# KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI

# UNIVERSITAS SUMATERA UTARA FAKULTAS KEDOKTERAN

Jalan dr. T. Mansur No. 5 Kampus USU Medan 20155 Telp. (061) 8211045, 8210555 Fax. (061) 8216264, e-mail: dean.med@usu.ac.id

Number : 90/UN5.2.1.1/PPM/2022

Attachment: 2 (two) files

: Invitation

Medan, 28 June 2022

มหาวิทยาลัยทักษิณ

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เวลา.... 10:29 น

#### Dear Sir/Madam

Subject

Warmest greetings from Universitas Sumatera Utara Indonesia. Today's public health challenges are complex and crosscutting. One Health concept as an effort to address health issues, such as emerging zoonotic diseases, climate change impacts, and the human-animal bond, stresses the importance of interdisciplinary communication and collaboration. Faculty of Medicine Universitas Sumatera Utara (USU) Indonesia is organising a hybrid summer course event with the theme of "Understanding One Health Issues in Southeast Asia". This event invites excellent speakers and experts from different background to share knowledge, resources, professional expertise and start collaboration within Indonesia and between countries.

The event will be held on:

Day/Date : 5 - 13 September 2022 Place : Universitas Sumatera Utara

Medan, Indonesia

For further information, please find attached the Programme Book and the event's flyer. Early registration can be done in <a href="https://bit.ly/USUSummerCourse">https://bit.ly/USUSummerCourse</a>. Should you need further assistance, please do not hesitate to contact us via email to <a href="collabs.fk@usu.ac.id">collabs.fk@usu.ac.id</a> or by whatsapp +62 853-6010-9505 (dr. Rycha). Finally, we would like to thank you very much for your attention and participation.

Cordially Yours,

Vice Dean III, Faculty of Medicine

niversitas Sumatera Utara

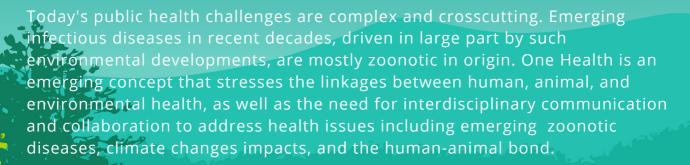
dr. Inke Nadia D. Lubis, M.Ked(Ped), Sp.A, Ph.D

NIP.198305262008012003

#### UNIVERSITAS SUMATERA UTARA

# UNDERSTANDING ONE HEALTH ISSUES IN SOUTHEAST ASIA

SUMMER COURSE



The course is intended for medical doctors, veterinarians, nurses, epidemiologists, zoologists, ecologists, entomologists, economists, biologists, microbiologists, anthropologists and students of relevant areas.

The course is equavalent to 2 credits.

#### **REGISTER NOW!**

Deadline of registration is on 14 August 2022 Course from 5 to 13 September 2022

Course is funded by USU



# TOPICS ONE HEALTH

#### P. KNOWLESI MALARIA

- Introduction to One Health
- Ecosystem change and human health
- Emerging and reemerging diseases
- One Health issues in Indonesia
- The role of animals as sentinels for environmental agent and contaminants
- Human-wildlife conflict
- One Health: livestock and companion animals
- Potential risks of zoonotic diseases from wildlife due to climate change
- The role of mosquitoes in human pathogen transmission
- The relevance of mosquito biology to vector surveillance and control
- Landscape complexity and land use change in North Sumatera and North Kalimantan: demonstration of interactive web tools
- Agricultural risk evaluation
- Oil palm development and smallholders' incomes
- Emerging zoonoses rickettsiosis
- One Health and antimicrobial resistance in livestock animals
- Irrational use of antibiotics in humans
- Impact of antimicrobial resistance on public, animal and environmental health
- Use of mathematical modeling to predict infectious diseases outbreaks
- Geospatial risk mapping masterclass



