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### Importance of Tropical Medicine

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## Background

- Definition of tropical medicine: “Field focused on infections and illnesses caused by bacteria, viruses, fungi or parasites that are prevalent in tropical areas”
- “Neglected Tropical Diseases” – coined by the WHO to highlight and tackle conditions that are associated with devastating health, social, and economic consequences
- Estimated 1 billion people are affected; however, up to 1.6 billion people require intervention
- Increase of international travel has further affected the spread of diseases
- My prior experiences:
  - 6 week rotation at UPCH-UTMB in 2018
  - Poster presentation temporally analyzing *Fasciola hepatica* eggs in 2018
  - Conference of the International Society of Travel Medicine 2019
  - Intensive Course in Tropical and Travel Medicine course at UTMB in 2020
  - Global Health Track at UTMB (completed 2021) and at CMH (projected completion 2025)



*Fasciola hepatica*

## Objective

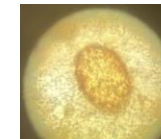
Provide insight on the importance of tropical medicine to society and health, abroad and locally

## Experience

- 4-5 week time split between clinical shadowing, laboratory work, and Spanish immersion
- Clinical experience
  - Learning clinical scenarios vs in-person diagnoses
  - Community health
  - Travel Clinic and patients
- Laboratory experience
  - Diagnostic testing
    - Collecting samples: human and animal
    - Sedimentation: concentration method
    - Kato Katz: identification and quantification
    - Stains: identification
  - Molecular diagnostics
    - PCR
  - *Fasciola hepatica* cultures



*Sporothrix schenckii*



*Ascaris* egg

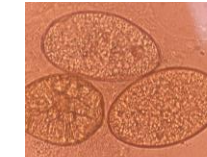
## Discussion

- Importance of awareness
  - Cost of disease, cost of resources, funding, and sustainability
- “One Health” movement: integrated, unifying approach to balance and optimize the health of people, animals and the environment
- Filling in the gaps of knowledge
  - Necessary experience and skills for diagnostic tests



Artifact

*Capillaria* egg



*Fasciola* eggs



*Taenia solium* eggs

## Future Directions

- Since returning...
  - Completed requirements for CTropMed certification
  - Have seen malaria in both hospitals, atypical presentations of TB, leprosy, and neurocysticercosis
- Plan on furthering my experience with UTMB-UPCH CRC in Cusco
- Will apply to combined internal medicine-pediatric infectious disease fellowship for further training
- Looking for fellowship programs and avenues that allow me to continue work in global partnerships

## References

- WHO: World Health Organization
- American Society of Tropical Medicine and Hygiene
- Intensive Course in Tropical and Travel Medicine course at UTMB

Thanks to CMH GME to allow me to return to Cusco, Peru for this experience. Thanks to UPCH-UTMB CRC staff, especially Vanessa, Carol, Dra. Martha, and Dra. Karen. Thank you to Cusco Regional Hospital staff, especially Dr. Casorla and Dr. Cuevas.