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## Electron paramagnetic resonance (EPR) investigation of skin structure of *Psoriasis vulgaris*

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E lectron paramagnetic resonance (EPR) spin-probe method was used to investigate structural aspects of *psoriasis vulgaris* stratum corneum (pv-SC). EPR spectra of the SC samples were analyzed using order parameter (S0) and rotational diffusion rates. A little, broad three-line pattern of 5-doxylstearic acid (5-DSA) in pv-SC was observed. The spectral pattern of pv-SC is quite different from those of control SC reported. The S0-values obtained for the pv-SC and the control were approximately 0.20 and 0.49, respectively. The statistical analysis suggests that the 0.20 value of pv-SC is significantly smaller than the 0.49 value of the control (p<0.01). The rotational diffusion rates for the probe motion in the SC were faster than those of the control. Moreover, there was no significant spectral difference of the glass-plate with the SC against the static magnetic field, except for the signal intensity. The present results suggest that the pv-SC is less rigid of the structure than that of the control SC, indicating irregular architecture of pv-SC.

## Biography

Kouichi Nakagawa obtained his PhD from Boston University in 1989 and did postdoctoral researches at Northwestern University and University of Denver. Now, he is a Professor of Graduate School of Health Sciences at Hirosaki University. He has published more than 60 papers in international Journals and 8 book chapters, and serving on an editorial board member of Analytical Chemistry Insights.

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