

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(7) 517-600 (2023)



Cover

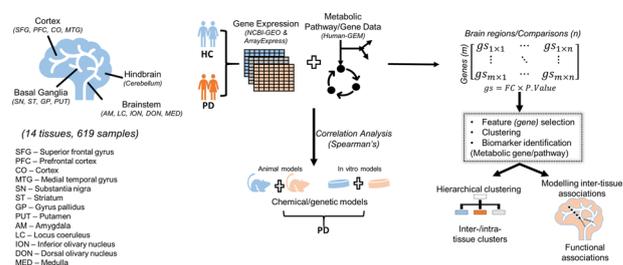
See Tunahan Çakır *et al.*, pp. 522–537.
Image designed by Gencer Yüzer and reproduced by permission of Tunahan Çakır from *Mol. Omics*, 2023, 19, 522.

RESEARCH ARTICLES

522

Brain-wide transcriptome-based metabolic alterations in Parkinson's disease: human inter-region and human-experimental model correlations

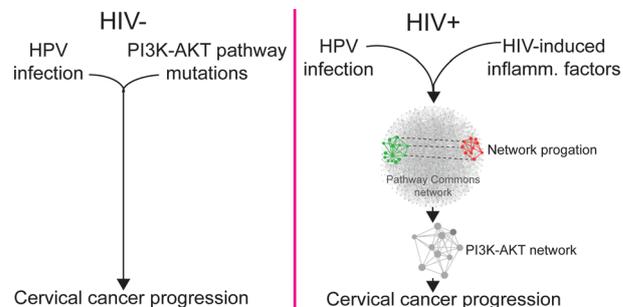
Regan Odongo, Orhan Bellur, Ecehan Abdik and Tunahan Çakır*



538

Network modeling suggests HIV infection phenocopies PI3K-AKT pathway mutations to enhance HPV-associated cervical cancer

Charles Ochieng' Olwal, Jacqueline M Fabius, Lorena Zuliani-Alvarez, Manon Eckhardt, George Boateng Kyei, Peter Kojo Quashie, Nevan J Krogan,* Mehdi Bouhaddou* and Yaw Bediako*



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 0WF.

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

MembersCelia Berkers, Utrecht University, Netherlands
Subhra Chakraborty, National Institute of Plant Genome Research, Delhi, India
Maria do Rosário Domingues, University of Aveiro, Portugal

Benjamin Garcia, Washington University in 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

Claire Eyers, University of Liverpool, UK

Alex Georgakilas, National Technical University of Athens, Greece

Rebekah Gundry, University of Nebraska Medical Center, USA

Walter Kolch, System Biology Ireland, Ireland

Ben Lehner, Wellcome Sanger Institute, UK

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

Information for Authors

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

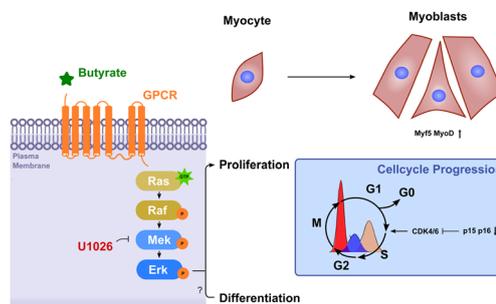


RESEARCH ARTICLES

552

Butyrate promotes C2C12 myoblast proliferation by activating ERK/MAPK pathway

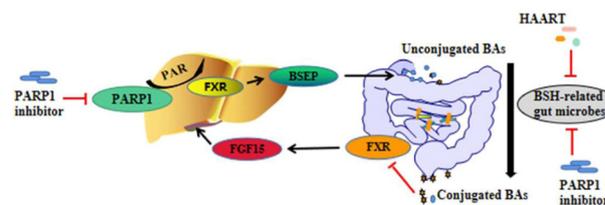
Li Guan, Ziyi Cao, Ziyue Pan, Chao Zhao, Mengjuan Xue, Fan Yang* and Jie Chen*



560

PARP-1 inhibitor alleviates liver lipid accumulation of atherosclerosis via modulating bile acid metabolism and gut microbes

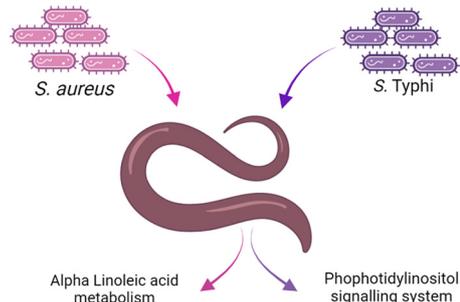
Yingkun Sheng, Guibing Meng, Zhirong Zhou, Ruijiao Du, Yuefei Wang* and Miaomiao Jiang*



574

Distinct global metabolomic profiles of the model organism *Caenorhabditis elegans* during interactions with *Staphylococcus aureus* and *Salmonella enterica* Serovar Typhi

Balasubramanian Chellammal Muthubharathi, Velayutham Ravichandiran* and Krishnaswamy Balamurugan*



585

Proteomic analysis reveals mechanisms underlying increased efficacy of bleomycin by photochemical internalization in bladder cancer cells

Odrun A. Gederasas,* Animesh Sharma, Saide Mbarak, Bjørnar Sporsheim, Anders Høgset, Vanya Bogoeva, Geir Slupphaug and Lars Hagen*

