



# Michael Ansah – Sanger Excellence Fellow



# How many times did Michael change his mind on what career he wanted to do?

- A. 0
- B. 1
- C. 3
- D. I am still changing my mind

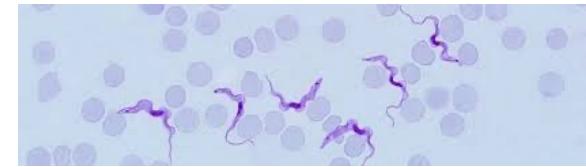


Answer: D



# NHS England

A-Levels: Biology,  
Chemistry,  
Physics and P.E



Master's:  
Parasitology



Sanger Excellence  
Fellow

Played for Crewe Alexandra FC.  
GCSEs: Science, French, History, RE,  
PE.



Undergraduate:  
Degree in  
Biochemistry



PhD: Biomedical  
Science



Trigger Warning!

# Neglected Tropical Diseases

**“Diverse group of conditions that are mainly prevalent in tropical areas, where they thrive among people living in impoverished communities”**



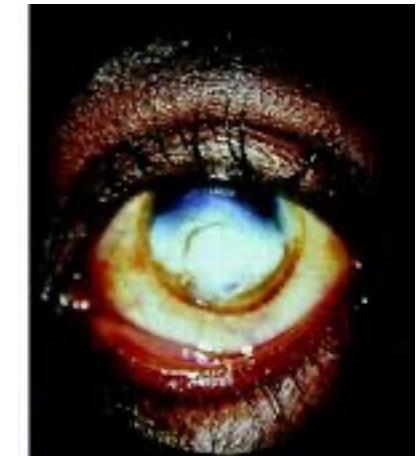
Snake Bites



Elephantiasis



Bilharzia



River Blindness



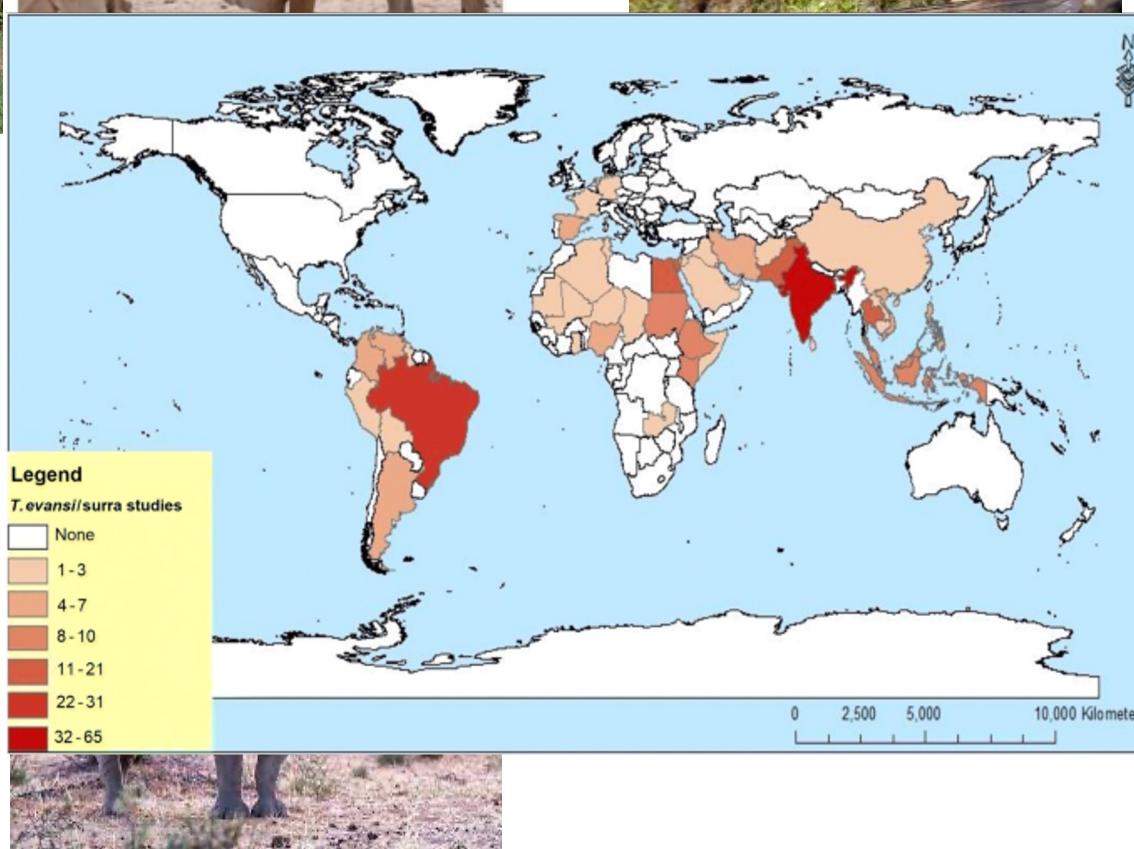
How much does it cost to develop a drug from scratch?

