



Proof of Efficacy

Promoting Knowledge of the Efficacy of Kampo Medicines with “Drug-fostering” through the Building of Evidence

Kampo medicines are pharmaceutical products with multiple components derived from natural substances. Due to this characteristic, it has been considered difficult to show their efficacy and safety scientifically. To establish a position for Kampo formulations as a treatment option, it is necessary to prove the efficacy and safety of Kampo formulations in the field of Western medicine. We have therefore been engaged in basic and clinical research, and in building evidence.

Since fiscal 2004, we have focused our resources on drug-fostering research. Drug-fostering research is a program for accumulating basic and clinical data to establish evidence for diseases in areas of high medical need that have been resistant to new Western drugs and for which prescription Kampo formulations have demonstrated special efficacy. The program started with three formulations—Daikenchuto, Yokukansan, and Rikkunshito—with the subsequent addition of two more. These drug-fostering program formulations are contributing to expansion of the Kampo market as growth drivers for

the Tsumura Group. In fiscal 2016, we established “Growing” formulations as new strategic formulations to follow the five drug-fostering program formulations. Focusing on the areas of geriatric health, cancer (supportive care^{*2}), and women’s health, we have been working to gain write-ups for these formulations in medical treatment guidelines.^{*3} We are promoting the formation of packages for drug-fostering program formulations and “Growing” formulations. The packages include five items: evidence from clinical studies,^{*4} elucidation of action mechanisms, study on frequency of side effects, pharmacokinetics (ADME^{*5}), and database research (health economics, etc.). The results of successful evidence accumulation include a more than two-fold increase in the number of write-ups in treatment guidelines over the past 10 years.

^{*2} Treatment to reduce the symptoms arising from the cancer itself or from the side effects caused by the cancer treatment, etc.
^{*3} A compendium of diagnoses and standard guidance on treatment for each illness, describing the best tests and treatment methods, etc., based on evidence.
^{*4} Data from meta-analysis (integration of multiple study results for analysis from a higher perspective) and randomized comparison trials (RCTs)
^{*5} Absorption, Distribution, Metabolism, Excretion. Looking at how a drug acts within the body after being taken.

Status of Evidence-building

As of end of March 2023

	No.	Formulation name	Integrated analysis	RCT	Mechanism of action	Study on frequency of side effects	Pharmacokinetics (ADME)	Database research (health economics, etc.)
Drug-fostering program formulations	100	Daikenchuto	4	36	○	○	○	○
	54	Yokukansan	4	18	○	○	○	○
	43	Rikkunshito	2	26	○	○	○	—
	107	Goshajinkigan	2	15	○	—	○	—
	14	Hangeshashinto	1	10	○	—	—	○
Growing formulation	17	Goreisan	1	11	○	—	—	○
	24	Kamishoyosan	—	7	○	—	—	—
	41	Hochuekkito	—	17	○	In progress	—	—
	108	Ninjin'yoeito	—	2	○	—	—	—
	137	Kamikihito	—	0	○	—	—	—

Notes: 1 ○ indicates the existence of a relevant academic paper, etc.
 2 Numbers of statistical analysis and RCT papers are collated from 2000 to January 2023

Contribution to Solving Social Issues through the Expansion of Standard Treatments

Tsumura is working to build evidence through both basic and clinical research. Taking Daikenchuto as an example, in basic research we worked to elucidate the pharmacological effects, such as promoting intestinal motility, increasing intestinal blood flow, and anti-inflammatory effects, as well as the mechanism of action. In clinical research, we examined the pharmacokinetics and frequency of side effects. In addition, we conducted a double-blind randomized comparison trial (DB-RCT) and meta-analysis on the effect on post-operative gastrointestinal function and symptoms to prove its efficacy, resulting in the write-up of Daikenchuto in treatment guidelines for several conditions.

The establishment of such evidence has led to new write-ups and increased recommendation levels in treatment guidelines. Ultimately, we will expand the use of Kampo formulations as standard treatments.^{*6} Through the Company’s research activities, it has established a foundation for recognition of Kampo formulations as standard treatments by physicians, to

a degree. This foundation includes qualitative and quantitative improvement in write-ups in treatment guidelines and inclusion of Kampo training-related content in the education models and core curricula for disciplines including medicine, dentistry, pharmacology, and nursing.

In addition, since Kampo medicine enhances people’s inherent natural healing ability and promotes improvement of symptoms, it is considered a “personalized medicine” that treats both mental and physical aspects together. Aiming to realize a society where everybody can receive optimal Kampo treatment, we will increase our efforts to develop a Kampo medical exam support system using DX and AI technology, clearly identifying the responders to Kampo formulations (cohorts that show efficacy, “patterns” for Kampo), and establishing objectivity for Kampo medical exams.

^{*6} Optimal treatment methods recommended to most patients, with efficacy and safety confirmed based on evidence.

→ For details, see page 51 “Strategic Challenge 2”.

Impact of Drug-fostering Research on Sales of Prescription Kampo Formulations (rate of sales growth compared to fiscal 2004, when drug-fostering was started)

