# **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(6) 381-448 (2023)



#### Cover

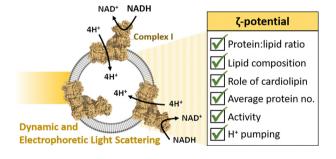
© Nanoclustering/Science Photo Library/Getty Images.

#### **PAPERS**

386

Using light scattering to assess how phospholipid-protein interactions affect complex I functionality in liposomes

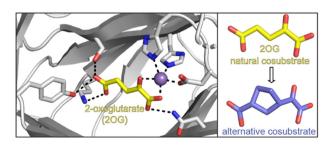
Jana Eisermann, John J. Wright, James D. E. T. Wilton-Ely,\* Judy Hirst and Maxie M. Roessler\*



399

Kinetic and inhibition studies on human Jumonji-C (JmjC) domain-containing protein 5

Anthony Tumber, Eidarus Salah, Lennart Brewitz,\* Thomas P. Corner and Christopher J. Schofield\*



## **Executive Editor**

Anna Rulka

Deputy Editor Audra Taylor

Editorial Production Manager

Viktoria Titmus

Assistant Editors Shwetha Krishna, Michael Whitelaw, Alexander Whiteside

**Editorial Assistant** 

Samantha Campos

Publishing Assistant Brittany Hanlon

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,

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 OWF, 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.

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**

Hiroaki Suga, The University of Tokyo, Japan

Associate Editors

Claudia Höbartner, University of Würzburg

Lingyin Li, Stanford University, USA Zaneta Nikolovska-Coleska, University of Michigan, USA

Andrea Rentmeister, University of Münster, Germany Roderich Süssmuth, Technical University of

Cai-Guang Yang, Shanghai Institute of Materia Medica, China

Members

Michelle Arkin, University of California San Francisco, USA

Jennifer Heemstra, Washington University, St

Ali Tavassoli, University of Southampton, UK

#### **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, Don Hilvert, ETH Zürich, Switzerland Jin Zhang, University of California San Diego,

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 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.

This journal is © The Royal Society of Chemistry 2023.

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.

Registered charity number: 207890

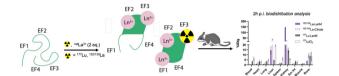


#### **PAPERS**

#### 414

# Radiolabeling and in vivo evaluation of lanmodulin with biomedically relevant lanthanide isotopes

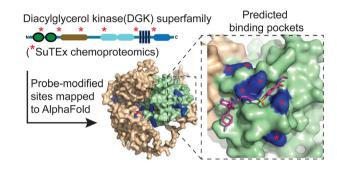
Kirsten E. Martin, Joseph A. Mattocks, Dariusz Śmiłowicz, Eduardo Aluicio-Sarduy, Jennifer N. Whetter, Jonathan W. Engle, Joseph A. Cotruvo Jr\* and Eszter Boros\*



#### 422

# Predicting small molecule binding pockets on diacylglycerol kinases using chemoproteomics and AlphaFold

Roberto Mendez, Minhaj Shaikh, Michael C. Lemke, Kun Yuan, Adam H. Libby, Dina L. Bai, Mark M. Ross, Thurl E. Harris and Ku-Lung Hsu\*



### 431

# Study and design of amino acid-based radical enzymes using unnatural amino acids

Feiyan Yuan, Binbin Su, Yang Yu\* and Jiangyun Wang\*

