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### Title

FLUORESCENCE EMISSION-SPECTRA OF LAURDAN IN NEUTROPHILS DURING THE ACTIVATION OF THE RESPIRATORY BURST

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**Fluorescence emission spectra of Laurdan in neutrophils during the activation of the respiratory burst.**

36th Annual Meeting of the Biophysical Society, Houston, Texas, 9-13 February 1992.

*Biophys J.* 1992; 61(2 Pt 2): A312, 1794.

**Abstract**

The activation of the respiratory burst of neutrophils is accompanied by multiple and complex biochemical events that take place at the level of the cell surface, plasma membrane and cytosol. We have investigated the changes in plasma membrane polarity of neutrophils during the activation of the respiratory burst by measuring the steady-state fluorescence emission spectra of 2-dimethylamino (6-lauroyl) naphthalene (Laurdan), which is known to be incorporated at the hydrophobic-hydrophilic interface of the bilayer, displaying spectral sensitivity to the polarity of its surrounding. Our results show a blue shift of the fluorescence emission spectra of Laurdan during the activation of neutrophils with phorbol myristate acetate or N-formyl-methionyl-leucyl-phenylalanine. These results suggest that the activation of the respiratory burst of PMNs is accompanied by a decrease in polarity at the hydrophobic-hydrophilic interface of the plasma membrane.