- A. 8 thousand pounds
- B. 8 million pounds
- C. 80 million pounds
- D. 800 million pounds

Answer: D

# What have I worked with? Surra

Hosts



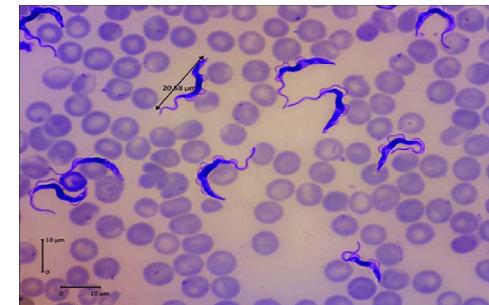
Vectors/Transmission



Mechanical (Vampire Bat)



Oral Transmission



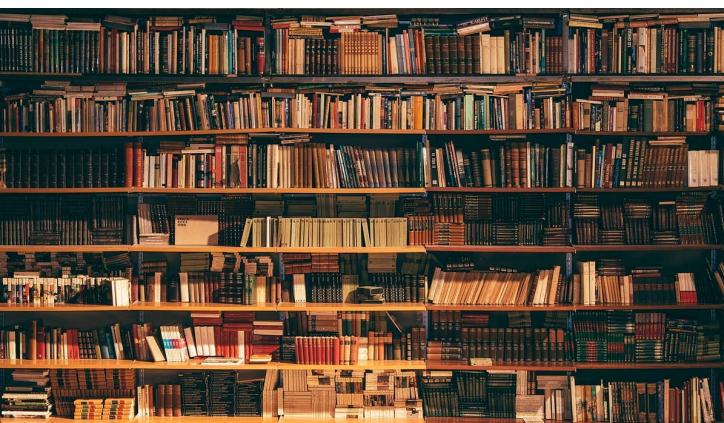
*Trypanosoma evansi*

# How many cases of Surra are there annually?

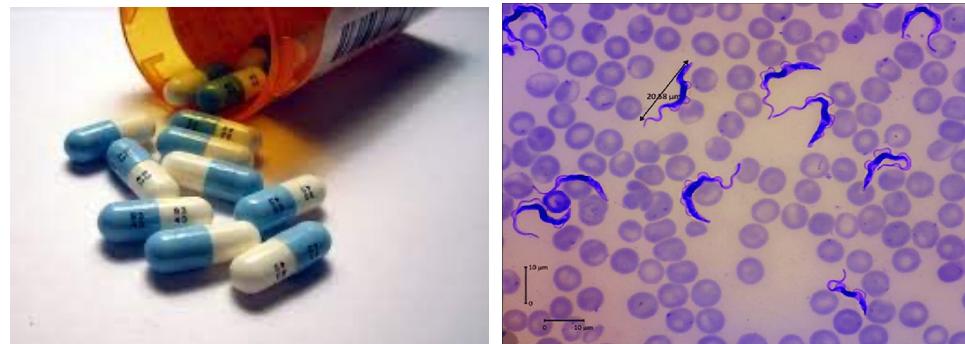
- A. We don't know
- B. 1 thousand
- C. 100 thousand
- D. 1 million

