



# Role of pharmacologist during the COVID-19 pandemic

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## Dear Editor

Due to the situation of the outbreak of COVID-19 and lack of actually medication beside vaccination, pharmacologist will play an important role during this outbreak in drug information including herbal drugs, supporting physician in evaluate old and new drug information which has been indicated role in COVID-19 care especially on efficacy and safety.

## 1. Drug information including herbal drugs

A lot of drugs have been used in COVID-19. Pharmacologist role should provide the information of drug which have been used based on evidence-based medicine (EBM). These must include drug,

agent including herb proposed in social media as of mislead communication leading to abuse and misuse causing side effect and complication. Herbal drug is one of common use for COVID-19 treatment or prevention which almost are lack of EBM (Table 1 and 2).

**Table 1.** Level of evidence (LOE) for evidence related to the effectiveness of herbal drug therapy. (Update from 2018 OCEBM criteria)<sup>1</sup>

Level of evidence	Quality of documents*
1	▪ Systematic review/ meta-analysis from RCTs
2	▪ RCT or ▪ Highly impact observational study
3	▪ Cohort studies or ▪ Follow-up studies
4	▪ Case-series ▪ Case-control studies
5	▪ Expert opinion ▪ in vitro or in vivo research ▪ Scriptures or traditional medical textbooks

**Note:** LOE may decrease following quality of methodology

\*Oxford Centre for Evidence-based Medicine (OCEBM) Levels of Evidence. 2011 [updated 2011 March]

\*\*Ebell MH, Siwek J, Weiss BD, Woolf SH, Susman J, Ewigman B, et al. Simplifying the language of evidence to improve patient care. The Journal of Family Practice. 2004;53(2).

RCT = randomized controlled trial

Oxford Centre for Evidence-based Medicine: Levels of Evidence (March 2009) Modified by CATTM (2019)

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<https://li01.tci-thaijo.org/index.php/JBAP>

**Table 2.** Grade of recommendations for evidence related to the effectiveness of herbal drug therapy

Grade	Definition	Meaning
A	Highly recommendation	Should follow very strongly Unless there are obviously better alternatives
B	recommendation	Should be followed, but should keep up with new information and should always ask the patient
C	Alternative	Physicians should have flexibility in making decisions Can be used if the condition is not severe or urgent. and should make regular follow-up appointments for treatment results
D	Last alternative	Other options (if any) should be considered first and monitored for new information for benefits or adverse effects. and should make regular follow-up appointments for treatment results

## 2. Supporting information to physician in evaluate old and new drug using in COVID-19

Pharmacologist who work as clinical pharmacologist play an important role in provide drug information to physician as well as related healthcare workers in evaluate old and new drug information which has been indicated role in COVID-19 care especially on efficacy and safety. These are also to improve the rational use of medicines during therapy. The way of supporting information include

2.1 Create a rational drug manual to assist clinicians in better the treatment of COVID-19 patients including usage and dosage, administration, precautions, drug-drug interactions, adverse drug reactions and dose adjustment for special populations.

2.2 Participate in clinical trial research to explore effective treatment options. Pharmacologist can help to establish a database of clinical drug research, analyze the safety and effectiveness of medication therapy in COVID-19.

2.3 Establish evidence-based drug use on the efficacy and use of medications that are currently used in treating COVID-19 patients.

As a pharmacologist, I would like the “Thai Pharmacological Society” (TPS) to be a leader in guiding government, academy and community by providing accurate information. Although some situation, especially on herbal drug and product, seems to counter the current coming from belief bias which is beyond the truth and scientific principles gone now. It's better than doing nothing. It's also a good opportunity to have TPS be recognized and understood the role of TPS.

## References

- [1] OCEBM Levels of Evidence Working Group. The Oxford Levels of Evidence 22016 [cited 2020 July 7]. Available from: <https://www.cebm.net/index.aspx?o=5653>