

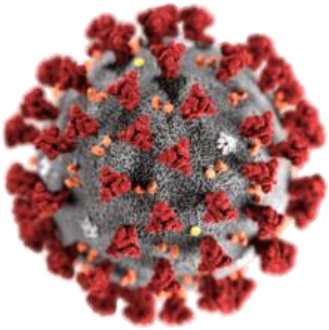
Pyramax is a potential medicine against COVID-19 and Influenza

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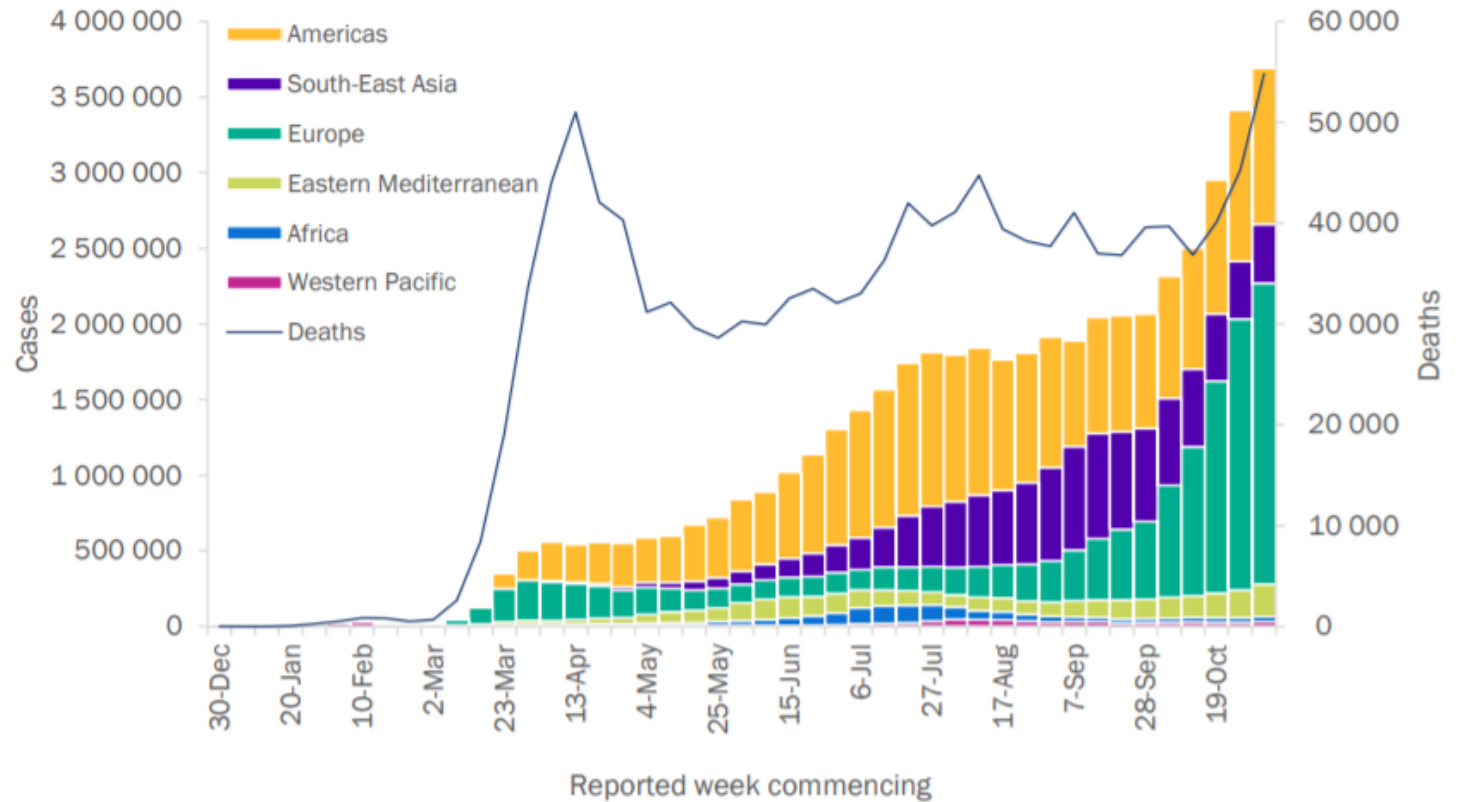
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COVID-19



SARS-CoV-2



Cases is increasing seriously in November 2020

Influenza

During the 2018–2019 flu season:



**35.5
million**

Americans got
sick with flu



**16.5
million**

Americans had to see
a doctor for the flu












**46
thousand**


Children were hospitalized
with the flu

"Estimated Influenza Illnesses, Medical visits, Hospitalizations, and Deaths in the United States –2018–2019 influenza season," CDC.gov, 2020.

