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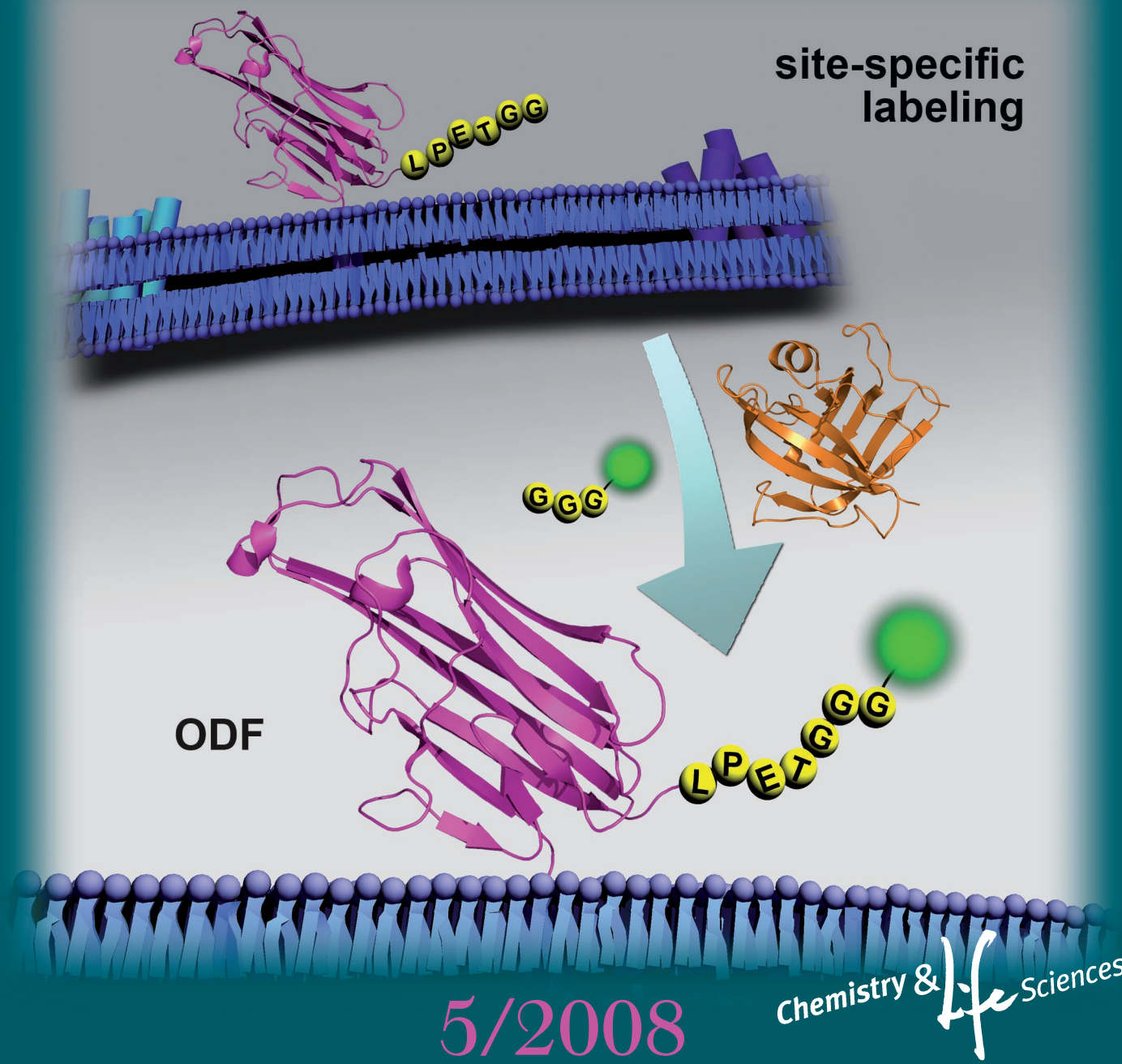

5/2008

Chemistry & Life Sciences

Minireview: Activity-Based Protein Profiling
(S. Yao)
Plus Original Contributions

EUChemSoc

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Cover Picture

Tsutomu Tanaka, Teruyasu Yamamoto, Shinya Tsukiji, and Teruyuki Nagamune*

The cover picture shows a site-specific cell-surface protein modification catalyzed by Sortase A (SrtA), a transpeptidase from *Staphylococcus aureus.* As a model cell-surface protein, osteoclast differentiation factor (ODF), a type II membrane protein, was genetically modified at the C terminus with a short peptide tag LPETGG, a recognition sequence of SrtA, and expressed on a living cell surface. Addition of SrtA and N-terminal triglycine-containing probes (biotin, Alexa Fluor 488, EGFP) to culture medium allowed site-specific labeling of the LPETGG-tagged protein on the living cell surface. The present strategy will provide important tools for cell biology and cell-surface engineering. For more information, see the article by T. Nagamune et al. on p. 802 ff.