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See Shiqi Wang *et al.*, pp. 1546–1554. Image reproduced by permission of Shiqi Wang from *RSC Chem. Biol.*, 2025, **6**, 1546.

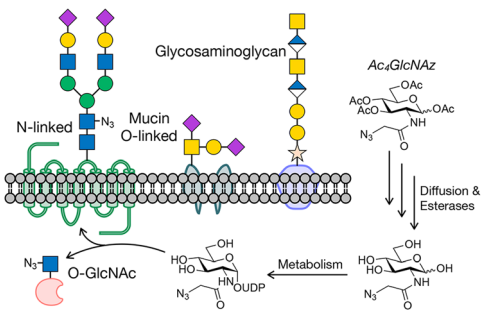
Inside cover
See Jeffery M. Tharp *et al.*, pp. 1555–1565. Image reproduced by permission of Jeffery M. Tharp from *RSC Chem. Biol.*, 2025, **6**, 1555.

REVIEWS

1506

Achieving cell-type selectivity in metabolic oligosaccharide engineering

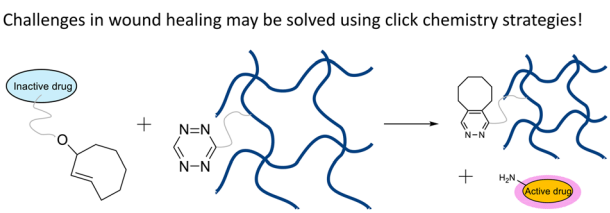
Michelle Marie B. Helmeke, Rhianna L. Haynie-Cion and Matthew R. Pratt*



1521

Applications of click and click-to-release chemistry in biomaterials to advance skin regeneration

Merel Gansevoort, Matthijs van de Waarsenburg, Thomas J. Boltje, Floris P. J. T. Rutjes,* Toin H. van Kuppevelt and Willeke F. Daamen*



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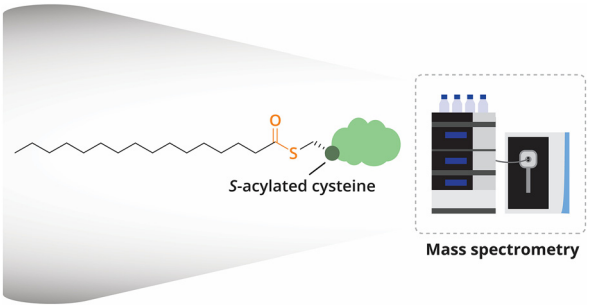
REVIEWS

1532

Deciphering protein long-chain *S*-acylation using mass spectrometry proteomics strategies

Anneroos E. Nederstigt, Samiksha Sardana and Marc P. Baggelaar*

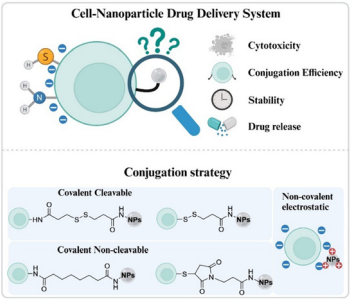


PAPERS

1546

The impact of conjugation strategies and linker density on the performance of the Spermine-AcDex nanoparticle–splenocyte conjugate

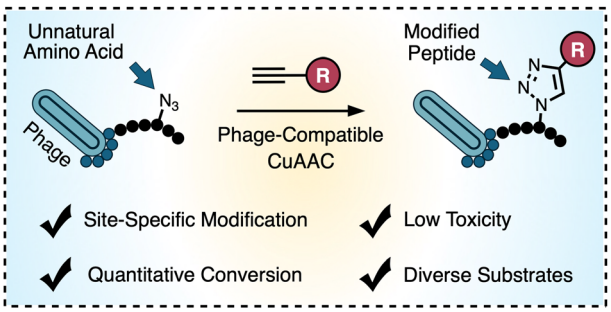
Yuchen Su, Ruoyu Cheng, Bowei Du, Mai O. Soliman, Hongbo Zhang and Shiqi Wang*



1555

Copper-catalysed azide–alkyne cycloaddition on live M13 bacteriophage for expanding the molecular diversity of phage-displayed peptide libraries

