Area Head - Factory 1 & 2 **1989 – 2002**

- Directed the fermentation and recovery operations in Factory 1 and 2 at the Danville facility, which was responsible for the production of biologics, food ingredients, animal health products, and other industrial fermentation products. Managed a staff of approximately 85 individuals, 17 salaried and 68 hourly.
- Prepared and management a multi-million dollar budget for the Factory 1 & 2 manufacturing operation.
- Served as the Plant Lead for the design, construction, and demonstration of the Xanthan Gum Process at the Danville facility. Upon completion of Phase II of this project, Danville was the second largest producer of Xanthan Gum for our customer in the world.
- Instituted a stand-alone quality system for the Xanthan Gum operation as part of the efforts to streamline operations and reduce costs. As part of this quality effort the Factory 1 & 2 area became the only area on the Danville site that received certification for ISO 9000, Kosher, HACCAP, and American Institute of Baking.
- Responsible for regulatory compliance, including cGMP's, Safety, and Environmental.
- Co-Chaired the Design Team that developed and eventually implemented the "First Self-Managed Work Teams" at the Danville Facility.

Department Head – Factory 1 & 2 **1986 - 1989**

- Directed the fermentation and recovery operations in Factory 1 and 2 at the Danville facility, which was responsible for the production of avermectin and asparaginase. Managed a staff of approximately 32 individuals, 9 salaried and 23 hourly.
- Prepared and management a multi-million dollar budget for the Factory 1 & 2 manufacturing operation.
- Responsible for process improvement efforts, achieving profit plan and yield targets for area.
- Responsible for regulatory compliance, including GMP's, and Safety and Environmental.

Senior Staff Microbiologist **1985 - 1986**

- Managed the Biotechnology Pilot Plant, comprised of 5L to 4000L scale fermentation vessels.
- Managed the performance of 5 hourly technicians.
- Responsible for scale-up of new processes, use testing of new raw materials, and general process improvements in support of manufacturing operations.

EDUCATION

Master of Science, Microbiology, University of Arkansas, Fayetteville, AR, 1979
Thesis: *"Effects of Trace Elements on the Growth and Metabolism of Rhizopus* nigricans"

Bachelor of Science, Biology/Chemistry, Arkansas Tech University, Russellville, AR, 1977

Gregory A. Spancake

REDACTED
EXEMPTION 6

PROFESSIONAL EXPERIENCE

CHEROKEE PHARMACEUTICALS, Riverside, PA **2008 - 2009**
Manufacturer of pharmaceutical and specialty chemicals

Department Head, Fermentation Services

- Manage the Technical Support Dept. which is responsible for providing technical support for the Fermentation Services contract manufacturing operation. Interact with the customers technical experts for technology transfer, develop process fits for the facility and provide support for process introductions.
- Review processes from potential new customers to determine if they are suitable opportunities for our business.
- Chair the Institutional Biosafety Committee to ensure facility compliance with NIH guidelines regarding recombinant organisms.

MERCK & CO., INC., Danville, PA **1996 - 2008**
Manufacturer of pharmaceuticals
Department Head, Factory 1 & 2 **2000 – 2005**

- Managed the fermentation and isolation facility responsible for production of asparaginase and xanthan gum.
- Responsible for process improvement efforts, achieving profit plan and yield targets for area and the implementation of a high performance work system.
- Responsible for regulatory compliance, including GMP's, ISO, Kosher, Safety and environmental.
- Shut down the xanthan gum process at the end of the contract and helped transition the facility to contract manufacturing.

Department Head, Factory 1 **1996 - 2000**

- Managed the F1 fermentation facility responsible for production of avermectin, asparaginase and xanthan gum.
- Responsible for process improvement efforts, achieving profit plan and yield targets for area and the implementation of a high performance work system.
- Responsible for regulatory compliance, including GMP's, ISO, Kosher, Safety and environmental.

