

# Molecular Omics

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

[rsc.li/molomics](https://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 21(5) 367-526 (2025)



### Cover

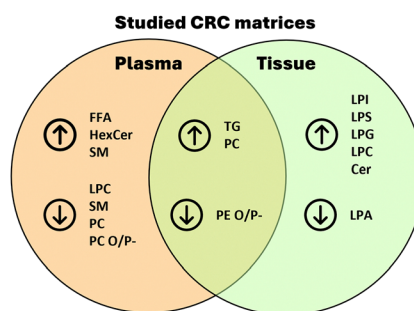
See Patricia Pascual-Vargas, Chris Bakal *et al.*, pp. 390–421.  
Image reproduced by permission of Chris Bakal from *Mol. Omics*, 2025, **21**, 390.

## REVIEW

373

### Advancing colorectal cancer research through lipidomics

Pedro Santiago, Tânia Melo, Maria Barceló-Nicolau, Gwendolyn Barceló-Coblijn, Pedro Domingues and Rosário Domingues\*

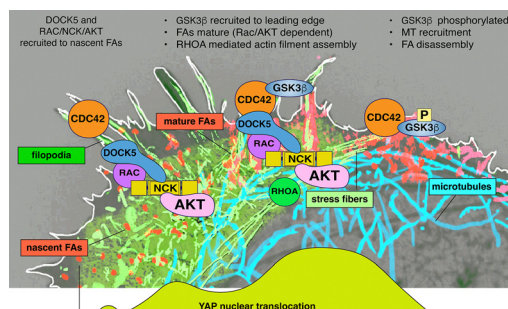


## RESEARCH ARTICLES

390

### Integration of focal adhesion morphogenesis and polarity by DOCK5 promotes YAP/TAZ-driven drug resistance in TNBC

Patricia Pascual-Vargas,\* Mar Arias-Garcia, Theodoros I. Roumeliotis, Jyoti S. Choudhary and Chris Bakal\*



# RSC Advances

At the heart of open access for  
the global chemistry community

Editor-in-chief

Russell J Cox

Leibniz Universität Hannover, Germany

We stand for:



**Breadth** We publish work in all areas of chemistry and reach a global readership



**Affordability** Low APCs, discounts and waivers make publishing open access achievable and sustainable



**Quality** Research to advance the chemical sciences undergoes rigorous peer review for a trusted, society-run journal



**Community** Led by active researchers, we publish quality work from scientists at every career stage, and all countries

Submit your work now

[rsc.li/rsc-advances](https://rsc.li/rsc-advances)

@RSC\_Adv

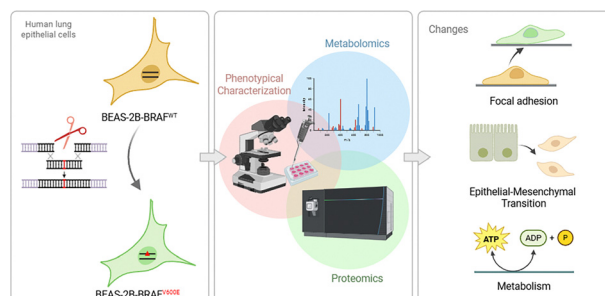


## RESEARCH ARTICLES

422

## Proteomic and metabolomic dissection of the *BRAF* V600E mutation-induced cellular state transition in lung epithelial cells

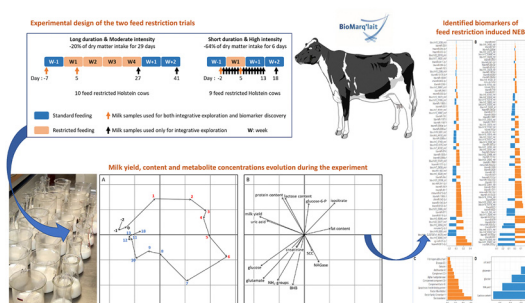
Fengting Liu, Fan Yang, Hailin Xiong, Jingnan Huang, Zhenhui Huang, Jingying Song, Xinyi Liu, Hongchao Zhou, Jing Xu, Jimin Yuan,\* Lin Jia\* and Lingyun Dai\*



