

Value-Added Products From Lignite

The use of lignite for running power plants is being discouraged the world over, as these lead to environmental pollution, global warming, and climate change. There is thus a need to find alternate uses for this rich resource that is available in many countries. Previously no specific compounds have been characterized from this source. Most of the products derived from lignite and sold in the market are black in color. We offer a water soluble colourless solid for use in agriculture, bio-medicine, and material science. One of these new compounds isolated shows mild anti-covid-19 activity. These could serve as an antiviral agent and be used in treatment of Alzheimer's disease.

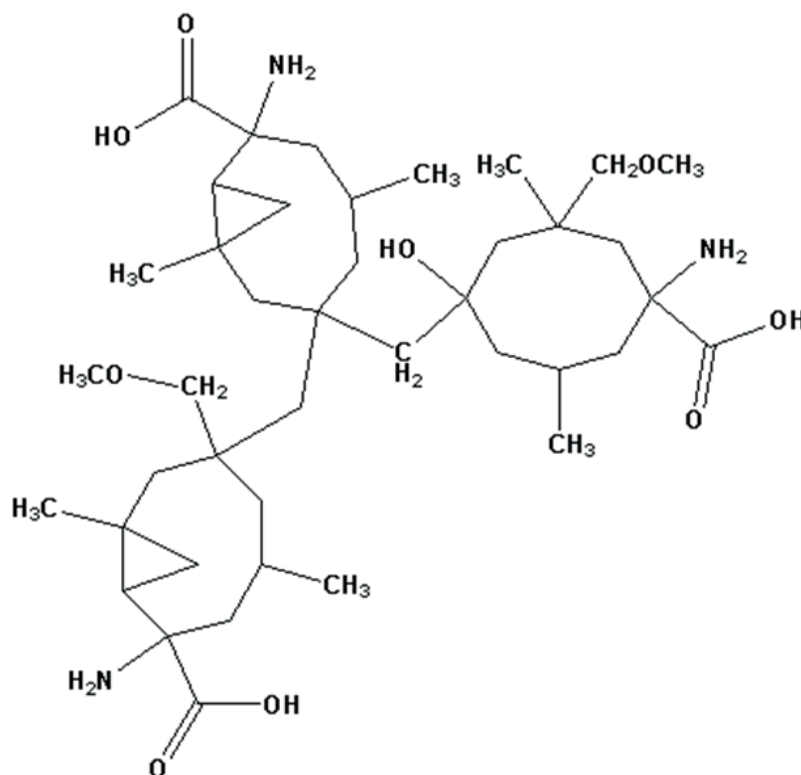
Name

Methanol adduct of 'trimeric' amino acid.

Status

Available for development and commercialization

Chemical Structure:



Molecular Formula: C₄₁H₇₁N₃O₉ Molecular weight m/z: 750.0171

Sectors of Application

- Agriculture
- Biomedicine
- Materials Science (For Dye Sensitised Solar Cells, DSSC) and Oxidation reduction catalysts

Summary

This invention and new developments relate to providing novel value-added products from lignite and a process for preparing value-added products. More particularly, this provides water soluble chiral amino acids/esters from lignite which have application in agriculture, biomedicine, and materials science.

Additional Information

Doxorubicin Conjugate Of Methanol Adduct Of 'Trimeric' Amino Acid

Doxorubicin is the most used anti-cancer drug with severe side effects esp. its cardiotoxicity. The new conjugate will be a nano, water soluble, slow-release anti-cancer agent, with possibly fewer side effects.

Metformin Conjugate Of Methanol Adduct Of 'Trimeric' Amino Acid

Metformin hydrochloride is used in the treatment of Diabetes type 2 and is the best-selling drug in India (Sales INR 103 crores/ year) but has the following known side effects:

- Feeling sick, nausea; Being sick (vomiting); Diarrhoea; Lactose acidosis; Stomach ache; Loss of appetite; A metallic taste in the mouth.
- We offer a formulation of Metformin hydrochloride and our 'trimeric' amino acid with less side effects compared to Metformin hydrochloride.
- Similarly, the conjugate with Metformin base and our 'pentameric' amino acid covalently bound to each other is a slow-release drug with less side effects.