredith</b>	Senior Research Scientist-Environmental Research, Australian Nuclear Science and Technology Organisation.

11.00-11.15	<b>Invited lecture: Role of fluoride in chronic renal failure</b> Professor Oliver Ileperuma
11.15-11.30	<b>Levels of trace elements in commonly consumed food commodities in Sri Lanka</b> <u>DG Mohotti</u> , S Diyabalanage, MD Kalpage and R Chandrajith
11.30-11.45	<b>Accumulation of cylindrospermopsinand microcystin-LR in rice (<i>Oryza sativa</i>) in CKDu high prevalentPadaviya in Anuradhapura District, Sri Lanka.</b> <u>HASN Abey Siri</u> , K Wanigasuriya and PM Manage
11.45-12.00	<b>Assessment of heavy metal contamination in surface sediment of reservoirs in CKDu prevalent areas in relation to CKDu non prevalent areas of Sri Lanka</b> <u>RVH Hansika</u> and SK Yatigammana

12.00-12.15	<b>Distribution and abundance of toxigenic cyanobacteria in freshwater reservoirs in CKDu prevalent and non-prevalent areas of Sri Lanka</b> <u>PAAPK Senanayake</u> and SK Yatigammana
12.15-12.30	<b>Cylindrospermopsin and microcystin-LR contaminated human urine in CKDu high prevalent Medirigiriya in Polonnaruwa District, Sri Lanka.</b> HASN Abey Siri, K Wanigasuriya and PM Manage
12.30-12.45	<b>Toxicity studies of POEA 15, surfactant of commercial glyphosate (Roundup)</b> <u>AN Navaratne</u> , N Uduwella, P Vasana , S Ranasinghe, R Waduge and H Kothalawala

#### Session IV: Providing safe water for CKDu regions

<b>Chair</b>	<b>Prof. Johannes Barth</b>	Geo Zentrum Nordbayern, University of Erlangen-Nürnberg, Germany
<b>Co-Chair</b>	<b>Dr. Hearth Manthrethilaka</b>	International Water Management Institute (IWMI),

13.30-13.45	<b>Invited lecture: Cyanotoxins: hidden cause for CKDu in Sri Lanka</b> Professor Pathmalal M Manage
13.45-14.00	<b>Community-based intervention of drinking water improvement and health management in CKDu epidemic area</b> <u>J Su</u> , C Wang, P Wang, J Zhang and G Li
14.00-14.15	<b>Base (KOH) activated coconut coir waste for removal of fluoride from drinking water</b> <u>HED Tharika</u> , MNS Kottegoda and ADLC Perera
14.15-14.30	<b>Adsorption of cadmium from aqueous solutions on activated carbon prepared from coconut coir waste</b> <u>BPK Ekanayake</u> , MNS Kottegoda and ADLC Perera
14.30-14.45	<b>Removal of fluoride from aqueous solutions by chemically synthesized hydroxyapatite nanoparticles</b> <u>NHMMD Narampanawaa</u> , MGGSN Thilakarathnaa and RMG Rajapakse
14.45-15.00	<b>A novel method to remove fluorides in water by using chemically synthesized magnesium oxide nano wires</b> <u>KHDN Abeysooriya</u> , GGTA Ranathunge and RMG Rajapakse
15.00- 15.15	<b>Removal of heavy metals from contaminated potable water using processed rice hull-based filter</b> JMRS Bandara and <u>HMM Seneviratne</u>

#### Session V: Social Aspects of CKDu

<b>Chair</b>	<b>Prof. Stephen Schensul</b>	Director, Centre for International Community Health Studies, University of Connecticut- Health, USA
<b>Co-Chair</b>	<b>Prof. Tudor Silva</b>	Department of Sociology, University of Peradeniya

15.30-15.45	<b>Chronic Kidney Disease of unknown etiology: emerging health security issues in South Asia</b> <u>PLS Dias</u> and MW Pasqual
-------------	--

15.45-16.00	<b>Experimental innovation competition to address humanitarian-driven problem –water and CKDu in North-Central Province (NCP) of Sri Lanka.</b> <u>M Sara</u> and T Boyle
16.00-16.15	<b>Chronic Kidney Disease of unknown etiology (CKDu): is it the end result of modern irrigation?</b> <u>KMK Somaratne</u> , HMTW Seneviratne, GDDJ Bandara, ARTV Alahakoon and YMDM Bandara
16.15-16.30	<b>Reflections on water consumption patterns around CKDu patients from Ginnoruwa</b> Upul Kumara Wickramasinghe
16.30-16.45	<b>Strength of social capital on living condition of CKDu patients: A case from Rideemaliyadda area in Sri Lanka</b> <u>HMS Priyanath</u> , HKS Premadasa, S Malavipathirana and CN Walpita
16.45-17.00	<b>Organic farming vs conventional farming: an approach for environmental remediation in paddy cultivation</b> <u>WAPP Rathnayake</u> and, AN Navaratne