RSC Chemical Biology

rsc.li/rsc-chembio

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2633-0679 CODEN RCBSAO 4(12) 967-1132 (2023)



Cover See Hans-Achim Wagenknecht *et al.*, pp. 1037–1042. Image reproduced by permission of Mathis Robin Mitha from *RSC Chem. Biol.*, 2023, **4**, 1037.



Inside cover

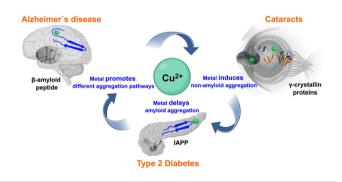
See Yvonne Mast *et al.*, pp. 1050–1063. Image reproduced by permission of Yvonne Mast from *RSC Chem. Biol.*, 2023, **4**, 1050. Photograph of Streptomyces colony by Felix Gonther.

OPINION

974

Copper binding and protein aggregation: a journey from the brain to the human lens

Yanahi Posadas, Carolina Sánchez-López and Liliana Quintanar*

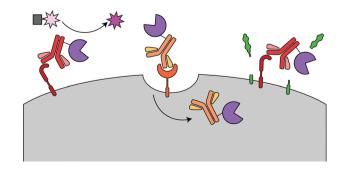


REVIEWS

986

Bringing enzymes to the proximity party

Gabrielle S. Tender and Carolyn R. Bertozzi*



Executive Editor Anna Rulka Deputy Editor Audra Taylor Editorial Production Manager Viktoria Titmus

Assistant Editors

Shwetha Krishna, Angelica-Jane Onyekwere, Michael Whitelaw, Alexander Whiteside

Editorial Assistant Samantha Campos

Publishing Assistant

Brittany Hanlon

Publisher

Neil Hammond

For queries about submitted papers, please contact Viktoria Titmus, Editorial Production Manager in the first instance. E-mail: chembio@rsc.org

For pre-submission queries please contact Anna Rulka, Executive Editor. Email: chembio-rsc@rsc.org

RSC Chemical Biology (electronic: ISSN 2633-0679) is published 12 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road,

Cambridge, UK CB4 0WF. RSC Chemical Biology is a Gold Open Access journal and all articles are free to read. Please email orders@rsc.org to register your interest or contact Royal Society of Chemistry Order Department, Royal Society of Chemistry,

Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK Tel +44 (0)1223 432398; E-mail: orders@rsc.org

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

RSC Chemical Biology

rsc.li/rsc-chembio

RSC Chemical Biology publishes exceptionally significant findings in chemical biology

Editorial Board

Chair Hiroaki Suga, The University of Tokyo, Japan	
Associate Editors Claudia Höbartner, University of Würzburg, Germany Zaneta Nikolovska-Coleska, University of Michigan, USA	Andro Germ Rode Berlin Cai-O

l	
	Andrea Rentmeister, University of Münster,
	Germany
	Roderich Süssmuth, Technical University of
	Berlin, Germany
	Cai-Guang Yang, Shanghai Institute of
	Materia Medica, China

Advisory Board

Christopher Chang, University of California, Berkeley, USA Dorothea Fiedler, FMP Berlin, Germany Christian Hackenberger, FMP Berlin, Germany Maja Köhn, University of Freiburg, Germany Yamuna Krishnan, University of Chicago, USA Jennifer Prescher, University of California, Irvine, USA Christopher Schofield, University of Oxford, UK Pamela Silver, Harvard Medical School, USA	Kira Weissman, University of Lorraine, France Christopher Schofield, University of Oxford, UK Peng Chen, Peking University, China Hermen Overkleeft, Leiden University, Netherlands Xiu-Jie Wang, Bayes Buisness School London, UK Don Hilvert, ETH Zürich, Switzerland Jin Zhang, University of California San Diego, USA Laura Kiessling, MIT, USA	Giulio Superti-Furga, Medical University of Vienna, Austria Luc Brunsveld, Eindhoven University of Technology, Netherlands May Khanna, University of Arizona, USA Paul Joseph Dyson, Swiss Federal Institute of Technology Lausanne, Switzerland Lei Liu, Tsinghua University, China Guifang Jia, Peking University, China Chudi Ndubaku, ORIC Pharmaceuticals, USA
Information for Authors		

Full details on how to submit material for publication in RSC Chemical This journal is @ The Royal Society of Chemistry 2023.

Biology are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made via the journal's homepage: rsc.li/rsc-chembio

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)-Reproduced by permission of the Royal Society of Chemistry.

Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

Members

San Francisco, USA

St Louis, USA

Michelle Arkin, University of California

Jennifer Heemstra, Washington University,

Ali Tayassoli, University of Southampton, UK

Registered charity number: 207890

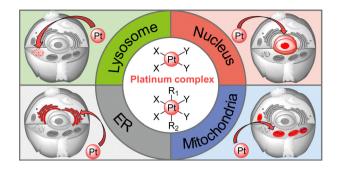


REVIEWS

1003

Unlocking the potential of platinum drugs: organelle-targeted small-molecule platinum complexes for improved anticancer performance

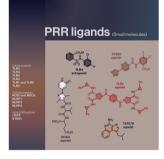
Zhiqin Deng, Shu Chen, Gongyuan Liu and Guangyu Zhu*



1014

Small molecule modulators of immune pattern recognition receptors

Taku Tsukidate, Charles W. Hespen and Howard C. Hang*

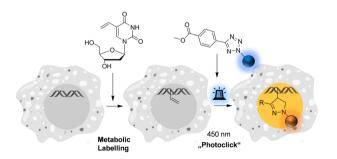


COMMUNICATIONS

1037

Metabolic labelling of DNA in cells by means of the "photoclick" reaction triggered by visible light

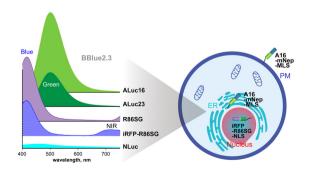
Lisa Rieger, Bastian Pfeuffer and Hans-Achim Wagenknecht*



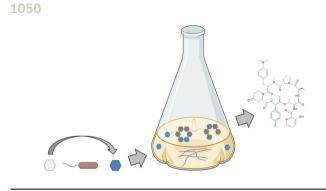
1043

Single-chain multicolor-reporter templates for subcellular localization of molecular events in mammalian cells

Sung-Bae Kim,* Ramasamy Paulmurugan, Nobuo Kitada and Sojiro A. Maki



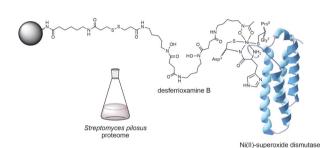
PAPERS



Biotransformation-coupled mutasynthesis for the generation of novel pristinamycin derivatives by engineering the phenylglycine residue

Oliver Hennrich, Leoni Weinmann, Andreas Kulik, Karen Harms, Philipp Klahn, Jung-Won Youn, Frank Surup and Yvonne Mast*

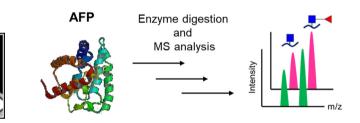
1064



Reduction-cleavable desferrioxamine B pulldown system enriches Ni(II)-superoxide dismutase from a *Streptomyces* proteome

Jenny Ni, James L. Wood, Melanie Y. White, Norbert Lihi, Todd E. Markham, Joseph Wang, Peter T. Chivers and Rachel Codd*

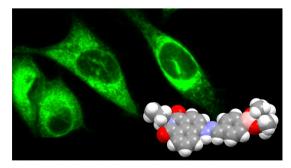
1073



Quantitative mass spectrometric analysis of hepatocellular carcinoma biomarker alpha-fetoprotein

Chen-Chun Chen, Han-Wen Huang, Bo-Rui Chen and Chi-Huey Wong*

1082



Fluorescent naphthalimide boronates as theranostics: structural investigations, confocal fluorescence and multiphoton fluorescence lifetime imaging microscopy in living cells

Megan J. Green, Haobo Ge, Stephen E. Flower, Charareh Pourzand, Stanley W. Botchway, Hui-Chen Wang, Navaratnarajah Kuganathan, Gabriele Kociok-Köhn, Meng Li, Suying Xu,* Tony D. James* and Sofia I. Pascu*

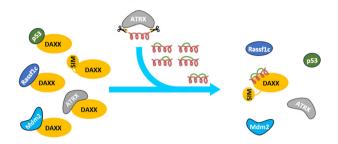
PAPERS

1096

Stitched peptides as potential cell permeable inhibitors of oncogenic DAXX protein

Clare Jelinska.* Srinivasaraqhavan Kannan, Yuri Frosi, Siti Radhiah Ramlan, Fernaldo Winnerdy, Rajamani Lakshminarayanan, Charles W Johannes, Christopher J Brown, Anh-Tuan Phan, Daniela Rhodes and Chandra S Verma*

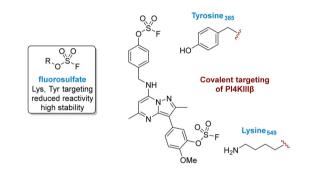
Stitched Peptide Inhibitors of DAXX



1111

Covalent targeting of non-cysteine residues in **ΡΙ4ΚΙΙΙ**β

Brett Cosgrove, Emma K. Grant, Sophie Bertrand, Kenneth D. Down, Don O. Somers, John P. Evans, Nicholas C. O. Tomkinson* and Michael D. Barker*



1123

An enhanced biophysical screening strategy to investigate the affinity of ASOs for their target RNA

Rouven Stulz, Michael Lerche, Olivia Luige, Agnes Taylor, Stefan Geschwindner and Alice Ghidini*

