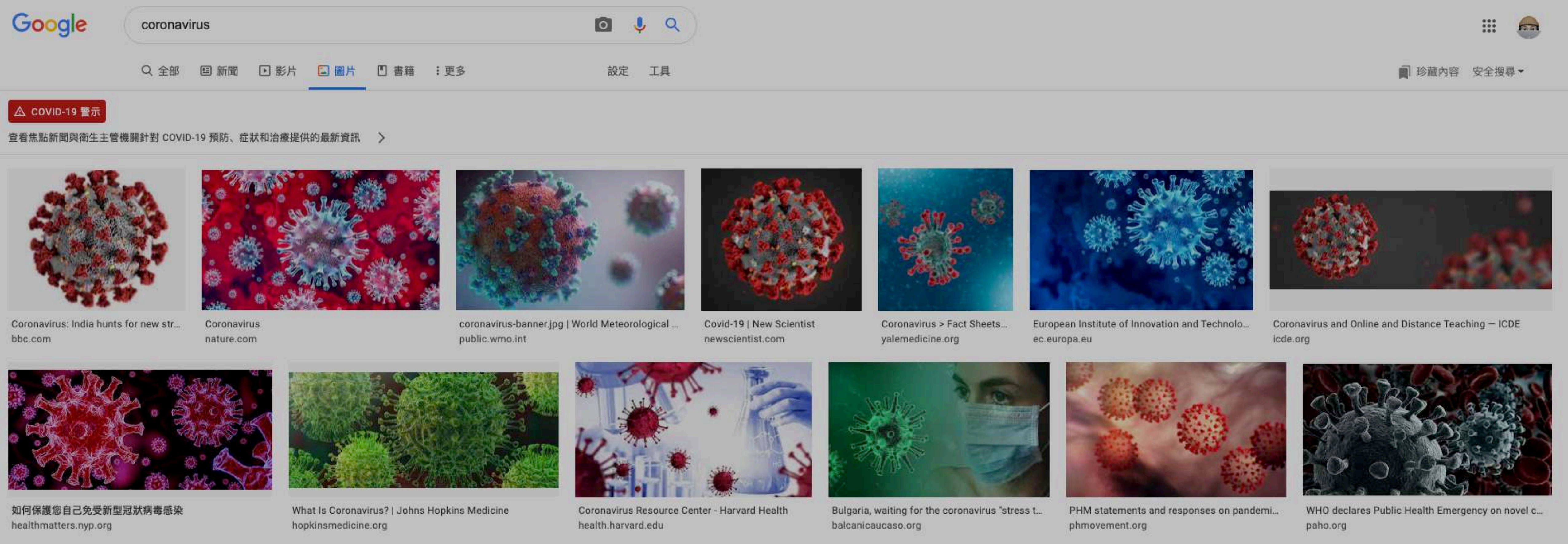# How to Draw the Coronavirus

《The Paris Review》
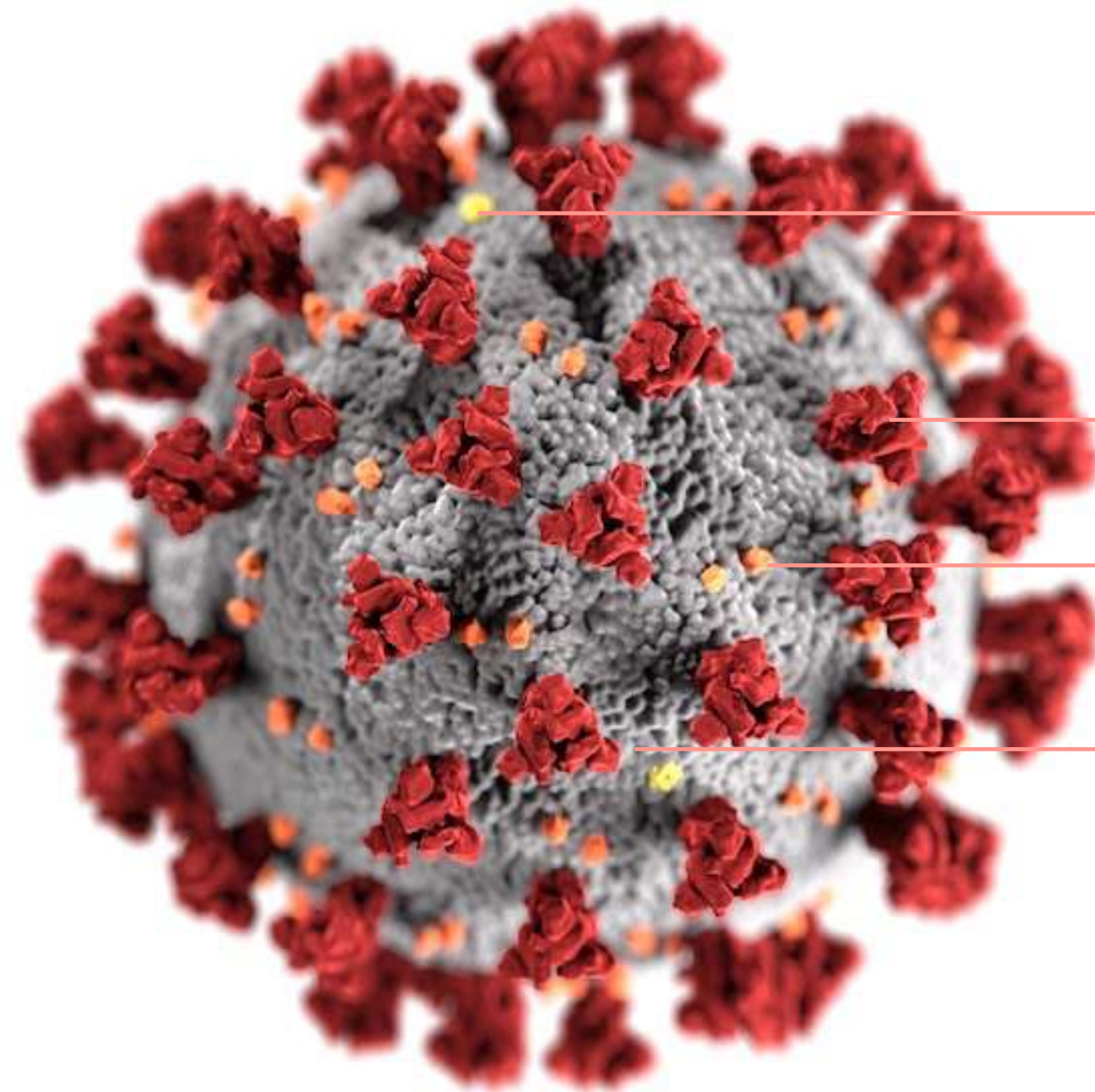
-Rebekah Frumkin

赵佳禾 2021.6.15

Many of us imagine the virus as <u>a sphere radiating red spikes</u>
—but why?
 Certain elements of these visualizations are based on the way coronavirus appears under a microscope,
