

# 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 5(5) 389-474 (2024)



### Cover

See Edward W. Tate *et al.*, pp. 439–446. Image reproduced by permission of Jana Volaric from *RSC Chem. Biol.*, 2024, 5, 439.

## EDITORIAL

395

### Introduction to 'Medicinal Chemistry Small Molecule Probes'

Gemma Nixon, Khondaker Miraz Rahman and John Spencer\*



## PROFILE

397

### Contributors to the *RSC Chemical Biology* Emerging Investigators Collection 2023



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)

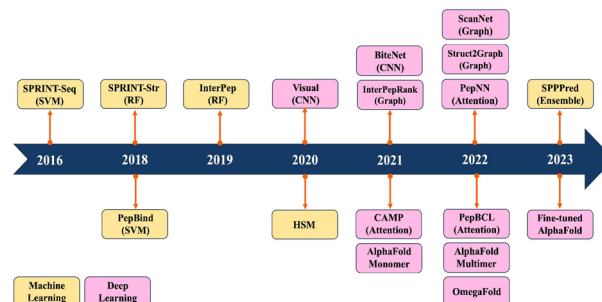


## REVIEWS

401

## Leveraging machine learning models for peptide–protein interaction prediction

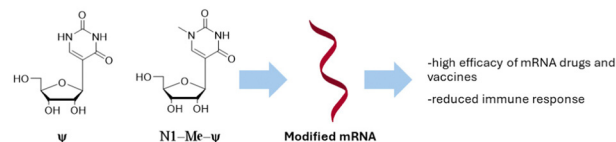
Song Yin, Xuenan Mi and Diwakar Shukla\*



418

## Pseudouridine and N1-methylpseudouridine as potent nucleotide analogues for RNA therapy and vaccine development

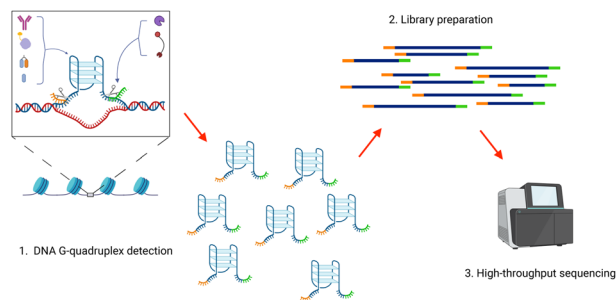
Lyana L. Y. Ho, Gabriel H. A. Schiess, Pâmella Miranda, Gerald Weber and Kira Astakhova\*



426

## Genome-wide mapping of G-quadruplex DNA: a step-by-step guide to select the most effective method

Silvia Galli,\* Gem Flint, Lucie Růžičková and Marco Di Antonio\*

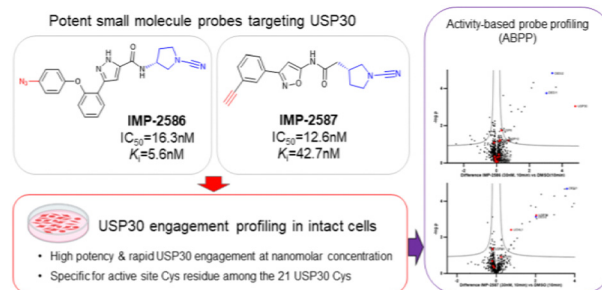


## PAPERS

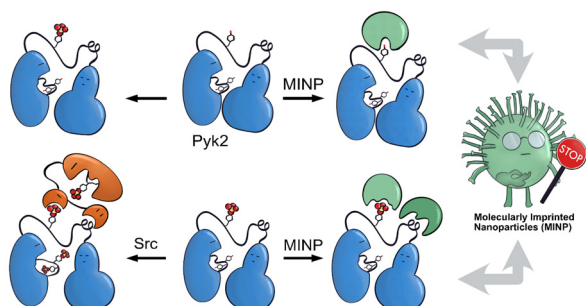
439

## Discovery of potent and selective activity-based probes (ABPs) for the deubiquitinating enzyme USP30

Milon Mondal, Fangyuan Cao, Daniel Conole, Holger W. Auner and Edward W. Tate\*



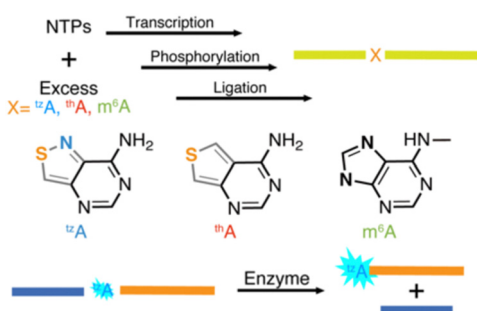
447



### Molecularly imprinted nanoparticles reveal regulatory scaffolding features in Pyk2 tyrosine kinase

Tania M. Palhano Zanela, Milad Zangiabadi, Yan Zhao and Eric S. Underbakke\*

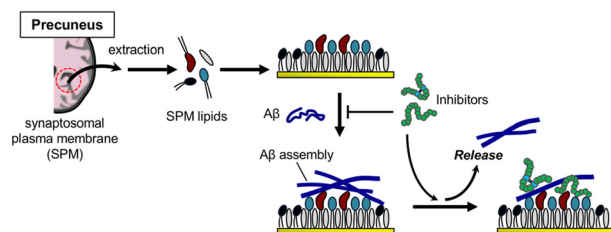
454



### Site-specific RNA modification *via* initiation of *in vitro* transcription reactions with m<sup>6</sup>A and isomeric emissive adenosine analogs

Deyuan Cong, Kfir B. Steinbuch, Ryosuke Koyama, Tyler V. Lam, Jamie Y. Lam and Yitzhak Tor\*

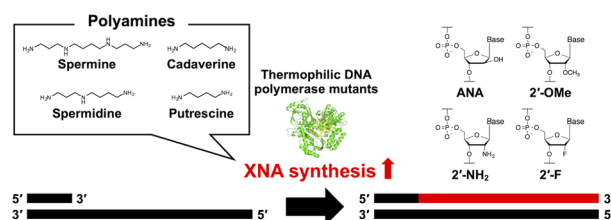
459



### Prevention of amyloid $\beta$ fibril deposition on the synaptic membrane in the precuneus by ganglioside nanocluster-targeting inhibitors

Erika Miyamoto, Hideki Hayashi, Shigeo Murayama, Katsuhiko Yanagisawa, Toshinori Sato\* and Teruhiko Matsubara\*

467



### Polyamines promote xenobiotic nucleic acid synthesis by modified thermophilic polymerase mutants

Hidekazu Hoshino,\* Yuuya Kasahara and Satoshi Obika\*

