# **Molecular Omics**

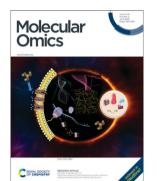
Research and reviews in omic sciences, including genomics, proteomics, transcriptomics, metabolomics, glycomics and lipidomics

# rsc.li/molomics

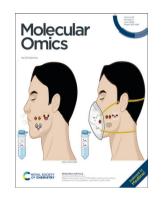
The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

# IN THIS ISSUE

ISSN 2515-4184 CODEN MOOMAW 19(5) 365-446 (2023)



**Cover** See Ranadhir Chakraborty *et al.*, pp. 370–382. Image reproduced by permission of Subhajit Sen, Sriradha Ganguli and Ranadhir Chakraborty from *Mol. Omics*, 2023, **19**, 370.



Inside cover

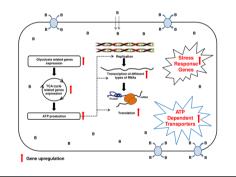
See Soumen Kanti Manna et al., pp. 383–394. Image adapted from "Adult male head", by BioRender.com (2023). Retrieved from https:// app.biorender.com/ biorender-templates. Image reproduced by permission of Debasish Prusty from *Mol. Omics*, 2023, **19**, 383.

# RESEARCH ARTICLES

# 370

What transcriptomics and proteomics can tell us about a high borate perturbed boron tolerant Bacilli strain

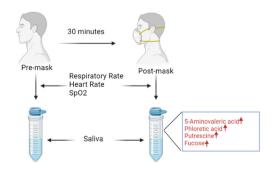
Subhajit Sen, Sriradha Ganguli and Ranadhir Chakraborty\*



# 383

# Effect of short-term use of FFP2 (N95) masks on the salivary metabolome of young healthy volunteers: a pilot study

Sk Ramiz Islam, Debasish Prusty, Subhadip Maiti, Raju Dutta, Partha Chattopadhyay and Soumen Kanti Manna\*



## **Editorial Staff**

Executive Editor Rebecca Garton

Deputy Editor

Jack Washington
Development Editor

Daniel Robertshaw

Editorial Production Manager Sarah Whitehouse

### Publishing Editors

Nicola Burton, Tom Cozens, Katie Fernandez, Ryan Kean, Roxane Owen, Alex Rowles

Editorial Assistant

Amy Cook Publishing Assistant

Andrea Whiteside

Publisher Sam Keltie

For queries about submitted papers, please contact Sarah Whitehouse, Editorial Production Manager, in the first instance. E-mail: **molomics@rsc.org** 

For pre-submission queries please contact Rebecca Garton, Executive Editor. E-mail: molomics-rsc@rsc.org

Molecular Omics (electronic: ISSN 2515-4184) is published 10 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WE.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the 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

2023 Annual (electronic) subscription price: £1430; US\$2520. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

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

# **Molecular Omics**

### rsc.li/molomics

*Molecular Omics* is a premier journal publishing the highest quality research in the -omics sciences, including genomics, proteomics, transcriptomics, metabolomics, glycomics and lipidomics.

Editorial Board

#### Chair

Robert Moritz, Institute for Systems Biology, USA

#### Associate Editors

Hyungwon Choi, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

# Richard Unwin, University of Manchester, UK

Benjamin Garcia, Washington University in

Claire Eyers, University of Liverpool, UK

Members Celia Berkers, Utrecht University, Netherlands Subhra Chakraborty, National Institute of Plant Genome Research. Delhi. India

# ster, UK St Louis, USA

Nicolle Packer, Macquarie University, Australia Xiaohua Shen, Tsinghua University, China Michael Washburn, University of Kansas Medical Center, USA

#### Advisory Board

Chris Bakal, Institute of Cancer Research, UK Anne K Bendt, Singapore Lipidomics Incubator (SLING), National University of Singapore, Singapore Tunahan Cakir, Gebze Technical University, Turkey Erin Carlson, University of Minnesota, USA James Edwards, Saint Louis University, USA

Information for Authors

Alex Georgakilas, National Technical University of Athens, Greece Rebekah Gundry, University of Nebraska Medical Center, USA Walter Kolch, System Biology Ireland, Ireland A Ben Lehner, Wellcome Sanger Institute, UK A Souvik Maiti, Institute of Genomics and

#### Integrative Biology, India Andrej Shevchenko, Max Planck Institute for Molecular Cell Biology and Genetics, Germany Silke Sperling, Charité - Universitätsmedizin Berlin. Germany

Ed Tate, Imperial College London, UK Ronghu Wu, Georgia Tech, USA

Full details on how to submit material for publication in Molecular Omics 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/molomics

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

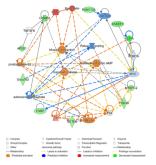


# **RESEARCH ARTICLES**

# 395

The mechanism of chronic unpredictable mild stress induced high blood pressure in rats: a proteomic and targeted metabolomic analysis

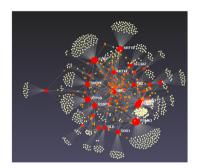
Hongxia Zhao, Qiong Wu, Na Li\* and Yongchun Chen\*



# 404

Role of identified proteins in the proteome profiles of CDK4/6 inhibitor-resistant breast cancer cell lines

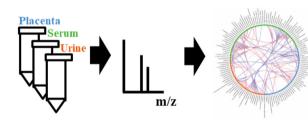
Binayak Kumar, Peeyush Prasad, Ragini Singh, Ram Krishna Sahu, Ashutosh Singh, Srikrishna Jayadev Magani\* and Suresh Hedau\*



# 418

# The complete change in bile acids and steroids in systematic metabolomics applied to the intrahepatic cholestasis of pregnancy

Hualin Xu, Yupin Xu, Guoqiang Zhao, Xukun Fu, Jian Zhao, Huaqian Wang, Yuliang Cai and Hongmei Lin\*



Clinical samples Untargeted Metabolomics

**Bioinformatics Analysis** 

# 429

Meta-analyses of host metagenomes from colorectal cancer patients reveal strong relationship between colorectal cancer-associated species

Manuel Adrian Riveros Escalona, Joice de Faria Poloni, Mathias J. Krause and Márcio Dorn\*

