

Patent Selections:

The patents annotated in this section have been selected from various patent data bases. These recent patents are relevant to the articles published in this journal issue, categorized by different biotechnology methods, processes and techniques involved.

THERMODYNAMIC ANALYSIS

1. Greene, M. R., Mark I. Cavity induced allosteric modification of intermolecular interactions and methods of identifying compounds that effect the same. *EP2196930 (2010)*.
2. Steven, M., Edward. M., Follis, A. V., Linked myc-max small molecule inhibitors. *WO10083404 (2010)*.
3. Mitra, R. D., Tessler. L. A. Single molecule protein screening. *WO10065531 (2010)*.
4. Boschetti, E., Process design using mass spectrometry. *WO10078554 (2010)*.
5. Stevens, F. J. Methods for systematic control of protein stability. *WO10008690 (2010)*.
6. Jayawickramarajah, J. Stimulus-responsive Aptachelamers. *WO10006238 (2010)*.
7. Itzhak, B., Bioinformatically detectable viral regulatory genes. *US07759478 (2010)*.
8. O'Neil, K., Sweet, R., Heavner, G. Solution phase biopanning method using engineered decoy proteins. *US07790405 (2010)*.
9. Stewart, L., Butler, M. C., Jeung-Hoi, H., Radley, T. L. Folding protein functioning as a molecular switch. *US07767788 (2010)*.
10. Bell, A. G., Bruce, R. H., Elrod, S. A., Peeters, E., Torres, F. E. Method for a nanocalorimeter for detecting chemical reactions. *(2010)*.

BIOMASS

1. Medoff, M. Conversion systems for biomass. *EP2049674 (2010)*.
2. Dale, B. E., Lynd, L. R., Laser, M. Process for the treatment of lignocellulosic biomass. *EP2013368 (2010)*.
3. McDonald, W. F., Kwiatkowski, J.R., Narendranath, N. V., Bootsma, J. Alan., Carlson, D. C. System for pre-treatment of biomass for the production of ethanol. *WO10102060 (2010)*.
4. Cirakovic, J. Oxidative treatment of biomass to enhance enzymatic saccharification. *WO10080436 (2010)*.
5. Brady, M., Stamires, D., O'Connor, P. Modification of biomass for efficient conversion to fuels. *WO10075405 (2010)*.
6. Agbogbo, F., Johnson, J. Production of ethanol from lignocellulosic biomass. *WO10075213 (2010)*.
7. Benson, R. A. C., Benech, R. Use of stillage residue as a nutrient source for fermentation of hydrolyzed

lignocellulosic biomass to ethanol. *WO10071987 (2010)*.

8. Kohn, R. A., Kim, S. W. Process for producing lower alkyl alcohols from cellulosic biomass using microorganisms. *WO10056304 (2010)*.
9. Galvez iii, A., Richards, G. Materials and methods for converting biomass to biofuel. *WO10025171 (2010)*.
10. Namdar, B., Muhammad, J., Brian, H. Ethanol production by lactate dehydrogenase-deleted thermophilic microorganisms. *GB2461495 (2010)*.

ANTIGEN DELIVERY SYSTEM

1. Richard, K., System for delivery into a XCR1 positive cell and uses thereof. *EP2200633 (2010)*.
2. Bonnet, D., Brown, C. B., Georges, B., Sizer, P. J. Antigen delivery vectors and constructs. *US07687455 (2010)*.
3. Patel, A., Kobasa, D., Kobinger, D., Babiuk, S. Peptide adjuvants. *WO10060208 (2010)*.
4. Fletchner, J., Gierahn, T. Antigen screening system. *WO10002993 (2010)*.
5. Christoph, Z., Otto, S., Hubert, P., Heimo, B., Ursula W. Her-2/neu multi-peptide vaccine. *EP1844788 (2010)*.
6. Zhang, J., Henry, M. J., Chen, W., Webb, S. R. Induction of mucosal immune responses by mucosal delivery pentabody complex (MDPC). *WO10045225 (2010)*.
7. Chi-huey, Yu, A., Chang, Y., Lin, K., Cheng, Y. S. E., Jan J, Lin, Y., Hung, J. Alpha-galactosyl ceramide analogues and their use as immunotherapies, adjuvants, and antiviral, antibacterial and anticancer agents. *GB2461656 (2010)*.
8. Herrmann, J. E., Belitsky, B. R., Sonenshein, A. L., Tzipori, S. Methods and compositions for spore-based vaccines. *WO10006326 (2010)*.

