

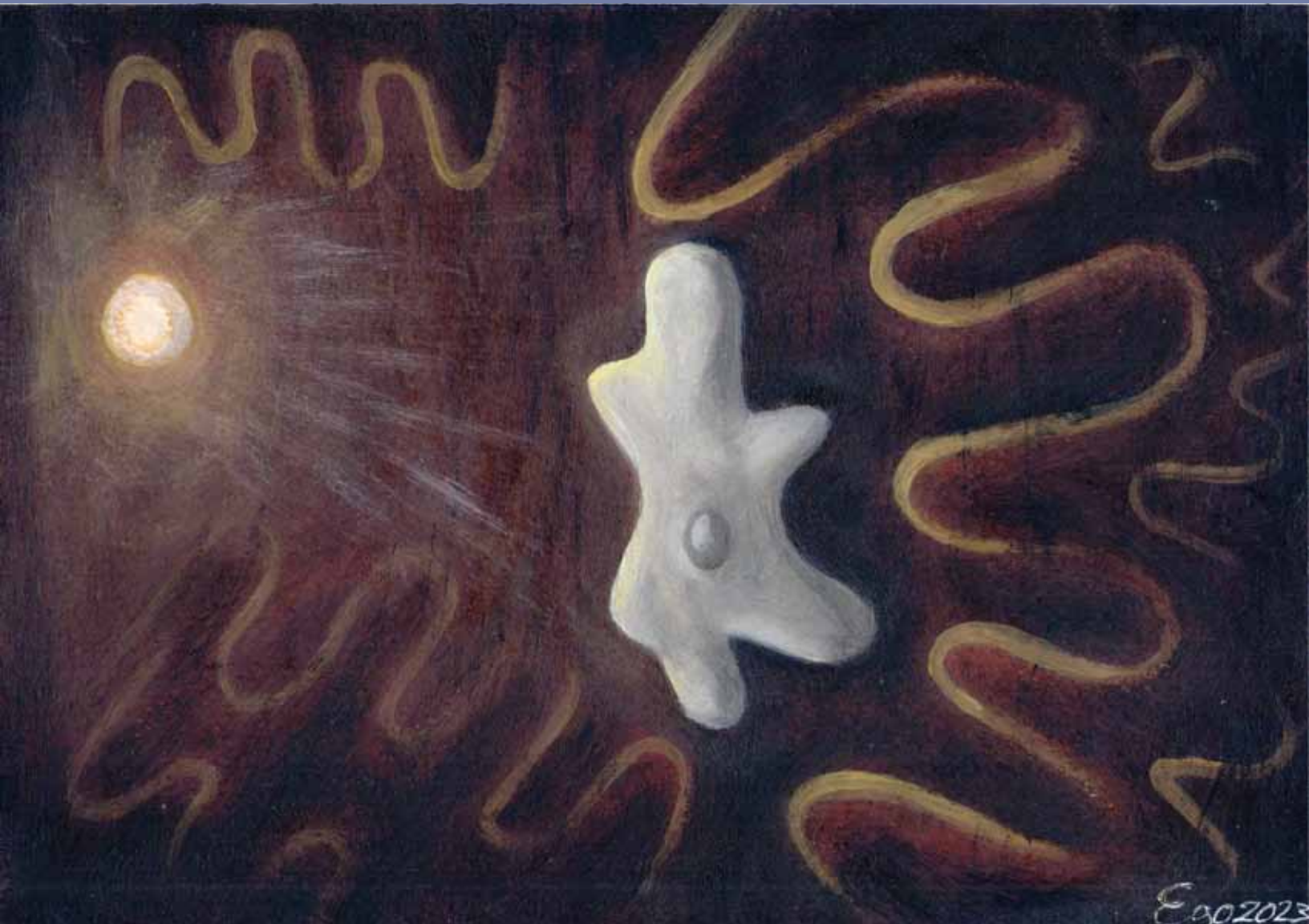


"Entamoeba, the  
intestinal ecosystem  
and infection"

# XX INTERNATIONAL SEMINAR ON AMEBIASIS 2023

October 24 to 27, 2023, Mérida, Yucatán, México.

## SCIENTIFIC PROGRAM



"The answer is inside" Author: Enrique González Rivas, Mex.