Answer: A

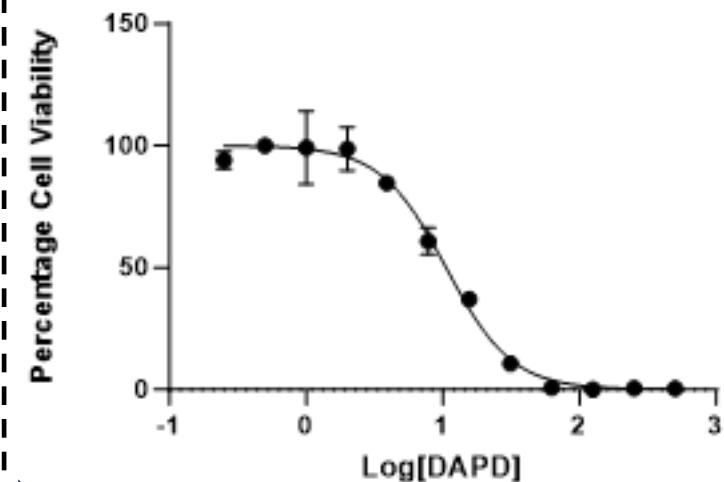
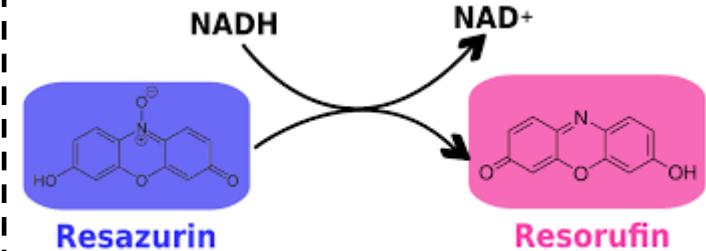
# Drug Screening



Drug Library



IC50 Assay



# What have I worked with? Cutaneous Leishmaniasis

Trigger  
Warning

Hosts



Humans



Dogs

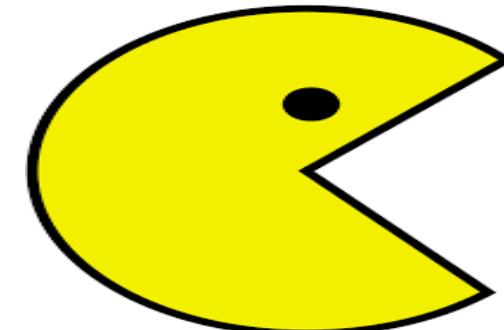
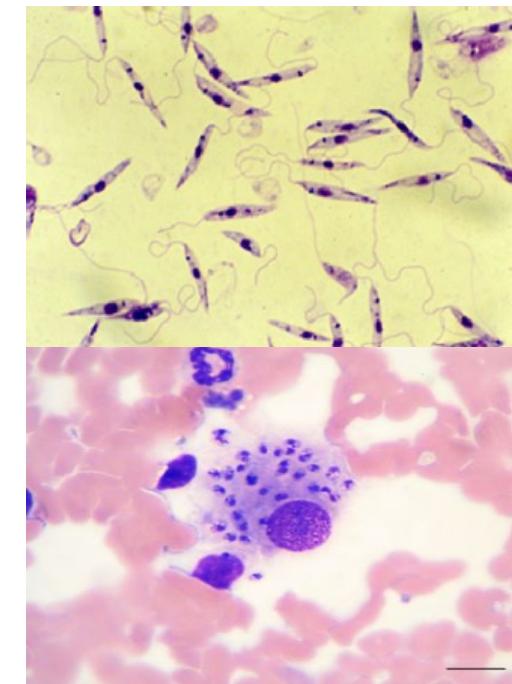
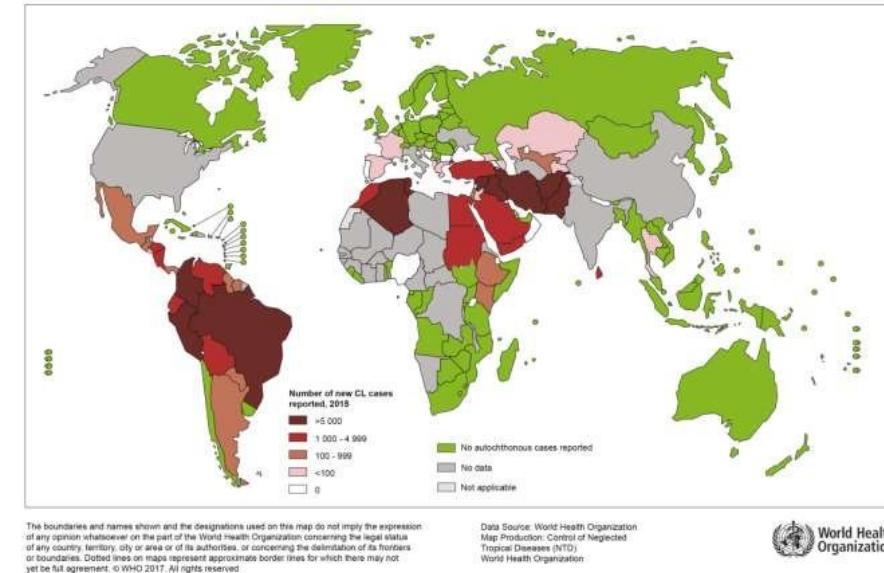
Vectors/Transmission



