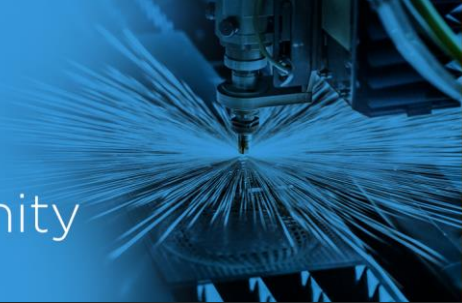




NovaUCD

Technology Licensing Opportunity



Vitamin E Synthesis

Industrial process for manufacturing of RRR vitamin E (natural form)



Opportunity

The worldwide market for Natural forms of Vitamin E is expected to grow at over 5%, and currently generated over 530 million US\$ in 2017.

Four tocopherols (class of organic chemical compounds, which have vitamin E activity) are available in nature and are absorbed with the diet, but only one RRR- α -tocopherol satisfies the criteria of being a vitamin. However Synthetic vitamin E manufactured is limited to one isomer α -tocopherol.

Technology Overview

The method uses a patented asymmetric synthesis approach to the preparation of the NVE, based on asymmetric Grignard methodology. Tertiary alcohol precursors of both C2 diastereoisomers of α -tocopherol can be prepared by a novel patented asymmetric Grignard synthesis.

The products were converted to their respective α -tocopherols in 3 steps, which allowed a definitive re-assignment of their absolute configurations. This presents a practical solution to a long-standing problem, the asymmetric construction of the C2 stereocentre of α -tocopherol. For instance both isomers: (R,R,R)- α -tocopherol and (S,R,R)- α -tocopherol could be prepared with the length of synthetic route depending on the desired specification

Key Features/Advantages:

Creates the pure form of Vitamin E which has key properties that are desired for cosmetics, advanced foods etc.

Value Proposition:

A Novel method to produce the pure forms of Vitamin E by a scalable method

Markets:

Nutraceuticals, medical, Food.

Lead Inventors:

Professor Declan Gilheany

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Contact:

Hugh Hayden
Knowledge Transfer
t: + 353 1 716 3725
e: Hugh.hayden@ucd.ie

FUNDERS:

