

# Molecular Omics

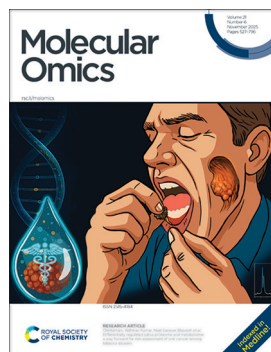
Research and reviews in omic sciences, including genomics, proteomics, transcriptomics, metabolomics, glycomics and lipidomics

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See Chintamani, Abhinav Kumar, Neel Sarovar Bhavesh *et al.*, pp. 594–606. Image created by Dr Krishn Verma and reproduced by permission of Prof. Neel Sarovar Bhavesh from *Mol. Omics*, 2025, 21, 594.



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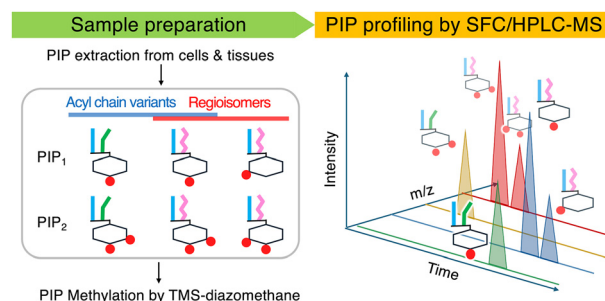
See Dharmendra Singh Bhadauria, Neeraj Sinha *et al.*, pp. 607–620. Image reproduced by permission of Neeraj Sinha from *Mol. Omics*, 2025, 21, 607.

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Franklin Vinny Medina Nunes, Luiza Marques Prates Behrens, Rafael Diogo Weimer, Gabriela Flores Gonçalves, Guilherme da Silva Fernandes\* and Márcio Dorn\*

#### Diverse Single-Cell Omics Technologies

Genomics, Epigenomics, Transcriptomics, Proteomics

#### Deep Learning Tools

e.g., scICAN, scGAL, scMSI, scMDC, scMaui, SAILERX, scGEMOC, scHGA, MarsGT, MinNet, scGPT, scDART

#### Key Deep Learning Architectures

Neural Networks, Convolutional Neural Networks, Autoencoders (and VAEs), Generative Adversarial Networks, Graph Neural Networks

#### Challenges and Future Directions

Enhance interpretability, computing requirements, labeled datasets, federated learning.

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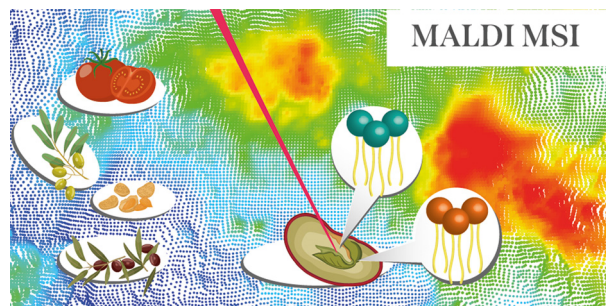


## REVIEWS

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## MALDI mass spectrometry imaging in plant and food lipidomics: advances, challenges, and future perspectives

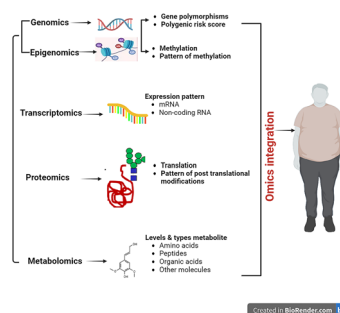
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## The omics revolution in obesity: from molecular signatures to clinical solutions

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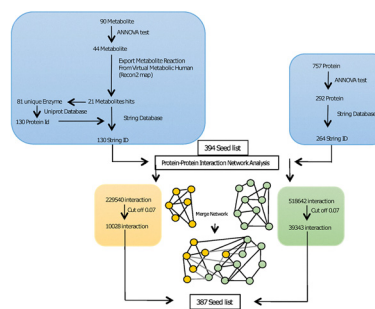
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## RESEARCH ARTICLES