Sandfly

Epidemiology

Status of endemicity of cutaneous leishmaniasis worldwide, 2015

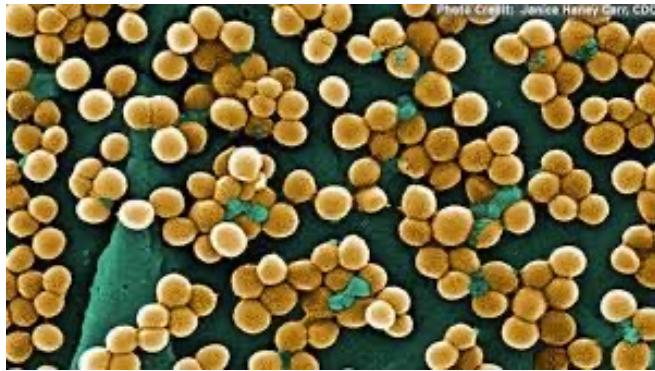


How many cases of leishmaniasis are there annually

- A. 1 thousand
- B. 10 thousand
- C. 100 thousand
- D. 1 million

Answer: D

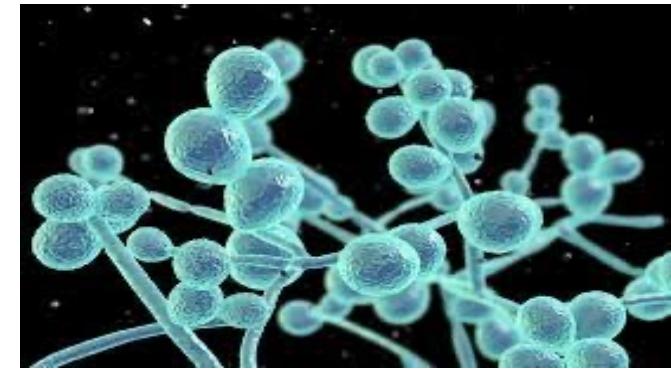
# What have I worked with? Multi-Drug Resistant Diseases



