**SUPPLEMENTARY INFORMATION**

**Suppl. information 1**. Subject inclusion, exclusion, and withdrawal criteria of the clinical study with HO-DMN patch.

Inclusion criteria

1. Adult female aged 30–65 years
2. Subjects who have wrinkles on test areas
3. Subjects who have voluntarily signed the consent form after understanding the study objective and contents
4. Subjects who do not have any acute or chronic diseases, including skin diseases
5. Subjects who can be observed and traced during the study period

Exclusion criteria

1. Female subjects who are pregnant or lactating
2. Subjects who have mental or physical disability
3. Subjects who have used skin ointment containing steroids for 1 month or more for skin disease treatment
4. Subjects who have participated in the same study within the last 6 months
5. Subjects who have sensitive or hypersensitive skin
6. Subjects who have atopic or infectious skin diseases
7. Subjects who have skin symptoms, such as mold, acnes, erythema, or hemotelangiosis on the test area
8. Subjects who have had a dermatological procedure or treatment within 6 months before the study initiation
9. Subjects who have irritations or allergies to cosmetics, quasi-drugs, or daily sunlight
10. Any other subjects who are unsuitable to participate in the study based on the judgment of the chief researcher or researcher in charge

Withdrawal criteria

1. Subjects who wanted to discontinue from the study
2. Subjects who have skin diseases or adverse events
3. Subjects who were exposed to excessive sunlight, drinking, and/or smoking leading to misinterpretation of study results
4. Subjects could be observed and traced because of their personal conditions