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## Differentially regulated saliva proteome and metabolome: a way forward for risk-assessment of oral cancer among tobacco abusers

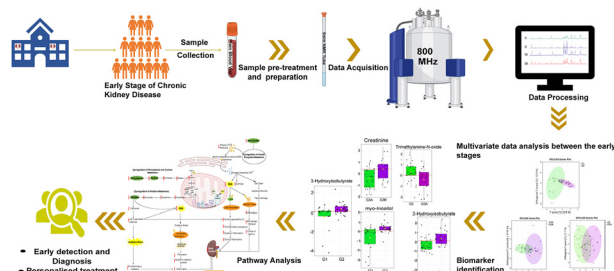
Bolaji Fatai Oyeyemi, Shruti Dabral, Amit Paramaraj, Sandhya Srinivasan, Gagan Deep Jhingan, Dhiraj Kumar, Chintamani,\* Abhinav Kumar\* and Néel Sarovar Bhavesh\*



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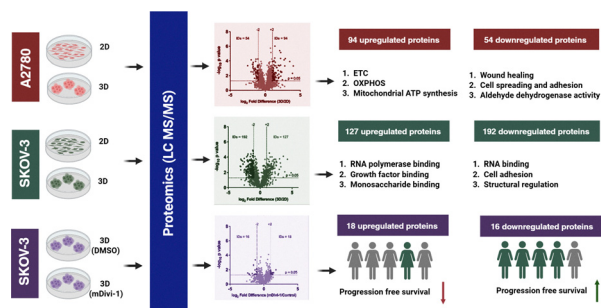
## Characterizing metabolic dysregulation in early-stage chronic kidney disease for diagnostic insights

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



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### An altered proteome in ovarian cancer stem-like cells: profiling of the mDivi-1 induced proteome and its clinical significance

Manita Raina, Tejan Lodhiya, Rahail Ashraf, Kalpana Tankay, Arunaja K., Raju Mukherjee\* and Sanjay Kumar\*

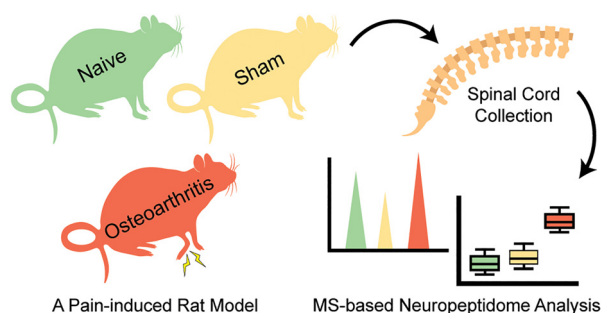
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### Comparative glycomic analysis of hawk (*Rupornis magnirostris*), caiman (*Caiman latirostris*) and sea turtle (*Caretta caretta*) tear films

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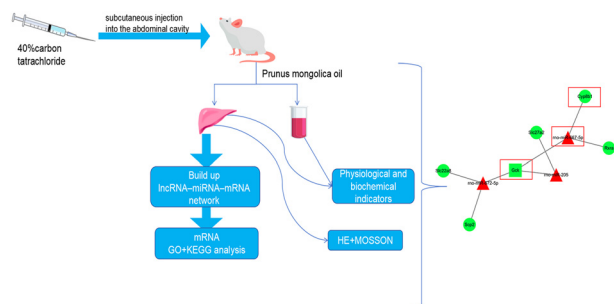
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### *Prunus mongolica* oil attenuates hepatic fibrosis via a lncRNA-mediated ceRNA network targeting dual PGC-1α/PPARγ and TGF-β/Smad3 pathways

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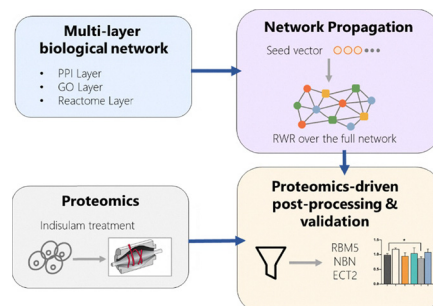