- Plasmodium knowlesi malaria: clinical manifestations and treatment
- Strengthening Plasmodium knowlesi surveillance in North Sumatera
- Malaria diagnosis: microscopy to molecular
- Serology: a tool to determine transmission level over time
- Health facility-based serological surveillance and participatory mapping to predict malaria outbreaks
- Land-use changes in North Sumatera
- Primate ecology and behavior
- Zoonotic malaria transmission in North Southeast Asia, and what we know (and don't know) about P. knowlesi vectors
- The importance of mosquito identification
- Identification of Plasmodium species and Anopheline vectors
- PCR introduction and lab tour

#### MEDICAL ANTHROPOLOGY

- Introduction to diverse of culture in North Sumatera
- Traditional dance
- Medical anthropology: traditional wisdom in North Sumatera towards zoonotic diseases prevention and management
- Prioritizing zoonotic diseases using a multisectoral, One Health approach
- Intercultural and interdisciplinary approaches towards One Health outbreak preparedness and responses in Indonesia

## **LECTURERS**

#### **USU LECTURERS**

- Inke Nadia D. Lubis
- Ivana Alona
- Hendri Wijaya
- Lambok Siahaan
- Hemma Yulfi
- Ranti Permatasari
- Bejo Slamet
- Diana Chalil

#### **GUEST LECTURERS**

- Matthew Grigg,
- Prof Tom Burkot
- Peter Speldewinde
- Bridget Barber
- Tanya Russell
- Alexandra Zimmerman
- Sunny Sanderson
- Katharina Waha
- Andy Hulthen
- Kevin Tetteh
- Freya Shearer
- David Price
- Bram van de Straat
- Boni Sebayang

- Tiara Pakasi
- Endang Wulandari
- Amin Soebandrio
- Triwibowo
- Ahadi Kurniawan
- Henry Surendra
- Rizaldi
- Joko Pamungkas
- Fatkhanuddin Aziz
- Hendra Wibawa
- Novra Sandi















































# Universitas Sumatera Utara

2022 INTERNATIONAL SUMMER COURSE





# SCHOOL OF MEDICINE















#### INTERNATIONAL SUMMER COURSE OF MEDICINE

# UNDERSTANDING ONE HEALTH ISSUES IN SOUTHEAST



Today's public health challenges are complex and crosscutting. Antimicrobial resistance, pollution, food security, biosafety, biosecurity, and emerging and re-emerging infectious diseases are associated with changes in land use, population growth, urbanisation, global travel and trade, industrial activities, and climate change.

Date	5 <sup>th</sup> - 13 <sup>th</sup> September 2022
Credits	2 Credits
Language	English
Delivery	Hybrid
Total Hours	45 Hours
<b>Tuition Fee</b>	Free
Website	https://fk.usu.ac.id/id/

Emerging infectious diseases in recent decades, driven in large part by such environmental developments, are mostly zoonotic in origin. Zoonotic disease outbreaks and pandemic including COVID-19, Ebola, chikungunya, Zika virus, Middle East Respiratory Syndrome, cholera, plague, and yellow fever, have highlighted our vulnerability to emerging infectious diseases among other crises.

One Health is an emerging concept that stresses the linkages between human, animal, and environment health, as well as the need for interdisciplinary communication and collaboration to address health issues including emerging zoonotic diseases, climate changes impacts, and the human-animal bond. Lessons learned from infectious disease outbreaks in recent years have illustrated that training professionals in the One Health arena has the potential to improve epidemic and pandemic preparedness. Without One Health approach, experts in environmental, animal, and human health will continue to address these challenges independently and in an uncoordinated fashion, missing the opportunity to maximise the benefits of shared knowledge, shared professional expertise, and available resources

In response to One Health issues, training of researchers must transcend individual's disciplines to develop a new process of collaboration. This involves physicians, veterinarians, ecologist, zoologist, entomologists, sociologist, economist, anthropologists, pathologists, microbiologists, epidemiologists, and politicians need to ensure they have the skills to work collaboratively with each other and with governments, the private sector and communities.

