

## EPHI, NATIONAL DATA MANAGEMENT CENTER FOR HEALTH (NDMC):- QUICK UPDATE ON COVID-19, 061<sup>st</sup>

### This update summarizes:

- **Ethiopia's Covid-19 Situation Updates**
- **Global and Regional Burden Of Covid-19**
- **Comparative Analysis of COVID-19 from January 21 to May 2021 in Ethiopia**
- **The Mysteries of the Coronavirus and Brains**
- **On the Management of COVID-19 Pandemic in Italy**
- **Ivermectin and Outcomes from Covid-19 Pneumonia**

## Ethiopia's Covid-19 Situation Updates

- Since the last brief (03 June 2021), 1,139 new confirmed corona virus disease 2019 (COVID-19) cases and 42 new deaths have been reported nationally. To date, a total of 273,175 COVID-19 cases and 4,220 related deaths (case fatality rate (CFR): 1.54, which is similar compared to the last week's rate) have been reported from 9 regions and 2 city administrations in the country. Compared to the cases and deaths reported a week ago, the national cumulative case and death reported this week remained stable without increment.
- There are 21,722 active cases currently, of which 271 (1.25%, slightly decreased compared to last week's report) of them are critical. The number of active cases and critical cases have shown reduction by 4,069 and 106 cases respectively compared to the last week. So far 247,502 cases have recovered from COVID-19, out of which 5,060 recoveries were over the last one-week period which increased by 1% compared to the last week.
- The proportion of active cases among the total cases so far has decreased by around 1.5% while that of recoveries increased by the similar rate compared to the last week. However, the proportion of death remained nearly the same over the last one week period (Fig 1).

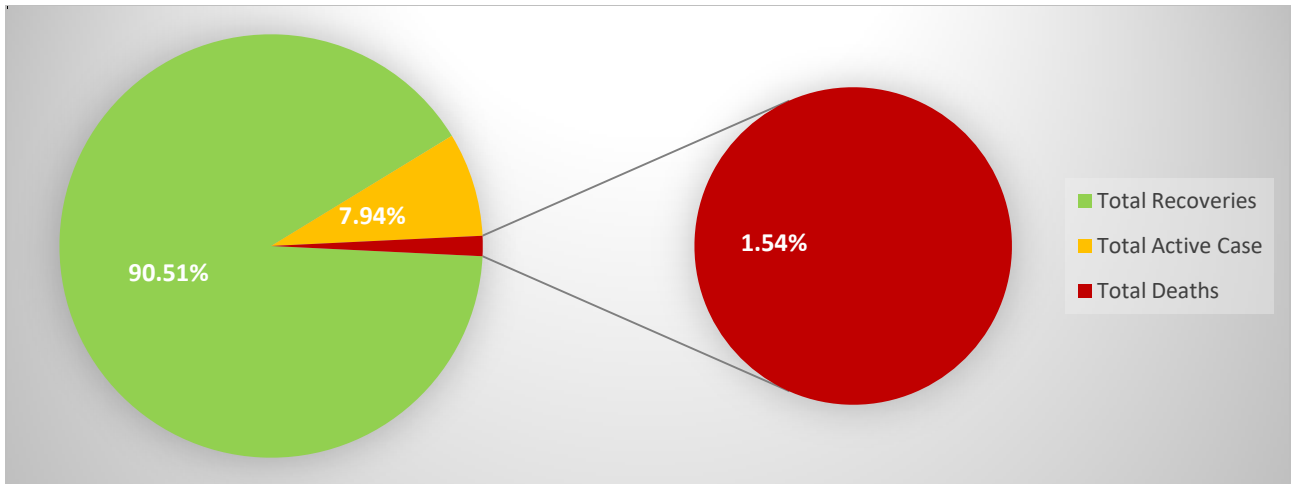


Fig 1: Proportions of active cases, recoveries and death as of May 20, 2021.

- The total number of tests done to date is 2,759,855. Among 26,293 laboratory samples tested over the last one-week duration, 1,139 of them tested positive for COVID-19, yielding a positivity rate of 4.3%; showing a 1.4% reduction from the last week's positivity rate.
- The distribution of cumulative cases by region is top in Addis Ababa (177,207) followed by Oromia (38,528) and Amhara regions (11,544). Over the last 7 days, top new case reporting regions that reported over one hundred cases were Addis Ababa, Oromia, Amhara and Tigray region, each reported 811, 325, 109 and 106 new cases respectively. Those two top reporting regions account for 73.3 % of new cases identified over the two weeks (fig 2).

