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European patent specification

(11) NO/EP 3558943 B1

NORWAY

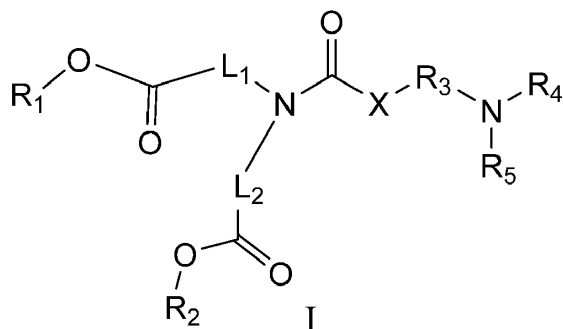
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C07C 333/04 (2006.01)

Norwegian Industrial Property Office

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(73)	Proprietor	Arcturus Therapeutics, Inc., 10628 Science Center Drive Suite 250, San Diego, CA 92121, USA
(72)	Inventor	PAYNE, Joseph, E., c/o Arcturus Therapeutics, Inc. 10628 Science Center Drive Suite 250, San Diego, CA 92121, USA CHIVIKULA, Padmanabh, c/o Arcturus Therapeutics, Inc. 10628 Science Center Drive Suite 250, San Diego, CA 92121, USA TANIS, Steven, P., c/o Arcturus Therapeutics, Inc. 10628 Science Center Drive Suite 250, San Diego, CA 92121, USA KARMALI, Priya, c/o Arcturus Therapeutics, Inc. 10628 Science Center Drive Suite 250, San Diego, CA 92121, USA
(74)	Agent or Attorney	ZACCO NORWAY AS, Postboks 488, 0213 OSLO, Norge

(54)	Title	IONIZABLE CATIONIC LIPID FOR RNA DELIVERY
(56)	References Cited:	WO-A1-2016/081029

Enclosed is a translation of the patent claims in Norwegian. Please note that as per the Norwegian Patents Acts, section 66i the patent will receive protection in Norway only as far as there is agreement between the translation and the language of the application/patent granted at the EPO. In matters concerning the validity of the patent, language of the application/patent granted at the EPO will be used as the basis for the decision. The patent documents published by the EPO are available through Espacenet (<http://worldwide.espacenet.com>) or via the search engine on our website here: <https://search.patentstyret.no/>

Patentkrav**1.** En forbindelse med formel I

5 hvor

R_1 er en forgrenet, ikke-syklisk alkyl eller alkenyl med 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, eller 22 karboner;

L_1 er lineær alkylen med 1 til 15 karboner;

10 R_2 er en forgrenet, ikke-syklisk alkyl eller alkenyl med 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, eller 22 karboner;

L_2 er en lineær alkylen med 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 eller 15 karboner;

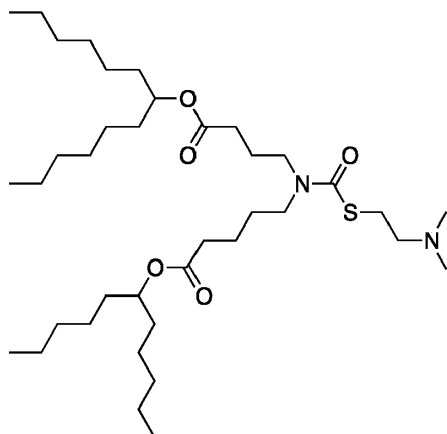
X er O eller S;

R_3 er en lineær alkylen med 1, 2, 3, 4, 5, eller 6 karboner; og

15 R_4 og R_5 er de samme eller forskjellige, hver en lineær eller forgrenet, ikke-syklisk alkyl med 1, 2, 3, 4, 5, eller 6 karboner;

eller et farmasøtisk akseptabelt salt eller solvat derav.

