



New Licensing Opportunity

Protease inhibitors that overcome drug resistance of pathogens (especially HIV)



Dr. Jordan Tang

Category: Therapeutic

Field: Immunology – Concept is applicable to treatment against pathogens in general. However, OMRF’s study was focused on human immunodeficiency virus (HIV).

Inventor: Dr. Jordan Tang

Patent Information: Strong IP position. US Patent # 6969731. Foreign applications pending.

Background: Drug resistance is a major problem with the treatment of most pathogens, and particularly in HIV. HIV protease inhibitors are among the most powerful drugs in suppressing HIV in patients. However, HIV has developed resistance (by mutating its protease) to most protease inhibitor drugs so far marketed or used in clinical trials. The strains of HIV containing mutant proteases are less vulnerable to inhibitor drugs and are able to replicate better and maintain infection. No effective principle exists for the design of resistance-proof HIV protease (HIVPr) inhibitors.

Invention: OMRF has developed a new inhibitor based on a novel concept for designing HIVPr inhibitors that are not vulnerable to drug resistance.

Data shows that this inhibitor is effective against many known HIVPr mutants that are resistant to other HIVPr inhibitor drugs.

Disadvantages of Traditional Approach:

The most common method of treatment is to determine the drug that a pathogen is sensitive to, and then treating the patient with that drug. Another approach is the use of a mixture of multiple drugs, preferably having different mechanisms of action, to block the life cycle of the pathogen before it can develop drug resistance. In the case of HIV, this second approach has been widely adopted. Unfortunately, HIV mutates extremely rapidly, and becomes resistant even to these combinations of drugs.

Advantages of OMRF Technology:

Drug resistance of pathogens, especially of that of HIV, is an unresolved problem. The new OMRF technology provides for the design of HIVPr inhibitor drugs that are not vulnerable to drug resistance. In short, this technology addresses a vital and unmet need in the field of HIV/AIDS therapy.

Stage of Development of Technology: In vitro data is available. Technology is ready for aggressive development. We are seeking licensing/research partners to bring this to market.



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