A Journal of the Gesellschaft Deutscher Chemiker

D 3461

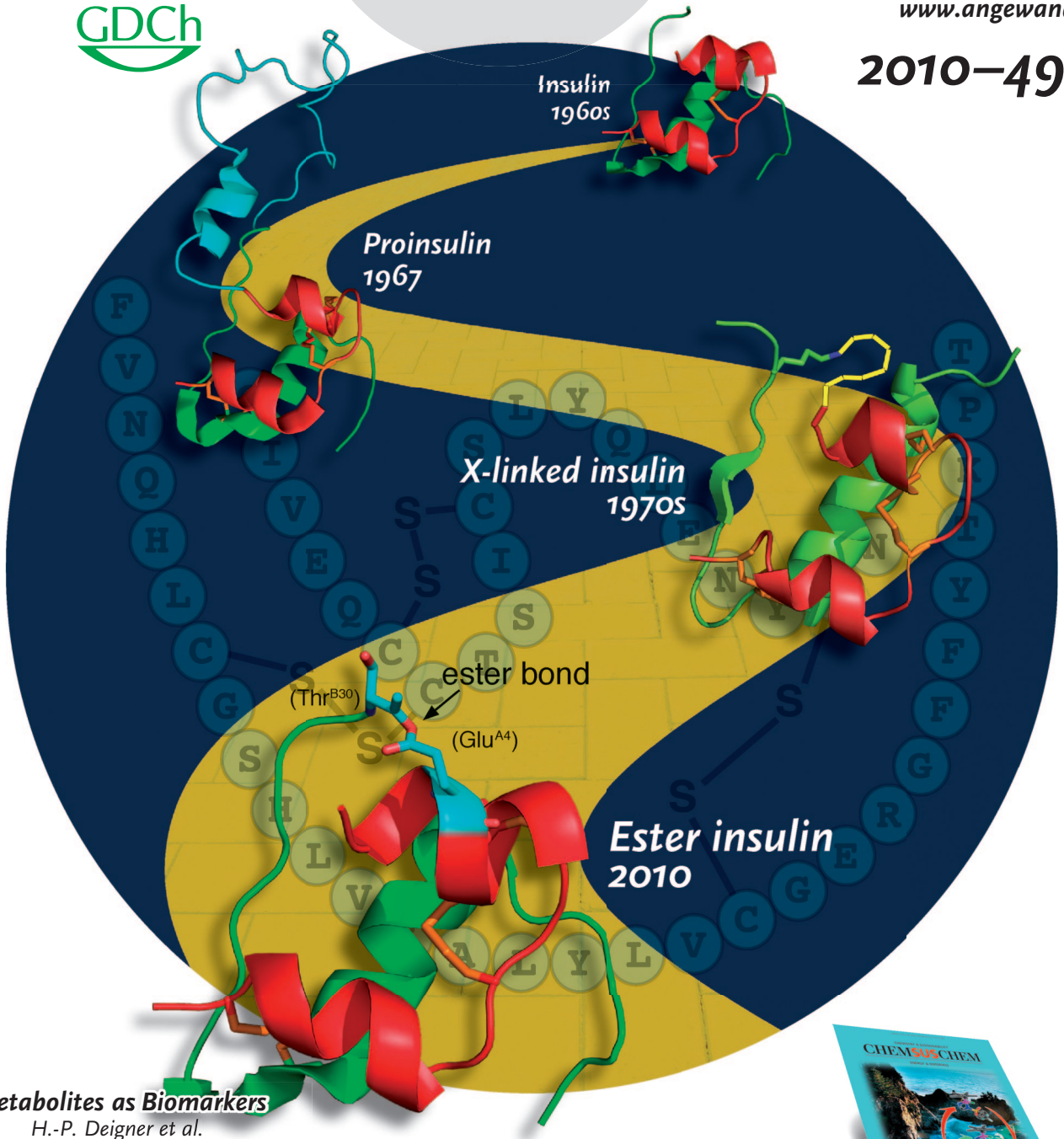
Angewandte Chemie

International Edition

GDCh

www.angewandte.org

2010–49/32



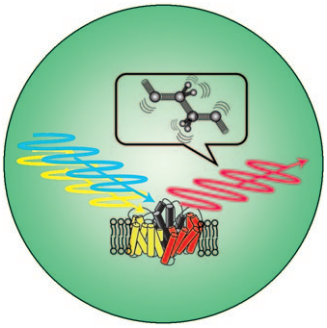
ACIEFS 49 (32) 5389–5582 (2010) · ISSN 1433–7851 · Vol. 49 · No. 32

WILEY-VCH

Cover Picture

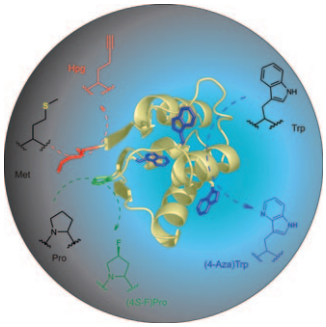
Youhei Sohma,* Qing-Xin Hua, Jonathan Whittaker, Michael A. Weiss, and Stephen B. H. Kent*

The efficient total chemical synthesis of insulin has been a challenge for more than 40 years. In their Communication on page 5489 ff., Y. Sohma, S. B. H. Kent, and co-workers show that a 'zero length' ester-linked precursor folds as efficiently as full length proinsulin and can be simply converted into fully active insulin by saponification. (The artwork for the cover picture was prepared by D. Kent and is based on a concept by Y. Sohma).



IR Spectroscopy on Biomolecules
New techniques in vibrational spectroscopy provide high spatial and temporal resolution with minimal perturbation of the biomolecules studied. J. Heberle et al. describe surface IR techniques such as SEIRAS, SFG, and SNIM as well as ultrafast 1D and 2D IR spectroscopy in their Minireview on page 5416 ff.

Biomarker Research
H.-P. Deigner and co-workers describe in their Review on page 5426 ff. how the use of targeted metabolomics and mass spectrometry can lead to the identification of metabolites that can act as clinical biomarkers for different diseases.



Synthetic Amino Acids
N. Budisa et al. describe the incorporation of two or three different synthetic amino acid in vivo in a protein expression experiment in their Communication on page 5446 ff.