GENENCOR INTERNATIONAL, INC., Rochester, NY **1991 - 1995**
Manufacturer of industrial enzymes and specialty chemicals

Manager, Microbiology

- Managed the Culture Collection which resulted in safekeeping of important company strains, generation of validated seed stocks for production processes, and ISO 9002 Certification.
- Provided technical support for Manufacturing Operations resulting in smooth introduction of new processes.
- Chaired the Institutional Biosafety Committee to ensure facility compliance with NY State and NIH guidelines regarding recombinant organisms.

- Managed strain and process development efforts for several industrial enzymes resulting in significant yield improvement.

EASTMAN KODAK CO., Bioproducts Div., Rochester, N.Y. **1988 – 1991**
Manufacturer of industrial enzymes, diagnostic enzymes and specialty chemicals

Laboratory Supervisor
- Managed Operations Microbiology and Analytical as part of plant management team. Labs provided necessary testing and monitoring of fermentations performed in Operations and performed development work in support of Bioproducts R&D activities.
- Provided technical leadership, personnel development and managed operating budget.
- Served as the Bioproduct Divisions Biosafety Officer and a member of the Eastman Kodak's Institutional Biosafety Committee.
- Managed the microbial assets of the division and served as microbiology consultant for the Biomanufacturing Program resulting in successful completion of numerous manufacturing contracts.
- Served as a member of the Contamination Control Task Force which investigated and solved contamination problems in the Operations Department.

MERCK & CO., INC., Danville, PA **1985 - 1988**
Manufacturer of pharmaceuticals

Senior Staff Microbiologist
- Managed culture development programs for the production of riboflavin, avermectin, cephalosporin C, and L-dopa, that improved productivity through the use of UV and chemical mutation.
- Developed culture storage procedures for new strains resulting in improved culture stability.

EDUCATION

Ph.D., Microbiology, Syracuse University, Syracuse, NY, 1985

B.S., Biology/Chemistry, University of Miami, Coral Gables, Fl, 1975

Additional training:

Fermentation Technology at Massachusetts Institute of Technology

John E. Cuzens

Senior Vice President, Chief Technology Officer, BlueFire Ethanol, Inc.

Education and Training:

University of California Berkeley, Bachelor of Science in Chemical Engineering.
College of Marin, Associate of Science in Physical Sciences

State of California, Registered Professional Mechanical Engineer, 1980, License No. 20891.
State of California, Contractors "A" License Responsible Managing Employee for ARK Energy, Inc. No.A700016

Past Member - American Institute of Chemical Engineers.

Selected Patents/Applications - 8 x "Method of Producing Sugars using Strong Acid Hydrolysis of Cellulosic and Hemicellulosic Materials" U.S.#5,562,777, 5,580,389, "Conversion of Glucose to Levulinic Acid" and other patents pending.

Technical Papers Presented and Published - "Sugar Cane Bagasse Conversion to Ethanol", World Renewable Energy Congress, Denver 1996. "Continuous Chromatographic Separation", National Renewable Energy Conference, Colorado Springs 1997, "Fuel-Flexible, Fuel Processors" ESD Conference, Los Angeles 1998, "Fuel Cells for Modern Buildings" Fuel Cell 98, Palm Springs.

Professional Experience:

BlueFire Ethanol, Inc, Irvine, Ca 2006 to present
Senior Vice President, Chief Technology Officer

Wahlco, Inc., Santa Ana, Ca. 2004- 2006
Director of Projects; Supervised Project Managers, Project Engineers and a scheduling group managing projects, mostly Utility or Engineer/Procure/Construction company clients. Process development and implementation of new urea to ammonia technology for the safe production of ammonia gas for Selective Catalytic Reduction environmental systems.

Applied Utility Systems, Inc., Irvine, Ca. 2001 – 2004
Manager of Operations, Manager of Project Management; Worked in a matrixed organization as the lead on development, design, fabrication and construction projects related to refinery

utility and chemical process industries. Responsible for customer satisfaction and maintenance of project deliverables quality. Completed $15MM SCR retrofit of 2 x FT4 30 MWe gas turbines on schedule and to satisfaction of customer while maintaining highest gross margin in company history.

