

Joint BioEnergy Institute

Issued Patents

1. Jeffrey L Fortman, Leonard Katz and Jay Keasling, “Producing Dicarboxylic Acids Using Polyketide Synthases”, issued 5/26/2015, #2541-08
2. Jeffrey L Fortman, Leonard Katz, and Jay Keasling, “Producing a Trimethylpentanoic Acid Using Hybrid Polyketide Synthases”, issued 10/7/2014, #2825-01
3. Jay Keasling, Taek Soon Lee and Pamela Patricia Peralta-Yahya, “Isoprenoid Based Alternative Diesel Fuel”, issued 8/18/2015, #2837-01

Filed Applications

1. Blake A. Simmons, Anthe George, Seema Singh, Ning Sun, Jian Shi, Manali Sawant and Noppadon Sathitsuksanoh, “Long Alkyl Chain Alcohols as Precipitant and Extraction Media for Ionic Liquid Pretreatment of Lignocellulosic Biomass,” filed 12/23/2014, #2013-105-01, JBEI – all DOE
2. Thomas L Ruegg, Michael Thelen and Douglas Higgins, “Engineered Microorganisms Having Resistance to Ionic Liquids,” filed 5/20/2015, #2013-120-02, JBEI – all DOE
3. Anup K Singh, Jess Sustarich and Chao Chung Shih, “Method and device for manipulation of a droplet,” filed 10/24/2014, #2013-128-01, JBEI – all DOE
4. Dominique Loque and Aymerick Eudes, “Lignin valorization,” filed 2/27/2015, #2013-139-01, JBEI – all DOE
5. Dominique Loque and Yan Liang, “Generation of Heritable Chimeric Plant Traits,” filed 1/16/2015, #2013-171-02, JBEI – all DOE
6. Florence Mingardon, Angélique Chanal, Aindrila Mukhopadhyay and Camille Clement, “Modified Host Cells Having Tolerance to Alpha-Olefins,” filed 4/29/2015, #2013-181-02, JBEI – all DOE
7. Jay Keasling, Lane Weaver, William Holtz and Daniel Arlow, “Compositions and methods for single-molecule construction of DNA,” filed 5/18/2015, #2013-188-02, JBEI – all DOE
8. Jay Keasling, Leonard Katz and Satoshi Yuzawa, “Producing 3-Hydroxycarboxylic Acid and Ketone Using Polyketide Synthases,” filed 2/26/2015, #2014-007-02, JBEI – all DOE
9. Jay Keasling, Mario Ouellet, Aindrila Mukhopadhyay and Amanda Reider Apel, “Synthetic Polypeptide Having A Xylose Import Activity,” filed 7/14/2015, #2014-020-01, JBEI – all DOE
10. Henrik Vibe Scheller and Solomon Stonebloom, “Induction of Latex Accumulation in Rubber-Producing Shrubs,” filed 4/3/2015, #2014-028-02, JBEI – all DOE

11. Blake A. Simmons, Kenneth L. Sale and Michael J. Liszka, "Switchable Ionic Liquids for Biomass Pretreatment and Enzymatic Hydrolysis," filed 10/31/2014, #2014-064-01, JBEI – all DOE
12. Pamela C Ronald, Hwei Du, Yufan Zhou and Nir Oksenberg, "Drought and Submergence Tolerance in Plants," filed 2/5/2015, #2014-108-02, JBEI – all DOE
13. Taek Soon Lee and Aram Kang, "Novel Host Cells and Methods for Producing Isopentenol from Mevalonate," filed 2/20/2015, #2014-135-01, JBEI – all DOE
14. Blake A. Simmons, Anthe George, Seema Singh, Noppadon Sathitsuksanoh, Robert Jansen and Philip Travisano, "HMF Productions from Fructose in Ionic Liquid Media," filed 12/23/2014, #2014-136-01, JBEI – all DOE
15. Blake A. Simmons, Anthe George, Seema Singh, Kirsty Leong, Noppadon Sathitsuksanoh, Robert Jansen, Philip Travisano and Mark D Allendorf, "Metal-Organic Frameworks for the Conversion of Lignocellulosic Derivatives to Renewable Platform Chemicals," filed 12/23/2014, #2014-138-01, JBEI – all DOE
16. Blake A. Simmons, Seema Singh, Ning Sun, Jian Shi and Jian Sun, "Method of Adjusting the pH of a Pretreatment Solution Using Carbon Dioxide Useful for Integrating Saccharification and Fermentation of a Biomass," filed 12/23/2014, #2014-139-01, JBEI – all DOE
17. Jay Keasling and Robert Haushalter, "Host cells and methods for producing diacid compounds," filed 3/10/2015, #2014-158-01, JBEI – all DOE
18. Thomas L Ruegg, "Host cells and methods using a repressor polypeptide and an inducible promoter for gene expression," filed 7/1/2015, #2015-007-01, JBEI – all DOE
19. Jay Keasling, Leonard Katz, Sean Poust and Andrew R. Hagen, "Producing Adipic Acid and Related Compounds Using Hybrid Polyketide Synthases," filed 7/10/2015, #2015-106-01, JBEI – all DOE
20. Bradley Holmes, Anthe George, Ning Sun, Kim Tran and Blake A. Simmons, "Sugar Extraction and Ionic Liquid Recycling Using Alkaline Solutions," filed 10/31/2014, #3117-03, JBEI – all DOE
21. Henrik Vibe Scheller and Joshua L Heazlewood, "Regulation of Galactan Synthase Expression to Modify Galactan Content in Plants," filed 11/7/2014, #3144-03, JBEI – all DOE
22. Trent R Northen, Kai Deng, Tristan de Rond, Pamela Patricia Peralta-Yahya, Xiaoliang Cheng and Jay Keasling, "Rapid Discovery and Screening of Enzyme Activity Using Mass Spectrometry," filed 6/11/2015, #3262-05, JBEI – all DOE
23. Blake A. Simmons, Joshua Park, Kenneth L. Sale, Steven W Singer and John Gladden, "Ionic Liquid-Tolerant Cellulase Enzymes," filed 2/2/2015, #3264-02, JBEI – all DOE