2. Forbindelsen ifølge krav 1, hvor forbindelsen er

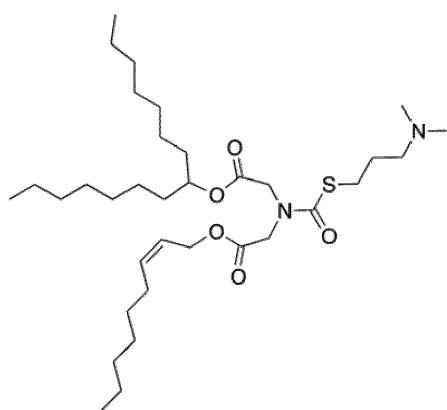


3. Forbindelsen ifølge krav 1, hvor R₁ har 8, 9, 10, 11, 12, 13, 14, 16, eller 17 karboner.

4. Forbindelsen ifølge krav 1, hvor R₁ omfatter to identiske alkyl- eller alkenyl-grupper.

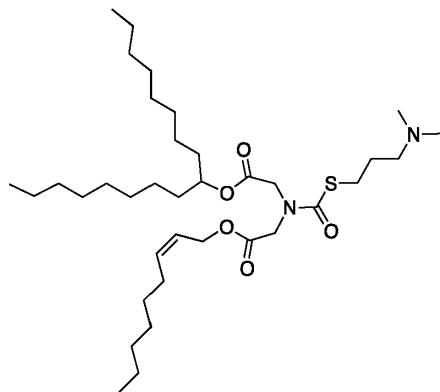
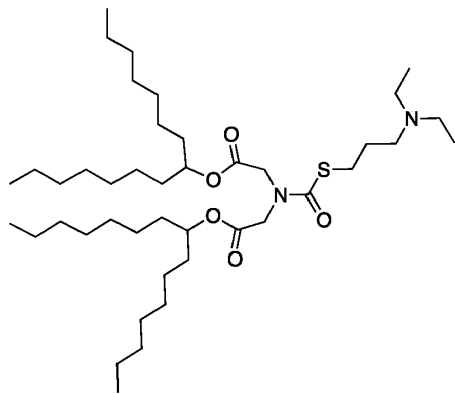
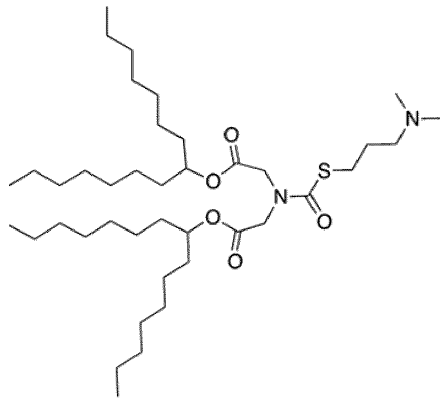
5. Forbindelsen ifølge krav 1, hvor L₂ har 4, 5, 6, eller 7 karboner.