<u>and others are choices that were made, an exercise of artistic license.</u>
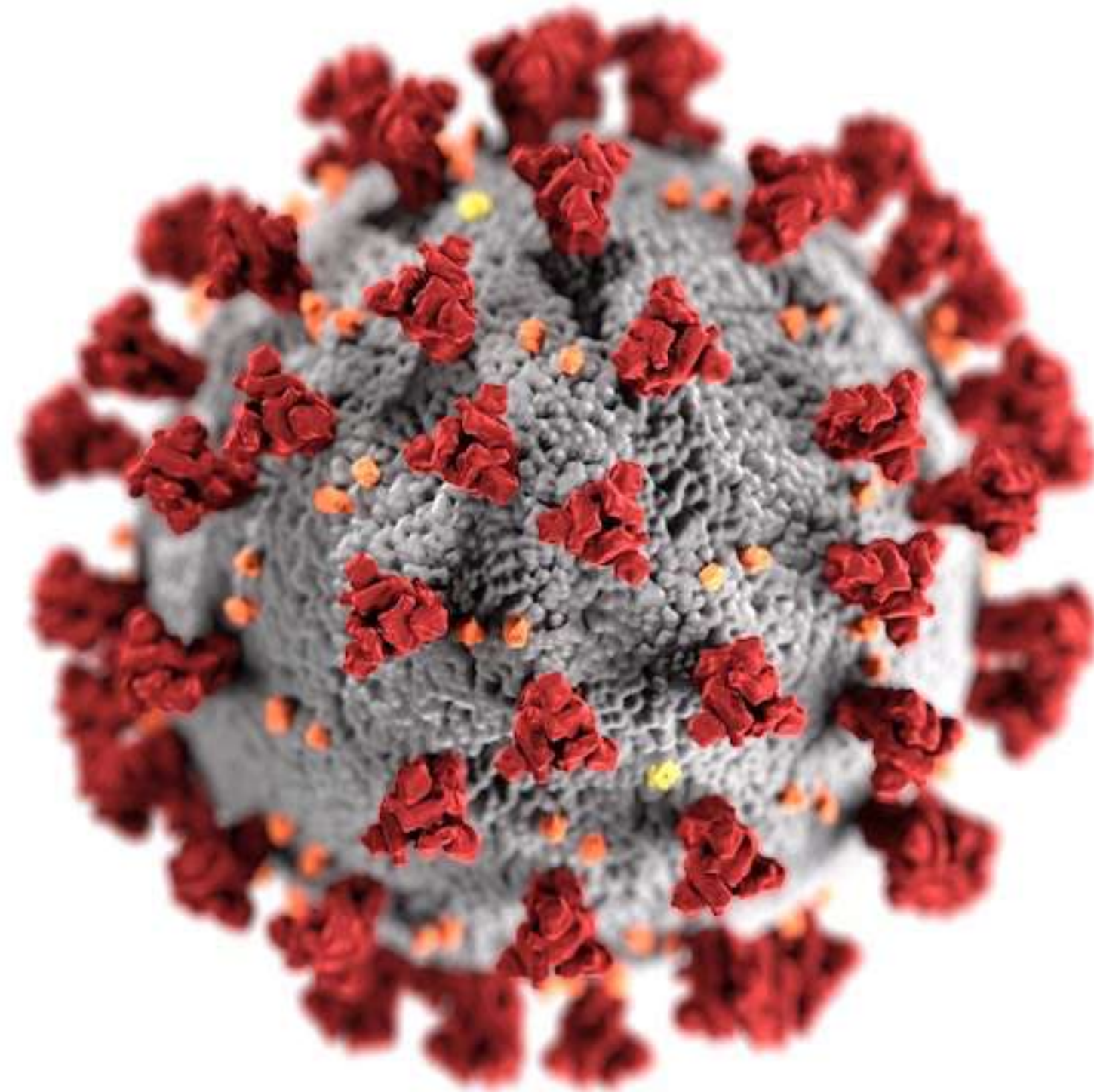
1_CDC's version

yellow specks: Envelope / E-protein

red protrusions: Spike / S-protein

orange crumbs: Membrane / M-protein

gray surface: the body

1_CDC's version

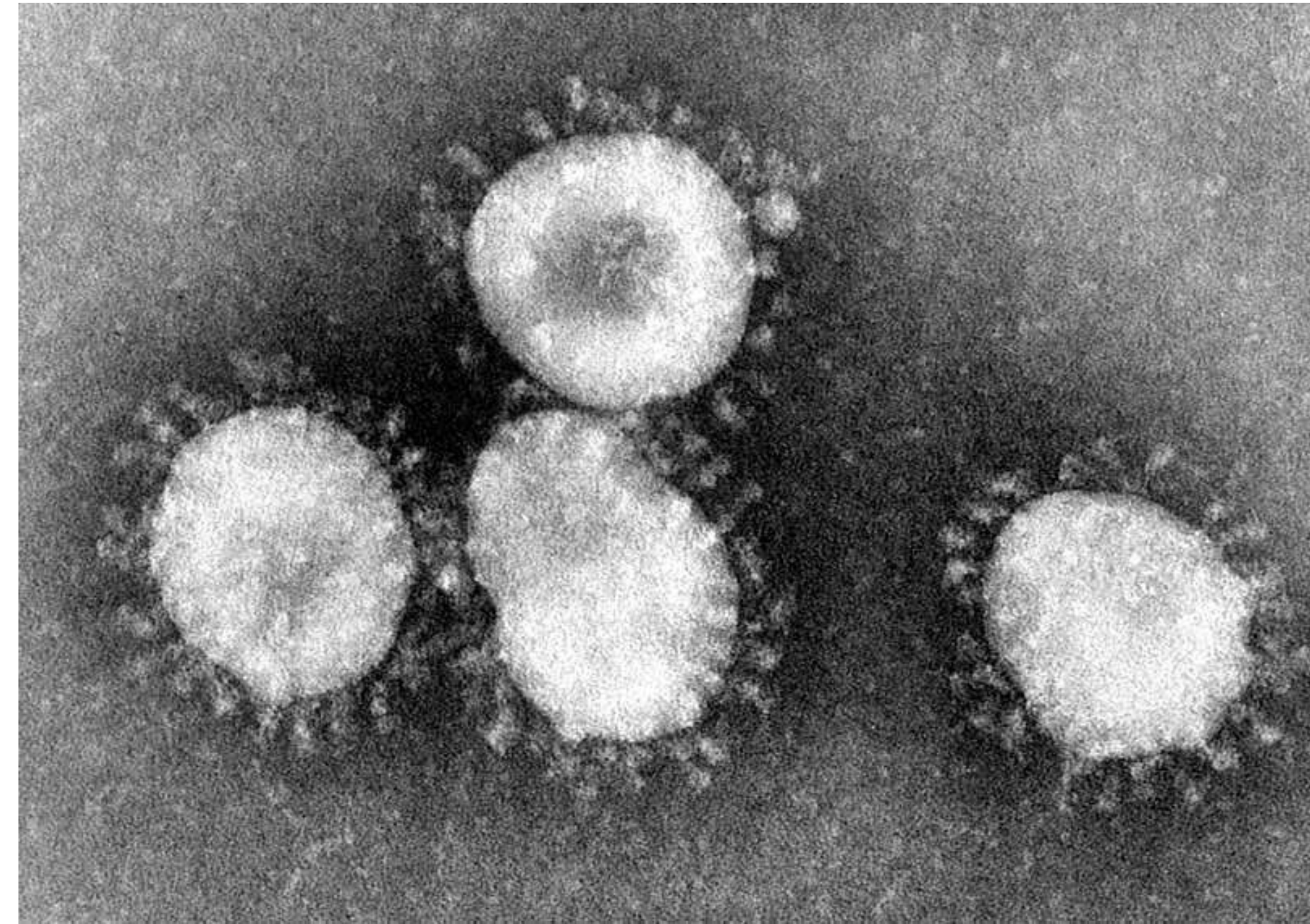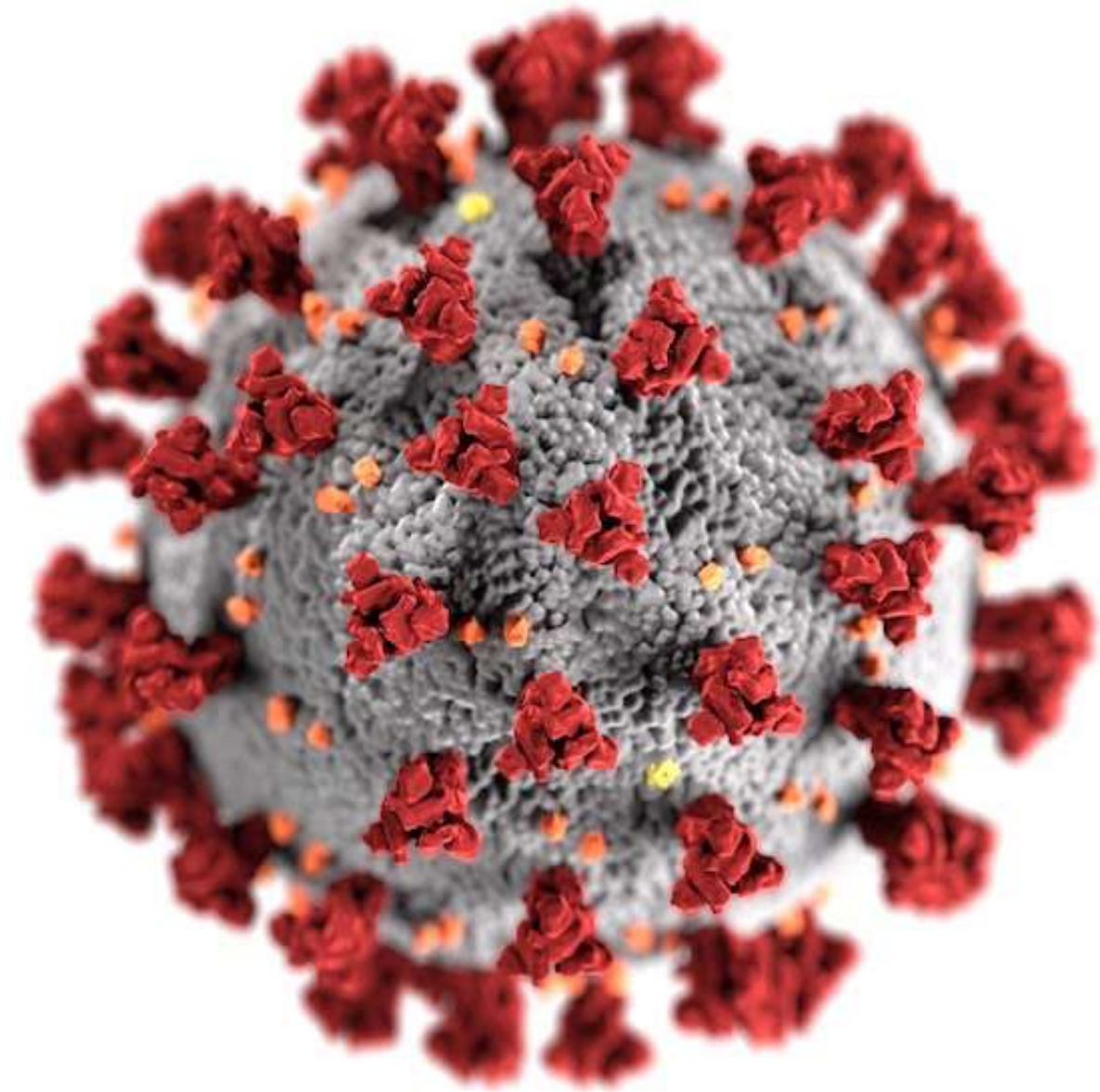create an arresting visual

