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Mezinárodní spolupráce v oblasti „*in vivo*“ zobrazovacích technik
Laboratoř Metalomiky a Nanotechnologií

Vás zve na seminář:

microRNA electrochemical detection in connection with specific magnetic separation

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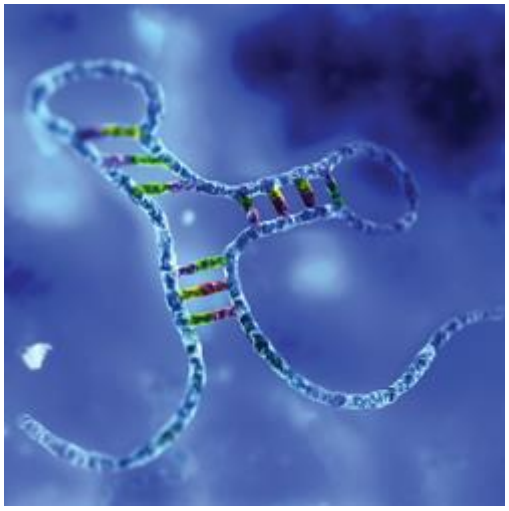
Abstrakt

The microRNAs (miRNAs) belong to small non-protein-coding RNAs. These miRNAs have different expressions at different diseases and they can serve as diagnostic and prognostic markers. That's why the sensitive, simple, fast and cost-effective detection method is required. For optimal MPs utilization the binding capacity of MPs surface was determined. To the MPs the anti-miR-124 was added and after immobilization step and MPs separation the amount of unbound antisense ODN in retantate was measured. In the Fig. 1A the dependence of anti-miR-124 amount remained in the retentate on applied concentration to MPs is shown. In addition of 3µM probe the unbound probe amount was only 3.3%. So for following experiment s was 3µM anti-miR-124 added to 500 µg of MPs. The next optimization step was the elution temperature determination. During the elution dsRNA denaturation occurs and the miR-124 is released into the elution solution. The goal was to find such a temperature at which would be released maximum miR-124 amount and simultaneously that does not cause the damage of streptavidin-biotin binding. For following experiments was elution temperature of 70°C was used, the peak height was 349 nA and the SWV signal of blank was insignificant.



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