

Modern science takes a look at traditional herbal medicine

Japanese researchers are looking to standardize **CENTURIES-OLD KAMPO HEALTH CHECKS**, while developing a domestic supply of imported herbal products.

Kitasato University's Hiroshi Odaguchi and his team are investigating 'kampo', a traditional medicine regime developed in Japan that aims to address health issues at a pre-symptomatic stage, dubbed *mibyo* in Japanese.

"It's important to standardize kampo's diagnostic logic by integrating empirical expertise and clinical data," argues Odaguchi, who is director general of the Oriental

Medicine Research Center. His team joined Hokkaido University's food health-based Center of Innovation as a satellite project in 2015.

Kampo training has been integrated into the core curriculum of Japanese medical students since 2001. In collaboration with five other universities, Kitasato researchers are working to standardize and validate 33 of the most common health-

indication patterns determined by kampo examinations.

Between 2008 and 2018, Odaguchi and his colleagues examined kampo prognoses against clinical data in 567 elderly people. Their hypothesis is that specific kampo classifications are linked to some diseases and physical conditions. For example, they suspect a kampo finding known as *shofuku-fujin* may be associated with lower than average life-span. These data are now being analysed.

Odaguchi's team is also seeking to standardize the conduct of kampo examinations, including tongue, abdomen and pulse checks. These checks will form the basis of a 'kampo dock' (health checkup) system in development, for use by doctors and practitioners.

LOCAL HERBS

Some 80% of the herbal plants used in kampo are imported from China, from where Japan's practice was first borrowed. Importation poses a constant concern for supply of these plants.

Odaguchi's group is also

trying to increase the local production of herbal plants. "But raising herbal plants is difficult and takes time," Odaguchi explains. Roughly 100 plants are involved and the proportion of active ingredients in each plant can be affected by the soil in which they are grown, the water supply, the weather, and other factors.

To address this, the researchers analysed the chemical constituents of 46 herbal plants and created mapping models to visualize their quality. Fifteen are already produced in Japan, but researchers found the rest could also be locally grown. For example, *Tetradium ruticarpum* was imported from China until recently. But local farmers now grow and distribute the plant after it was identified in the wild in northwest Japan. ■



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A kampo doctor makes full use of the senses of sight, hearing, smell, and touch to make a diagnosis.



Gardenia fruit is used not only in herbal medicine, but also in food as a natural pigment.