

# 4-N-Derivatized Sialic Acids and Related Sialosides

Tech ID: 33647 / UC Case 2024-540-0

## ABSTRACT

Researchers at the University of California, Davis have developed advanced compounds targeting neuraminidase activity to combat viral infections and understand cellular mechanisms.

## FULL DESCRIPTION

This technology encompasses the synthesis of sialic acid (Sia) derivatives designed for the inhibition of neuraminidases, crucial in the pathogenesis of viral infections and several cellular processes. These compounds, including pharmaceutically acceptable salts, are based on specific structural formulas that allow for targeted interaction with neuraminidases, offering potential therapeutic and research applications.

## APPLICATIONS

- ▶ Pharmaceuticals for the treatment of viral infections.
- ▶ Biomedical research tools for studying cellular processes and viral mechanisms.
- ▶ Diagnostic kits for neuraminidase activity and influenza virus detection.

## FEATURES/BENEFITS

- ▶ Targeted inhibition of neuraminidase activity.
- ▶ Potential to interfere with viral infections, including influenza.
- ▶ Can be used in research to purify neuraminidases or detect their presence.
- ▶ Offers a platform for further exploration of sialic acid's biological roles.
- ▶ Addresses challenges in synthetically producing biologically relevant sialic acids.
- ▶ Reduces difficulty in studying and targeting neuraminidase-related processes.
- ▶ Provides for lack of specific inhibitors for neuraminidase in biomedical research and therapy.

## PATENT STATUS

Country	Type	Number	Dated	Case
Patent Cooperation Treaty	Published Application	<a href="#">WO 2025/088529</a>	05/01/2025	2024-540

Additional Patent Pending

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## INVENTORS

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## OTHER INFORMATION

### KEYWORDS

infectious disease,  
Influenza A, influenza  
virus, influenza virus  
neuraminidase, influenza  
virus neuraminidase  
substrate, inhibitors &  
probes, influenza virus  
vaccine

### CATEGORIZED AS

- ▶ **Medical**
  - ▶ Diagnostics
  - ▶ Disease:  
[Infectious Diseases](#)
  - ▶ New Chemical  
[Entities, Drug Leads](#)
  - ▶ Other
  - ▶ Therapeutics

RELATED CASES

2024-540-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Purification of Glycosphingosines and Glycosphingolipids
- A Photobacterium Sp. Alpha2-6-Sialytransferase 9Psp2.6St) A366g Mutant With Increased Expression Level And Improved Activity In Sialylating Tn Antigen
- Synthesis of Capsular Polysaccharides
- Legionaminic Acid Glycosyltransferases for Chemoenzymatic Synthesis of Glycans and Glycoconjugates
- Using Escherichia coli to Produce Human Milk Oligosaccharide Lactodifucotetraose
- Substrate And Process Engineering For Biocatalytic Synthesis And Facile Purification Of Human Milk Oligosaccharides (HMOs)
- O-Acetyl Glycosphingosines and Gangliosides, as well as Their N-Acetyl Analogs
- Stable N-acetylated analogs of Sialic Acids and Sialosides
- Alpha1–2-Fucosyltransferase for Enzymatic Synthesis of Alpha1–2-linked Fucosylated Glycans
- Engineering Pasteurella Multocida Heparosan Synthase 2 (Pmhs2) For Efficient Synthesis Of Heparosan Heparin And Heparan Sulfate Oligosaccharides
- One-Pot Multienzyme Synthesis of Sialidase Reagents, Probes and Inhibitors
- Novel Methods For Chemical Synthesis Of Lactosyl Sphingosines, Glucosylsphingosines, Galactosylsphingosines, And 3-O-Sulfogalactosylsphingosines

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