Influenza

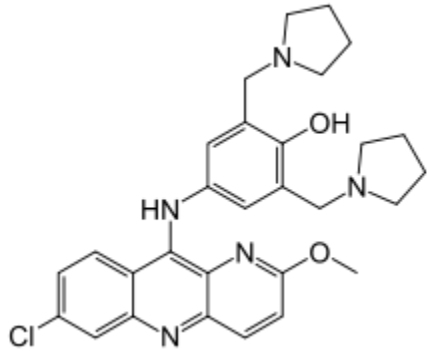
FLU or COVID-19?

SYMPTOMS OF FLU OR COVID		SYMPTOMS OF COVID
 FEVER OR CHILLS	 SORE THROAT	 NEW LOSS OF TASTE OR SMELL
 CONGESTION OR RUNNY NOSE	 HEADACHE	 NAUSEA, VOMITING OR DIARRHEA
 FATIGUE AND/OR MUSCLE OR BODY ACHES	 COUGH	 SHORTNESS OF BREATH OR DIFFICULTY BREATHING

 OSF[®] HEALTHCARE

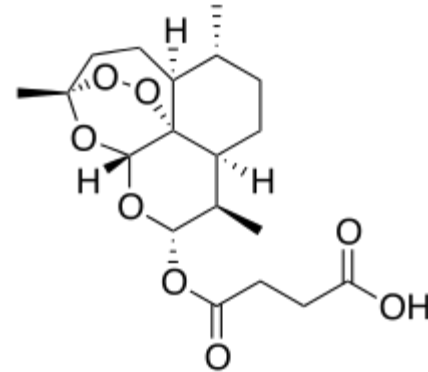
The same common symptoms can drive the worst situation

Pyronaridine and Artesunate



Pyronaridine

- High potency against *Plasmodium falciparum*
- Extended schizontocidal activity in mice compared with chloroquine
- Efficacy in Ebola virus test

