Towards ncRNA-based therapeutics for lung cancer

Aims & Scope:

Lung cancer is the leading cause of cancer-related death worldwide, accounting for more than 1.4 million deaths per year. Despite improvements in early diagnosis and new therapeutic strategies, lung cancer remains the number one cause of cancer related deaths in both men and women, and the overall 5-year survival remains only of 10–20%.

The ncRNAs are non-coding RNAs that including miRNAs, lncRNAs, circRNAs and so on. They usually regulate gene expression at a post-transcriptional level. Mounting evidence suggests that ncRNAs exert pivotal effects in lung carcinogenesis. And ncRNA have recently been identified as attractive targets for diagnostics and therapeutic intervention in lung cancer. A better understanding of the role that ncRNAs play in the disease will contribute to the development of new diagnostic biomarkers and individualized therapeutic tools.

Although advanced drugs have been tried in clinic, the therapeutic success has largely been hampered due to drug-resistance. ncRNAs may be involved in the acquisition of resistance to a number of cancer treatments. Therefore, targeting ncRNAs may be an attractive strategy for developing novel and more effective individualized therapies, improving drug efficiency. However, the challenge of development of safe and reliable delivery systems for miRNA-based therapy needs to be overcome before ncRNA-based therapeutics become a reality.

In this special issue, we will summarize recent research advances in the relationship between ncRNA and lung cancer, including ncRNA roles in lung carcinogenesis, the involvement of ncRNA in different mechanisms of drug resistance. And we’ll discuss new ncRNA as potential biomarkers for diagnostics, potential use of ncRNA as therapeutic agents in lung cancer and new strategies to achieve in vivo tissue specific delivery.
Topics to be covered (main bioactive component):


Keywords:

ncRNA; lung cancer; therapeutics; carcinogenesis.

Schedule: The final articles will be delivered by September 2019.