*Staphylococcus  
aureus*

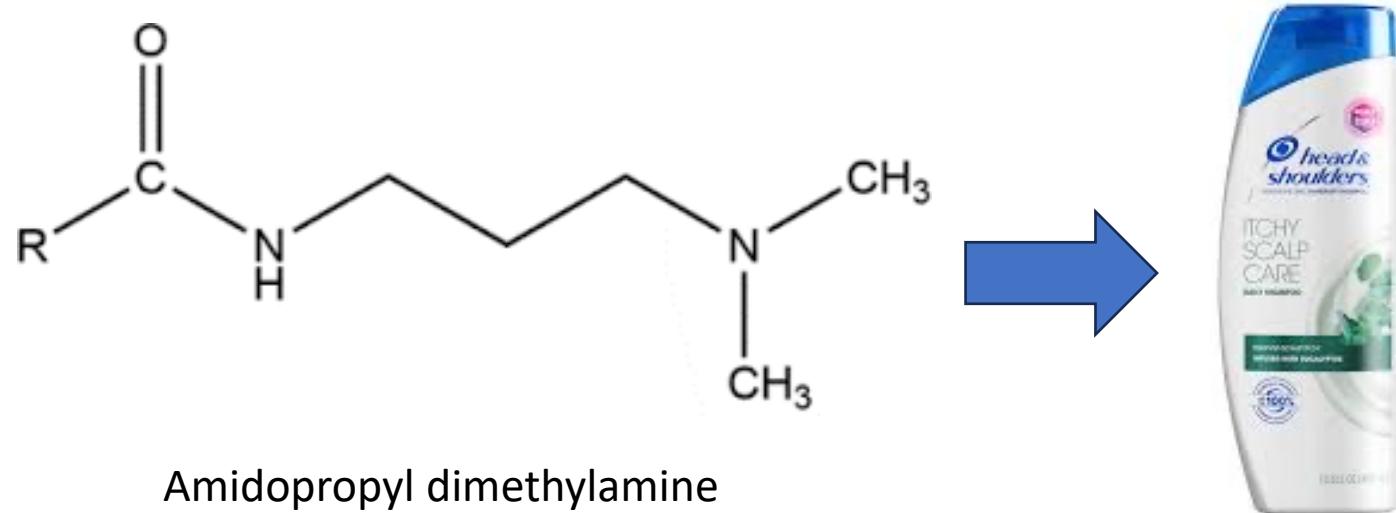


*Pseudomonas  
aeruginosa*

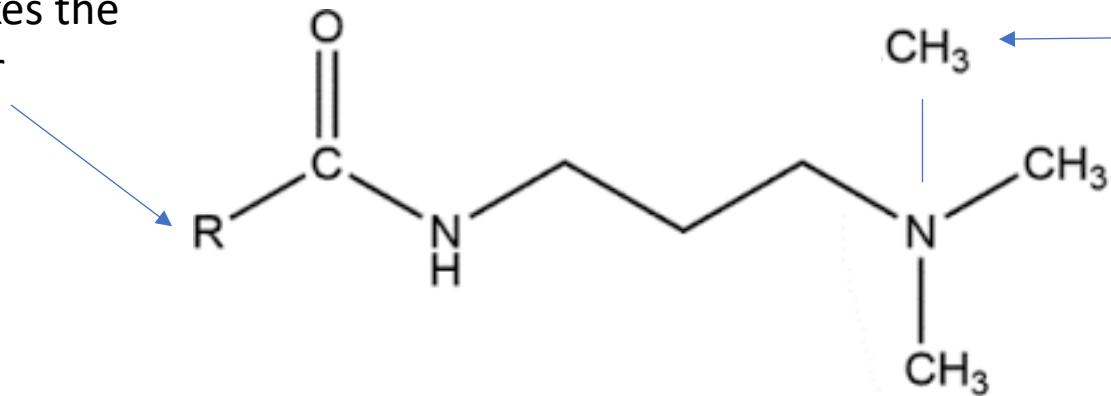


*Candida albicans*

# Making Drugs



Making this bit longer makes the drug better



Adding this extra  $\text{CH}_3$  makes the drug better against some species but worse against others