6. En forbindelse valgt fra gruppen som består af



EP 3 558 943

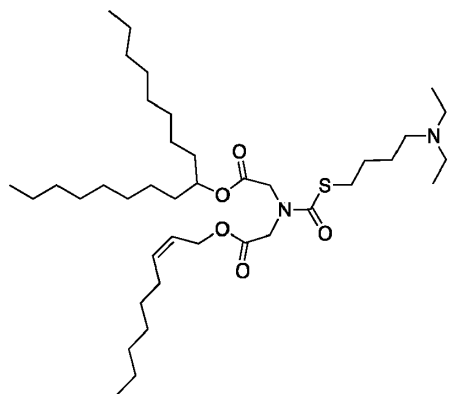
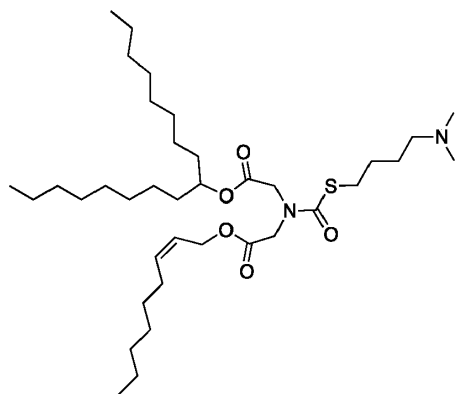
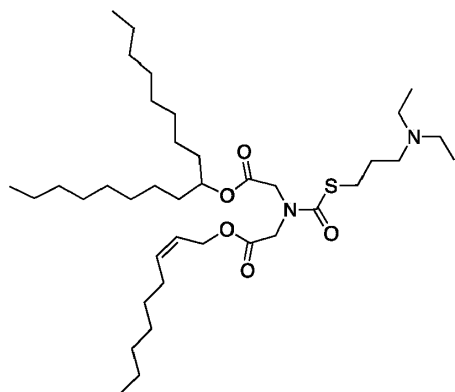
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EP 3 558 943

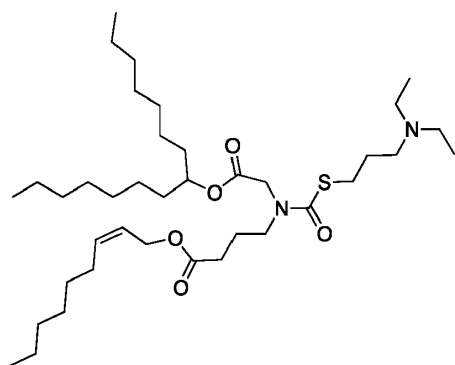
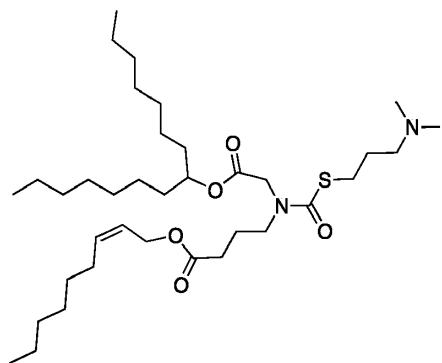
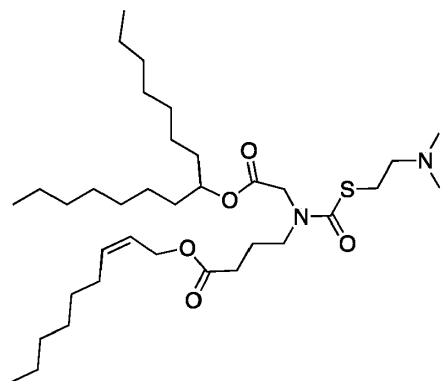
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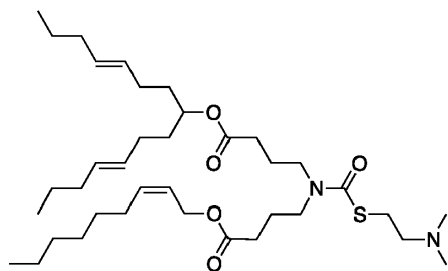
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EP 3 558 943