24. Blake A. Simmons, Seema Singh and Patanjali Varanasi, "Renewable Aromatics from Lignocellulosic Lignin," filed 6/8/2015, #3265-03, JBEI – all DOE
25. Dominique Loque, "Systems and Methods for Enhancing Gene Expression," filed 1/27/2015, #3293-03, JBEI – all DOE
26. Jay Keasling and Jingwei Zhang, "A Host Cell Modified to Produce 2-Pyrrolidone," filed 4/14/2015, #3307-01, JBEI – all DOE

Foreign Filed Applications

Technology Disclosures

1. John Cunha, Richard Heins, Kenneth L. Sale, Chessa Scullin, Blake A. Simmons and Seema Singh, "Thermotolerant mixture of a Glucoside hydrolase family 1 beta-glucosidase and a glucoside hydrolase family 16 laminarinase for algal biomass deconstruction," 10/20/2014, #2015-006, JBEI – all DOE
2. Thomas L Ruegg, "Jungle Express inducible Eil-promoters for gene expression," 10/21/2014, #2015-007, JBEI – all DOE
3. Evelyn Denzel, John Gladden, Jennifer Hiras and Steven W Singer, "Active Component of Cellulase Mixture from a Thermophilic Bacterial Community is a Multenzyme Complex," 10/28/2014, #2015-010, JBEI – all DOE
4. Jennifer Hiras, Steven W Singer and Yu-Wei Wu, "The Unexpected Importance of Actinobacterial GH12 in Hydrolysis of Crystalline Cellulose," 10/31/2014, #2015-012, JBEI – all DOE
5. Mark D Allendorf, Parthasarathi Ramakrishnan, Blake A. Simmons and Seema Singh, "Lignin for Photovoltaic (PV) Technologies," 11/3/2014, #2015-016, JBEI – all DOE
6. Tanmoy Dutta, Parthasarathi Ramakrishnan, Jian Shi, Blake A. Simmons and Seema Singh, "Metal containing ionic liquids and their applications in lignocellulosic biomass conversion to fuels and chemicals," 11/19/2014, #2015-027, JBEI – all DOE
7. Michael Kent, "New method to depolymerize lignin using a chelator-mediated Fenton reaction," 11/25/2014, #2015-029, JBEI – all DOE
8. Dominique Loque and Patrick Shih, "A method to design and build libraries of synthetic promoters to control expression strength (of multiple genes/ of one or more genes) in eukaryotic systems," 2/17/2015, #2015-049, JBEI – all DOE
9. Tanmoy Dutta, Blake A. Simmons, Seema Singh and Jian Sun, "Easy and inexpensive method for converting monomeric, oligomeric, and polymeric lignin to ionic liquid," 3/2/2015, #2015-055, JBEI – all DOE

