PATENTS

Mati Karelson

(as of August 6th, 2016)

1. Saarma; Mart (Helsinki, FI), Karelson; Mati (Vahi, EE), Bespalov; Maxim (Helsinki, FI), Pilv; Mehis (Tallinn, EE), **Methods of facilitating neural cell survival using GDNF family ligand (GFL) mimetics or RET signaling pathway activators**, U.S. Patent No. 8,901,129 (December 2, 2014), European Patent No.:EP2509953 (March 30, 2016).

*Disclosed are compounds and methods for treating neurological and other disorders by administering to a subject in need thereof an effective amount of a compound having binding and/or modulation specificity for GFR.alpha. receptor molecules, which can be mimetics of glial-derived neurotrophic factor (GDNF) family ligands (GFLs), GFR.alpha./RET signaling pathway agonists, and/or direct RET agonists (activators).*

1. Karelson; Mati (Tartumaa, EE), Saarma; Mart (Helsinki, FI), Pilv; Mehis (Tallinn, EE), **Antisense agents combining strongly bound base-modified oligonucleotide and artificial nuclease**, U.S. Patent No. 7,786,292 (August 31, 2010), European Patent No.: EP2013044 ( August 29, 2012).

*The invention provides compounds having a chelating moiety and an oligonucleotide sequence wherein the oligonucleotide includes one or more modified nucleobases, such as hydroxynucleobases. The disclosed compounds are suitable for antisense therapy. The chelating moiety can be complexed to an ion of a lanthanide metal. These compounds are efficient translation inhibitors of nucleic acids and have increased binding affinity for target nucleic acids. The invention also includes compositions and methods of using these compositions as antisense therapy.*

1. Karelson; Mati (Tartu, EE), Seli; Neinar (Tartu, EE), **Composite materials for infrared sensing markers,** U.S. Patent No. 7,662,315 (February 16, 2010).

*The invention discloses composite materials for distant laser sensing in the infrared spectral region. The composites are disclosed to consist of the conductive polymer, the infrared active compound and the thermoplastic matrix polymer.*

1. Karelson; Mati (Vahi, EE), Saarma; Mart (Helsinki, FI), Pilv; Mehis (Tallinn, EE), Strongly bound base-modified oligonucleotides, U.S. Patent Application 20120171279 (July 5, 2012).

*The invention provides compounds having a chelating moiety and an oligonucleotide sequence wherein the oligonucleotide includes one or more modified nucleobases, such as hydroxynucleobases. The disclosed compounds are suitable for antisense therapy. The chelating moiety can be complexed to an ion of a lanthanide metal. These compounds are efficient translation inhibitors of nucleic acids and have increased binding affinity for target nucleic acids. The invention also includes compositions and methods of using these compositions as antisense therapy.*

1. Saarma; Mart; (Helsinki, FI) ; Merits; Andres; (Tartu, EE) ; Karelson; Mati; (Tartu, EE), **Use of Oligonucleotides with Modified Bases as Antiviral Agents**, U.S. Patent Application 20110171287 (July 14, 2011).

*The invention relates to the use of oligonucleotides having modified nucleobases to inhibit gene expression and/or replication of viruses in a subject. The modified nucleobases may be mercapto-modified bases or hydroxy-modified nucleobases. It is contemplated that the oligonucleotides further comprise a nuclease complex which enhances anti-viral activity of the oligonucleotides.*

1. Karelson, Mati (EE), Karelson, Kaupo (EE), Leis, Jaan (EE), Seli, Neinar (EE), A method for manufacturing smart packaging material, European Patent No. EP2156374 (05.10.2011.).

*This invention relates in general to the field of smart packaging materials. More specifically, this invention relates to a manufacturing method of low-cost plastic for packaging materials embedding tags possessing the magnetic activity.*