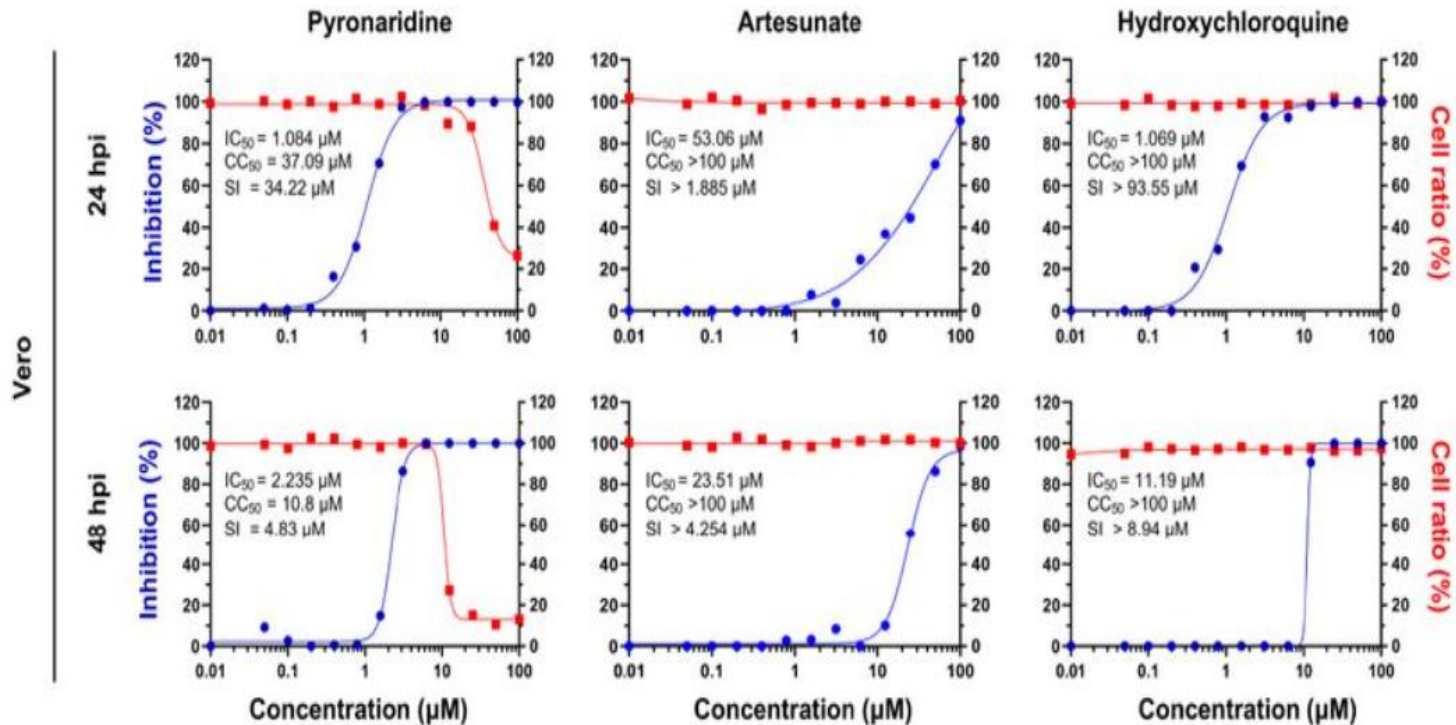


Artesunate

- Prodrug converted to DHA
- Reduction for viral load in cytomegalovirus-infected rats
- Anti-inflammatory effects.

