

Current Molecular Medicine

Extracellular vesicles in tumor diagnosis and treatment

Tumors display an organ-like structure and composed of heterogenous cells. Extracellular vesicles, including exosomes, microvesicles, and etc, played an important role in the initiation, progression and metastasis of tumors as intercellular signal transmitters. Recently, EVs have attracted much attention as a new determinand in diagnosis and drug carrier in treatment, due to their diverse contents and high biocompatibility. However, convenient isolation and quantitative analysis is still technically challenging in EVs studies, which largely limits our understanding and clinical application of EVs. Development of new approaches in EVs isolation and quantitation and their application in tumor diagnosis and treatment become a very hot topic in both biologists and medical doctors.

This special issue focuses on the advances of EVs related studies and their contribution to both diagnosis and treatment of tumors. Studies reveal the function of different EV subgroups and apply them into bedside are especially welcome.

Both original articles and focused reviews are invited.

Potential topics include but are not limited to the following:

- New technologies in EVs isolation and quantitation and their clinical application
- Roles of different EV subgroups in carcinogenesis, and related molecular mechanisms
- EV-associated RNA biomarker discovery and mechanism studies
- EV-associated protein biomarker discovery and mechanism studies
- EV-associated lipid biomarker discovery and mechanism studies
- Biogenesis of different EVs in cancer cells and other cells in tumor microenvironment
- Tumor derived EVs and their application in drug delivery
- Dendritic cells (DCs) derived EVs and their application in drug delivery
- Mesenchymal stem cells (MSCs) derived EVs and their application in drug delivery
- Bioengineering or chemical modification on EVs to facilitate drug delivery

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