10. John Gladden and Blake A. Simmons, "Conversion of Lignin-derived Aromatics into Value-added Products by Novel Fungi and Bacteria," 3/2/2015, #2015-057, JBEI – all DOE
11. Tanmoy Dutta, John Gladden, Kenneth L. Sale, Blake A. Simmons, Steven W Singer, Seema Singh and Jian Sun, "Microbial cell factories for the production of ionic liquids from lignocellulose-derived sugars and aromatics," 3/2/2015, #2015-058, JBEI – all DOE
12. Tanmoy Dutta, John Gladden, Blake A. Simmons, Seema Singh and Jian Sun, "Derivatization of sugars into Ionic Liquids," 3/2/2015, #2015-059, JBEI – all DOE
13. Tanmoy Dutta, Blake A. Simmons, Seema Singh and Jian Sun, "Low temperature Lignin dissolution and depolymerization," 3/18/2015, #2015-080, JBEI – all DOE
14. Joanna Chen, Hector Plahar, Lisa Simirenko and Manjiri Tapaswi, "DIVA v2.0," 3/23/2015, #2015-083, JBEI – all DOE
15. Chijioko Joshua, Blake A. Simmons and Steven W Singer, "Strategy for fractionation and separation of constituents of non-derivatized 'native' lignin," 4/13/2015, #2015-094
16. Anup K Singh and Jess Sustarich, "Method and device for tracking of droplets," 4/15/2015, #2015-095, JBEI – all DOE
17. Tanmoy Dutta, Parthasarathi Ramakrishnan, Blake A. Simmons, Seema Singh and Jian Sun, "Design and development of Acidic to basic ILs for conventional and modified hybrid Ionic liquid pretreatment process of lignocellulosic materials and lignin catalysis," 4/17/2015, #2015-096, JBEI – all DOE
18. Andrew R. Hagen, Leonard Katz, Jay Keasling and Sean Poust, "PKS producing adipic acid," 5/1/2015, #2015-106, JBEI – all DOE
19. Anup K Singh, "Droplet-based single molecule detection," 5/26/2015, #2015-114, JBEI – all DOE
20. Aymerick Eudes, Dominique Loque, Peter Matlock and Henrik Vibe Scheller, "Engineering Bioenergy Crops for Integrated Co-bioproduction of Fuels and Key Value Chemicals," 7/8/2015, #2015-138, JBEI – all DOE
21. Jorge Alonso-Gutierrez, Ee-Been Goh, Robert Haushalter, Leonard Katz and Jay Keasling, "Production of omega-hydroxy and omega-1-hydroxy methyl ketones as precursors for the synthesis of macrocyclic ketones," 7/14/2015, #2015-141, JBEI – all DOE
22. Blake A. Simmons, Seema Singh and Feng Xu, "High Gravity, Fed-batch Ionic Liquid Based Process for Biomass to Fuels/Chemicals," 7/16/2015, #2015-143, JBEI – all DOE
23. Chijioko Joshua, Blake A. Simmons and Steven W Singer, "Alkaline depolymerization of water-soluble Lignin Extracts," 7/17/2015, #2015-144, JBEI – all DOE

24. Marijke Frederix and Aindrila Mukhopadhyay , “Novel Transporter, YbjJ, with Unknown Function, Provides Extreme Tolerance to Ionic Liquid Exposure in Model Microbial Strain Escherichia Coli,” 7/20/2015, #2015-145, JBEI – all DOE
25. Dajiang Liu , Parthasarathi Ramakrishnan, Blake A. Simmons and Seema Singh, “Polyoxometalate (POM) for the Conversion of Lignocellulosic Derivatives to Renewable Platform Chemicals,” 7/29/2015, #2015-151, JBEI – all DOE

Licenses

1. 2014-0490, “Nonexclusive License and Bailment Agreement with Kiverdi Inc. [for plasmids]”, invention #2014-155
2. 2014-0622, “Option Agreement for Ionic Liquid Pretreatment Technologies (CRADA Background IP) between POET, LLC and [LBNL and behalf of JBEI]”, invention #'s 2729; 2750; 3078; 3117; 2013-105; 2013-132; 2014-064
3. 2014-0660, “Option Agreement for CRADA IP between Poet, LLC and Berkeley Lab” - invention #2729; 2750; 3078; 3117; 2013-105; 2013-132; 2014-064
4. 2015-0156, “Option Agreement for Biological Hydrogenation (CRADA IP) between Total Energies Nouvelles Activites USA SAS and [LBNL on behalf of JBEI]” - invention #2809
5. 2015-0237, “Option Agreement [with Afingen, Inc. for Engineering Robust Yeasts For Biorefinery Applications (CRADA IP)]” - invention #3293
6. 2015-0238, “BIP Option Agreement [between Afingen, Inc. and LBNL]”, invention #3293
7. 2015-0240, “BIP Option Agreement [between Arzeda Corporation and LBNL on behalf of JBEI]”, invention #3211
8. 2015-0241, “OPTION AGREEMENT for Biosynthetic Methodologies and Methods for Producing Branched C5 Alcohols as Alternatives to Fossil-Fuel-Derived Products [with Technology Holding LLC (CRADA IP)] - invention #2392, 3112
9. 2015-0242, “Background Intellectual Property Option Agreement [with Technology Holding LLC and LBNL]”, invention #2392; 3112
10. 2015-0380, “Development and Evaluation Agreement [with Riffyn, Inc.]”
11. 2015-0493, “Beta Test Site Agreement [with Agilent Technologies, Inc. by LBNL on behalf of JBEI]”