

New study may hold promise for future disease therapies

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Linking genetic material microRNAs with cells that regulate the immune system could one day lead to new therapies for treating cancer, infections and autoimmune diseases, according to a Henry Ford Hospital study.

Qing-Sheng Mi, M.D., Ph.D., the study's senior author and director of Henry Ford's Immunology Program, says their findings are important because it shows for the first time an association between microRNAs and a key subset of immune regulatory [cells](#) in the body, natural killer [T cells](#) (NKT), which are known to lead to autoimmune diseases and cancer.

The study is being published June 1 in the [Proceedings of the National Academy of Sciences](#).

"While further studies are needed, we believe this provides important insight about how microRNAs can regulate NKT cells, and signals a major step forward in biology science for looking at new therapies for treating some chronic immune disease," Dr. Mi says.

MicroRNAs are short strands of [genetic material](#) that researchers believe perform a vital role in healthy development by turning off [gene activity](#). NKT cells potent regulators of diverse immune responses in the body.

By genetically modifying mice with specific deletion microRNAs in hematopoietic stem cells, Henry Ford researchers showed that the lack

of microRNAs can block the development and function of normal NKT cells.

If researchers are successful at identifying unique microRNA that specifically regulate NKT cells, Dr. Mi, it could lead to new treatment therapies for some chronic disease.

Source: Henry Ford Health System ([news](#) : [web](#))

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