

# mRNA deregulation through microRNAs as a highly relevant mechanism in lymphomagenesis

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Burkitt lymphomas

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Diffuse large B-cell lymphomas

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Follicular lymphomas



miRnome sequencing of patients



- 22 miRNAs separate Burkitt from diffuse large B-cell lymphomas/follicular lymphomas
  - 13 regulated by MYC
  - 3 unreported microRNAs

- recurrent mutations of hsa-miR-142
- editing of the hsa-miR-376 cluster

There is evidence for microRNA editing in lymphomagenesis



Argonaute-2 photoactivatable ribonucleoside-enhanced cross-linking and immunoprecipitation experiments to analyze the direct physical interactions of microRNAs with mRNAs

- 208 mRNAs directly targeted by MicroRNAs
- 328 mRNAs directly targeted by MicroRNAs

There are several regulatory pathways of relevance in lymphomagenesis including Ras, PI3K-Akt and MAPK signaling pathways, also recurrently deregulated in lymphomas by mutations