gave a certain "character" to the disease

"It just really stood out."

"We didn't want to scare the public,"
"but we did want them to take it seriously."

"Their illustration kind of looks handsome."

"It has a certain symmetry to it,
an appealing design."

《Brief Review on COVID-19: The 2020 Pandemic Caused by SARS-CoV-2》
https://www.cureus.com/articles/29459-brief-review-on-covid-19-the-2020-pandemic-caused-by-sars-cov-2

researching
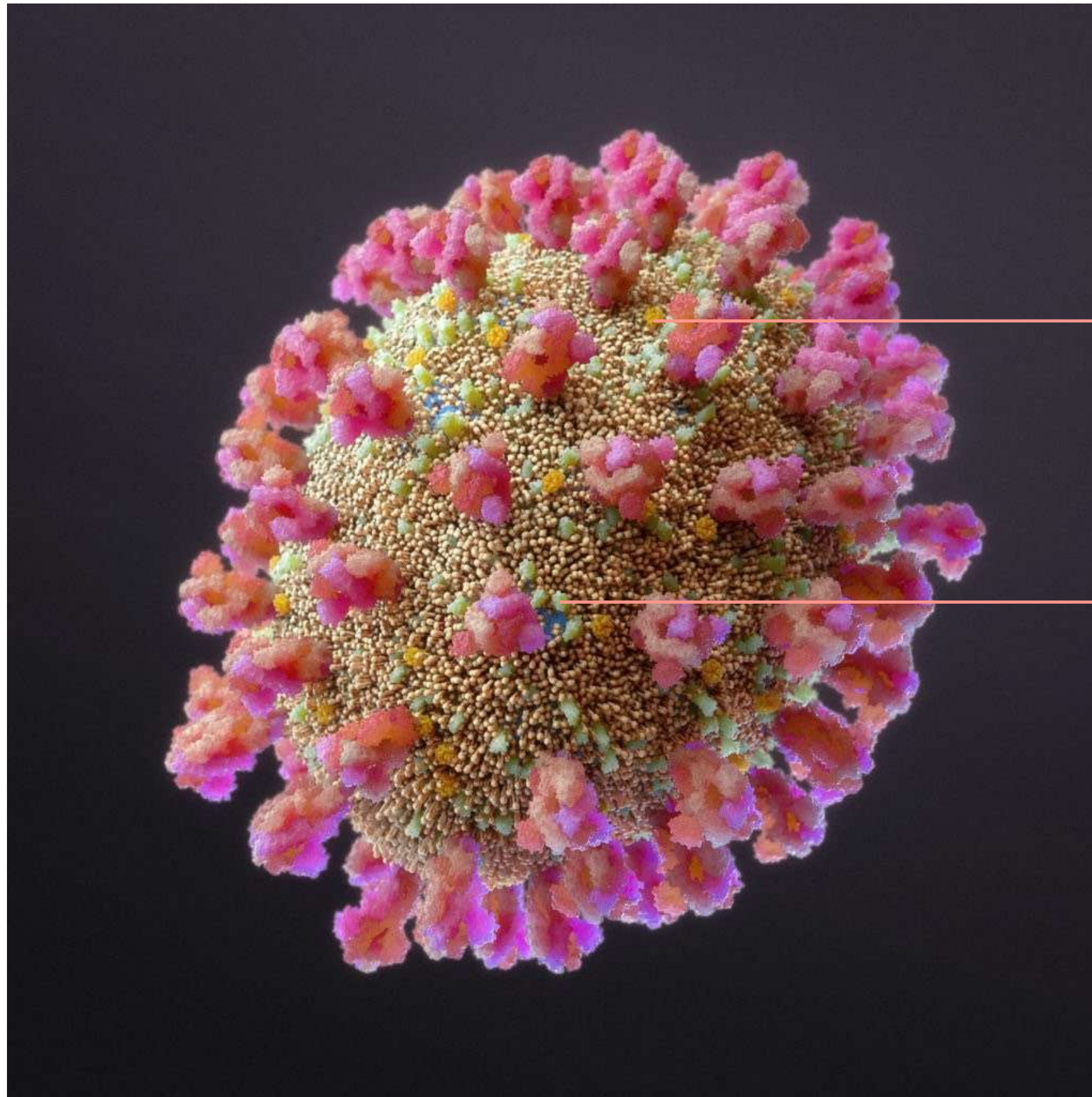questioning CDC's labs → World Protein Data Bank
downloaded images → how much to show
how far apart → flourish
dramatic lighting
ominous look
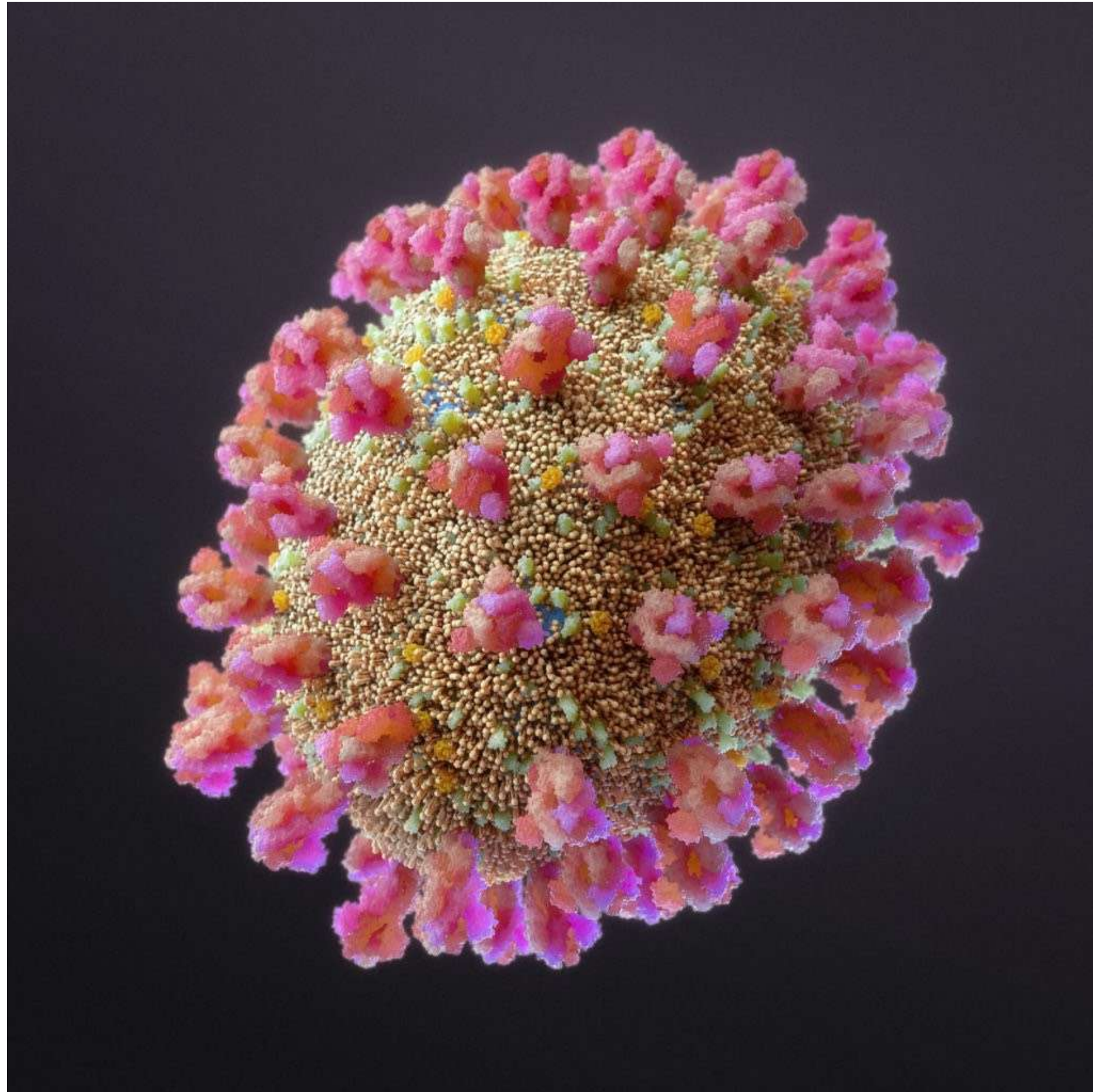
|
https://www.wwpdb.org/