VIRAL VECTORS

1. Sadoff, J. C., Fulkerson, J., Stone, M. Enhancement of transgene expression from virus-based vaccine vectors using suppressors of the type 1 interferon response. *WO10025016 (2010)*.
2. Guehenneux, F., Moreau, K., Esnault, M, Mehtali, M. Duck embryonic derived stem cell lines for the production of viral vaccines. *EP2150275 (2010)*.
3. Simon, D., Guirakhoo, F., Rummyantsev, A. A., Caroline, M. Flavivirus vaccine vector against influenza virus. *EP2117589 (2010)*.

4. Dropulic, B., Paula, P. Conditionally replicating viral vectors and their use. *EP1380650 (2010)*.
5. Osorio, J. E., Iams, K.P., Bakke, B. A., Hwa, S. Recombinant raccoon pox virus vaccine against highly pathogenic avian influenza. *WO10065140 (2010)*.
6. You, J., Iida, A., Hasegawa, M. Minus strand RNA viral vectors carrying a gene with altered hypermutable regions. *EP1642966 (2010)*.
7. Kawaoka, Y., Hamm, S., Ebihara, H. Recombinant influenza vectors with a polii promoter and ribozymes for vaccines and gene therapy. *US07723094 (2010)*.

MOLECULAR FARMING

1. Gorr, G., Launhardt, H., Berg, B. Protein production method. *EP1539966 (2010)*.
2. Marillonnet, S., Thoeringer, C., Klimyuk, V., Gleba, Y. RNA virus-derived plant expression system. *EP1682667 (2010)*.
3. Marillonnet, S., Thoeringer, C., Klimyuk, V., Gleba, Y. RNA virus-derived plant expression system. *EP2184363 (2010)*.
4. Orvar, B. L., Mantyla, E. Industrial plant-based production of animal-free recombinant proteins in defined environment. *WO10001418 (2010)*.
5. Drake, P. M. W., E Moraes Madeira, L. Production of compounds from plants. *WO10040990 (2010)*.
6. Reddy, V. S., Leelavathi, S., Bhardwaj, A. A method of expressing foreign protein in plastids. *WO10061404 (2010)*.
7. Mason, H. S., Huang, Z., Chen, Q., Arntzen, C. J., Yuan, S., Hjelm, B. A DNA replicon system for high-level rapid production of vaccines and monoclonal antibody therapeutics in plants. *WO10025285 (2010)*.

RECOMBINANT PROTEIN PRODUCTION

1. Hateboer, G., Verhulst, K. C., Uytdehaag, A. G. C. M., Schouten, G., Bout, A. Recombinant protein production in a human cell comprising at least one E1 protein of adenovirus. *EP2163640 (2010)*.
2. Peel, S. A., Clokie, C. M. L., Turner, J. D. A method of enhancing recombinant protein production. *EP2167665 (2010)*.
3. Weber, U., Ziegler, T. Production of recombinant IL-18 binding protein. *US07691611 (2010)*.
4. Choi, I. Y., Kim, C. H., Lee, H. J., Park, S. H., Kwon, S., Lee, G. S. A novel vector and expression cell line for mass production of recombinant protein and a process of producing recombinant protein using same. *EP2087118 (2010)*.
5. Lee, S.J., Kim, Y. O., Nam, B. H. Production of soluble recombinant protein by pi value control of N-terminal. *EP2220235 (2010)*.
6. Matsuyama, R., Maeda, H., Shirahama, H., Imamura, T., Kamachi, Y. Novel recombinant animal cells with

high protein production, method of constructing the same and method of mass protein production using the same. *EP1676911 (2010)*.

