



## Pure Protein Announces Soluble Class II HLA Technology Breakthrough

***The technology development has substantial applications for the \$37 billion autoimmune disease market, transplantation, infectious diseases, cancer and other new disease targets.***

**Oklahoma City, OK and Austin, TX – October 28, 2009 – [Pure Protein, L.L.C.](#)**, a biopharmaceutical company specializing in diagnostic and therapeutic reagents for use in immunology research and development, has announced that [Chief Scientist William Hildebrand](#), Ph.D., and his team, have developed soluble Class II human leukocyte antigens (HLA). This represents a significant technology breakthrough that can dramatically impact multiple pharmaceutical and medical sectors and has enormous market potential. Autoimmune disease is a key area of interest for HLA research and product development.

### **Molecular Fingerprints for the Immune System**

HLA Class II proteins beneficially serve as molecular fingerprints for the immune system and direct immune responses to attack infections. But they are also responsible for initiating the rejection of transplanted organs and tissues, as well as deleterious autoimmune responses.

Each person's unique set of Class II HLA molecules provides a diverse immune response to infections. While diversity is advantageous in regards to maintaining good health, it makes studying and treating this system a challenging task. Pure Protein is now able to provide a solution through its native Class II HLA proteins to characterize and modulate human immune responses.

Pure Protein is now producing highly purified Class II HLA proteins through its patent-pending methodology. Large quantities of soluble HLA (sHLA) protein from human cell lines are available for use in transplantation, drug target discovery and bio-therapeutic development. The company's soluble HLA (sHLA) production method generates pure, single species antigens with correct cellular processing, enabling powerful insight into the workings of diseased cells and the body's response to them.

Competing HLA production methods involve destruction of the cells followed by extensive yet inefficient purification steps that do not yield highly purified protein. Pure Protein's sHLA preparations are comprised of single specificity proteins without any other components of the cell. Because the company uses a recombinant form of HLA that requires minimal downstream purification, the protein can be produced in large quantities (tens of milligrams) with high purity and specificity. This breakthrough in production will facilitate the use of HLA in therapeutic areas requiring significant clinical validation.

### **Market Potential and Business Development**

William C. Strieber, Executive Vice President of Pure Protein, said, "Our development of an efficient way to produce soluble Class II gives Pure Protein an extraordinary opportunity to create many new avenues to the diagnosis and treatment of autoimmunity, infectious diseases, cancer and transplantation related maladies. We look forward to the new collaborations the company is building to take full advantage of the leading-edge, superior technology that we can provide market leaders."

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Pure Protein's soluble Class II HLA molecules address multiple unmet needs from which a broad variety of products can be developed for several multi-billion dollar markets. The global market for autoimmune disease treatments is estimated to be at \$37.84 billion in 2009, and is growing at a CAGR of 12.7% from 2009 to 2014 to reach an estimated \$68.81 billion in 2014 (1). [The US tissue and organ clinical transplantation market](#) is expected to grow to \$5.25 billion by 2012 (2). In infectious diseases therapeutics (non-antibiotic), the US market was \$13.5 billion in 2005 and will likely double over the next 5 years (3). Growing at a CAGR of 12.3%, the global market for cancer drugs is expected to exceed \$78 billion by 2012. Cancer vaccines and antiangiogenics will record the fastest growth rate. Drug manufacturers are now focused on developing target therapies. These drugs attack target cells and thus limit the severity of side effects (4).

### About Pure Protein, L.L.C.

Pure Protein is a biopharmaceutical company specializing in immunology tools for diagnostics and vaccine development to address unmet medical needs and major market opportunities for new disease targets. Pure Protein was formed in 1999 to commercialize research developed at the University of Oklahoma Health Sciences Center. Pure Transplant Solutions, L.L.C., a subsidiary of Pure Protein, is using HLA protein to develop diagnostics, devices, and therapeutics which will eliminate rejection in organ transplants. Pure Vaccine Solutions, L.L.C., another subsidiary of Pure Protein, is using HLA protein to discover valuable new vaccine targets, improve existing vaccines, and design clinical trials for vaccine candidates. Pure Protein and its subsidiaries are funded and managed by Emergent Technologies, Inc. For more information, please visit the website [www.pureproteinllc.com](http://www.pureproteinllc.com).

### About Emergent Technologies, Inc.

Emergent Technologies, Inc. (ETI) is a life sciences technology investment and management company which provides early stage funding and development for scientific discoveries originating at universities and research institutions. The Company creates value by transforming scientific breakthroughs into technology platforms with multiple applications. ETI's unique innovation process enables the Company to select promising scientific discoveries for development, maximize the value of intellectual property and manage both cost and risk associated with the commercial development of early stage technologies. ETI is dedicated to turning research into revenue and, in the process, introducing compelling solutions to meet important market needs. For more information, visit the company website [www.etibio.com](http://www.etibio.com).

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### References:

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2. Global Industry Analysts, Inc., "Organ and Tissue Transplantation: A Global Strategic Business Report," February 2008.
3. Insight Pharma Reports, "Infectious Diseases - R and D Challenges and Market Drivers," September 2006.
4. RNCOS, "Global Cancer Treatment Forecast to 2012," August 2008.

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