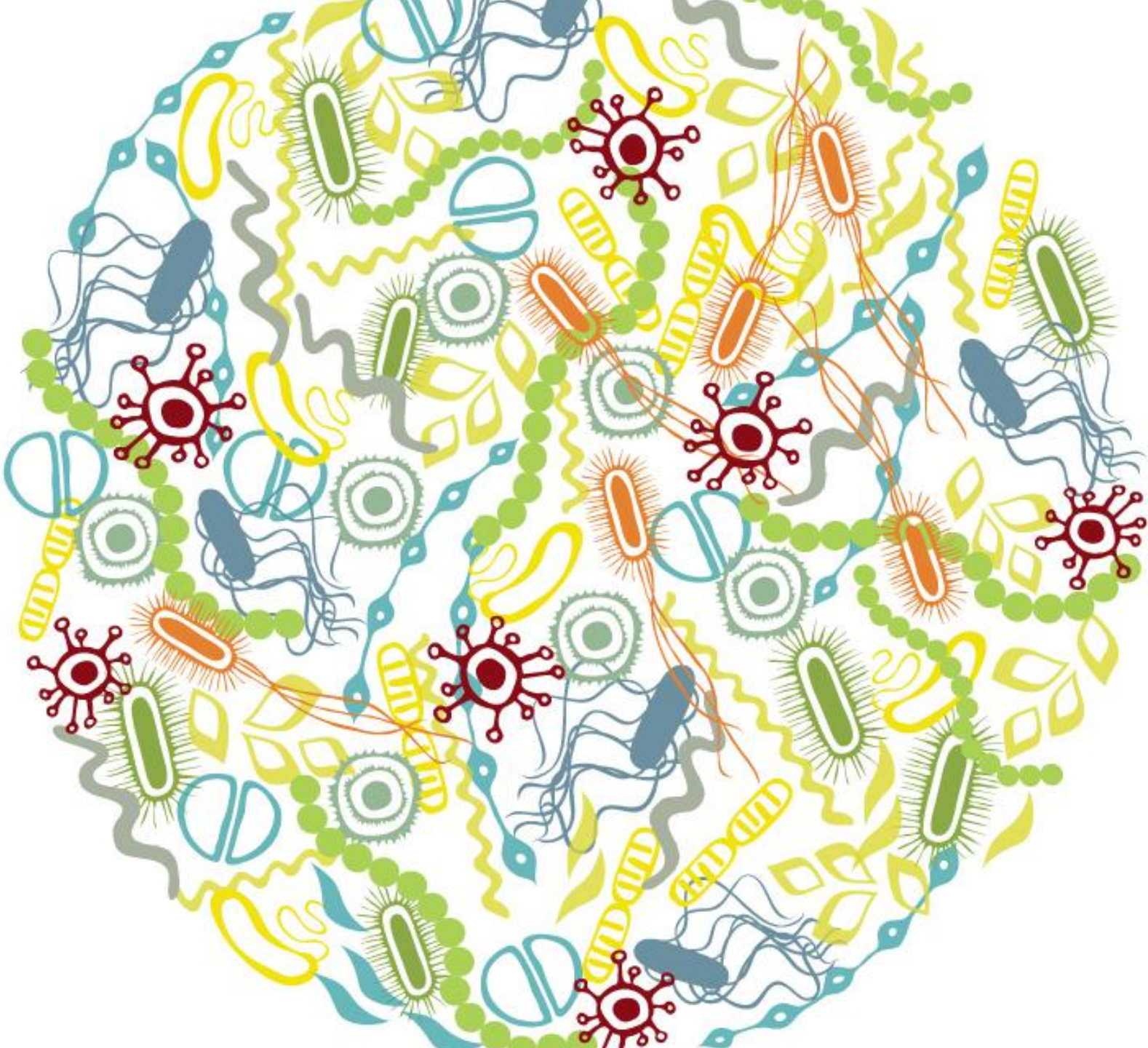
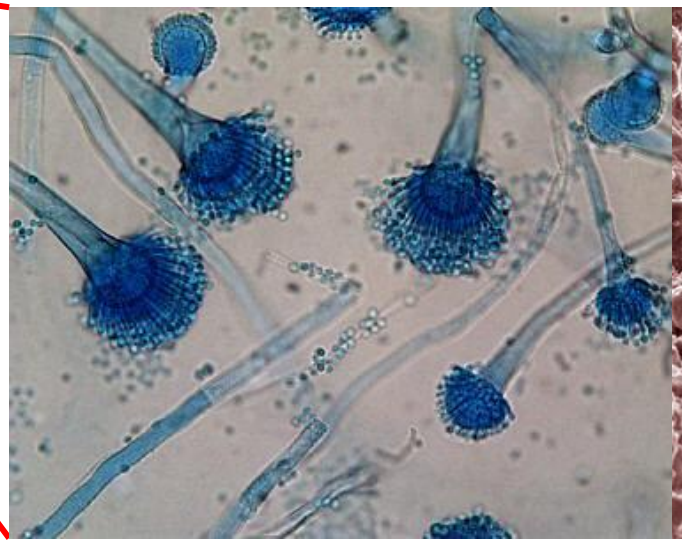
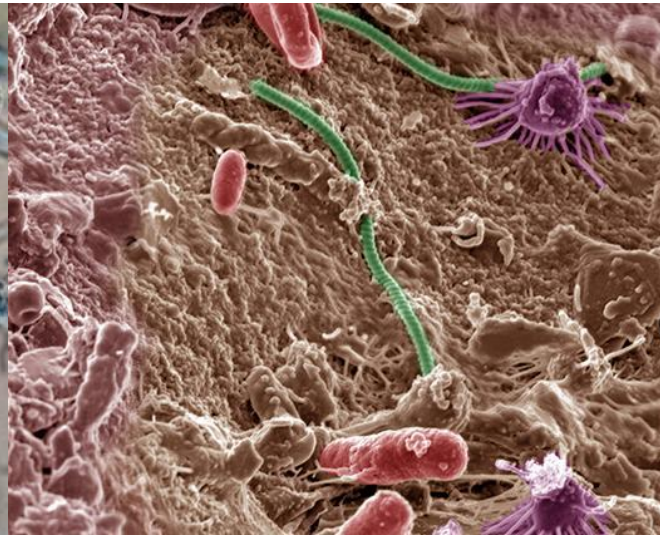
MICROBES AND CLIMATE CHANGE