Facultad de Medicina



Juntos transformemos  
**Yucatán**  
GOBIERNO DEL ESTADO

**SEFOTUR**  
SECRETARÍA DE FOMENTO  
TURÍSTICO

SPONSORS

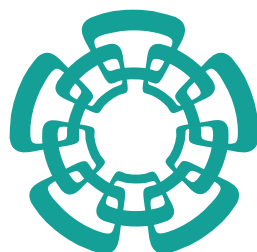


UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO

Facultad de Medicina



FACULTAD DE MEDICINA  
UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO



**Cinvestav**

CENTRO DE INVESTIGACIÓN Y DE ESTUDIOS AVANZADOS  
INSTITUTO POLITÉCNICO NACIONAL



Juntos transformemos  
**Yucatán**  
GOBIERNO DEL ESTADO

**SEFOTUR**  
SECRETARÍA DE FOMENTO  
TURÍSTICO

SECRETARÍA DE FOMENTO TURÍSTICO  
GOBIERNO DE YUCATÁN

***Organizer Committee***

Cecilia Ximénez PhD  
Nancy Guillén PhD  
Víctor Tsutsumi PhD  
Tomoyoshi Nozaki PhD

***Scientific Committee***

Serge Ankri PhD  
Iris Bruchhaus PhD  
Kris Chadee PhD  
Enrique González PhD  
Rashidul Haque PhD  
Elisabeth Labruyere PhD  
Laurence A. Marchat PhD  
Adolfo Martínez PhD  
Upinder Singh PhD  
Somlata PhD  
Patricia Talamás PhD  
Kumiko Tsukui PhD

***Technical Committee***

Angélica Serrano PhD  
Patricia Morán PhD  
Liliana Rojas PhD  
Eric G. Hernández PhD  
Horacio Pérez PhD  
Martha E. Zaragoza M in Sc  
Ma. Ángeles Padilla Chem  
Ma. Elena Ortíz Secy  
Omar Agni García M in Sci  
Gabriela Perera M in Sci

***Participating Students***

Pamela Bautista Biol  
Hugo González  
Yair Eleazar Juárez  
Vanessa Reyes  
Diego Bravo  
Diana Sarai Rodríguez

---

# WELCOME

## Dear Colleagues:

It is an honor to invite you again to our next “XX International Seminar on Amebiasis 2023” during October 24 to 28, in this occasion in the city of Mérida, Yucatán Mexico.

After the interruption of our seminar due to the COVID-19 pandemic, we want to offer you an inclusive, updated academic program of excellence, dedicated to the scientific community in the study of amoebiasis, the intestinal ecosystem, and infection, come together to disseminate, discuss, and share scientific knowledge within their area.

Until the COVID-19 pandemic, the seminar was held every 2 years in different cities of our country. Sadly, during this hiatus, we lost our dearest colleagues: Shibayama Salas Mineko PhD, Alfonso Olivos García PhD and Ruy Pérez Tamayo PhD.

We remember them in this Seminar with admiration, respect and affection.

In this occasion we hope to maintain the same enthusiasm, keep the high scientific quality of the event and the harmony between old and new friends. Let us enjoy the exchange of ideas, the time and opportunity to be once again together.

**Welcome to the “XX International Seminar on Amebiasis 2023”**

## *Organizers*



# SCIENTIFIC PROGRAM

TUESDAY, October 24, 2023

## Registration

### Lobby

11:00-14:00

16:00-17:50

## Opening ceremony

### Regency 3-4

- 17:50-18:00      Welcome words and presentation of guest honors  
**Cecilia Ximénez**
- 18:00-18:20      Welcome to the XX version of International Seminar on Amebiasis and 50 years of its existence  
**Víctor Tsutsumi**
- 18:20-18:30      Welcome to Mérida  
**Yucatán government representation**
- 18:30-19:00      Official opening of XX International Seminar on Amebiasis  
In representation of sponsors Martha Espinosa Cantellano (CINVESTAV) and Germán Fajardo Dolci  
(Medicine Faculty, UNAM)

## Plenary session

### Regency 3-4

- 19:00-20:00      Inaugural Conference: Pathogenesis of Amebiasis  
**William A. Petri Jr. M.D. Ph.D.**

## Welcome cocktail

### Terrace Regency

20:00-22:00

# SCIENTIFIC PROGRAM

WEDNESDAY, October 25, 2023

## Session I.I

***Entamoeba histolytica*, microbiota and host interplay in the onset of amoebiasis  
In memoriam of Professor Ruy Pérez Tamayo, Ph.D.**

Regency 3-4

Chairperson Tomoyoshi Nozaki

09:00-09:05 Brief words by Cecilia Ximénez

## Invited speaker

9:05-9:35 Defining functional roles for colonic microbiota and mucus in innate host defense against *Entamoeba histolytica*  
Kris Chadee

