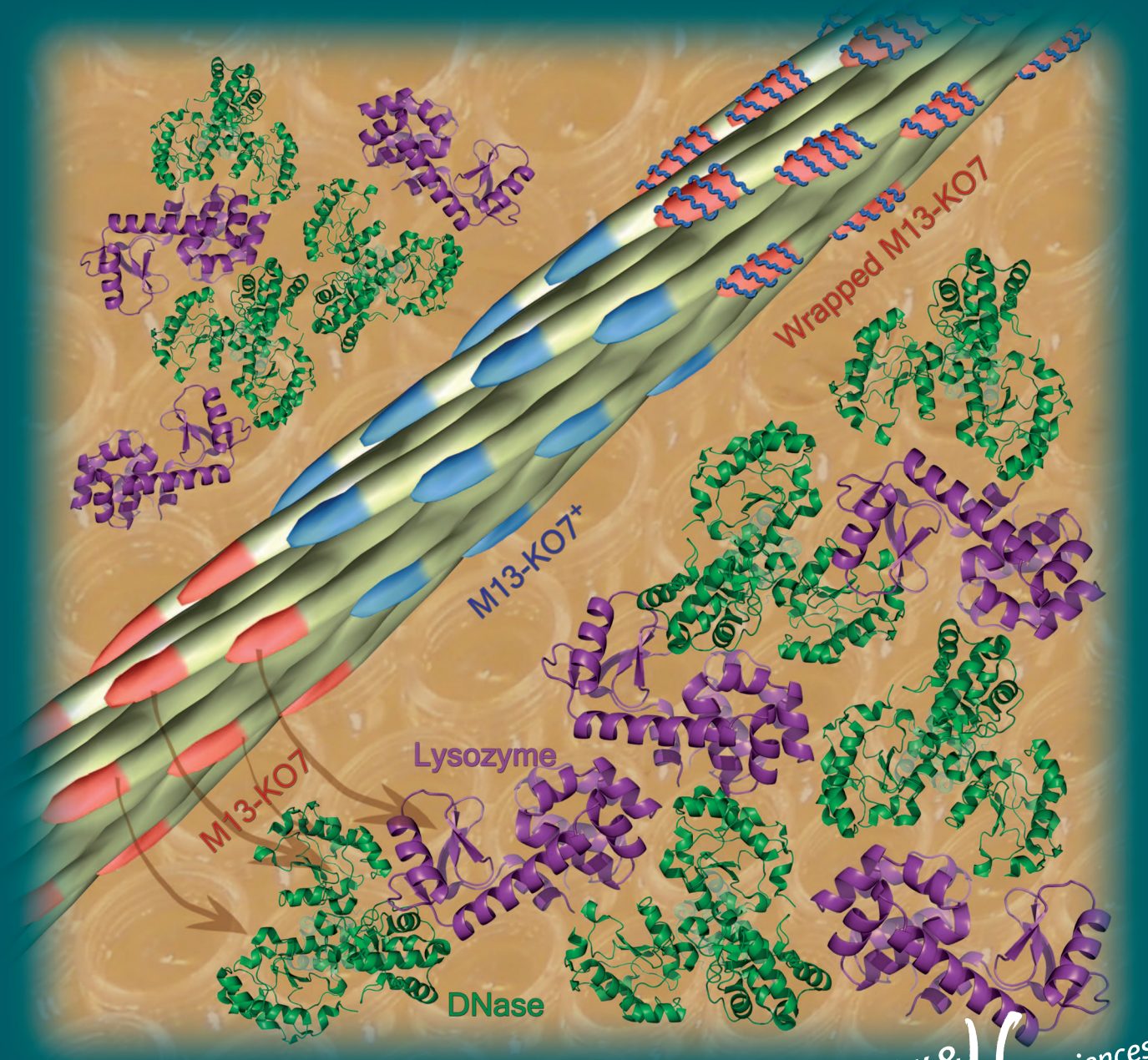
CBCHFX 9 (17) 2757 – 2896 (2008) · ISSN 1439-4227 · Vol. 9 · No. 17 · November 24, 2008

D55712

A EUROPEAN JOURNAL

CHEMBIOCHEM

OF CHEMICAL BIOLOGY



17/2008

Chemistry & Life Sciences

Concept: Polymerization of α-Hydroxy Acids by Ribosomes (H. Suga)

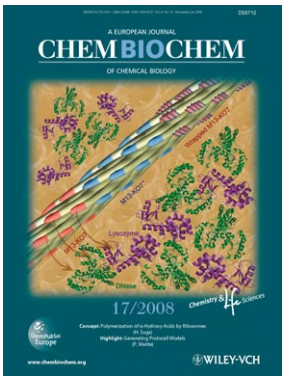
Highlight: Generating Protocell Models (P. Walde)

ChemPubSoc Europe

www.chembiochem.org

WILEY-VCH

Cover Picture



Jorge A. Lamboy, Phillip Y. Tam, Lucie S. Lee, Pilgrim J. Jackson, Sara K. Avrantinis, Hye J. Lee, Robert M. Corn, and Gregory A. Weiss*

The cover picture shows a section of the M13 filamentous bacteriophage, widely used for the display and manipulation of proteins in both academic and industrial laboratories. The negatively charged outer surface of conventional phage (red coat proteins at the bottom third of the phage) results in nonspecific binding to high-pI target proteins such as colicin E9 DNase (green) and lysozyme (purple). All too often such nonspecific binding results in failed screens, assays and selections. As shown on p. 2846 ff., G. Weiss et al. solve this problem by inserting a genetically encoded positively charged peptide into the phage coat (blue coat proteins in the middle of the phage). A chemical approach with oligolysine wrappers can also mask the negatively charged surface (top third of the phage) to allow experiments with previously inaccessible target proteins. Cover art by Denise Der and Jorge Lamboy from a design by Gregory Weiss.