This course is intended for medical doctors, veterinarians, nurses, epidemiologists, zoologists, ecologists, entomologists, economists, biologists, microbiologists, anthropologists and students of relevant areas.











# Course Objectives



- To promote and advance the One Health approach for control of emerging and reemerging infectious and zoonotic diseases
  - To improve the competencies of One Health professionals
- To captivate, advance, and nurture cadres of trained professionals to be One Health current and future leaders

#### Course Curriculum



#### **General Learning Outcome**

By the end of this course, participants will master the theory and be able to implement the One Health concept in preventing, preparing and managing zoonotic diseases in Southeast Asia, particularly in North Sumatera, through intercultural and interdisciplinary approaches.

#### **Credits:**

2 (two)

#### Length:

9 (nine) days

#### **Total hours:**

45 hours

## Study methods and modes of delivery:

- Seminar, discussion, role play, laboratory training
- 2 Field trip
- 3 Offline for participants, online/offline for speakers

#### **Assessment:**

- 1 Attendance and active participation
- 2 Written-based assessment: quizzes, essays, portfolios
- 3 Laboratory training assessment: activity reports.

#### **Modules**



## This course consists of 3 (three) main modules:

- One Health concept
- Plasmodium knowlesi malaria
- Introduction to local culture in North Sumatera and medical anthropology









# **Selection Process**

1 Candidates need to fill in the Google form through this link: https://bit.ly/USUSummerCourse

Deadline 14 August 2022



- 2 Selected participants will be sent an email noticing of
- 3 the acceptance
- 4 Participant will pay for their own transportation and accommodation
- 5 There is no fee for the course

#### **MODULE 1: ONE HEALTH**

**Module outcomes:** 

- 1 To understand One Health concept
- 2 To implement One Health approach in managing zoonotic diseases

Topics	Method	Hours	Speaker	Institution
Introduction to One Health	Seminar, discussion	1	Sunny Sanderson	Menzies School of Health Research,Australia
Ecosystem change and human health	Seminar, discussion	1	Peter Speldewinde	University of Western Australia, Australia
Emerging and reemerging diseases	Seminar, discussion	1	Endang Wulandari	WHO Indonesia
One Health issues in Indonesia	Seminar, discussion	1	Tiara Pakasi	Ministry of Health Indonesia
The role of animals as sentinels for environmental agent and contaminants	Seminar, discussion	1	Joko Pamungkas	Institusi Pertanian Bogor, Indonesia
Human-wildlife conflict	Seminar, discussion	1	Alexandra Zimmermann	University of Oxford, United Kingdom
One Health: livestock and companion animals	Seminar, discussion	1	Novra Sandi	Eijkman-Oxford Clinical Research Unit, Indonesia
Potential risks ofzoonotic diseases from wildlife due to climate change	Seminar, discussion	1	Hendra Wibawa	Disease Investigation Center Wates,Indonesia
The role of mosquitoes in human pathogen transmission	Seminar, discussion	1	Tom Burkot Tanya Russell	James Cook University, Australia
The relevance of mosquito biology to vector surveillance and control	Seminar, discussion	1	Tom Burkot Tanya Russell	James Cook University, Australia