2_iSO-FORM's version

E-protein (orange)
from models of the SARS-CoV virus

M-protein (green)
through "predictive neural net processing"

2_iSO-FORM's version

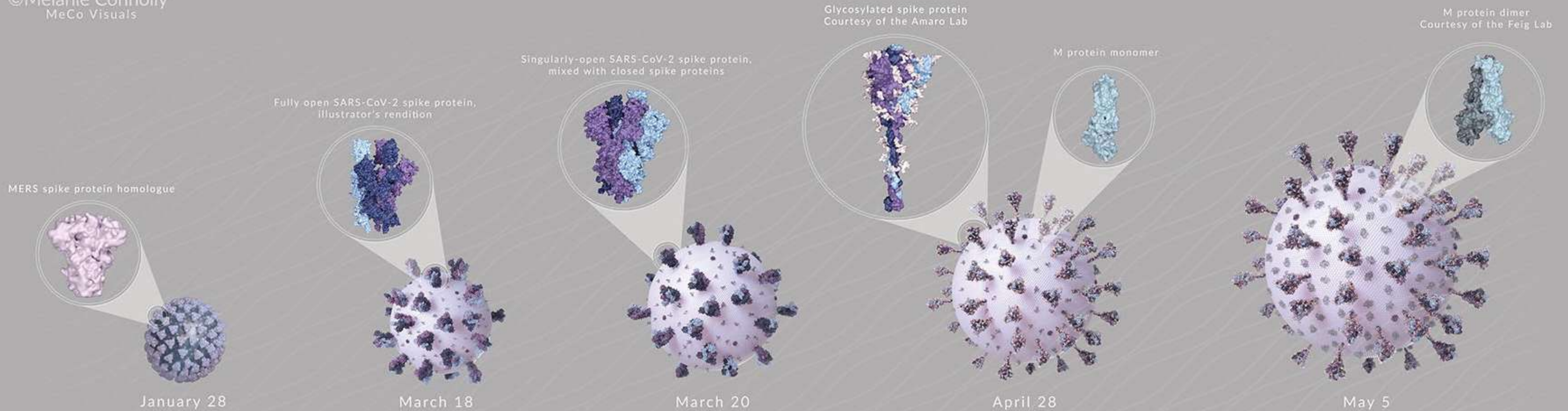rendered it as ellipsoidal: coronavirus is _pleomorphic_, meaning it can vary in shape.

colors and style emphasize the virus's: _structural complexity_ _aggressive protein configuration_ but also hint at its _frail nature_ outside the body
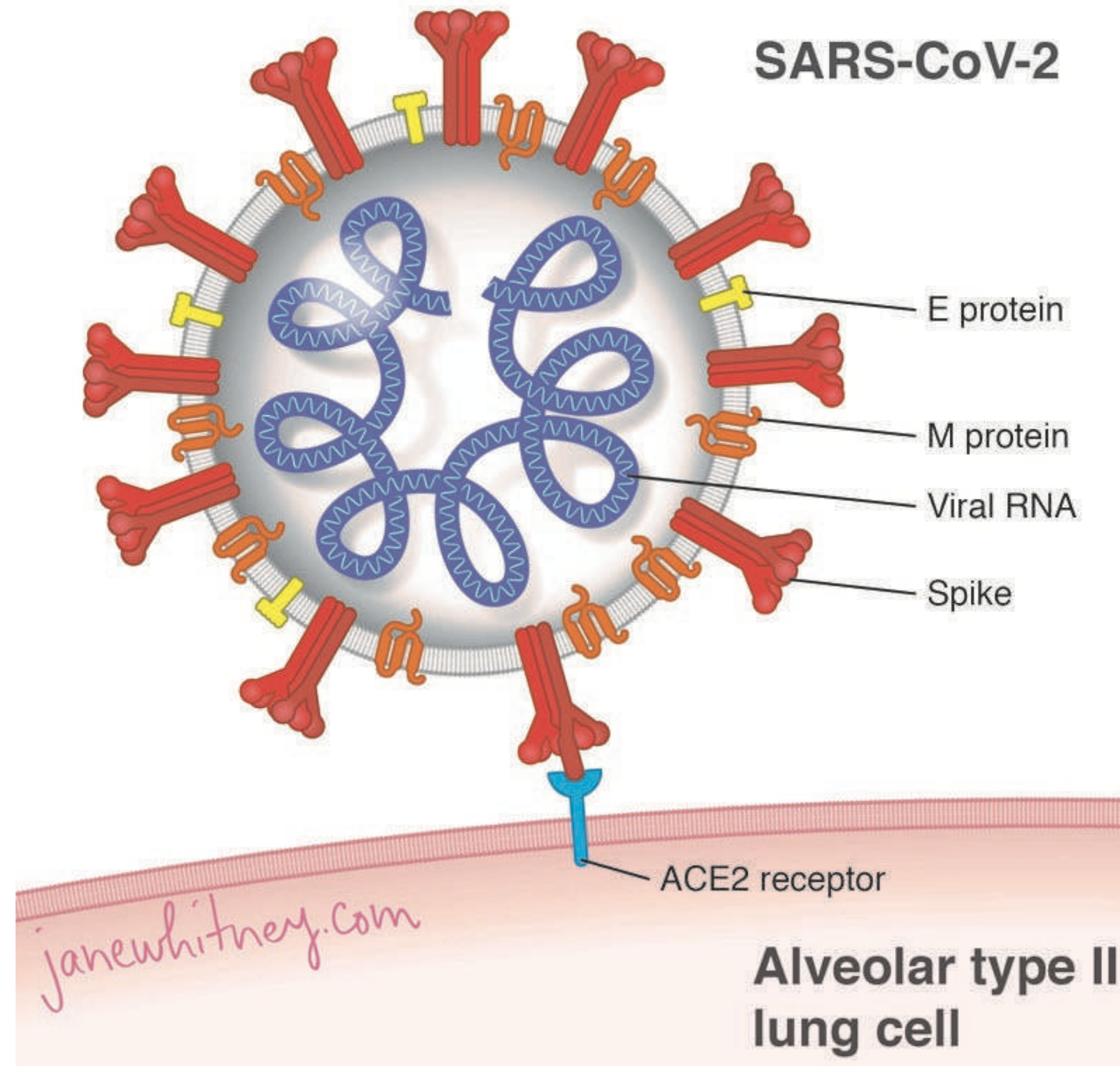
3_Melanie Connolly's version

