Task Force on Repurposing of Drugs (TFORD) for COVID-19

S&T Core Group on COVID19 constituted by PSA to GoI

Published Clinical Trials reviewed by TFORD-COVID19-India (Ref: TFORD/Heat-Map/003)

Serial No	1	2	3	4	5	6	7	8	9	10	11
Brief ref (with embedded link)	Gautret (2020a)	Gautret (2020a)	Gautret (2020b)	Jun (2020)	Cao (2020)	Gao (2020)	Janssen (2020)	Zhang (2020)	Zhang (2020)	Xu (2020)	Cai (2020)
Size of trial	26 (Total 36)	6 (Total 36)	80	15 (Total 30)	94 (Total 199)	100	30	27 families and 124 health care workers	27 families and 124 health care workers	21	35 (Total 80)
Type of trial	Open label non-randomized clinical trial	Open label non-randomized clinical trial	Open label observational trial	Prospective	Randomized, controlled, open-label trial	Multicenter clinical trials	single center, open label, randomized, and controlled trial	Retrospective case-control cohort study	Retrospective case-control cohort study	Retrospective	Open-Label, nonrandomized, Control Study
Arm of study or full study	Arm	Arm	Full Study	Full Study	Full Study	Full study	Full study	Arm	Arm	Full Study	Full Study
Trial outcome (1: Positive; 0: No outcome, -1: Negative)	1	1	1	1	-1	1	0	1	-1	1	1
Drug candidate											
Chloroquine	No	No	No	No	No	Yes	No	No	No	No	No
Hydroxychloroquine	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Remdesivir	No	No	No	No	No	No	No	No	No	No	No
Lopinavir/Ritonavir	No	No	No	No	Yes	No	No	No	No	No	No
Favipiravir	No	No	No	No	No	No	No	No	No	No	Yes
Baloxavir Marboxil	No	No	No	No	No	No	No	No	No	No	No
Darunavir	No	No	No	No	No	No	Yes	No	No	No	No

Ribavirin + IFN beta	No	No	No	No	No	No	No	No	No	No	No
Galidesivir	No	No	No	No	No	No	No	No	No	No	No
Oseltamivir	No	No	No	No	No	No	No	No	Yes	No	No
Umifenovir	No	No	No	No	No	No	No	Yes	No	No	No
Camostat mesylate	No	No	No	No	No	No	No	No	No	No	No
Ruxolitinib	No	No	No	No	No	No	No	No	No	No	No
Interferon beta	No	No	No	No	No	No	No	No	No	No	No
Tocilizumab	No	No	No	No	No	No	No	No	No	Yes	No
Ustekinumab	No	No	No	No	No	No	No	No	No	No	No
Nigericin	No	No	No	No	No	No	No	No	No	No	No
Teicoplanin	No	No	No	No	No	No	No	No	No	No	No
Ivermectin	No	No	No	No	No	No	No	No	No	No	No
Others											
AZT	No	Yes	Yes	No	No	No	No	No	No	No	No
Cobistat	No	No	No	No	No	No	No	No	No	No	No

Outcomes											
Brief ref (with embedded link)	Gautret (2020a)	Gautret (2020a)	Gautret (2020b)	Jun (2020)	Cao (2020)	Gao (2020)	Janssen (2020)	Zhang (2020)	Zhang (2020)	Xu (2020)	Cai (2020)
Primary outcome	Virological clearance at day-6 post-inclusion	Virological clearance at day-6 post-inclusion	i) an aggressive clinical course requiring oxygen therapy or transfer to the ICU after at least three days of treatment, ii) contagiousness as assessed by PCR and culture, and iii) length of stay in the ID ward	Negative conversion rate of COVID-19 nucleic acid in respiratory pharyngeal swab on days 7 after randomization	The time to clinical improvement	Not available	Not available	Prophylaxis, not treatment	Prophylaxis, not treatment	Changes in body temperature, respiratory function, and CT findings before and after treatment with tocilizumab	Changes in chest computed tomography (CT), viral clearance, and drug safety
Secondary outcome	Virological clearance overtime during the study period, clinical follow-up (body temperature, respiratory rate, long of stay at hospital and mortality),	Virological clearance overtime during the study period, clinical follow-up (body temperature, respiratory rate, long of stay at hospital and mortality),	No	Negative conversion rate of COVID-19 nucleic acid in respiratory pharyngeal swab on days 7 after randomization	Mortality at day 28, the duration of mechanical ventilation, the duration of hospitalization in survivors, and the time (in days) from treatment initiation to death	Not available	Not available	Prophylaxis, not treatment	Prophylaxis, not treatment	Changes in body temperature, respiratory function, and CT findings before and after treatment with tocilizumab	Changes in chest computed tomography (CT), viral clearance, and drug safety