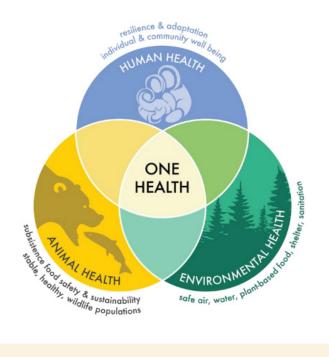
Summer Book







Topics	Method	Hours	Speaker	Institution
Landscape complexity and land use change in North Sumatera and North Kalimantan: demonstration of interactive web tools	Seminar, discussion	1	Katharina Waha Andy Hulthen	CSIRO, Australia
Agricultural risk evaluation	Seminar, discussion	1	Ivana Alona	Universitas Sumatera Utara
Oil palm development and smallholders' incomes	Seminar, discussion	1	Diana Chalil	Universitas Sumatera Utara, Indonesia
One Health and antimicrobial resistance in livestock animals	Seminar, discussion	1	Fathkanuddin Aziz	Universitas Gajah Mada, Indonesia
Irrational use of antibiotics in humans	Seminar, discussion	1	Hendri Wijaya	Universitas Sumatera Utara, Indonesia
Impact of antimicrobial resistance on public, animal and environmental health	Seminar, discussion	1	Amin Soebandrio	Universitas Indonesia, Indonesia
Emerging zoonoses - rickettsiosis	Seminar, discussion	1	Matthew Grigg	Menzies School of Health Research, Australia
Geospatial risk mapping	Seminar, discussion	2	Freya Shearer	University of Melbourne, Australia
Use of mathematical modeling to predict Infectious disease outbreaks	Seminar, discussion	1	David Price	University of Melbourne, Australia



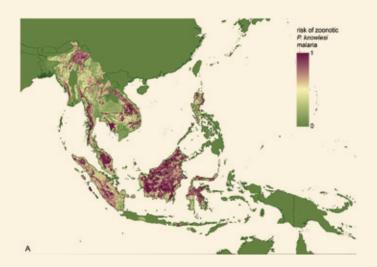








### **MODULE 2: PLASMODIUM KNOWLESI MALARIA**



#### **Module Outcomes:**

To understand malaria knowlesi, its agent, vectors, and diseases

To implement One Health approach in managing transmission and risks factors of knowlesi malaria

Topics	Method	Hours	Speaker	Institution
Plasmodium knowlesi malaria: clinical manifestations and treatmen	Seminar, discussion	1	Bridget Barber (TBC)	Menzies School of Health Research, Australia
Strengthening Plasmodium knowlesi surveillance in North Sumatera	Seminar, discussion	1	Inke Lubis	Universitas Sumatera Utara, Indonesia
Malaria diagnosis: microscopy to molecular	Seminar, discussion	1	Rintis Noviyanti	Eijkman Institute for Molecular Biology, Indonesia
Serology: a tool to determine transmission level over time	Seminar, discussion	1	Kevin Tetteh	LSHTM, United Kingdom
Health facility-based serological surveillance and participatory mapping to predict malaria outbreaks	Seminar, discussion	1	Henry Surendra	Eijkman-Oxford Clinical Research Unit, Indonesia
Land-use changes in North Sumatera	Seminar, discussion	1	Bejo Slamet	Universitas Sumatera Utara, Indonesia
Primate ecology and behavior	Seminar, discussion	1	Rizaldi	Universitas Andalas, Indonesia
Zoonotic malaria transmission in Southeast	Seminar, discussion	1	Bram van de Straat	James Cook University, Australia









Topics	Method	Hours	Speaker	Institution
Asia, and what we know (and don't know) about P. knowlesi vectors	Seminar, discussion	1		
The importance of mosquito identificatio	Seminar, discussion	1	Boni Sebayang	James Cook University, Australia
Identification of Plasmodium species and Anopheline vectors	Seminar, discussion	2	Lambok Siahaan Hemma Yulfi Boni Sebayang Ahadi Kurniawan	Universitas Sumatera Utara, Indonesia James Cook University, Australia
PCR introduction and lab tour	Seminar, discussion	2	Ranti Permatasar	BTKLPP Medan, Indonesia Universitas Sumatera Utara, Indonesia

#### **MODULE 3: INTRODUCTION TO LOCAL CULTURE AND MEDICAL ANTHROPOLOGY**





#### **Module Outcomes:**

- To get familiar with local culture in North Sumatera
- 2 To include local culture in managing zoonotic diseases