Glycosylated spike models courtesy of the Amaro Lab, M protein dimers courtesy of the Feig Lab
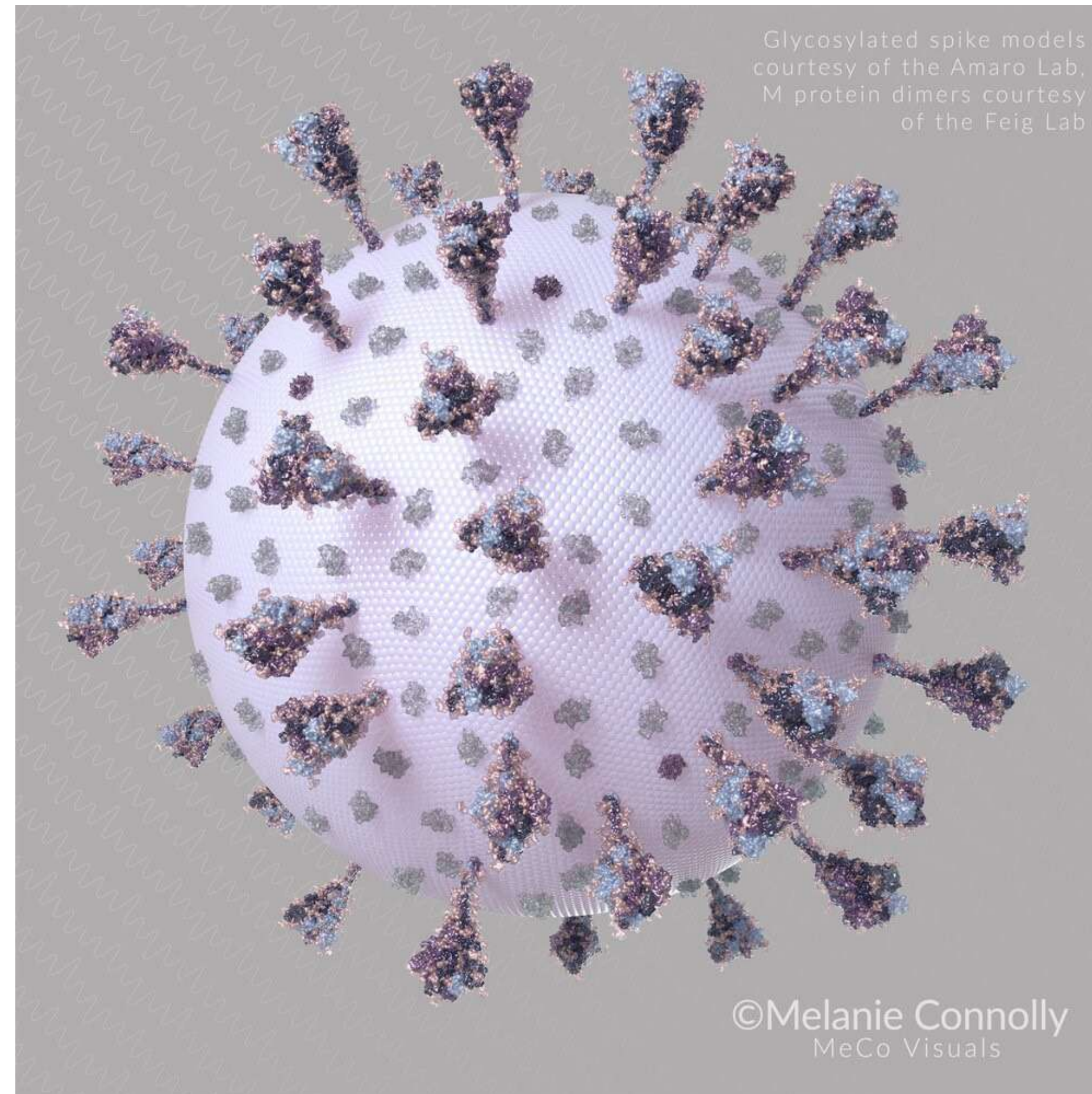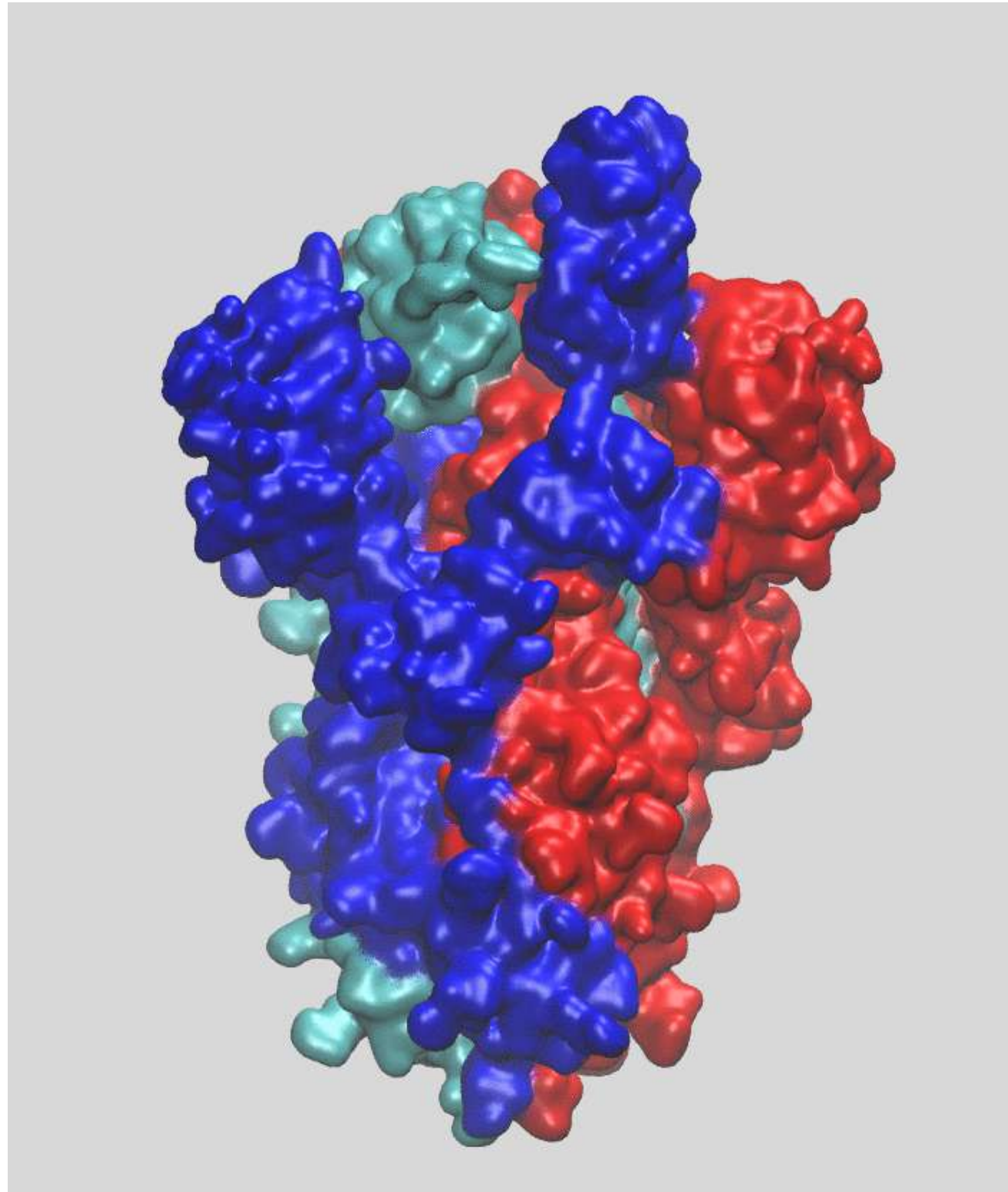
©Melanie Connolly
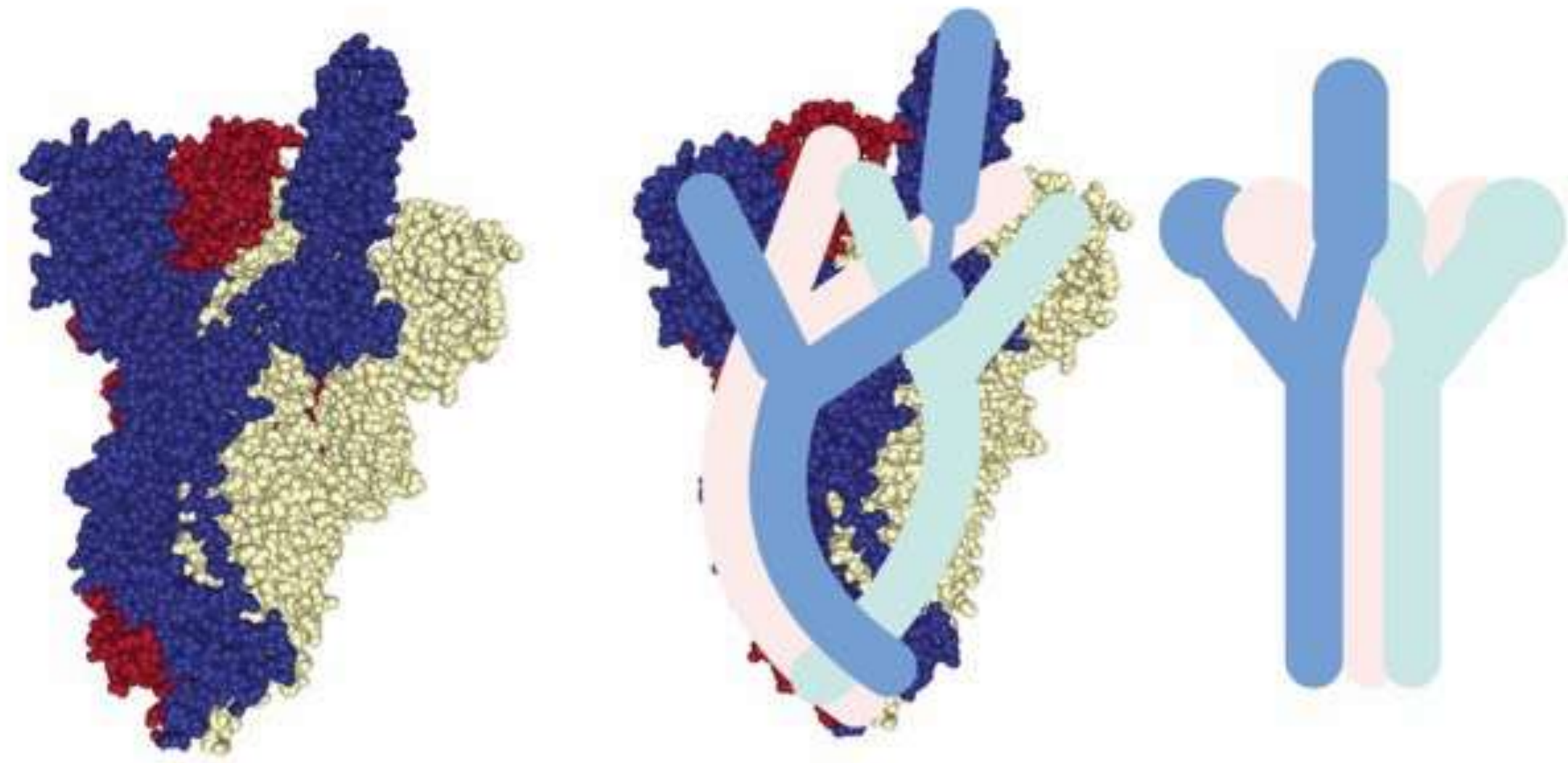MeCo Visuals