Hydrogen Burner Technology, Inc., Long Beach, Ca. 1997-2001
Director of Manufacturing, Director of Engineering; Supervised engineering, manufacturing and project management personnel in this technology development company. Responsible for managing the fourteen ongoing contracts worth approximately $7 mm for clients such as the U.S. DOE, Los Alamos National Laboratory and several private companies. Helped double project backlog through responsive customer

service by exploiting compatible opportunities. Co-patent applicant for a process patent covering the integration of a fuel-flexible, fuel processor subsystem.

ARKENOL, Inc., Laguna Hills, Ca. 1991-1997
Director Engineering & Technology; Supervised the development and implementation of the ARKENOL "Acid Hydrolysis of Cellulosic Materials to Fermentable Sugars" technology. Supervised activities of employed and subcontract engineers & scientists in developing improvements and add-on technologies to further enhance the commercialization of the technology. Supporting company growth by making technical presentations, writing technical articles, networking and formulating technical proposals.

ARK Energy, Inc. (ARK), 1991-1997
Vice President Sacramento Power Inc., Senior Program Manager; Led Sacramento Ethanol and Power Cogeneration (SEPCO) project, a 149 mW gas fired combined cycle power plant and a 12.5 mm gal. per year cellulose to ethanol process plant. Sucesses included execution of Development Agreement and contracts with the Sacramento Municipal Utility District Financing Authority. Leader for CEQA, EIR permit activities at the CEC, for the AFC process. Lead technical coordinator for preliminary design for permitting and development of EPC contracts. Responsible for coordination of Political interface, and regulatory agencies. Project proponent speaker before community groups and public workshops. Responsible for schedule and budget performance compliance. Responsible Managing Engineer on ARK Energy, Inc. corporate State of California Contractors License for construction law and trade practice.

Senior Program Manager providing development assistance for potential projects in Brazil, Holland, Philippines, Indonesia, Italy, Australia, Hawaii, Texas and Minnesota. Potential projects included gas to coal fired 25-850 MW power plants with & without acid hydrolysis cogeneration thermal hosts. Biomass fired 2-50 MW utility plants for combined steam and power. Supported included cycle analysis, permit evaluation, technical communications, schedule and budget development.

DR. ROBERT J. WOOLEY

Education and Training

PhD Chemical Engineering, 12/1987
The University of Florida, Gainesville, Florida
MS Chemical Engineering, 8/1979
The University of Michigan, Ann Arbor, Michigan
BS Chemical Engineering, 5/1976
The University of Michigan, Ann Arbor, Michigan

Professional Experience

Abengoa Bioenergy New Technology, Lakewood, CO, 2007 to present
Director, Process Engineering

Responsible for the development of engineering for all technologies in the New Technology group. Leading a group of 10-15 engineers in the analysis of experimental data; development of models, PFDs, P&IDs and equipment and instrumentation specifications. Projects include cellulose conversion to ethanol and enhancements to the starch ethanol process.

National Renewable Energy Laboratory, Golden, CO, 2006 to 2007
Strategic Principal Engineer

Responsible for assuring appropriate and complete analyses, including risk and scenario analysis, are performed to support the objectives of the U.S. DOE's Biomass Program. Led the efforts to maintain a rigorous stage gate review process of all Biomass projects.

NatureWorks-Cargill, LLC, Minnetonka, MN, 2002 to 2006
Biomass Technology Manager

Led efforts (~ $5 million annually) to develop alternative feedstocks (biomass sugars) for the production of inexpensive lactic acid and polylactide polymers. This includesd managing Natureworks' efforts to develop intellectual property in biomass conversion, coordinate with strain and fermentation development at NatureWorks, and external partnerships with suppliers of supplemental technology (e.g., enzyme and feedstock collection). Responsible for process modeling and economic analysis of alternative biomass processes through the production of polylactide.

