







Special Issue Reprint

# MicroRNAs: Novel Biomarkers and Therapeutic Targets for Human Cancers

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Edited by Takahiro Ochiya Ryou-u Takahashi

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MicroRNAs (miRNAs) constitute a large family of small, approximately 20–22-nucleotide, non-coding RNAs that are involved in gene regulation, mainly at the post-transcriptional level. Multiple lines of evidence have indicated that miRNAs play important roles in the maintenance of biological homeostasis and that aberrant expression levels of miRNAs are involved in the onset of many diseases, including cancer. In various types of cancer, miRNAs play important roles in tumor initiation and development. Recently, miRNAs have been demonstrated to also be secreted via small endosome-derived vesicles called exosomes—which are derived from multiple cell types—including immunocytes and cancer cells. Exosomal miRNAs exert important functions in cell-to-cell communication and have been investigated as prognostic and diagnostic biomarkers.

This Special Issue of the *Journal of Clinical Medicine* will cover the following important aspects of miRNA functions in cancer biology:

- Biosynthesis of miRNA and its roles in gene regulation;
- Roles of miRNA in cancer biology, including
- 1) Roles of miRNA in tumor initiation and development,
- 2) Roles of miRNA in drug resistance,

NA in metastasis;

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- Roles of circulating miRNAs in cancer development;
- Expression levels/profiles of body fluid miRNAs for cancer diagnosis, prognosis, and



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