Trigger  
Warning

# What am I working on? *Acanthamoeba*

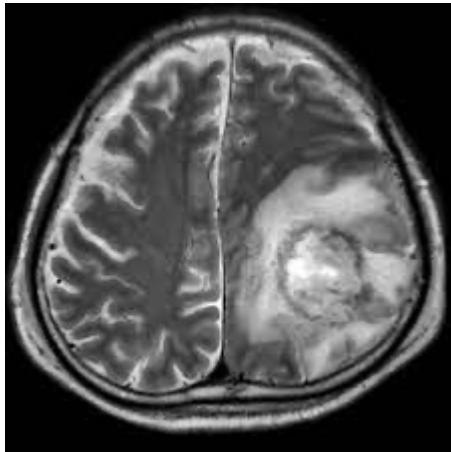
Hosts



Transmission



Humans



Contact Lenses



Immunocompromised



Trophozoite



Cyst

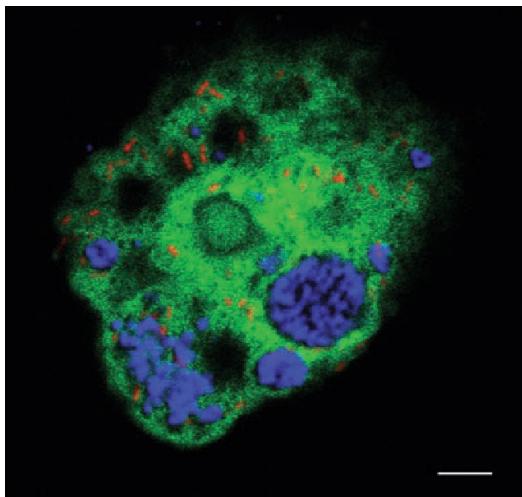
# Where do we find *Acanthamoeba*?

- A. Only in Africa
- B. Only in South America
- C. Everywhere
- D. Only in fresh water

Answer: C

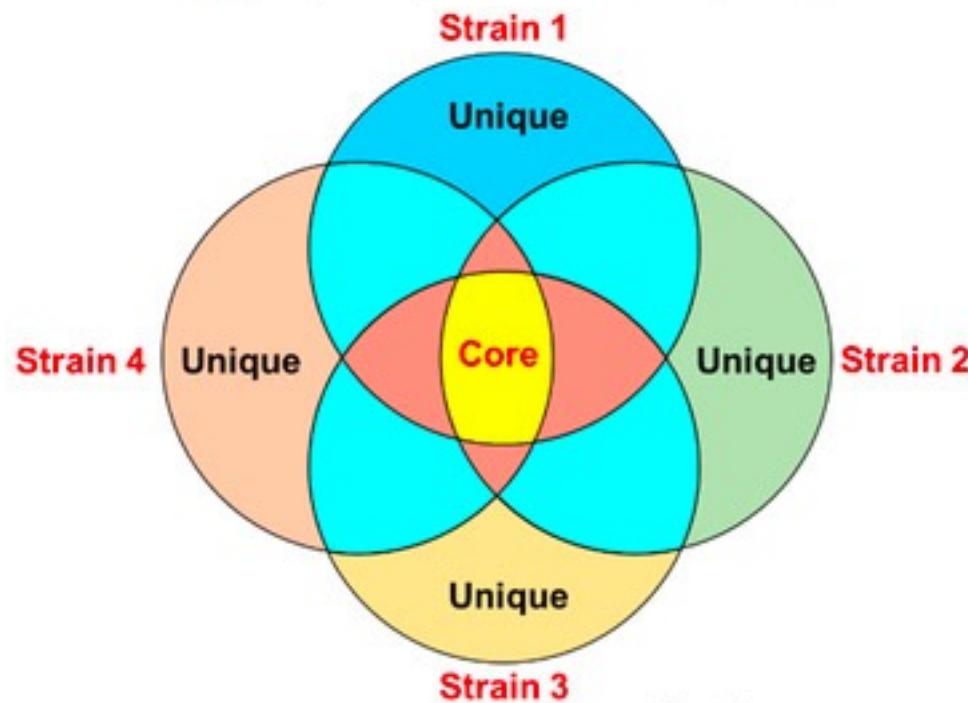
# *Acanthamoeba* genomics

Endosymbionts



**NHS**  
England

Pathogenicity



Transcriptomics



Trophozoite

Genes turned on?  Genes turned off?



Cyst



# You can do anything!\*

Contact me!  
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Twitter: @MLKAnsah97

\*But you must put in the work!