National Renewable Energy Laboratory, Golden, CO, 1991 to 2002
Technology Manager – Biofuels Program (2000 – 2002)

Accountable to DOE for the planning and execution of NREL and outside subcontracted research of approximately $20 million annually for advancing the National Biofuels Program. Considerable amount of stakeholder interaction and reviews were required to maintain support for the program at DOE and NREL.

Team Leader - Process Engineering (1996 – 1999)

Led a group of engineers responsible for developing and validating the process design and evaluating the economics through advanced modeling (ASPEN+) for the cellulosic biomass to ethanol process.

Manager/Team Leader - Alternative Fuels Data Center (1991 – 1995)
Advanced Separation Technologies, Inc., Lakeland, FL
Chief Engineer/Scientist
1989 to 1991

Development of laboratory and pilot plant procedures and design data for the ISEP continuous ion exchange and chromatographic process.

JSD Simulation Service Company, Houston, TX
Engineering Sales Manager
1988 to 1989
Responsible for program improvements and support of the process simulator ASPEN/SP.

Dow Corning Corporation, Midland, MI & Carrollton, KY
Engineering Specialist
1979 to 1984
Responsible for all chemical design aspects of several major capital projects.

Dow Chemical Company, Midland, MI
Chemical Engineer
1976 to 1978
Responsible for defining equipment and experiments to obtain scale-up information and customer samples of new products.

Selected Publications & Patents

"The eco-profiles for current and near-future NatureWorks® polylactide (PLA) production", with E. T. H. Vink, D. A. Glassner, J. J. Kolstad and R. P. O'Connor, Industrial Biotechnology, (3) 1, 58:81, 2007.

"Process for Fractionating Lignocellulosic Biomass into Liquid and Solid Products", with R. O'Connor, J. Kolstad, R. Kean, D. Glassner, B. Mastel, J. Ritzenthaler, J. Birk, J. Hettenhaus, R. Brooks, Patent Application WO 2007/120210 A2, October 25, 2007 "The Lignocellulosic Biorefinery: A Strategy to Return to a Sustainable Source of Fuels and Organic Chemicals" invited presentation with Davis Clements at Biorefinica 2004, Osnabrück, Germany, October 27-28, 2004.

"Standing Wave Design of Single and Tandem SMB Processes for Multicomponent Fractionation: Linear Isotherm Systems", with B. Hritzko, Y. Xie, N.-H. Wang, *AIChE J.*, (48) 2769, 2002.

"The effect of overliming on the toxicity of dilute acid pretreated lignocellulosics: the role of inorganics, uronic acids and ether-soluble organics", with T. Ranatunga, J. Jervis, R. Helm, J. McMillan, *Enzyme and Microbial Technology,* (27), 240, 2000.

"Process Design and Costing of Bioethanol Technology: A Tool for Determining the Status and Direction of Research and Development", *Biotechnology Progress,* with M. Ruth, D. Glassner, J. Sheehan, (15) 5:794, 1999.

"A Nine-Zone Simulated Moving Bed for the Recovery of Glucose and Xylose from Biomass Hydrolyzate" with Z. Ma and N.-H. L. Wang, *Industial and Engineering Chemistry*, (37) 9:3699, September 1998.

"Novel Three Component Separation Using a Single Continuous Counter-current Chromatographic Unit", presented at the AIChE National Meeting, Chicago, IL, November 1996.

ANDREA BOZZANO
UOP LLC
Development Manager - Renewables

EDUCATION AND TRAINING

Iowa State University	Chemical Engineering	MS	1989
University of Illinois	Chemical Engineering	BS	1987

PROFESSIONAL EXPERIENCE

UOP LLC	Manager, Renewables Development	Manager of Process Development group which is developing the UOP Ecofining and Renewable Jet technologies, as well as other technologies based on renewable feedstocks.
UOP LLC	Senior Specialist, Olefins and Detergents Development	Worked on a number of projects in development of technologies related to light olefins.
UOP LLC	Specialist, Olefins and Detergents Development	Worked on a number of projects in development of technologies related to detergents.
UOP LLC	Field Advisor	Worked on a number of startups in refineries and petrochemical plants.