3_Melanie Connolly's version

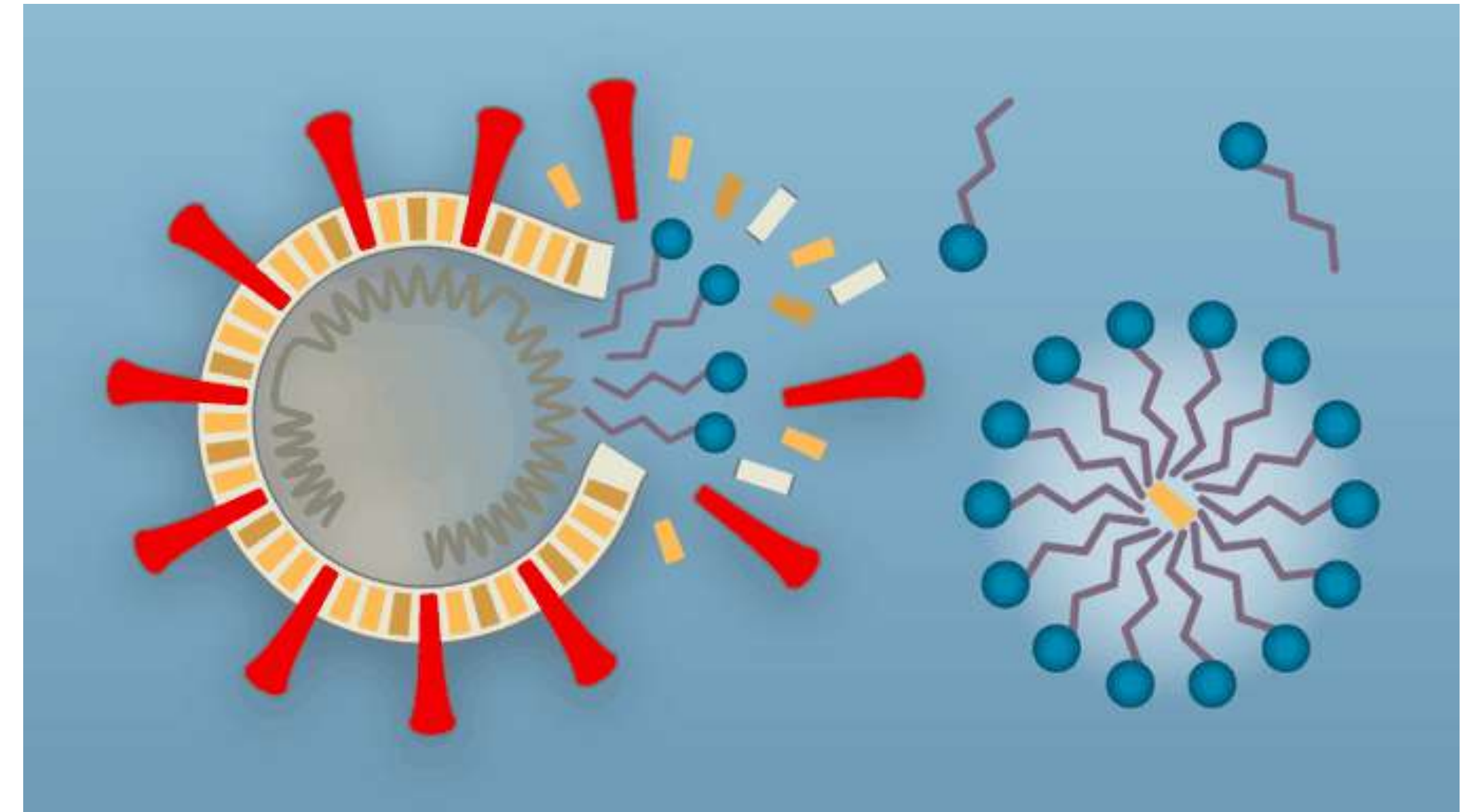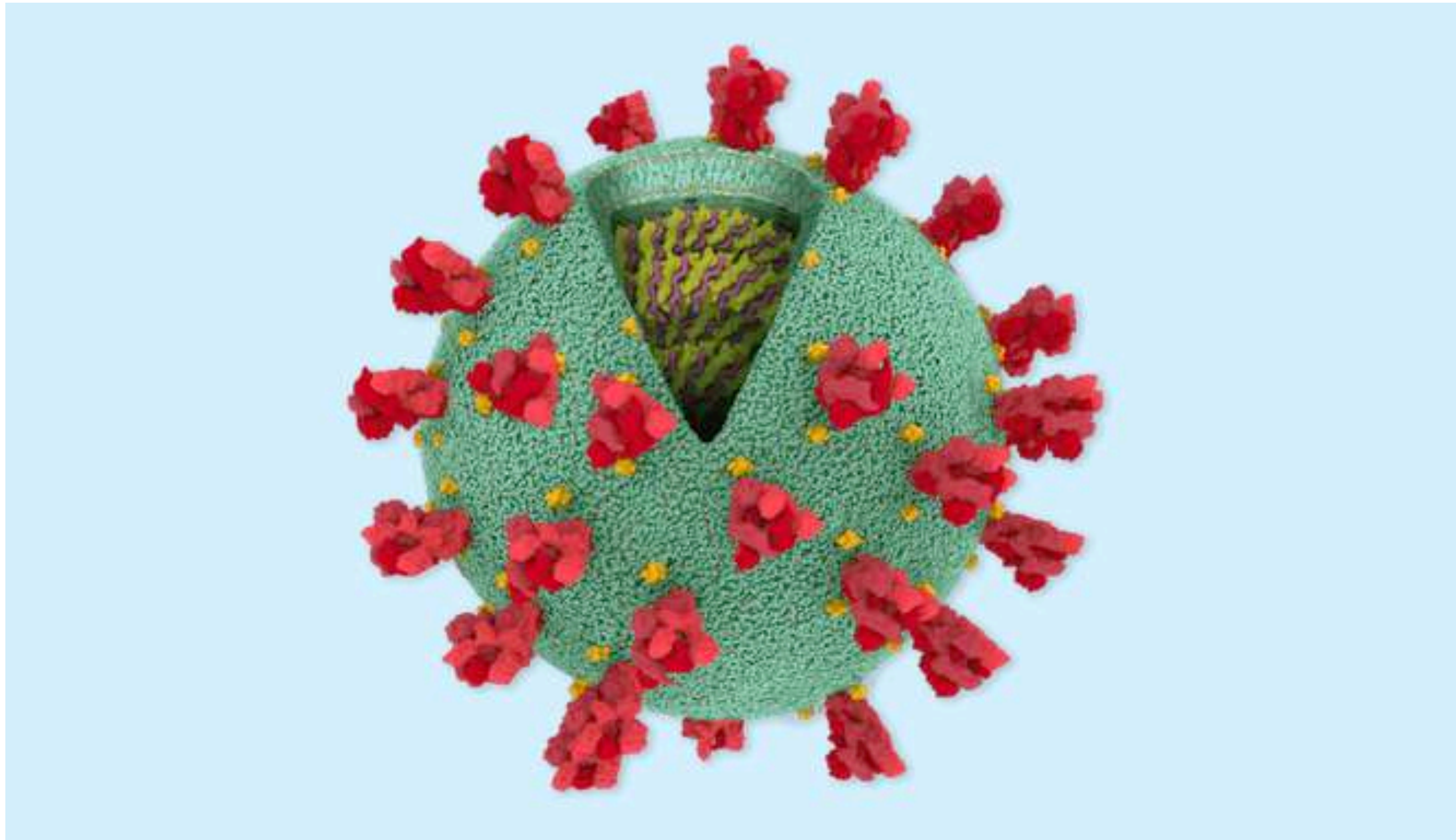# 4_ Jane Whitney's version