433

## Integrated multi-omic analyses of bovine milk identify biomarkers of negative energy balance

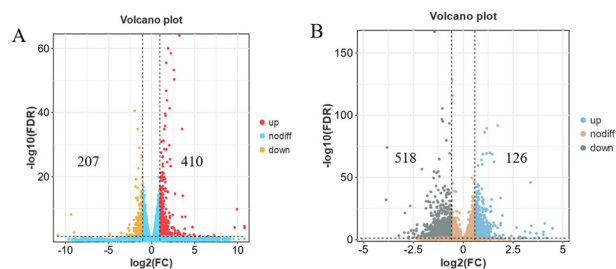
A. Leduc, A. Rau, D. Laloë, S. Le Guillou, P. Martin, M. Gelé, J. Pires, Y. Faulconnier, C. Leroux, M. Boutinaud and F. Le Provost\*



446

## Transcriptome and proteome analyses reveal the virulence of the *Vibrio alginolyticus* effector gene *vopR*

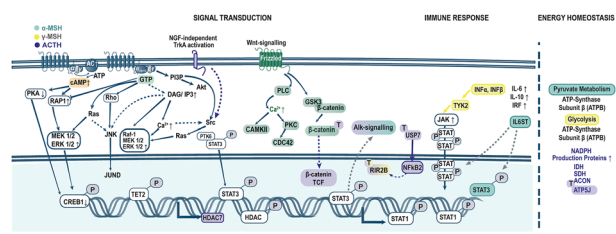
Fan Da, Shuanghu Cai, Liangliang Xu, Shixi Chen, Bin Li and Min Tao\*



456

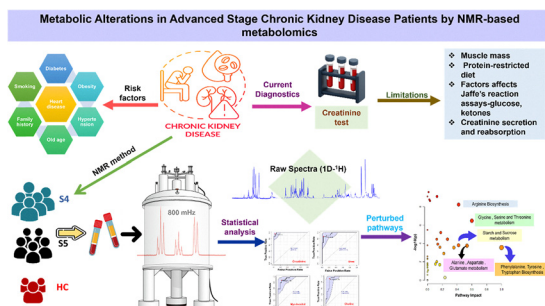
## POMC-specific modulation of metabolic and immune pathways via melanocortin-3 receptor signaling

Mariya Nezhyva, Friederike A. Sandbaumhüter, Per E. Andrén and Erik T. Jansson\*



## RESEARCH ARTICLES

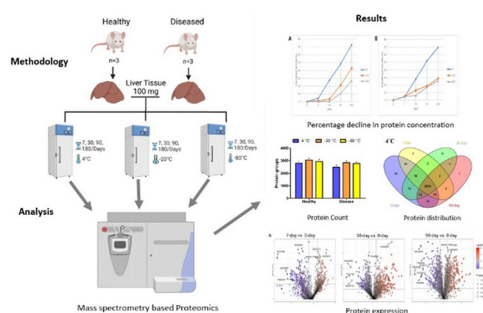
464



## Understanding metabolic alterations in advanced stage chronic kidney disease patients by NMR-based metabolomics

Amrita Sahu, Upasna Gupta, Bikash Baishya,\*  
Dharmendra Singh Bhadauria\* and Neeraj Sinha

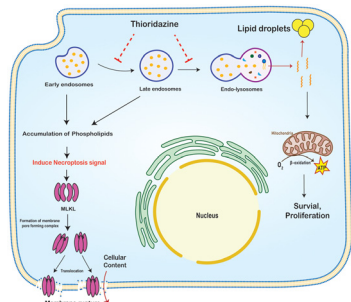
479



## Temperature- and time-dependent degradation of mouse tissue proteins: insights into RNA-binding protein stability via mass spectrometry

Aiswarya Suresh, Nikhil Pallaprolu, Aishwarya Dande,  
Harish Kumar Pogula, Vipin Kumar Parihar and  
Ramalingam Peraman\*

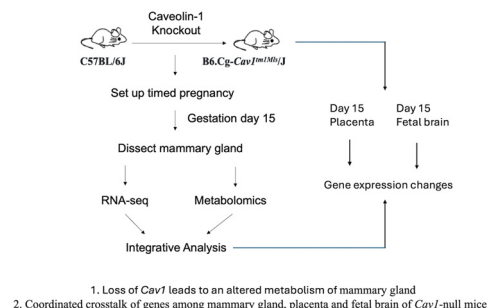
496



## Thioridazine induces phospholipid accumulation and necroptosis in parental and tamoxifen-resistant breast cancer cells

Chandrasekaran Mythri, Sachin B Jorvekar,  
Nirawane Suraj, Nethaji Pruthiviraj,  
Roshan M Borkar and Sudhagar Selvaraju\*

512



## Mammary gland metabolism and its relevance to the fetoplacental expression of cytokine signaling in caveolin-1 null mice

Shankar P. Poudel, Maliha Islam, Thomas B. McFadden  
and Susanta K. Behura\*