Selected Publications

	PAT. NO.		Title
1	7,396,966	T	Olefinic feedstock treatment processes
2	7,189,885	T	Staged process for producing linear 2-phenyl-alkanes
3	6,979,394	T	Alkylaromatic process with catalyst regeneration
4	6,756,515	T	Dehydrogenation process using layered catalyst composition
5	6,740,789	T	Alkylaromatic process with catalyst regeneration
6	6,486,370	T	Dehydrogenation process using layered catalyst composition

SYNERGISTIC ACTIVITIES

AIChE membership

Renewable Energy Group

Glen Meier

Director, Technology & Feedstock Development

Renewable Energy Group®, Inc.,

For more than 15 years, Glen Meier has managed diverse and entrepreneurial businesses. Currently, Meier serves as Director of Technology & Feedstock Development at Renewable Energy Group®, Inc.

Renewable Energy Group, Inc., (REG) is a biodiesel industry sales leader offering a complete biodiesel solution. Renewable Energy Group markets REG-9000™ biodiesel through large petroleum companies and fuel distributors. REG-9000 is used by on-highway fleets, municipalities, and power generator, mining, military, home heating and agriculture applications. REG's network production facilities consist of state-of-the-art proprietary multiple-feedstock technology. Renewable Energy Group offers procurement and risk management, production operations and technology services in addition to alternative feedstock research and commercialization.

As Director of the Technology & Feedstock Development department, Mr. Meier investigates new technologies that are complementary to REG's business and assigns priorities, staff and resources to multiple projects. The Technology & Feedstock Development department is a core strength of REG and the department supports many other functions of the business including Quality, Production, Procurement and Construction.

Todd A. Potas, PE, QEP
e-mail: tapotas@NRG-LLC.com

Todd A. Potas, P.E., Q.E.P., is a Principal at Natural Resource Group, LLC (NRG) with over 22 years of professional experience. He is a registered Qualified Environmental Professional and a registered professional engineer in Minnesota, Nebraska, North Dakota, Louisiana and Florida. Todd leads our Renewables environmental services for the biofuels industries; his primary responsibilities include business development, quality assurance/quality control, project management, air permitting and environmental compliance management, regulatory negotiations, alternative fuel source and process engineering and control evaluations. Todd previously was a principal investigator for several coal beneficiation projects for coal companies, public utilities, and the U.S. Department of Energy, using technologies that included high temperature and pressure drying, oil agglomeration, and conventional physical cleaning of various coals. Todd's combination of experience with biofuels and coal technologies allows him to evaluate environmental and permitting challenges for advanced biofuels projects.

Selected Project Experience

- Ethanex Energy: Project Manager, environmental permitting for four 100 MMgal/yr ethanol plants to be built in Illinois, Missouri and Kansas; work included fractionation and biomass boiler processing.
- DOE Biofuels funding applications. Have assisted with NEPA process and other application requirements for serveral applicant proposers.
- Biofuels Energy: Principal, environmental permitting for two 100 MMgal/yr ethanol plants built in Fairmont, Minnesota and Wood River Nebraska; work includes storm water and water discharge permitting and stack testing on-going compliance.
- Red Trail Energy: Principal, environmental permitting for a 50 MMgal/yr ethanol plant operating in Richardton, North Dakota; project includes a coal-fired bubbling bed boiler and was permitted as a PSD major source with BACT analysis and NAAQS and Class I air dispersion modeling. Work includes support for on-going compliance.
- Vector Pipeline Project: managed air permitting for the Springfield, Indiana and Highland, Michigan compressor stations from start to finish.
- Guardian Pipeline Project: completed the RR9 for the Joliet, Illinois compressor station.
- Buccaneer Pipeline Project: completed the air quality section of the third-party EIS, including a compressor station, off-shore construction operations through a National Wildlife Refuge, and a liquid separation facility. The RR9 work included the required noise sections.
- International Paper, Mansfield, Louisiana: project task manager for installation and operation of a PSD pre-construction ambient air monitoring network for sulfur dioxide and MET parameters near a pulp and paper manufacturing facility.
- Waste Management, Inc. Air Quality Work: preparation of over 15 Title V air permit applications for landfill gas flare systems, reciprocating engines, and landfill gas-fired turbine generators; preparation of air quality training manuals and Title V emission inventory guidance for landfills; and presenter at four air quality seminars.