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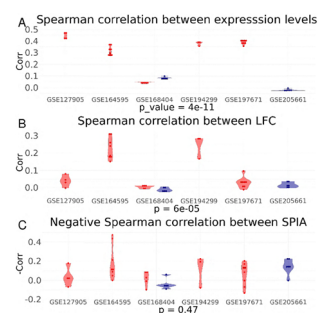
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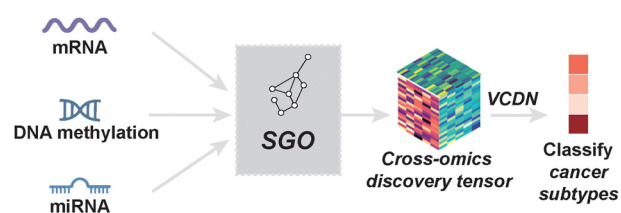
Nicolas Borisov, Yaroslav Ilnytsky, Boseon Byeon, Olga Kovalchuk\* and Igor Kovalchuk\*



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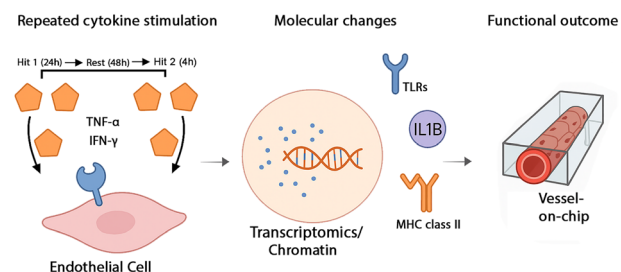
Guangji Zhang, Chunxiao Zhang, Pengpai Li, Duanchen Sun, Zhixia Yang and Zhi-Ping Liu\*



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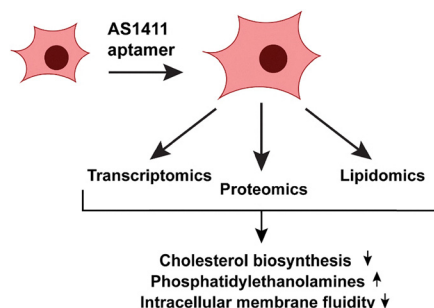
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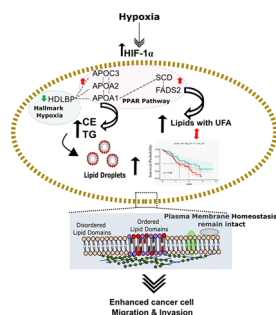
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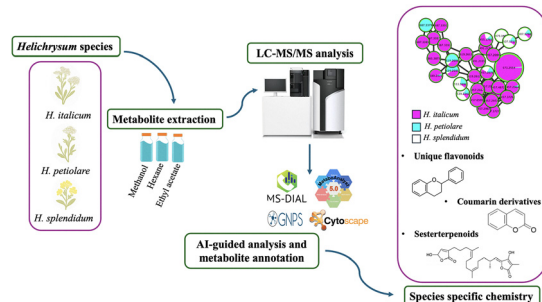
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## Hypoxia-induced alterations in lipid polyunsaturation and associated proteins drive aggressive metastasis in pancreatic cancer via the PPAR/hypoxia pathway

Prema Kumari Agarwala, Avinash Singh, Sanjeeva Srivastava and Shobhna Kapoor\*

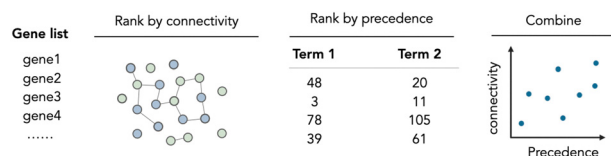
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## DeSciDe: a tool for unbiased literature searching and gene list curation unveils a new role for the acidic patch mutation H2A E92K

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