Anti SARS-CoV-2 efficacy

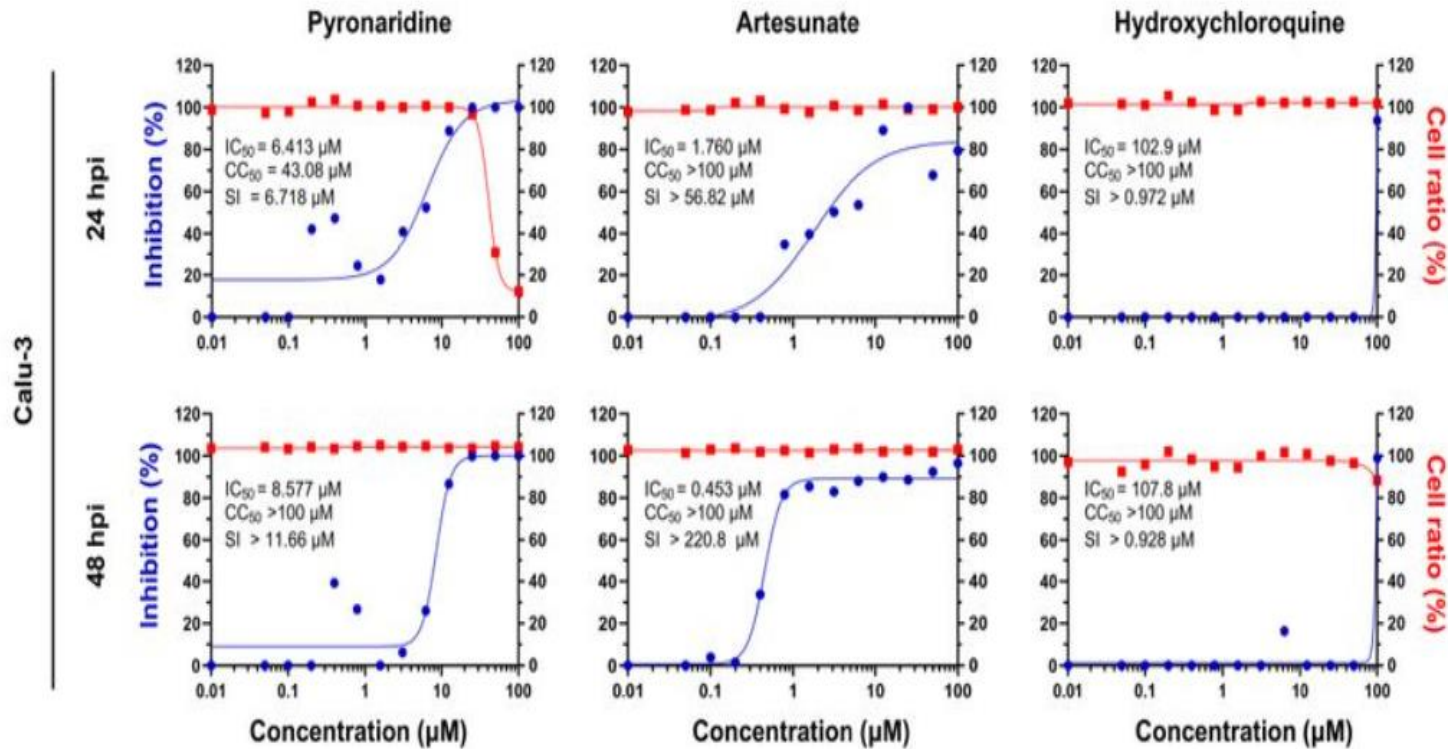
In Vero cell



Not better than Hydroxychloroquine

Anti SARS-CoV-2 efficacy

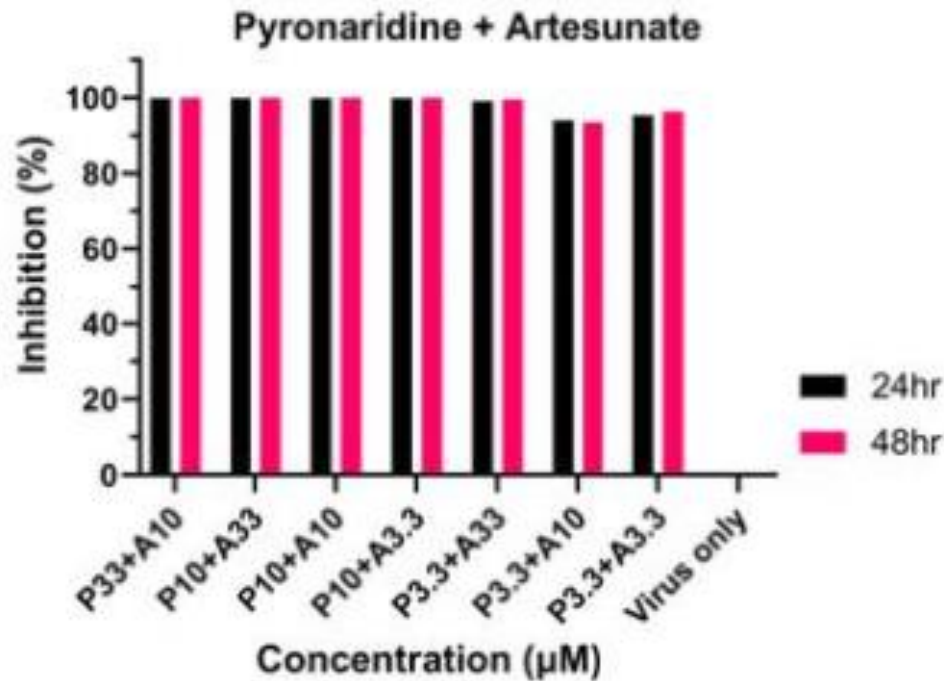
In Calu-3 cell



Much better than Hydroxychloroquine

Anti SARS-CoV-2 efficacy

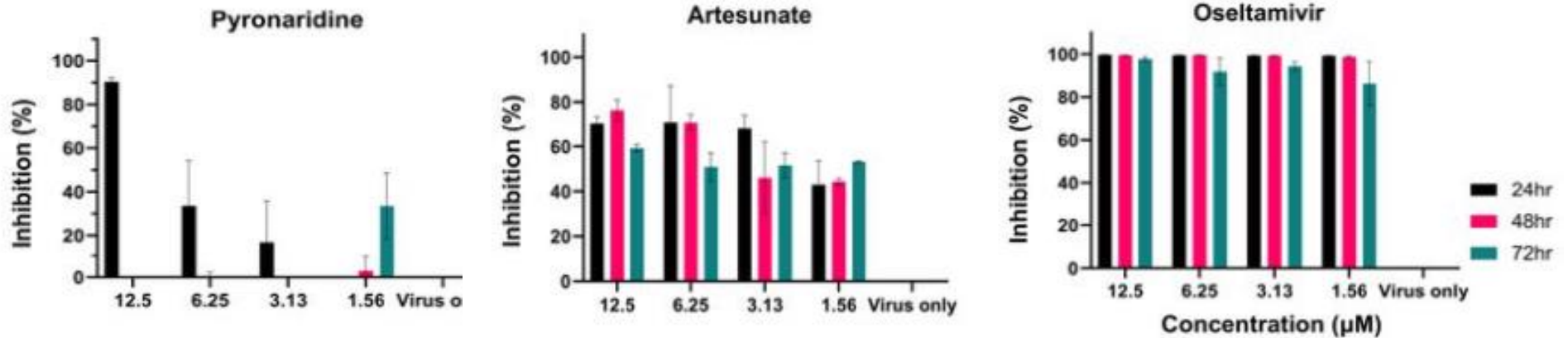
Various ratio of combinations



Combinations of Pyronaridine and Artesunate shows great efficacy

Anti Influenza efficacy

In Calu-3 cell



Artesunate shows valuable efficacy with all time