## Oral sessions

9:35-9:50 Gut microbiome mediated regulation of hematopoiesis and amebiasis  
Brandon Thompson

9:50-10:05 Fecal bacteriome transplantation from protozoa exposed donors, downregulate immune response in the germ-free mice model  
Liliana Rojas-Velázquez

10:05-10:20 Extracellular vesicles in host-parasite interaction of *Entamoeba histolytica* with primary monocytes  
Barbara Honecker

10:20-10:35 Effect of *Entamoeba histolytica* extracellular vesicles on the effector functions of human neutrophils  
Samuel García-Aguirre

10:35-11:00 Discussion and questions

## Coffee break

11:00-11:15

## Session I.II

**Virulence factors, stress, and redox responses  
In memoriam of Alfonso Olivos, Ph.D.**

Regency 3-4

Chairperson Stacey L. Burgess

11:15-11:20 Brief words by Nancy Guillen

# SCIENTIFIC PROGRAM

WEDNESDAY, October 25, 2023

## Oral sessions

- 11:20-11:35 Proteins differentially expressed between pathogenic and non-pathogenic *Entamoeba histolytica* clones influence pathogenicity by different mechanisms  
**Iris Buchhaus**
- 11:35-11:50 *Entamoeba histolytica* virulent trophozoites and the heat-shock proteins  
**Nancy Guillén**
- 11:50-12:05 Identification of potential interaction sites between the proteins EhHSP70 and EhHSF5 of *Entamoeba histolytica*  
**Misael Coca-González**
- 12:05-12:20 GalNAc and GlcNAc carbohydrates increase MPO enzyme activity through adhesion inhibition in amoeba and mouse neutrophil interactions  
**Mariana Gómez García**
- 12:20-12:35 Phagocytosis of *Entamoeba histolytica* and blood type selection  
**Silvia Castellanos Castro**
- 12:35-13:05 Discussion and questions

## Session II

### Microbiota, infection model, cytopathic effect and tissue destruction in the study of amoebiasis

Regency 3-4

Chairperson **Kris Chadee**

#### Invited Speaker

- 13:05-13:35 Digestive exophagy of bacterial biofilms by *Entamoeba histolytica* and its impact on stress tolerance, antibiotic resistance and cytotoxicity  
**Serge Ankri**

## Oral sessions

- 13:35-13:50 Tissue invasion by *Entamoeba histolytica* is facilitated by local mechanical stresses  
**Elisabeth Labruyère**
- 13:50-14:05 Analysing the invasion process of *Entamoeba histolytica* through the intestinal tissue using an organoid-derived monolayer model  
**Juliett Anders**
- 14:05-14:20 Functional characterization of lysine and glutamic acid rich protein 2 and tetraspanins on the human colon 3D crypts and animal models  
**Tomoyoshi Nozaki**

WEDNESDAY, October 25, 2023

14:20-14:35 A missense mutation in the goblet cell protein FCGBP alters the protective barrier functions of colonic mucus against *E. histolytica*  
**Hayley Gorman**

14:35-15:00 Discussion and questions

### Lunch

15:00-17:00

### Session III

#### Cellular biology of Entamoebae, organelles, membrane and traffic

Regency 3-4

Chairperson Elisabeth Labruyère

#### Invited Speaker

17:00-17:30 Computational morphodynamics of amiba  
**Jean-Christophe Olivo-Marin**

#### Oral sessions

17:30-17:45 Rho uniquely regulates endocytic pathways in the enteric protozoan parasite *Entamoeba histolytica*  
**Kumiko Nakada-Tsukui**

17:45-18:00 Isotype specific functions of the retromer complexes in *Entamoeba histolytica* which regulate vesicular trafficking and pathogenesis  
**Natsuki Watanabe**

18:00-18:15 Function and localization of intermediate subunit of *Entamoeba histolytica* lectin  
**Kentaro Kato**

18:15-18:30 Immunogenicity and safety of a synthetic *Entamoeba histolytica* vaccine candidate (LecA + GLA-3M-052 liposomes) in rhesus macaques  
**Christopher B. Fox**

18:30-18:55 Discussion and questions



WEDNESDAY, October 25, 2023

**Session IV**

***In vitro* antiamebic activity against *Entamoeba histolytica***

Regency 3-4

Chairperson      Kumiko Nakada-Tsukui

**Oral sessions**

- 18:55-19:10      *In vitro* anti-amebic activity of BT3 a benzothiazole derivate against *Entamoeba histolytica*  
**Arantza Guadalupe Navarro-Mendoza**
- 19:10-19:25      *In vitro* evaluation of anti-amoebic activity of Kaempferol in the interactions of *Entamoeba histolytica*  
with hamster neutrophils  
**David Lévaro-Loquio**
- 19:25-19:40      *In vitro* anti-amebic activity of riluzole against *Entamoeba histolytica*  
**Guadalupe Velázquez-Martínez**
- 19:40-19:55      Effect of *Plantago major* on the viability and growing of trophozoites of *Entamoeba histolytica* cultures  
*in vitro*  
**Karla María Morales Zamora**
- 19:40-20:20      Discussion and questions

