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第49回教育セミナー（2024）・「皮膚から“情報”を得る～ヒトの皮膚こそデータの宝庫～」

皮膚ガスを生体情報として活用する

関根嘉香*

Utilization of Human Skin Gas as Biological Information

Yoshika SEKINE*

Abstract

The skin surface serves as an easily accessible source of information about human health through the emission of skin gas. Human skin gas is a complex mixture of inorganic and organic volatile compounds released *via* three distinct emission routes: surface reaction, dermal gland, and blood. The individual skin gas profile is determined by physical, physiological, and psychological factors, lifestyle choices, and environmental conditions. Given its characteristics, human skin gas has garnered significant interest as a non-invasive biomarker for well-being. This article explores the potential use of skin gas information for human health care by reviewing the emission mechanisms of human skin gases, sampling and analytical methodologies, and several clinical applications to healthy volunteers and hospitalized patients. These applications include the assessment of sleep quality, detection of stress buildup in workers, diagnosis of pancreatic cancer, and elucidation of the unknown pathology of people allergic to me (PATM).

Key words: human skin gas, dermal emission, biological information, sampling, clinical application.