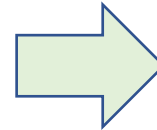
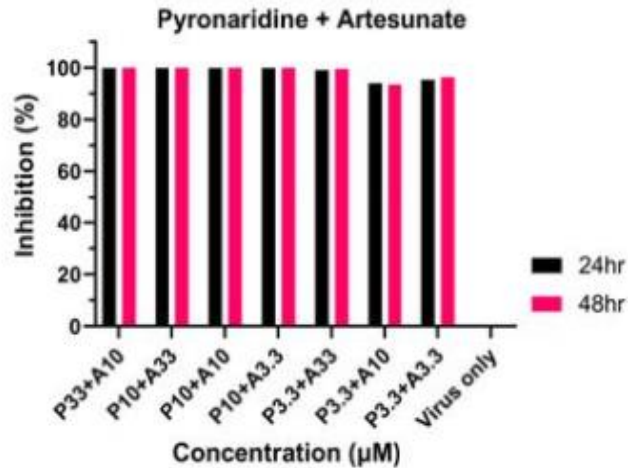
Pyramax

Consists of Pyronaridine and Artesunate

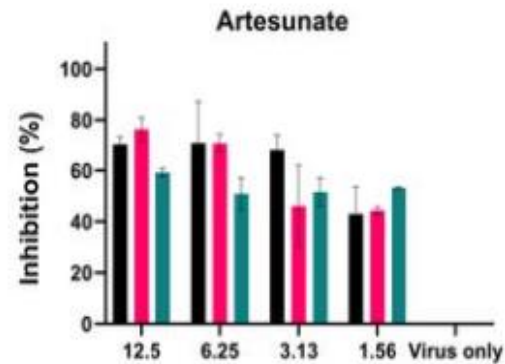
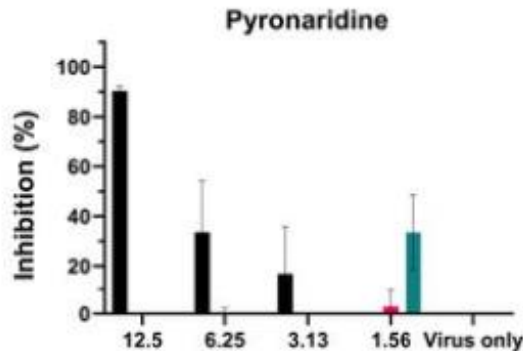


- Pyronaridine(3) and Artesunate(1)
- Antimalarial drug
- Oral medication / 1day 1dose with 3days
- No side effect
- In phase II clinical trial

Conclusion



If combinations of Pyronaridine and Artesunate have better efficacy against Influenza, Pyramax can be an efficient drug against both COVID-19 and Influenza



Q&A