Topics	Method	Hours	Speaker	Institution
Introduction to diverse of culture in North Sumatera	Video presentation	1	TBC	Universitas Sumatera Utara, Indonesia
Traditional dance	Practical training	1	Rithaony Hutajulu	Universitas Sumatera Utara, Indonesia
Medical anthropology: traditional wisdom in North Sumatera towards zoonotic diseases prevention and management	Seminar	2	Robert Sibarani Hamdani Harahap	Universitas Sumatera Utara, Indonesia
Prioritizing zoonotic diseases using a multisectoral, One Health approach	Seminar	3	Grace Goryoka (TBC)	Universitas Sumatera Utara, Indonesia









Topics	Method	Hours	Speaker	Institution
Intercultural and interdisciplinary approaches towards One Health outbreaks preparedness and responses: Indonesian experience from Avian flu	Seminar	3	I Nyoman Kandun (TBC)	Field Epidemiology Training Programme Indonesia
Pandemic games	Group discussion	2	Inke Lubis Matthew Grigg	Universitas Sumatera Utara, Indonesia Menzies School of Health Research, Australia

Supported by Australian Centre for International Agricultural Research (ZOOMAL Project), Australian Government

## SCHEDULE

Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Monday 5 Sept 2022	08.00-08.30	10.30-11.00	30 mins	Opening ceremony
0 0001 2022	08.30-09.30	11.00-12.00	1 hour	Introduction to diverse of culture in North Sumatera
	09.30-09.45	12.00-12.15	15 mins	Coffee/tea break
	09.45-10.45	12.15-13.15	1 hour	Introduction to One Health
	10.45-11.45	13.15-14.15	1 hour	Ecosystem change and humanhealth
	11.45-12.45	14.15-15.15	1 hour	Emerging and reemerging diseases
	12.45-14.00	15.15-16.30	1 hour 15 mins	Lunch/prayer
	14.00-15.00	17.30-18.30	1 hour	One health issues in Indonesia
	15.00-16.00	18.30-19.30	1 hour	The role of animals as sentinels for environmental agent and contaminants Lunch/prayer
	16.00-16.15	19.30-19.45	15 mins	Coffee/tea break
	16.15-17.15	19.45-20.45	1 hour	Human and wildlife conflict









Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Tuesday 6 Sept 2022	08.00-09.00	10.30-11.30	1 hour	One Health: livestock and health companion
	09.00-10.00	11.30-12.30	1 hour	Potential risks of zoonotic diseases from wildlife due to climate change Human and wildlife conflict
	10.00-10.15	12.30-12.45	15 mins	Coffee/tea break
	10.15-11.15	12.45-13.45	1 hour	The role of mosquitoes in human pathogen transmission
	11.15-12.15	13.45-14.45	1 hour	The relevance of mosquito biology to vector surveillance and control
	12.15-13.30	14.45-16.00	1 hour 15 mins	Lunch/prayer
	13.30-15.30	16.00-18.00	2 hour	Landscape complexity and land use change in North Sumatera and North Kalimantan: demonstration of interactive web tools
	15.30-15.45	18.00-18.15	15 mins	Coffee/tea break
	15.45-16.45	18.15-19.15	1 hour	Agricultural risk evaluation
	16.45-17.45	19.15-20.15	1 hour	Oil palm development and smallholders' incomes

Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Wednesday 7 Sept 2022	08.30-09.30	10.30-11.30	1 hour	One Health and antimicrobial resistance in livestock animals
	09.30-10.30	12.00-13.00	1 hour	Irrational use of antibiotics in humans
	10.30-10.45	13.00-13.15	15 mins	Coffee/tea break
	10.45-11.45	13.15-14.15	1 hour	Impact of antimicrobial resistance on public, animal and environmental health
	11.45-12.45	14.15-15.15	1 hour	Emerging zoonoses-rickettsiosis
	12.45-14.00	15.15-16.30	1 hour 15 mins	Lunch/prayer
	14.00-16.00	16.30-18.30	2 hour	Geospatial risk mapping
	16.00-16.15	18.30-18.45	15 mins	Coffee/tea break
	16.15-17.15	18.45-19.45	1 hour	Use of mathematical modeling to predict Infectious disease outbreaks









Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Thursday 8 Sept 2022	08.00-09.00	10.30-11.30	1 hour	Plasmodium knowlesi malaria: clinical manifestations and treatment
	09.00-10.00	11.30-12.30	1 hour	Strengthening Plasmodium knowlesi surveillance in North Sumatera
	10.00-10.15	12.30-12.45	15 mins	Coffee/tea break
	10.15-11.15	12.45-13.45	1 hour	Malaria diagnosis: microscopy to molecular
	11.15-12.15	13.45-14.45	1 hour	Serology: a tool to determine transmission level over time
	12.15-13.30	14.45-16.00	1 hour 15 mins	Lunch/prayer
	13.30-14.30	16.00-17.00	1 hour	Health facility-based serological surveillance and participatory mapping to predict malaria outbreaks
	14.30-15.30	17.00-18.00	1 hour	Land-use changes in North Sumatera
	15.30-15.45	18.00-18.15	15 mins	Coffee/tea break
	15.45-16.45	18.15-19.15	1 hour	Primate ecology and behavior
	16.45-17.45	19.15-20.15	1 hour	Zoonotic malaria transmission in Southeast Asia, and what we know (and don't know) about P. knowlesi vectors

Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Friday 9 Sep 2022	08.30-09.30	11.00-12.00	1 hour	The importance of mosquito identification
	09.30-09.45	12.00-12.15	15 mins	Coffee/tea break
	09.45-11.45	12.15-14.15	2 hour	Identification of Plasmodium species and Anopheline vectors
	11.45-14.00	14.15-16.30	2 hour 15 mins	Lunch/prayer time
	14.00-16.00	16.30-18.30	2 hour	PCR introduction and lab tour
	16.00-16.15	18.30-18.45	15 mins	Coffee/tea break
	16.15-17.15	18.45-19.45	1 hour	Traditional dance

Universitas Sumatera Utara Summer Book 2027

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Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Monday 12 Sep 2022	09.00-11.00	11.30-13.30	2 hours	Medical anthropology: traditional wisdom in North Sumatera towards zoonotic diseases prevention and managemen
	11.00-11.15	13.30-13.45	15 mins	Coffee/tea break
	11.15-12.45	13.45-15.15	1 hour 30 mins	Prioritizing zoonotic diseases using a mulsectoral, One Health approach (1)
	12.45-14.00	15.15-16.30	1 hour15 mins	Lunch/prayer
	14.00-15.30	16.30-18.00	1 hour 30 min	Prioritizing zoonotic diseases using a mulsectoral, One Health approach (2)

Day/Date	Jakarta/ Bangkok Time	Jakarta/ Bangkok Time	Allocated Time	Topics
Tuesday 13 Sep 2022	08.30-10.00	11.00-12.30	1 hour	Intercultural and interdisciplinary approaches towards One Health outbreaks preparedness and responses: Indonesian experience from Avian flu (1)
	10.00-10.15	12.30-12.45	15 mins	Coffee/tea break
	10.15-11.45	12.45-14.15	1 hour 30 mins	Intercultural and interdisciplinary approaches towards One Health outbreaks preparedness and responses: Indonesian experience from Avian flu (2)
	11.45-13.00	14.15-15.30	2 hour	Lunch/prayer
	13.00-15.00	15.30-17.30	1 hour	Pandemic games
	15.00-16.00	17.30-18.30	1 hour	Closing ceremony

Supported by Australian Centre for International Agricultural Research (ZOOMAL Project), Australian Government







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