4_ Jane Whitney's version

JANE WHITNEY'S 3D RENDERING OF A CORONAVIRUS
PROTEIN SPIKE

JANE WHITNEY'S ILLUSTRATION OF A CORONAVIRUS SPIKE

5_ Jonathan Corum's version

be easily digestible by a wide audience
while remaining rigorous in terms of molecular structure
begun with the CDC illustration
smoothed out the bumps and stylized the spikes
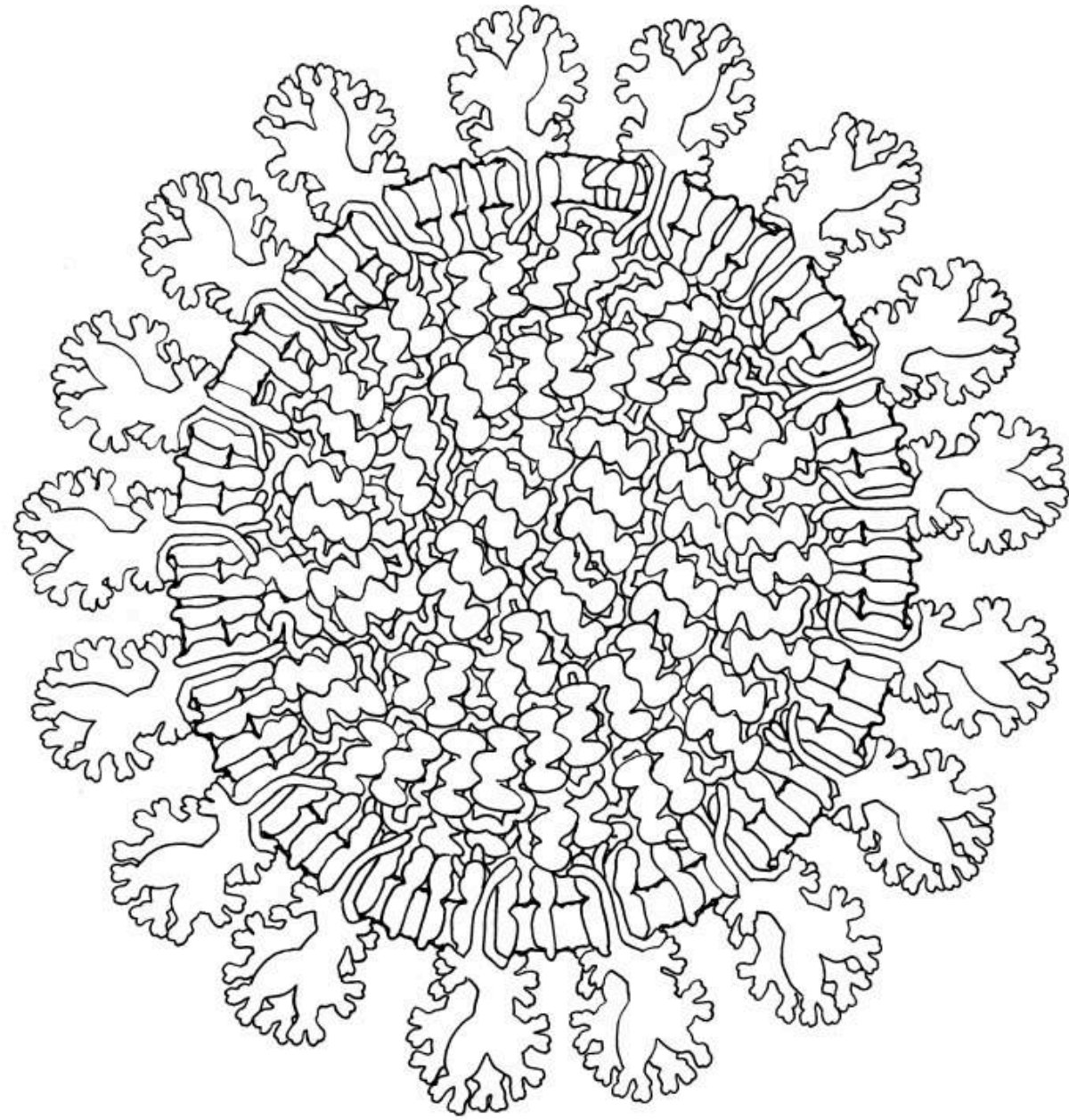crisper with a bright red that almost vibrates onscreen