7. Orvar, B. L., Mantyla, E. Industrial plant-based production of animal-free recombinant proteins in defined environment. *WO2010001418 (2010)*.
8. Klimyuk, V., Benning, G., Gleba, Y. Recombinant viral switches for the control of gene expression in plants. *EP1364034 (2010)*.
9. Rybicki, E. P., Meyers, A. E., Devesa, F., Marzabal, L.P., Hitzeroth, I. I., Oehlschlaeger, P. Recombinant protein bodies as immunogen-specific adjuvants. *WO2010040847 (2010)*.
10. Kovalic, D. K., Qiu, B., Tabaska, J. E., Wu, W. Isolated novel nucleic acid and protein molecules from corn and methods of using those molecules to generate transgenic plants with enhanced agronomic traits. *WO2010083178 (2010)*.
11. Lowther, W., Yeow, W.; Lorick, K., Pages, M., Lowther, N. J. Transgenic aloe plants for production of proteins and related methods. *EP1931792 (2010)*.

IMMUNOSTIMULANT

1. Torres, C. M. D., Vizcarra, G. D. Micronized carotenoid preparation as immunostimulant for crustaceans. *WO10094986 (2010)*.
2. Escaich, F. J., Martinez, P. D., Chetrit, R. C., Borda, C. E., Kosuna, K. Immunostimulant compositions comprising a nucleobase and a polysaccharide obtainable from fungi, yeast or bacteria. *WO10034615 (2010)*.
3. Lilius, E., Nikoskelainen, S., Kilpi, M. Rough lps as an immunostimulant in aquatic farming. *WO10023366 (2010)*.
4. Schneider, A., Laage, R., Vogt, G., Koch, W. Use of g-CSF for the treatment of stroke. *EP2195014 (2010)*.

ANTIBODY ENGINEERING

1. Hellendoorn, K., Baker, M., Carr, F. J. Modified anti-TNF alpha antibody. *EP1448602 (2010)*.
2. Winter, G., Ignatovich, O., Tomlinson, L. Dual-specific ligand and its use. *EP1399484 (2010)*.
3. Matthew, M. Methods and compositions for discovery of target-specific antibodies using antibody repertoire array (ara). *WO10011337 (2010)*.
4. Kanner, S. B., Jakobovits, A., Gudas, J., Raitano, A.B., Morrison, R. K., Challita-eid, P. M., Jia, X. Antibodies and related molecules that bind to 58p1d12 proteins. *WO10022279 (2010)*.
5. Mcauliffe, J., Palmer-hill, F., Zhu, Q., Suzich, J. Antibodies against and methods for producing vaccines for respiratory syncytial virus. *WO10087927 (2010)*.
6. Berman, P.W., O'Rourke, S., Scott, W. Selection of HIV vaccine antigens by use of intrapatient sequence variation to identify mutations in the HIV envelope

glycoprotein that affect the binding of broadly neutralizing antibodies. **WO10040136 (2010)**.

STAPHYLOCOCCAL SURFACE DISPLAY

1. Missiakas, D., Schneewind, O., Burts, M. Compositions and methods related to staphylococcal bacterium proteins. **WO10014304 (2010)**.
2. Cheng, A., Thammavongsa, V., Kern, J., Missiakas, D. M., Schneewind, O. Compositions and methods related to bacterial EAP, EMP, and/or ADSA proteins. **WO10042481 (2010)**.
3. Williamson, R. A., Wadia, J., Maruyama, T., Chen, Z., Nelson, J. Methods and vectors for display of molecules and displayed molecules and collections. **WO10033229 (2010)**.
4. Andreas, L. Yeast display systems. **WO10069913 (2010)**.
5. Andreas, M., Eszter, N., Ahsen, V., Klade, U., Henics, C., Tamas, Wolfgang, Z., Bui, M. D., Steven, G.

Method for identification, isolation and production of antigens to a specific pathogen. **US07771728 (2010)**.

6. Wittrup, k. Dane, w., Howland, S. Directed engagement of activating FC receptors. **WO10048588 (2010)**.

YEAST MOLECULAR DISPLAY

1. Paul, W., Wayne, T., Richard, H. Methods of construction biodiverse gene fragment libraries. **EP2175022 (2010)**.
2. Paul, W. G., Christian, H., Elise, B., David, L., Paul, T. J., Marina, V., Paul. T. D. Multispecific peptides. **WO10089115 (2010)**.
3. Christian, H., Jeremy, T., Gregory, W. Structured polycyclic peptide. **WO10089117 (2010)**.
4. Stephen R., Kristy N., Anju, A., Hong, W. Iron oxide-binding peptides. **WO10080418 (2010)**.