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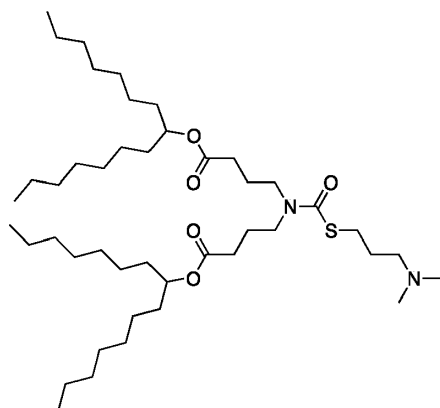
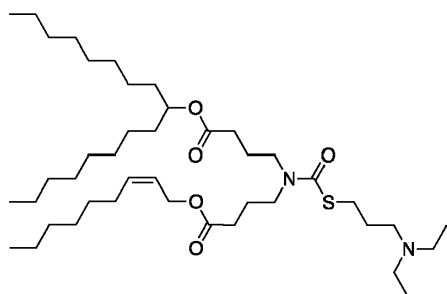
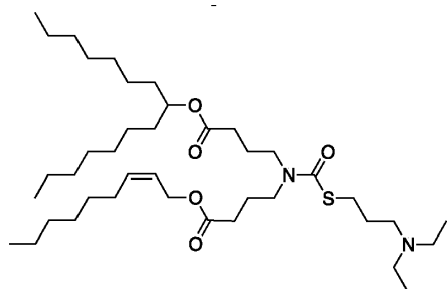


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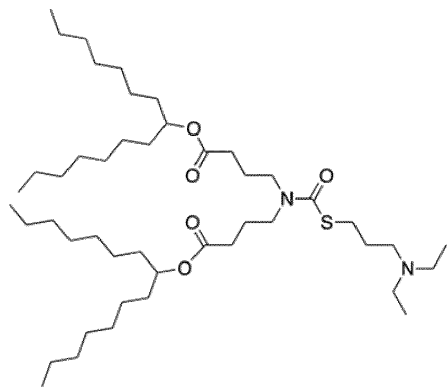


EP 3 558 943

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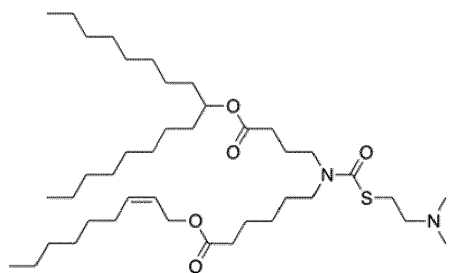
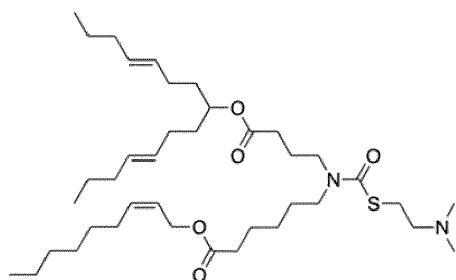


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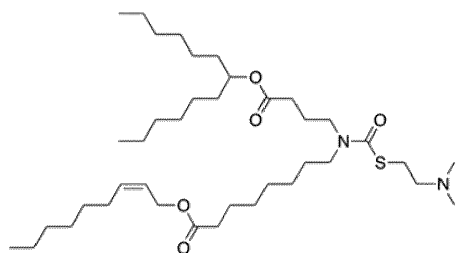
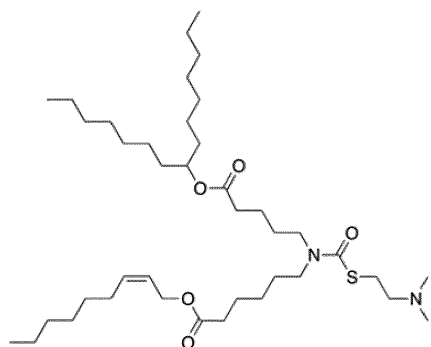


