

Reference: M.A. Phillips et al., *J. Med. Chem.* 2008 (PubMed ID 18522386)

9:45-10:00 intragroup discussion
10:00-10:20 intergroup discussion
10:20-10:25 wrap up haiku/poem
10:25-10:40 present poems and award

Proposal 1

Researchers directed site-specific mutagenesis of particular residues, which resulted in a significant increase in IC50 values. What information did they glean from this experiment?

Proposal 2

Postulate ANY reasons, scientific or not, why you think malaria has not yet been cured and propose what it will take to defeat malaria. (Answers can be scientific, social, economical, political, or a combination)

Proposal 3

Suppose this paper was from your lab. You are now reapplying for a Gates Foundation grant to continue your work. How, in your new grant proposal, will you justify both the progress you've made and the potential to produce a viable drug. Your answer should also consider whether this drug's potential is superior to the other compounds we've studied this quarter.

Proposal 4 (Mandatory)

Write a haiku (5,7,5) or a poem about any aspect of malaria or the drug discovery process. Present in class and bask in the glow of your own awesomeness. Each group can present up to two pieces of poetry with a minimum of one.

Graham's example (pre-written poem):

"My name is compound 7"

My name is compound 7 and I'm here to kick some ass,
I was originally discovered in a high through-put screen, where
Only 13 of us passed

Unlike my friends though I work well in whole-enzyme assays,
Which I guess is why you're reading this paper, here in class, today

It's not always easy though, being a competitive inhibitor;
Sometimes I wish I could bind allosterically, but hey, I'm not bitter;

My IC50 value is great, some would even say spectacular;
While other heterocyclic compounds have mostly been a disaster

I still need some work, some optimization and even a bit of luck;
But at the end of the day it's worth it, because malaria sucks.

Haiku (inspired by Phillips et al. [2008])
by Ashlyn, Chad, Courtnee, Jennifer, and Tyler

D H O D H
Pyrimidine synthesis
Bam! Inhibited.

Limerick
by Ashlyn, Chad, Courtnee, Jennifer, and Tyler

A terrible disease is malaria
If it lasts for too long they'll bury ya!
To keep you out of the ground
New drugs must be found
If it works: parasite mass hysteria.

Haiku by Michael

The Plasmodium
Cold heart half-heart assassin
Look for me – find me

Haiku by Kaiser

P. falciparum
Its resistance is building
We need some new drugs!

Haiku by Emoniel

Down in Africa
I thought they were butterflies
Mosquitos from hell

Haiku by Tracy

Oh malaria
Why are you so resistant
Please stop infecting

Parody of Jay-Z's "99 Problems" (written from the perspective of the parasite)
by Clementine

If you havin' drug problems I feel bad for you son
I got 99 problems but your meds ain't one
I mutate active sites of your drug targets
And whatever you do I don't give a f***
If you grew up in a 'hood with mosquitos
You better use your bed nets or I'll kill you hoe
If you're immunocompromised you'll have it worse
But I don't care 'cause that's how I rap