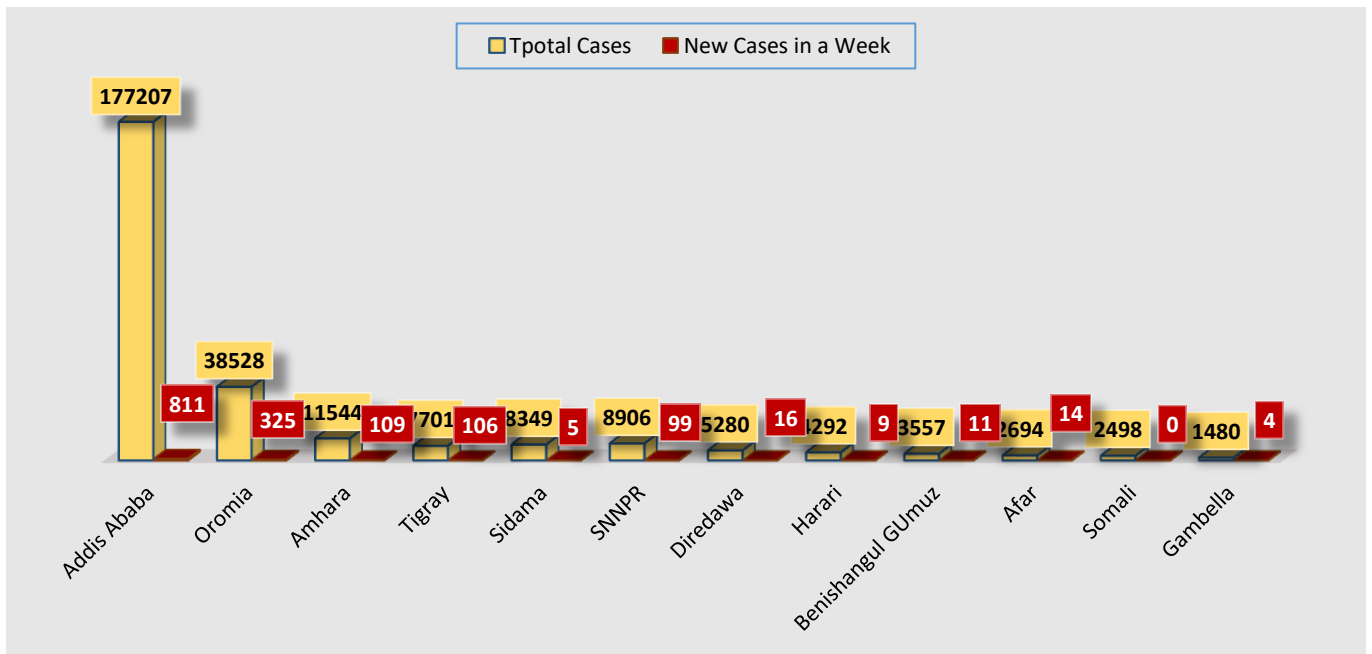


Fig2: Total cases and new cases (over a week time) by region based on available reports.

## Case Management and Infection Prevention Control (Ipc)

- This week, June 4- June 10, 2021, there are 5837 newly recovered cases bringing the total number of COVID-19 recovered cases to 248, 285
  - There are 261 patients in severe condition as of June 10, 2021, and all the other patients are on medical care in stable condition.

## Home Based Isolation and Care (HBIC)

Since Home Based Isolation and Care (HBIC) is started in Ethiopia:

- A total of 1960,189 COVID-19 confirmed cases are followed in the HBIC as of June 10, 2021.
  - 193, 816 of them have recovered in the HBIC as of June 10, 2021.
  - 3,671 cases are currently on HBIC.
  - 32 COVID-19 related deaths have occurred in the HBIC.
  - 2,185 cases have been transferred from treatment centers to HBIC.
  - 1201 cases have been transferred from HBIC to treatment centers.

## EPHI and FMOH COVID 19 response highlights of the week /trainings and supply

- There is the ongoing distribution of PPE, Viral Transport Media (VTM), swabs, pharmaceuticals, and other medical supplies to isolation and treatment centers.