EP 3 558 943

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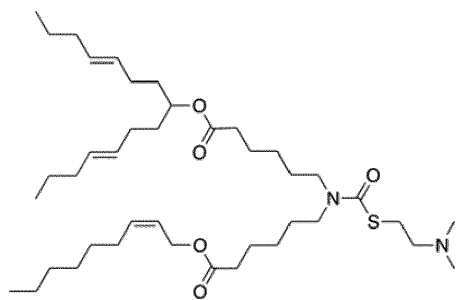
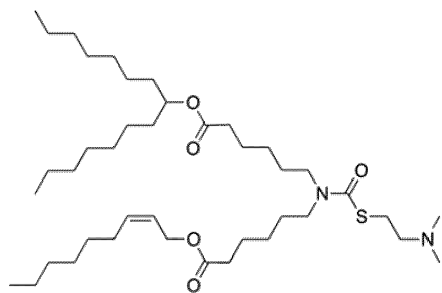
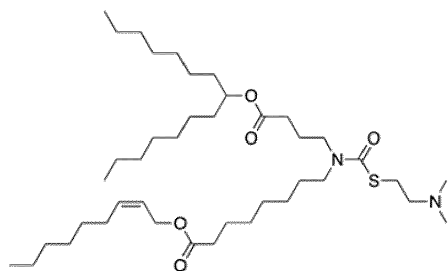


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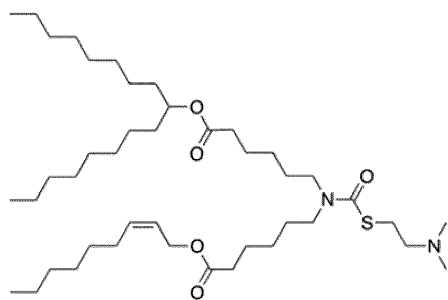


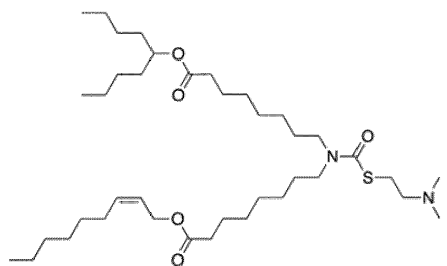
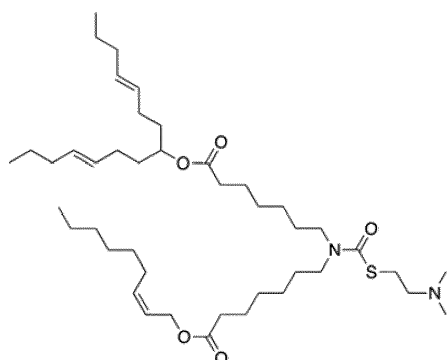
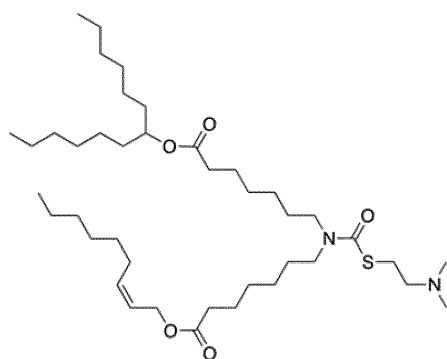
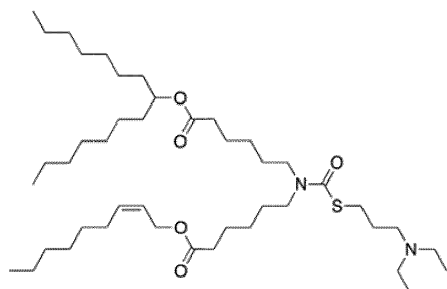
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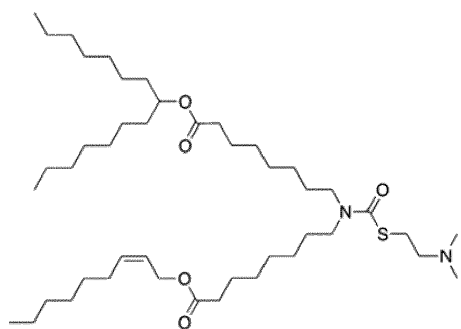
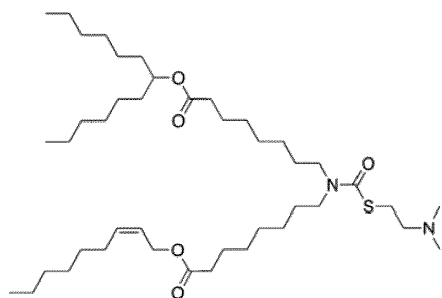
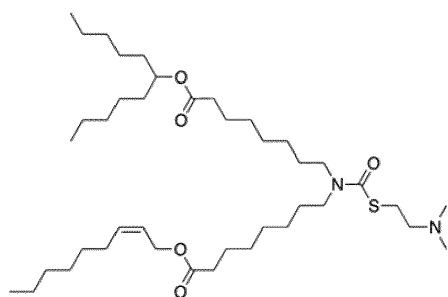
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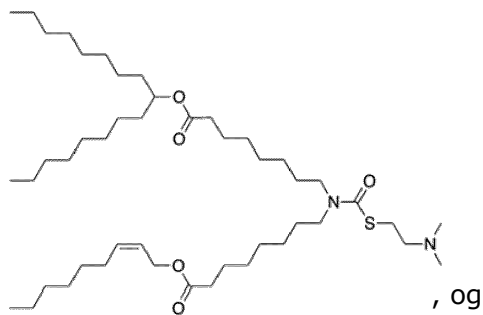
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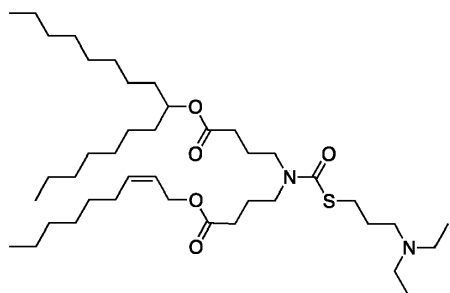