THURSDAY, October 26, 2023

**Session V.I****Regulation of gene expression in amitochondriate protozoan**

Regency 3-4

Chairperson Iris Bucchaus

**Invited Speaker**

9:00-9:30 *Entamoeba histolytica* circular ncRNAs regulate gene expression of virulent genes at different levels  
**Jesús Valdés Flores**

**Oral sessions**

9:30-9:45 Unraveling the role of CDC5 protein in *Entamoeba histolytica*: bridging transcriptional factors and splicing machinery  
**Elisa Azuara Liceaga**

9:45-10:00 EhYY1 transcription factor binding to its consensus DNA sequence and its immunolocalization  
**Yeudiel Hernández Hernández**

10:00-10:15 Iron-limited conditions increase the expression of a cytotoxic cysteine proteinase TvCP2 by a novel mechanism of mRNA alternative polyadenylation in *Trichomonas vaginalis*  
**Rossana Arroyo**

10:15-10:30 Multiple types of nuclear localization signals in *Entamoeba histolytica*  
**Israel Canela-Pérez**

10:30-10:55 Discussion and questions

10:55-11:10 **Coffee break**

**Session V.II****Epigenetics regulation of gene expression**

Regency 3-4

Chairperson Serge Ankri

**Invited speaker**

11:10-11:40 COX-like enzymatic activity in different protozoa of clinical relevance: a common strategy?  
**Patricia Talamás Rohana**

**Oral sessions**

11:40-11:55 Heat Shock Elements (HSEs) in promoter regions of the *Entamoeba histolytica* genome  
**David Dorantes Palma**

11:55-12:10 The lysine methyltransferase EhPKMT2 is involved in many cellular processes in *Entamoeba histolytica*  
**Mario Alberto Rodríguez**

12:10-12:25 *Entamoeba invadens*: identification of arginine methyltransferases (PRMT's) and analysis of their expression during encystation  
**Rigoberto Ortiz-Hernández**

THURSDAY, October 26, 2023

12:25-12:40 Vorinostat inhibits the development of amebic liver abscess  
**Verónica Ivonne Hernández Ramírez**

12:40-13:05 Discussion and questions

## Session VI

### Drug screening and discovery of new therapies against amitochondriate protozoan

Regency 3-4

Chairperson **Jesús Valdés Flores**

#### Invited Speaker

13:05-13:35 Rapid identification of miltefosine-resistant loci using the *Entamoeba histolytica* mutator strain  
**Yumiko Saito-Nakano**

#### Oral sessions

13:35-13:50 Generation of DNA aptamers that recognize *Entamoeba histolytica* trophozoites  
**Laurence A. Marchat**

13:50-14:05 Identification and structural characterization of binding site for drugs in the EhPGP5 multidrug resistance protein of *Entamoeba histolytica*  
**Brenda López-Tello**

14:05-14:20 Heterologous expression of the peptidyl-prolyl-cis-trans isomerase TvCyP1 from *Trichomonas vaginalis*; a potential biocatalyst for the assisted protein refolding  
**Veronica del Socorro Aranda Chan**

14:20-14:35 Structural and functional characterization of methyltransferase of arginine from *Entamoeba histolytica*  
**Leonardo Iván Aranda-Vivas**

14:35-15:00 Discussion and questions

15:00-17:00 **LUNCH**

## Session VII

### Human host defenses at the epithelium and cell-mediated innate immunity responses against *Entamoeba histolytica*

Regency 3-4

Chairperson **Mario Alberto Rodríguez**

#### Invited Speaker

17:00-17:30 Microbiota mediated innate immune modulation and protection from amebiasis  
**Stacey L. Burgess**