Adriana L. Romero-Olivares
University of California Irvine



MICROBES ARE EVERYWHERE





LARGEST ORGANISM ON EARTH IS A FUNGUS

MICROBES AND HUMANS ARE BIG SOURCES OF CARBON DIOXIDE (CO_2)

CO_2 is a greenhouse gas and it causes global warming because it traps heat from the sun

AND WHAT ABOUT CLIMATE CHANGE?

DROUGHTS IN SOME PLACES

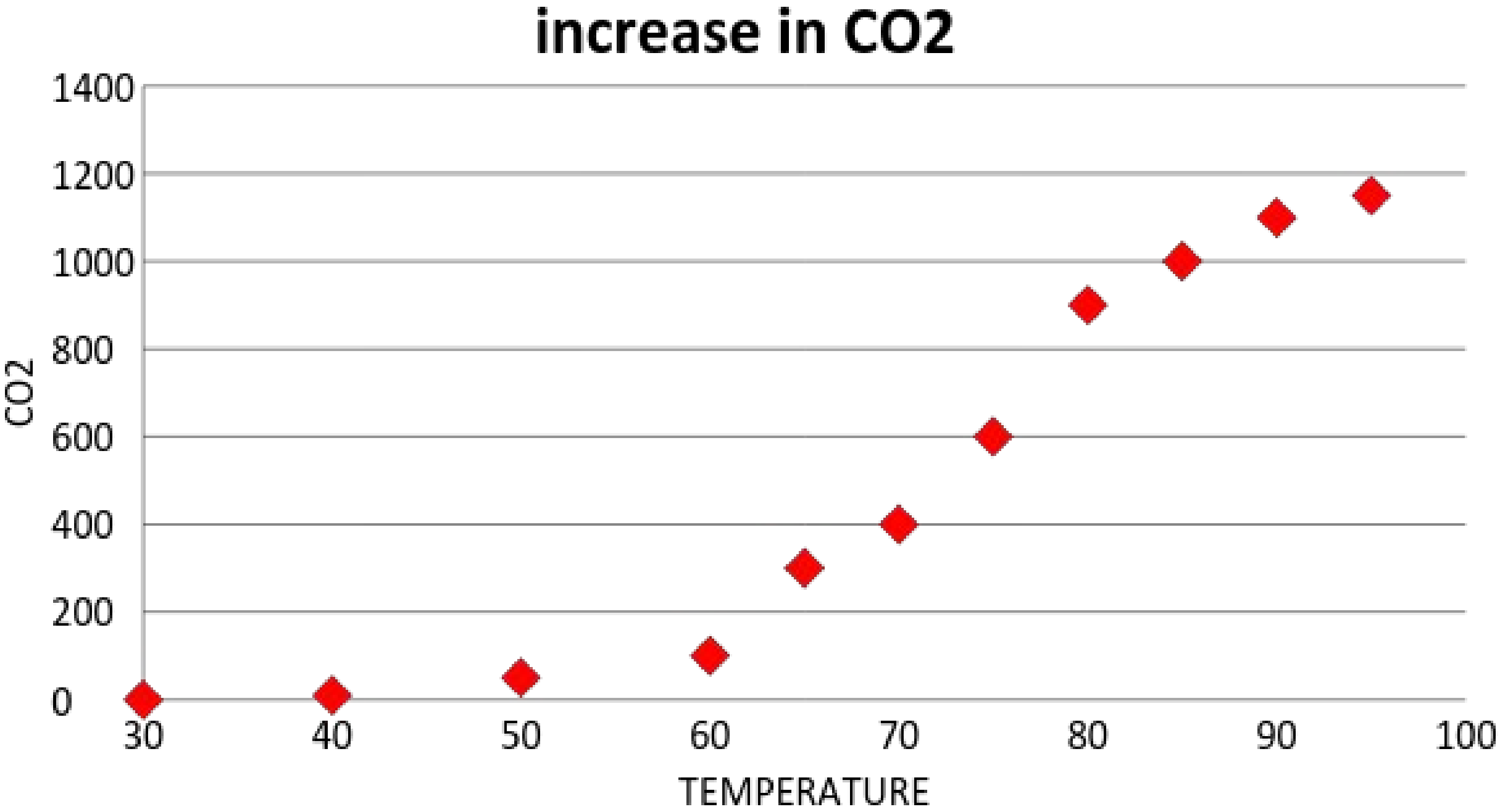
FLOODING IN OTHER PLACES

AS A SCIENTISTS I WANT TO KNOW HOW WE AFFECT MICROBES AND HOW THE CO_2 OF MICROBES WILL AFFECT US

WE ARE CHANGING THE WEATHER, WE'RE MAKING IT HOTTER. ARE MICROBES IN THE SOIL PRODUCING MORE OR LESS CO_2?

Fact: levels of CO_2 right now are 400

Temperature	CO_2 measurements	Increase in CO_2
30	400	400-400 = **0**
40	410	410-400 = **10**
50	450	450-400 = **50**
60	500	500-400 = **100**
65	700	700-400 = **300**
70	800	800-400 = **400**
75	1000	1000-400 = **600**
80	1300	1300-400 = **900**
85	1400	1400-400 = **1000**
90	1500	1500-400 = **1100**
95	1550	1550-400 = **1150**


increase in CO2
1400
1200
1000
800
600
400
200
0
CO2
30
40
50
60
70
80
90
100
TEMPERATURE

WE ARE CAUSING MICROBES TO INCREASE THEIR CO_2

- We have to use more renewable energy like solar energy or wind energy to rely less on fossil fuels and lower our carbon footprint

- Small changes in our lifestyles go a long way = turn off lights, unplug chargers, walk!

TO BE A SCIENTIST IN ECOLOGY YOU DON'T HAVE TO BE A GENIUS, YOU HAVE TO WANT TO LEARN

- I've been in school for 23 years… and counting
- I went to college to study Biology, then I continued to study to get a Master's degree and then I continued to study to get a PhD (in process)
- Advice: don't be afraid to take advanced math and science in middle school and high school! (this will go a long way when you're applying to college)
- Role models are important… choose wisely
- Don't be afraid to be different!