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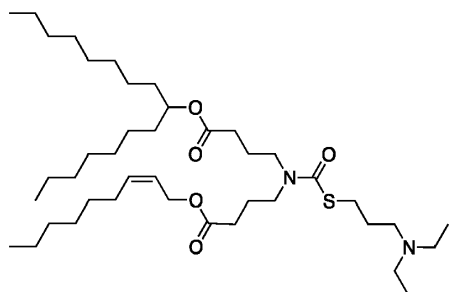
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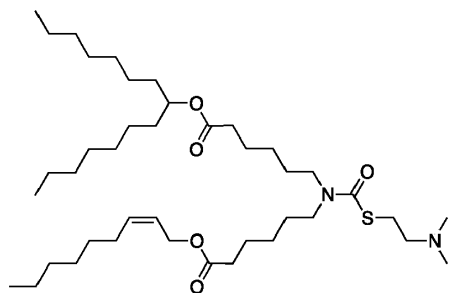


7. Forbindelsen ifølge krav 6, hvor forbindelsen er



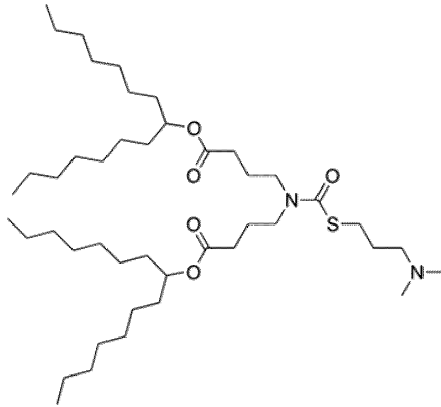
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8. Forbindelsen ifølge krav 6, hvor forbindelsen er



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9. Forbindelsen ifølge krav 6, hvor forbindelsen er



10. En lipidsammensetning som omfatter en forbindelse ifølge et hvilket som
5 helst av krav 1 til 9, og en nukleinsyre.

11. Lipidsammensetningen ifølge krav 10, hvor lipidsammensetningen er en
lipidnanopartikkel som innkapsler nukleinsyren.

10 **12.** Lipidsammensetningen ifølge krav 10, hvor nukleinsyren er et mRNA.