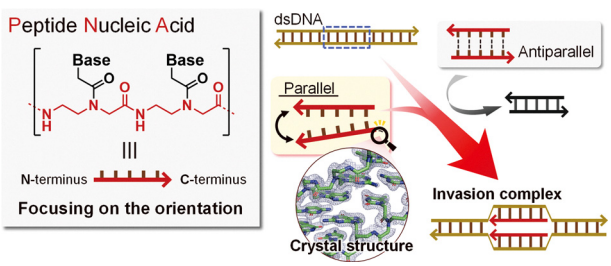
Olabode Dawodu, Cody A. White, Caitlin Specht, Alejandro Tapia and Jeffery M. Tharp*



1566

Peptide nucleic acids in parallel orientation form invasion complexes with double-stranded DNA

Masanari Shibata, Hiroshi Sugimoto, Masaki Hibino, Osami Shoji* and Yuichiro Aiba*



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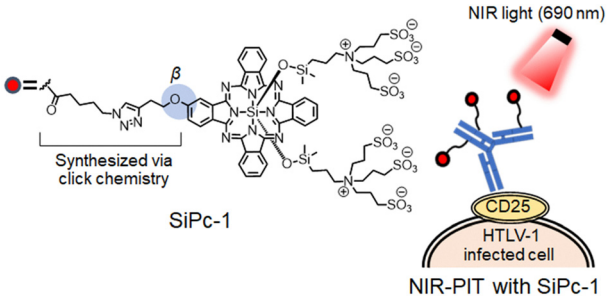
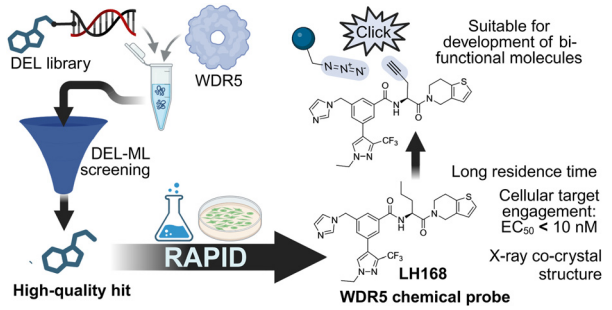
1576



Development of a silicon phthalocyanine analogue for near-infrared photoimmunotherapy and its application to HTLV-1-infected leukemic cells

Yoshikazu Fuse, Eita Sasaki, Masaharu Tamaki, Shunto Kawamura, Hisashi Ohno, Sota Yamada, Masahiro Yasunaga, Hideo Takakura, Hirofumi Hanaoka, Hisataka Kobayashi, Hideki Nakasone and Kenjiro Hanaoka*

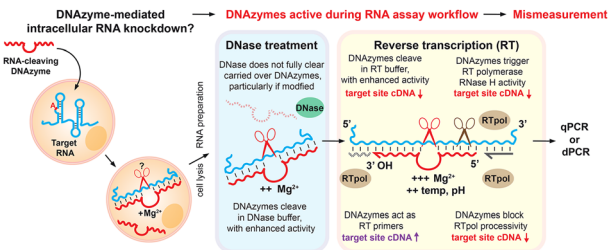
1585



Discovery of an exquisitely selective WDR5 chemical probe accelerated by a high-quality DEL–ML Hit

Lasse Hoffmann, Christopher Lenz, Frederic Farges, Serah W. Kimani, Johannes Dopfer, Sabrina Keller, Martin Peter Schwalm, Hanna Holzmann, Andreas Kraemer, Aiping Dong, Fengling Li, Irene Chau, Levon Halabelian, Matthias Gstaiger, Susanne Müller, Stefan Knapp* and Václav Němec*

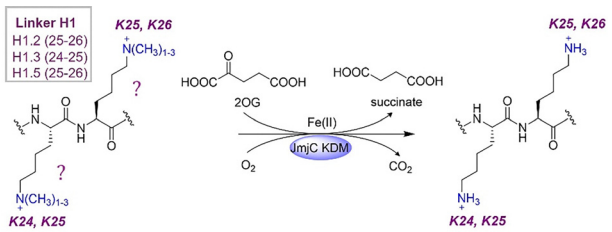
1595



Sources of mismeasurement of RNA knockdown by DNAzymes and XNAzymes

Maria J. Donde, Alicia Montulet and Alexander I. Taylor*

1607



Investigating the N-terminal linker histone H1 subtypes as substrates for JmjC lysine demethylases

