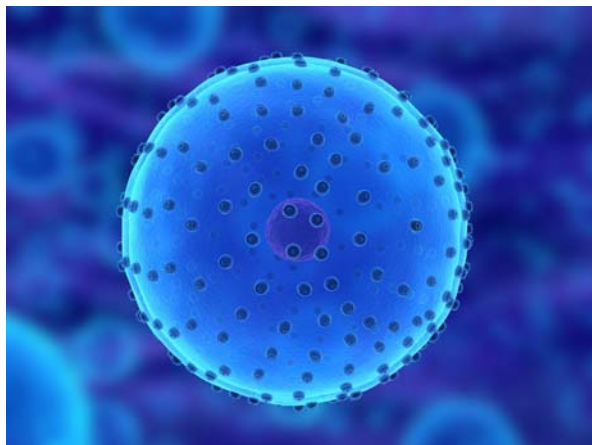




B Cell Specific Delivery of siRNA for Treatment of Lymphoma



DESCRIPTION

Lymphoma affects tens of thousands of people in the US per year. Most lymphomas are of B-cell origin and are characterized by expression of oncogenes that promote the uncontrolled proliferation and survival of the malignant cells. Standard chemo- and radio-therapy used to treat lymphoma are rarely curative and many lymphomas relapse within the first year. Newer drugs such as proteasome, kinase and HDAC inhibitors show promising results, but are non-specific, thereby causing unwanted effects in non-lymphoma tissues. A more targeted approach to treat lymphoma is needed.

Knockdown of oncogenes by small interfering RNA (siRNA) is a promising approach for directly treating B-cell lymphoma. This technology describes a B-cell specific siRNA delivery system for silencing one or more predetermined target genes, including a wide range of oncogenes.

KEY ASPECTS

- Aptamer directly targets siRNA to B cells and facilitates entry into the cell for maximal efficacy in knockdown of target gene(s)
- Cell type-specific delivery of siRNA eliminates off-target side effects associated with current therapies
- Potentially useful for treating a wider range of B-cell related disorders including graft-versus-host-disease and autoimmune disorders

PUBLISHED DATA

- Publication available upon request: "Dual Function BAFF Receptor Aptamers Inhibit Ligand Induced Proliferation and Deliver siRNAs to NHL cells." K. Tiemann, P. Swiderski, S. Forman, **J. Rossi**, J. Zhou. Submitted to *Blood*.

INTELLECTUAL PROPERTY

Title	US Patent Application	Date Filed
RNA aptamers against BAFF-R as cell-type specific delivery agents and methods for their use	61/323,761	4/13/2010

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