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For Immediate Release

UMN Pharma, Inc.

## IHI Corporation and UMN Pharma Announce Manufacturing Collaboration

IHI Corporation and UMN Pharma today executed an agreement for the formation of a joint venture focused on the production of drug substance for influenza vaccine through the use of cell culture. This is the first time that cell culture has been used for the production of influenza vaccine substance in Japan. The Agreement was executed on the 25<sup>th</sup> of January.

Under the terms of this agreement, IHI Corporation and UMN Pharma will jointly establish a manufacturing company focused on the production of vaccine substance for influenza vaccine. IHI Corporation is going to provide financial support to UMN Pharma in January of 2010. This investment underscores IHI's strong interest and expertise in the area of medical and pharmaceutical plant manufacturing.

The manufacturing company will be established in Akita City in April of 2010 and actual production will begin in 2012. This is the first time a manufacturing system using cell culture has been established in Japan.

UMN Pharma has initiated Phase II clinical trials for the development of UMN-0501 which utilizes a baculovirus expression system to produce protein by cell culture. This cell culture method represents a large improvement over traditional egg-based production methods that can take six months or longer to yield product. UMN-0501 can be produced in only two months. Utilizing the baculovirus expression system to produce protein by cell culture also allows for a larger yield meaning that UMN can provide a large amount of vaccine. In addition, this expression system allows UMN to completely avoid the use of live virus.

IHI Group and UMN Pharma have intensely studied the construction of a manufacturing facility focused on influenza, the ability to scale-up and also how to manufacture vaccines using cell culture. IHI and UMN have been able to combine their mutual knowledge to establish a highly effective and efficient system for the manufacturing influenza vaccines.

IHI Corporation is focused on contributing to the security and safety of society and promoting social responsibility to the citizens of Japan.

UMN Pharma is developing UMN-0501 for H5N1 pandemic influenza and is developing UMN-0502 focused on seasonal influenza. UMN Pharma's collaboration with IHI Corporation will allow for the quick and large scale production of UMN-0501 and UMN-0502, thus enabling UMN Pharma to rapidly address Japan's influenza vaccine needs.



## If you have any questions, please contact

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