## References

1. *Public Health Emergency Operations Centers (PHEOC), Ethiopia.*
2. [https://twitter.com/lia\\_tadesse](https://twitter.com/lia_tadesse).
3. <http://www.covid19.et/covid-19/>.
4. *EPHI's PHEM daily COVID-19 SITREP report.*

## Global and Regional Burden Of Covid-19

- Globally the total number of cases is extended to 175,177,177 as of June 10, 2021. A total of 158,992,991 cases recovered and 3,777,097 people died since the beginning of the outbreak. Globally, in a week time, from June 3 to June 10, 2021, COVID-19 cases increased by 1.6% and deaths by 1.9%. In the past week, Asia is the leading in terms of cases followed by Europe and North America. Europe continued to be became a lead in terms of the number of deaths followed by South and North America (Table 1).

Table 1. Global cases and deaths reported as of June, 2021.

	<b>COVID cases</b>	<b>Weekly % change</b>	<b>deaths</b>	<b>Weekly % change</b>
Global	175,177,177	1.6	3,777,097	1.9
Europe	47,016,389	0.6	1,082,468	0.7
North America	40,068,173	0.5	904,843	0.5
Asia	52,932,625	2.4	725,757	4.3
South America	30,079,545	3.2	929,014	2.8
Africa	5,009,823	2.0	133,746	1.6
Oceania	69,901		1,254	

- USA has recorded the highest number of cases 0.3% (34,154,305 to 34,264,727 cases) and 0.4% (611,020 to 613,494 deaths) that accounts 19.6% of the total global cases and carried 16.2% of global deaths as of June 10, 2021, showed declining trend.
- India is the 2<sup>nd</sup> highest in terms of cases in a week time by 2.6% (28,441,986 to 29,183,121) and deaths by 6.4% (338,013 to 359,695).
- Brazil became the 2<sup>3d</sup> rand worldwide with increased number of cases in a week time by 2.4% (16,720,081 to 17,125,357) and deaths by 2.6% (467,706 to 479,791).
- Ferance ranked 4<sup>th</sup> globally with 5,725,492 cases and 110,202 deaths.
- Turkey ranked 5<sup>th</sup> globally with 5,306,690 cases and 48,428 deaths.
- The line share of Africa to the global COVID-19 pandemic was 2.9% and 3.5% of the global cases and deaths as of June 10). The cases in the continent have increased by 2% in a week time (4,909,389 to 5,009,823 cases). Similarly, the total number of deaths in Africa has increased from 129,620 to 133,746 showing 1.6%. Total recoveries stand at 4,500,448.
- South Africa is the leading in the continent with 1,712,939 cases and 57,310 deaths. Morocco (522,389 cases, 9,190 deaths), Tunisia (360,285 cases, 13,229 deaths), Ethiopia (273,398 cases, 4,226 deaths) and Egypt (270,292 cases, 15,471 deaths) are the most four leading countries next to South Africa in reporting COVID-19 cases in Africa. (See table below).

Table 2: Cases and deaths reported in selected African countries as of May, 2021.

Africa	June 3		June 10	
	Cases	Deaths	Cases	Deaths
South Africa	1,675,013	56,711	1,712,939	57,310
Morocco	520,028	9,160	522,389	9,190
Tunisia	348,911	12,793	360,285	13,229
Ethiopia	272,036	4,178	273,398	4,226
Egypt	264,557	15,178	270,292	15,471

- In East African, COVID-19 cases and deaths have shown fast progress. As of March, Ethiopia and Kenya continued to be the major drivers of the COVID 19 burden in east African countries.

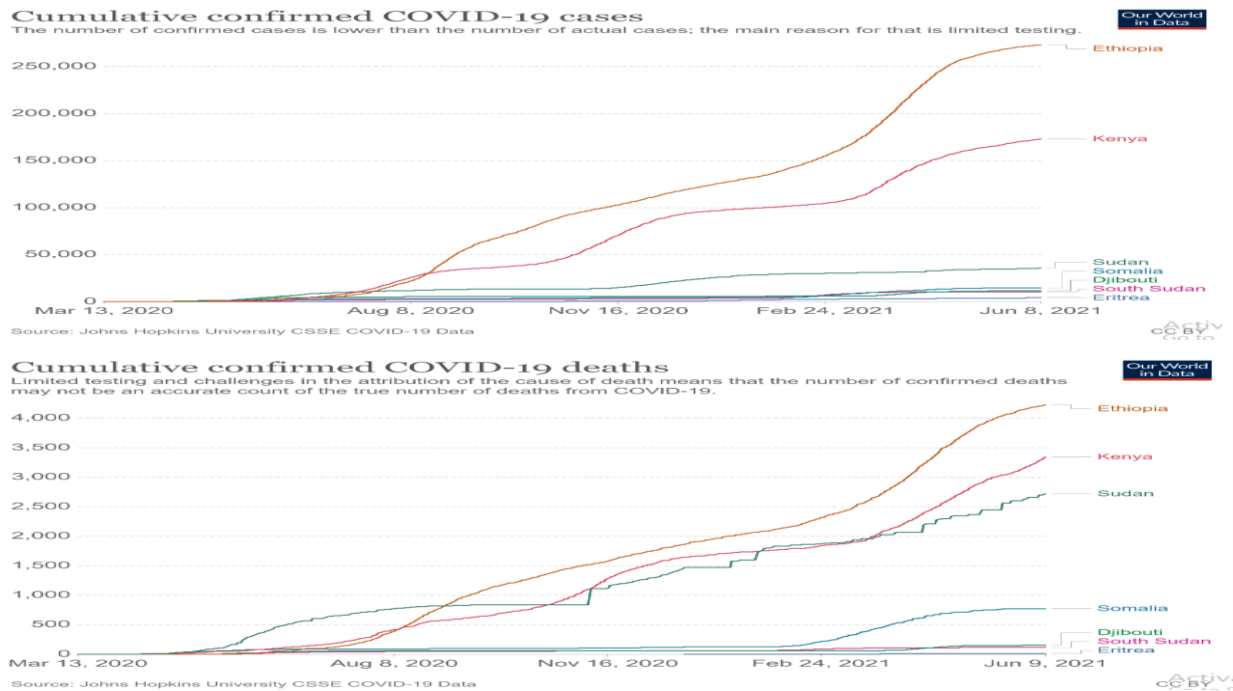


Figure3: The burden of COVID-19 in Eastern African countries.

## References

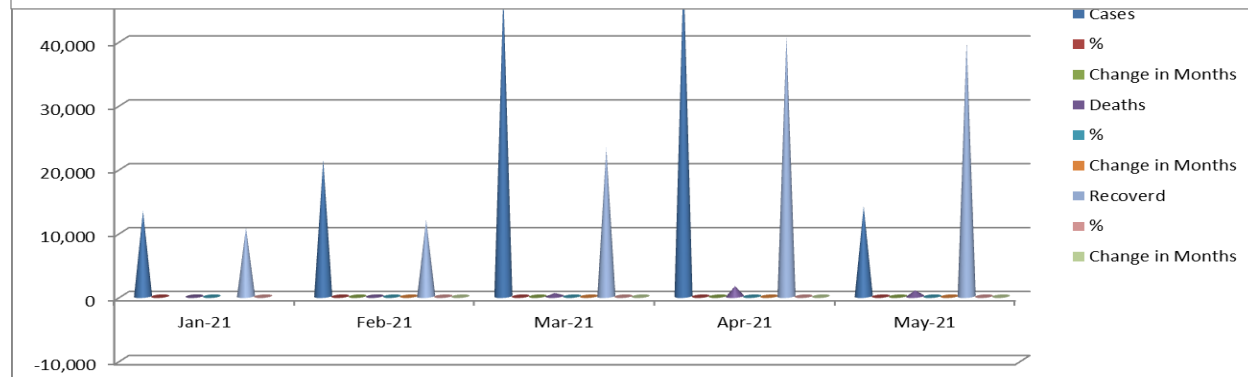
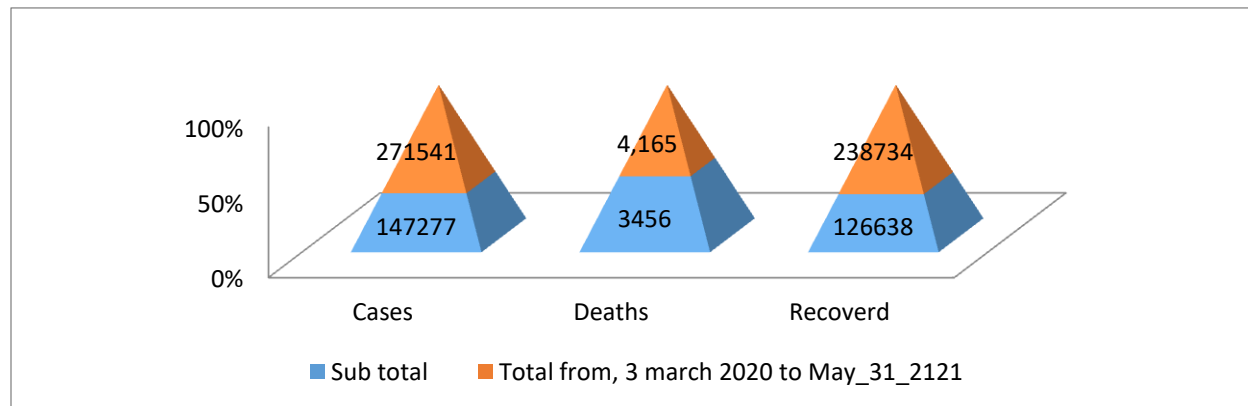
1. John Hopkins, Corona Virus Resources <https://coronavirus.jhu.edu/map.html>
2. Worldometer, Corona Virus <https://www.worldometers.info/coronavirus/>
3. Africa CDC: COVID 19 Surveillance; <https://au.int/covid19>
4. Our World: <https://ourworldindata.org/covid-cases>