THURSDAY, October 26, 2023

**Oral sessions**

- 17:30-17:45      Role of NETs in the in vitro cytotoxicity of *Entamoeba histolytica* trophozoites  
**Joshue Fabián Jorge-Rosas**
- 17:45-18:00      The role of cAMP responsive element modulator (CREM) in amebiasis  
**Audrey C. Brown**
- 18:00-18:15      NADPH oxidase inhibition decreases the development of amebic liver abscess in a susceptible model  
**Jennifer Eliana Flores-Salazar**
- 18:15-18:30      Exploring the arachidonic acid (AA) binding site in gp63 proteins from *Entamoeba* spp  
**Verónica Ivonne Hernández Ramírez**
- 18:30-18:45      In silico analysis of the interaction of PC4 and CFIm25 proteins of *Entamoeba histolytica*  
**Alondra Cisneros-Sarabia**
- 18:45-19:15      Discussion and questions

**Plenary session**

**XX International Seminar on Amebiasis  
In memoriam of Professor Bernardo Sepúlveda, Ph.D.**

**Regency 3-4**

- Chairperson      Cecilia Ximénez**
- 19:15-19:20      Brief words of **Ana Carolina Sepulveda, PhD.**
- 19:20-20:20      Magistral conference: Origin and development of the International Seminars on Amebiasis  
**Adolfo Martínez Palomo, Ph.D.**

FRIDAY, October 27, 2023 Regency 3-4

**Session VIII****Drug screening and discovery of new therapies against amoebiasis**

Regency 3-4

Chairperson **Laurence Marchat****Invited Speaker**

9:00-9:30 The dichloromethane fraction of *Croton sonorae*, a plant used in Sonoran traditional medicine, affects *Entamoeba histolytica* erythrophagocytosis and gene expression  
**Olivia Valenzuela**

**Oral sessions**

- 9:30-9:45 Tirapazamine an anticancer drug, with antiamebic potential  
**Josué Fernando Velazquez Romero**
- 9:45-10:00 Effect of Stevioside (*Stevia rebaudiana*) on *Entamoeba histolytica* trophozoites  
**Karla Jocelyn Ortega-Carballo**
- 10:00-10:15 Antiamoebic potential of butyl and isopropyl quinoxaline-7-carboxylate 1,4-di-N-oxide esters  
**María Esther Ramírez Moreno**
- 10:15-10:30 Anti-amoebic effect of extracts and alkaloids from several Mexican plants and a synthetic compound derived from amphotericin B  
**Julio César Carrero**
- 10:30-10:45 Incomptin A: *In vivo* effect on amoebic liver abscess development  
**Verónica Ivonne Hernández Ramírez**
- 10:45-11:15 Discussion and questions
- 11:15-11:30 **Coffee break**

**Session IX****Free living amoebae and other protist that affect the human  
In memoriam of Professor Mineko Shibayama, Ph.D.**

Regency 3-4

Chairperson **Horacio Pérez Juárez**

11:30-11:35 Brief words by Víctor Tsutsumi

**Invited Speaker**

11:35-12:05 *In vivo* characterization of cytokine expression, nitric oxide and reactive oxygen species production during primary amoebic meningoencephalitis development  
**Jesús Serrano-Luna**

**Oral sessions**

- 12:05-12:20 Insights into the proteomic profile and potential significance of a 50 kDa protein in *Balamuthia mandrillaris* pathogenesis  
**Rosalía Alfaro-Sifuentes**

## SCIENTIFIC PROGRAM

FRIDAY, October 27, 2023 Regency 3-4

- 12:20-12:35 Erythrophagocytosis and trophocytosis during the interaction of amphizoic amoebae with target tissue  
**Esthepania Arciga-Cardenas**
- 12:35-12:50 Characterization of the ubiquitin protein in trophozoites of *Naegleria* genus  
**Itzel-Citlalli Rubio-Gutiérrez**
- 12:50-13:05 *Trichomonas vaginalis* aspartic proteinase (Tv-AP): an analysis of the protein expression, localization and enzymatic activity in different trichomonad isolates  
**Lizbeth Sánchez-Ayala**
- 13:05-13:35 Discussion and questions

### Closing ceremony

#### Regency 3-4

- 13:35-13:45 Concluding remarks  
**Nancy Guillén / Tomo Nozaki**
- 13:45-13:55 Summary of Seminar  
**Angélica Serrano Vázquez**
- 13:55-14:00 Closing words  
**Organizer Committee**

15:00-17:00 **LUNCH**

#### Regency 3-4

20:00-00:00 **Farewell gala dinner**

SATURDAY, October 28, 2023

## Departure

12:00

Check out

**ATTENTION:** If you are staying at Hyatt Regency Mérida Hotel, you are entitled to breakfast before your departure

**Do not forget to answer the satisfaction questionnaire**

For taxi reservation to airport, contact concierge in the hotel



Visit our website:  
<https://ume.facmed.unam.mx/seminaronamebiasis/>