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Technology Opportunity

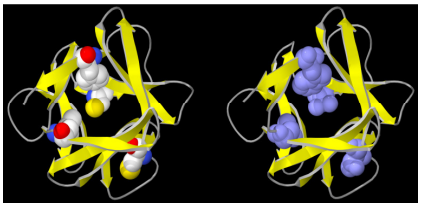



An Improved Form of Human Acidic Fibroblast Growth Factor (FGF-1)

The creation of a mutant form of human acidic fibroblast growth factor (FGF-1) with improved stability and functional properties is a unique discovery with a very large potential target market. Angiogenesis therapy can be greatly enhanced by this new technology. The growth factor is formulated without heparin, which reduces cost and eliminates the potential for introducing other disease, such as BSE (Mad Cow Disease). Additionally, improvements in potency and functional half-life may significantly reduce the effective dosage.

Applications

- Can be injected at the site of a vascular blockage to cause the development of new vasculature to supply blood to previously hypoxic tissue
- Treatment of patients with coronary artery disease
- Therapy of ischemic limbs where there is a potential for both tissue and nerve regeneration
- Enhanced wound-healing



Molecular structures of wild-type FGF-1 (left) and a mutant version (right)
Where the sites of mutation (light blue) are buried, the surface structure is not disrupted and stability and functional half-life are enhanced.

Advantages

- More stable, has a longer half-life, and is 100 times more reactive than wild-type FGF-1
- Because heparin is not used in the formulation, cost is reduced and safety is increased
- Less dosage is required than FGF-1
- Better controlled than FGF-1
- Patent protection (unlike wild-type FGF-1)

Technology

This is a cutting-edge “hidden design” protein engineering technique to enhance protein function while minimizing immunogenic potential.

Technology Opportunity

The Inventors

Michael Blaber, Ph.D

Dr. Blaber is a Professor of Biomedical Sciences with 26 years of experience in protein chemistry and protein engineering. He is ranked as one of the top 40 structural biologists, world-wide (http://www.molecularstructure.org). Dr. Blaber's research has appeared in 72 peer-reviewed publications in the areas of protein stability and engineering.

Jihun Lee, Ph.D

Dr. Lee is a Postdoctoral fellow and co-inventor of the "hidden design" protein engineering principle. She has created over 29 mutant fibroblast growth factor-1 proteins that have been deposited into the structural databank. Dr. Lee has had ten peer-reviewed publications in top biochemical journals.

For Licensing Opportunities Contact

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