## Comparative Analysis of COVID-19 from January 21 to May 2021 in Ethiopia

➤ In Ethiopia, the total number of cases was extended to 271,541 as of May 31, 2021. A total of 238,734 cases were recovered and 4,165 people died since the beginning of the outbreak. In the Country, in a monthly time, from January 01,2021 to May 31, 2021, COVID-19 cases increased by 2.96%, 9.61 %, 1.23%, and -13.54% and deaths by 2.45%, 5.47%, 26.19%, and -16.04. In these months April, the highest number of cases, deaths, and recovered registered followed by March.

Table 3: Covid-19 cases, deaths, and recovered were reported as of May 31, 2021.

Months	Cases	%	Change in Months	Deaths	%	Change in Months	Recoverd	%	Change in Months
Jan-21	13,386	4.93		170	4.08		10,766	4.51	
Feb-21	21,422	7.89	2.96	272	6.53	2.45	11,996	5.02	0.52
Mar-21	47,517	17.50	9.61	500	12.00	5.47	23,251	9.74	4.71
Apr-21	50,853	18.73	1.23	1591	38.20	26.19	40,753	17.07	7.33
May-21	14,099	5.19	-13.54	923	22.16	-16.04	39,872	16.70	-0.37
Sub total	147,277	54.24	0.07	3456	82.98	4.52	126,638	53.05	3.05
Total from, 3 march 2020 to May_31_2121	271,541			4,165			238,734		



- As shown from the above figure, the consecutive five months' total numbers of cases were 54.24% (147,277 to 271,541) and 82.98% (3,456 to 4,165 deaths) and recovered 53.05% (126,638 to 238,734). Therefore the numbers of cases, deaths, and recovered are also registered in April were the highest. The deaths are the highest as compared to the total deaths.

## References

1. John Hopkins, *Corona Virus: GITHUB REPOSITORY Archive*
2. John Hopkins, *Corona Virus Resources <https://coronavirus.jhu.edu/map.html>*

## The Mysteries of the Coronavirus and Brains

- In the coronavirus pandemic's early weeks, in neuropathology departments around the world, scientists wrestled with a question: Should they cut open the skulls of patients who died of covid-19 and extract their brains?
- In March 2020, in an isolation room, the Columbia team extracted a brain from a patient who had died of severe covid-19, the illness caused by the coronavirus. During the next months, they would examine dozens more. Saw met skull elsewhere, too.
- Autopsies of the sickest covid19 patients have revealed clotting in the brain and other signs of acute damage. They offered little evidence the virus attacks the organ directly.
- Neurologists have a hunch the coronavirus could be acting like herpes simplex, which commonly causes cold sores and in rare cases, dangerous brain swelling known as encephalitis.
- That swelling triggers the immune system. And sometimes, weeks or months later, the patient deteriorates not because of the virus but because of an autoimmune attack.

## Reference

1. <https://www.washingtonpost.com/health/2021/06/07/covid-are-brains-affected/> [June 7, 2021]

## On the Management of COVID-19 Pandemic in Italy

- The fast-moving coronavirus disease 2019 (COVID-19) called for a rapid response to slowing down the viral spread and reduce the fatality associated to the pandemic.
- Policymakers have implemented a wide range of non-pharmaceutical interventions to mitigate the spread of the pandemic and reduce burdens on healthcare systems.