Vildan A. Türkmen, Anthony Tumber, Eidarus Salah, Samanpreet Kaur, Christopher J. Schofield* and Jasmin Mecinović*

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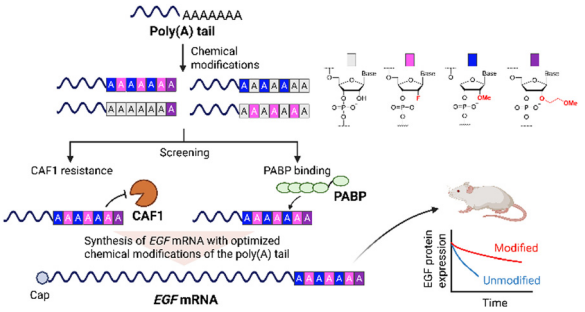
1616

Characterization of nuclease stability and poly(A)-binding protein binding activity of chemically modified poly(A) tail for *in vivo* applications

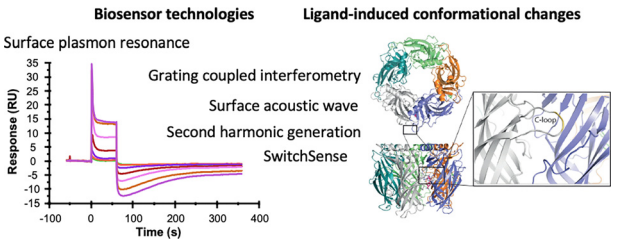
Atsushi Hashimoto, Yuma Kunitomo, Ittoku Kikuchi, Hiroki Yamada, Keiko Kobayashi, Kazuhiro Soshiroda, Hiromi Aman, Yasuaki Kimura, Junichiro Yamamoto, Yasuhisa Shiraishi, Satoshi Uchida,* Hiroshi Abe* and Hiroto Iwai*



1625

Detection and characterisation of ligand-induced conformational changes in acetylcholine binding proteins using biosensors and X-ray crystallography

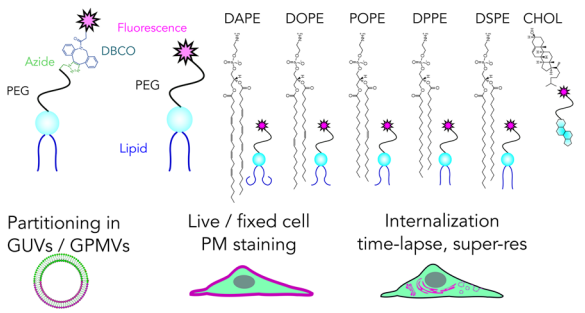
Edward A. FitzGerald, Daniela Cederfelt, Daria Kovryzhenko, Pierre Boronat, Bjarte Aarmo Lund, Doreen Dobritzsch, Sven Hennig, Pablo Porragas Paseiro, Iwan J. P. de Esch and U. Helena Danielson*



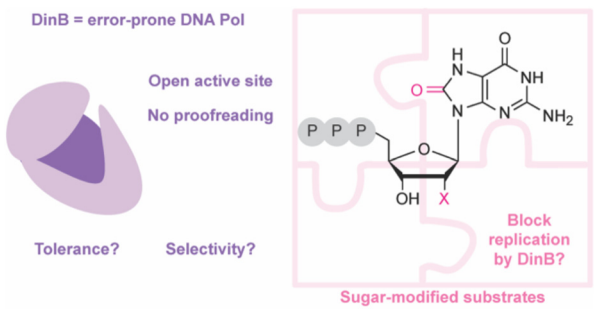
1640

Plasma membrane labelling efficiency, internalization and partitioning of functionalized fluorescent lipids as a function of lipid structure

Erdinc Sezgin



1650

The bacterial stress response polymerase DinB tolerates sugar modifications and preferentially incorporates arabinosyl nucleotides

Christina M. Hurley, Jeffrey M. Kubiak, Michael B. Cory, Jared B. Parker, Christian E. Loo, Laura C. Wang and Rahul M. Kohli*