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

INTELLECTUAL PROPERTY

<table>
<thead>
<tr>
<th>Title</th>
<th>US Patent Application</th>
<th>Date Filed</th>
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<td>RNA aptamers against BAFF-R as cell-type specific delivery agents and methods for their use</td>
<td>61/323,761</td>
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CONTACT
Ryan Kelly, Ph.D.
Manager, Office of Technology Licensing
Telephone: (626) 471-9359 Email: rykelly@coh.org

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