- An efficient response of healthcare systems is crucial to handle a health crisis.
- Understanding how non-pharmaceutical interventions have contributed to slowing down contagions and how healthcare systems have impacted on fatality associated with health crisis is of utmost importance to learn from the COVID-19 pandemic.
- This study investigated these dynamics in Italy at the regional level.
- The study found that the simultaneous introduction of a variety of measures to increase social distance is associated with an important decrease in the number of new infected patients detected daily.
- Contagion reduces by 1% with the introduction of lockdowns in an increasing number of regions.
- The study also found that a robust healthcare system is crucial for containing fatality associated with COVID-19.
- In addition, proper diagnosis strategies are determinant to mitigate the severity of the health outcomes.
- The preparedness is the only way to successfully adopt efficient measures in response of unexpected emerging pandemics.

## Reference

1. *Santeramo FG, Tappi M, Lamonaca E. On the management of COVID-19 pandemic in Italy. Health Policy (Amsterdam, Netherlands). 2021 May. DOI: 10.1016/j.healthpol.2021.05.014.*

## Ivermectin and Outcomes from Covid-19 Pneumonia

- Covid-19 has various clinical manifestations, ranging from mild respiratory manifestations such as fever, cough, anosmia to severe or life-threatening conditions such as shock, respiratory distress, arrhythmia, sepsis, loss of consciousness. Previously published analyses of studies have identified several comorbidities, home medications, and laboratory values that are associated with severe outcomes and the risk of dying from Covid-19.
- To reduce the severity and mortality rate of Covid-19, many attempts have been undertaken, including to discover the potential therapy. There were many therapeutic agents evaluated in clinical trials and suggested for Covid-19 therapy, such as remdesivir, dexamethasone, colchicine, and tocilizumab. These drugs may be beneficial for Covid-19 treatment because



of their effects on the cytokine storm syndrome which may cause progression of the disease into a more severe outcome.

- Ivermectin is a drug that is used to manage parasitic infections with broad-spectrum effectivity and has been approved by The United States Food and Drug Administration (FDA). It has been long known for the treatment of onchocerciasis, strongyloidiasis, lymphatic filariasis, and/or scabies.
- Besides its potential as anti-parasitic agents, several articles have demonstrated the antiviral activity of ivermectin against various viruses. Ivermectin has also been suggested to offer benefit in improving the outcomes from Covid-19 because of its action on prevention of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) proteins from entering the host cell nucleus in vitro.
- According to our recent pooled analysis, ivermectin was discovered to have an association with a higher negative RT-PCR test results rate, shorter time to negative RT-PCR test results, higher symptoms alleviations rate, shorter time to symptoms alleviations, shorter time to hospital discharge, and reduction in the severity and mortality from Covid-19.
- Furthermore, the subgroup analysis also showed that the benefits of ivermectin therapy in reducing the severity and mortality outcomes from Covid-19 were more prominent when administered to mild to moderate patients, compared within severe patients. On the other side, the benefits of ivermectin therapy in increasing negative RT-PCR test results rate, shortening time to negative RT-PCR test results, increasing symptoms alleviations rate, and shortening time to symptoms alleviations were more apparent in severe patients when compared with in mild to moderate patients.
- This study has several limitations; significant heterogeneities were found on most of the outcomes of interests included in this study, the total number of patients included in this study was relatively small and they include some pre-print studies to minimize the risk of publication bias; however, the authors have made exhaustive efforts to ensure that only sound studies were included.
- In conclusion findings from this study suggests that ivermectin may be the potential therapeutic agents for the management of Covid-19 to give better outcomes for the patients. However, more randomized clinical trial studies are still necessary and encouraged to be

done for confirming the results of our study. Finally, ivermectin should be considered as an essential drug for future Covid-19 therapy models.

## **Reference**

1. Hariyanto TI, Halim DA, Rosalind J, Gunawan C, Kurniawan A. *Ivermectin and outcomes from Covid-19 pneumonia: A systematic review and meta-analysis of randomized clinical trial studies. Rev Med Virol [Internet]. 2021 Jun 6 [cited 2021 Jun 10];e2265. Available from: <https://onlinelibrary.wiley.com/doi/10.1002/rmv.2265>*