

Rapid Measurement of Concussion-related Saliva microRNAs with a Novel Bio-device

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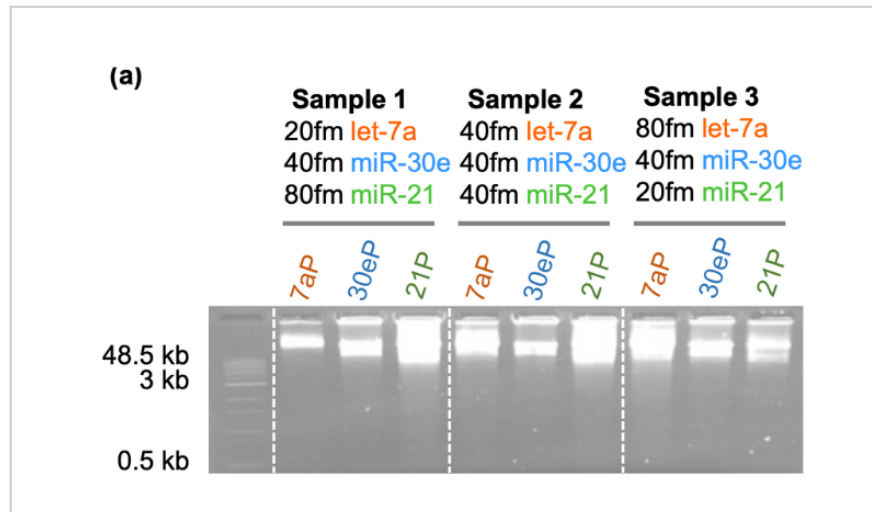


Figure 1. Gel images of RCA products

Technology Summary

Mild traumatic brain injuries (mTBI), or concussions, are the most common type of traumatic brain injury and are often underdiagnosed and underreported due to delayed symptoms and the conventional subjective assessment methods. Rapid and accurate mTBI diagnoses remains as an unmet need for effectively managing mTBI. Researchers suggest that salivary miRNAs are promising biomarkers for diagnoses based on varying expression levels. Current profiling methods fall short of the requirements of being rapid, inexpensive and accurate, which the proposed technology aims to overcome.

Application & Market Utility

The demand for mTBI diagnoses is extremely high due to the commonality, especially among national and worldwide sports team members. It is estimated that the market for concussion diagnoses and related products is \$7 million with an estimated growth to \$9 million by 2028. With the nonexistence of alternative rapid, inexpensive, and accurate diagnostics, the proposed invention has the opportunity to be the first of its kind. With the characteristics of the invention, it could be an optimal choice for sports teams where concussions from contact are most seen.

Next Steps

This method was tested on saliva samples collected from healthy volunteers and compared to other products on the market. Inventors are now seeking licensing opportunities with companies interested in diagnostics.

TECHNOLOGY READINESS LEVEL

4

Seeking

Licensing | Research

Keywords

- Concussion
- Brain Injury
- Diagnosis
- miRNA

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