

# 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 20(4) 215-290 (2024)



### Cover

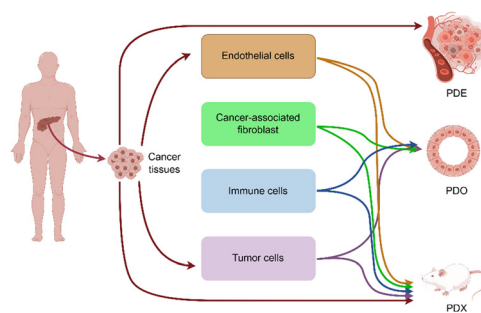
See Jiatong Li, Meng-Yao Li, Yingbin Liu *et al.*, pp. 220–233. Image reproduced by permission of Meng-Yao Li from *Mol. Omics*, 2024, 20, 220.

## REVIEWS

220

### Pancreatic cancer environment: from patient-derived models to single-cell omics

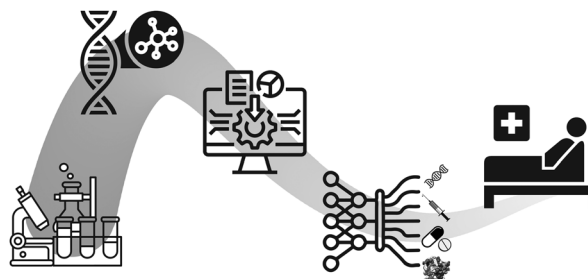
Ao Gu, Jiatong Li,\* Shimei Qiu, Shenglin Hao, Zhu-Ying Yue, Shuyang Zhai, Meng-Yao Li\* and Yingbin Liu\*



234

### Genome-scale metabolic models in translational medicine: the current status and potential of machine learning in improving the effectiveness of the models

Beste Turanli, Gizem Gulfidan, Ozge Onluturk Aydogan, Ceyda Kula, Gurudeeban Selvaraj and Kazim Yalcin Arga\*



The use of genome scale metabolic models supported by machine learning from bench side to bed side



# Environmental Science journals

One impactful portfolio for  
every exceptional mind

Harnessing the power of interdisciplinary  
science to preserve our environment

[rsc.li/envsci](https://rsc.li/envsci)

Fundamental questions  
Elemental answers

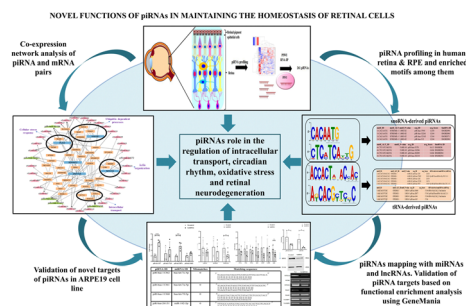


## RESEARCH ARTICLES

248

## piRNAs in the human retina and retinal pigment epithelium reveal a potential role in intracellular trafficking and oxidative stress

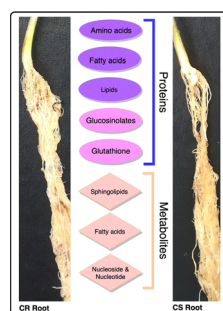
Muthuramalingam Karpagavalli, Suganya Sivagurunathan, T. Sayamsmruti Panda, Nagesh Srikakulam, Reety Arora, Lamiya Dohadwala, Basant K. Tiwary, Sudha Rani Sadras, Jayamuruga Pandian Arunachalam, Gopal Pandi and Subbulakshmi Chidambaram\*



265

## Proteome- and metabolome-level changes during early stages of clubroot infection in *Brassica napus* canola

Dinesh Adhikary, Devang Mehta, Anna Kisiala, Urmila Basu, R. Glen Uhrig, RJ Neil Emery, Habibur Rahman and Nat N. V. Kav\*



283

## Prediction of quality markers in Maren Runchang pill for constipation using machine learning and network pharmacology

Yunxiao Liu, Lanping Guo, Qi Li, Wencui Yang and Hongjing Dong\*