	and occurrence of side-effects	and occurrence of side-effects									
Result	57.1% of patients treated with HCQ were virologicaly cured	100% of patients treated with HCQ and AZT were virologicaly cured	66/80 (81%) of patients showed favorable clinical outcome and were discharged.	All patients showed improvement in follow-up examination	Lopinavir–ritonavir treatment did not significantly accelerate clinical improvement, reduce mortality, or diminish throat viral RNA detectability in patients with serious Covid-19Had adverse events that include gastrointestinal adverse events including nausea, vomiting, and diarrhea	Chloroquine phosphate is superior to the control treatment in inhibiting the exacerbation of pneumonia, improving lung imaging findings, promoting a virusnegative conversion, and shortening the disease course, adverse effects not reported.	Darunavir and Cobistat treatment was not effective.	Arbidol post-exposure prophylaxis (PEP) was a strong protective factor against the development of COVID-19 (Odds ratio 0·011 , 95% CI 0·001-0·125, P=0·0003 for family members and Odds ratio 0·049, 95%CI 0·003-0·717), P= 0·0276 for health care workers). Arbidol could reduce the infection risk (Post Exposure Prophylaxis –PEP) of	Oseltamivir was associated with an increase in COVID-19 infection (Odds ratio 20·446, 95% CI 1·407-297·143, P= 0·0271)	All patients received standard care including lopinavir, methylprednisolone, other symptom relievers and oxygen therapy, and added with tocilizumab. 75.0% patients lowered their oxygen intake, lung lesion opacity absorbed in 90.5% patients, % of lymphocytes in peripheral blood returened to normal in 52.6% patients, C-reactive protein decreased in 84.2% patients. No obvious adverse reactions were observed. 90.5% patients were discharged on 13.5 days after the treatment with tocilizumab and the rest are recovering well.	Favipiravir (FPV) showed better therapeutic responses on COVID-19 in terms of disease progression and viral clearance. A shorter viral clearance time was found for the FPV arm versus the control arm (Lopinavir/Ritonavir + IFN-alpha) (median (interquartile range, IQR), 4 (2.5–9) d versus 11 (8–13) d, P < 0.001). The FPV arm also showed significant improvement in chest imaging compared with the control arm, with an improvement rate of 91.43% versus 62.22% (P = 0.004). Fewer adverse events were found in the FPV arm than in the control arm.

								the novel coronavirus inhospital and family settings.			

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Background information

About TFORD-COVID19

The Principal Scientific Advisor to the GoI, Dr K VijayRaghavan, has constituted a S&T Core Group on COVID19. Under the aegis of the S&T Core Group on COVID19, a Task Force has been constituted focused on Repurposing of Drugs for COVID19 (in short "TFORD-COVID19"). The Task Force is being coordinated by Dr V Premnath, Head, NCL Innovations at CSIR-NCL and Director, Venture Center and Dr Anurag Agarwal, Director, CSIR-IGIB. The Nerve Center for the Coordination is located be at Venture Center, Pune (located in the campus of CSIR-NCL).

About Advisory Group

The Nerve Center at TFORD-COVID19 has constituted an inter-disciplinary Advisory Group. This Advisory Group reviews the information compiled by the Nerve Center, provides suggestions on data, information sources, organization of data etc. while also providing inputs to refine the analysis and create a structured information base to support decision-making. The Advisory Group also provides expert input and opinions on certain selected points where experience-based inputs are needed. The members of the Advisory Group for each Discussion Paper are listed at https://nclinnovations.org/covid19/teams/ .

Nerve Center Team

Dr Priya Nagaraj, Dr Vidula Walimbe, Dr Smita Kale, Dr Kirtee Wani, Dr. Tejas Shah, Dr Mugdha Lele, Mr Navnath Kadam, Dr Manisha Premnath, Dr Premnath V

Citation:

If you use this information in any other document or communication, please credit is as "Heat map – Drug Candidates, Task Force on Repurposing of Drugs for COVID19, India, April 2020 (Ref: TFORD/Heat-Map/003; Source: http://www.nclinnovations.org/covid19/)". Spread sheet view and details: https://docs.google.com/spreadsheets/d/1lZb5x7GbfB1EMz5Oyorz-wX5_NPYwewRi9l6qhPyeg0/edit#gid=0

Cautionary Note

This Heat Map is a work-in-progress document. As the information about drug candidates evolves, the Heat Map is expected to change. The data presented here is the opinion of the members contributing to the Task Force and not meant to reflect the Government's position or that of any specific organization or individual. This information should also not be interpreted as guidance for clinical case management.