6_ David Goodsell's version

6_ David Goodsell's version
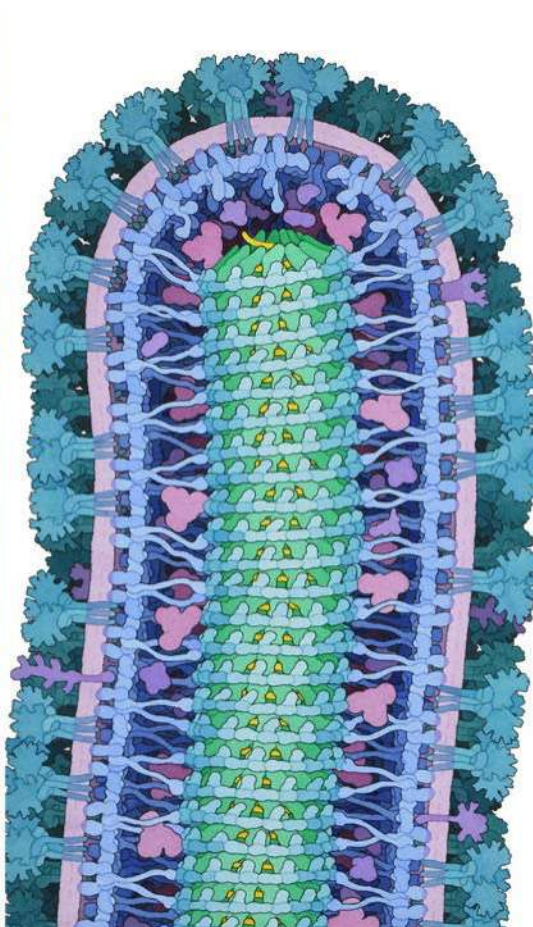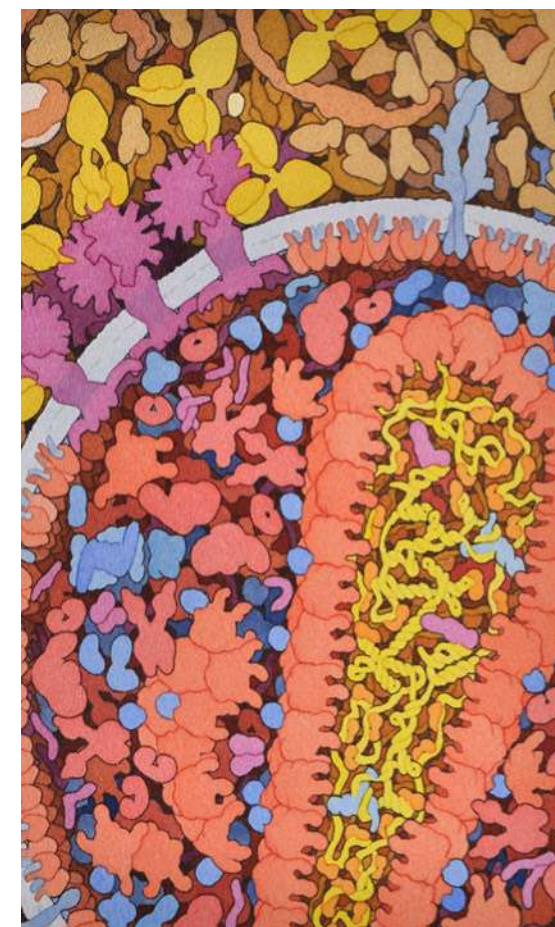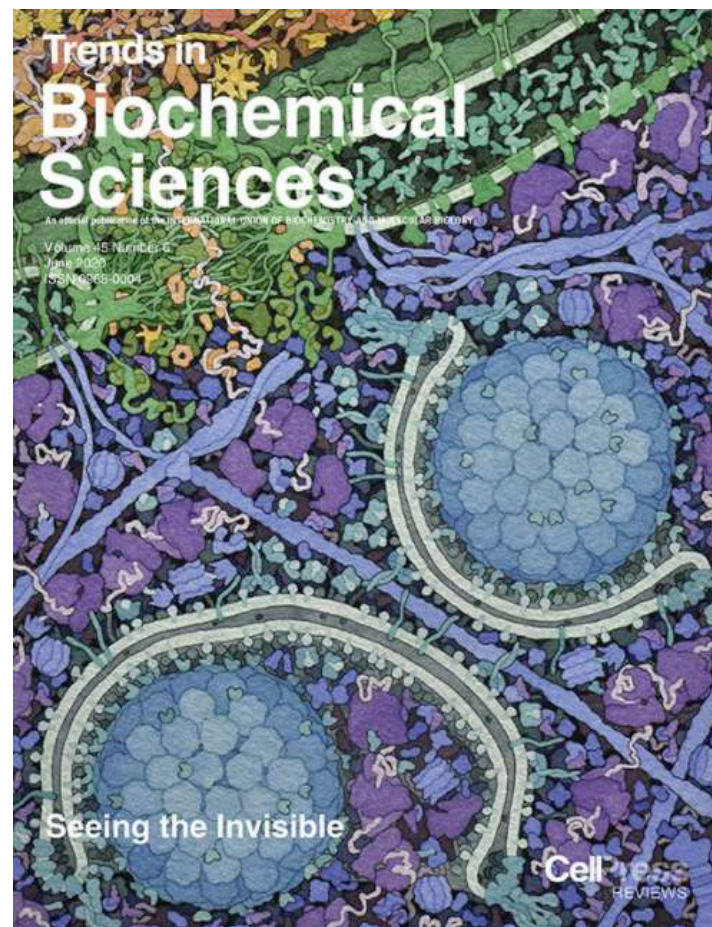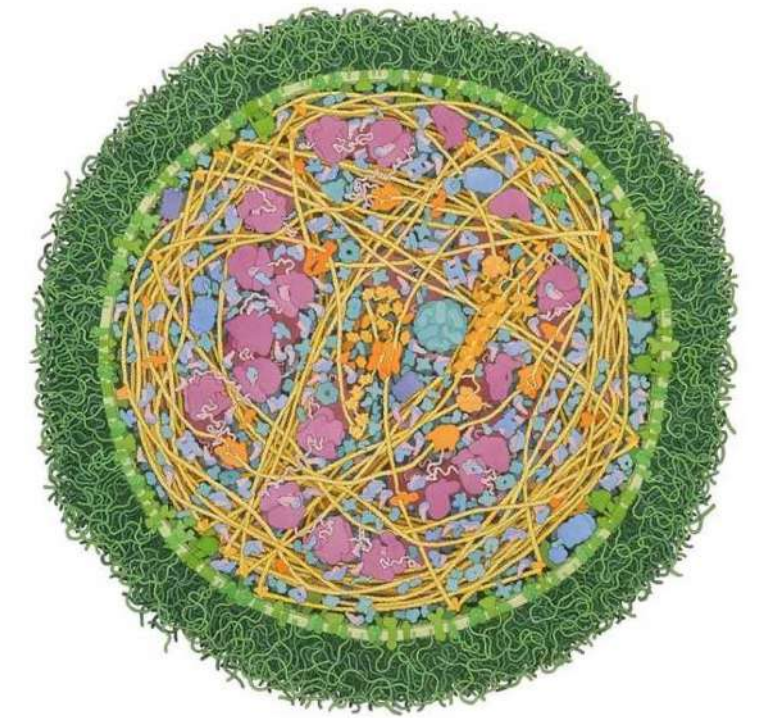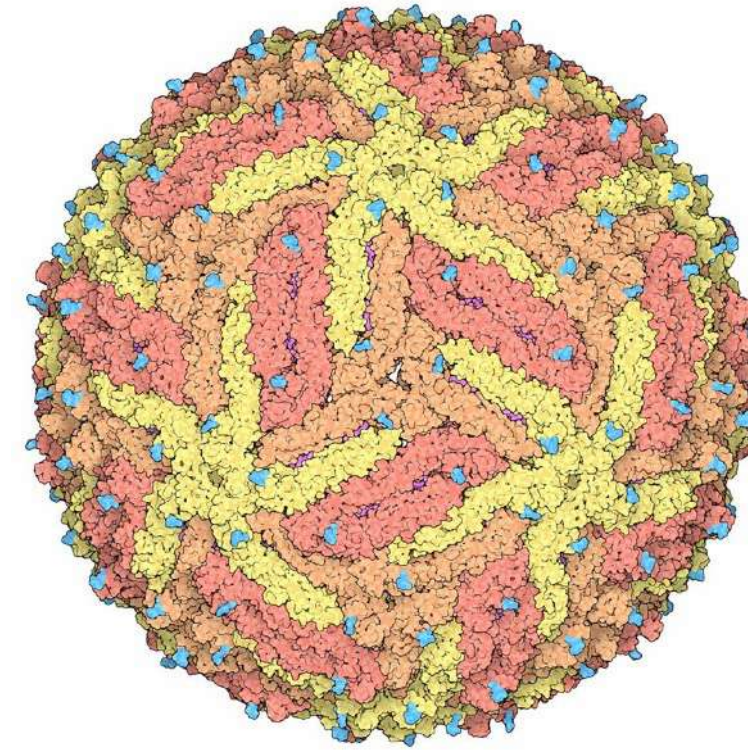
6_ David Goodsell's version

SELECTIONS FROM DAVID GOODSELL'S CORONAVIRUS ONLINE COLORING ACTIVITY