Education and Training

- M.E., Chemical Engineering, University of North Dakota, Grand Forks, North Dakota
- B.S., Chemical Engineering, University of North Dakota, Grand Forks, North Dakota

- Presenter, Annual Fuel Ethanol Workshop, Bryan and Bryan International, Air Emissions from Ethanol Plants, June 1999, 2001, 2002, 2003, 2005, Environmental Issues related to Biomass Gasification, June 2008, Moderator, June 2009.
- Presenter, DOE biomass programs, biofuels facility environmental siting and permitting issues, Argonne National Labs, February 2006.
- Instructor, Executive Enterprises, Inc., Air Quality Compliance Case Histories, Chicago, Illinois, 1997; Cincinnati, Ohio, 1997; and Farmington Hills, Michigan, 1997
- Prevention of Significant Deterioration/New Source Review Workshop, presented by EPA and the Air and Waste Management Association, Denver, Colorado, 1992

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OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received: 06/30/2009

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Solazyme, Inc.

* b. Employer/Taxpayer Identification Number (EIN/TIN): 33-1077078

* c. Organizational DUNS: 145862012

d. Address:

* Street1: 561 Eccles Avenue
Street2:
* City: South San Francisco
County: San Mateo
* State: CA: California
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 94080

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:
* First Name: Anthony
Middle Name:
* Last Name: Day
Suffix: Ph.D

Title: Vice President of Research and Development

Organizational Affiliation: Solazyme, Inc.

* Telephone Number: 650 780-4777
Fax Number: 650 871-4810

* Email: tday@solazyme.com

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

9. Type of Applicant 1: Select Applicant Type:

R: Small Business

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Golden Field Office

11. Catalog of Federal Domestic Assistance Number:

81.087

CFDA Title:

Renewable Energy Research and Development

*** 12. Funding Opportunity Number:**

DE-FOA-0000096

* Title:

Recovery Act - Demonstration of Integrated Biorefinery Operations

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

*** 15. Descriptive Title of Applicant's Project:**

Solazyme Integrated Biorefinery (SzIBR): Diesel Fuels from Heterotrophic Algae

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

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Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: CA-012 * b. Program/Project: PA-010

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 01/01/2010 * b. End Date: 03/31/2013

18. Estimated Funding ($):

* a. Federal	21,765,738.00
* b. Applicant	
* c. State	
* d. Local	REDACTED EXEMPTION 4
* e. Other	
* f. Program Income	
* g. TOTAL	

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

☐ Yes ☒ No Explanation

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	
* First Name:	Jonathan
Middle Name:	
* Last Name:	Wolfson
Suffix:	
* Title:	Chief Executive Officer
* Telephone Number:	650 780-4777
Fax Number:	650 871-4810
* Email:	jwolfson@solazyme.com
* Signature of Authorized Representative:	Matthew Frome
* Date Signed:	06/30/2009

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Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

Applicant Name: Solazyme

Award Number: DE-FOA-0000096

Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

Section A - Budget Summary

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Demonstration of Integrated Biorefinery Operations	81.087			$21,765,738		
2.					REDACTED EXEMPTION 4	
3.						
4.						
5. Totals		$0		$21,765,738		

Section B - Budget Categories

6. Object Class Categories	Grant Program, Function or Activity (1)	(2)	(3)	(4)	Total (5)
a. Personnel					
b. Fringe Benefits					
c. Travel					
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)					
j. Indirect Charges					
k. **Totals** (sum of 6i-6j)					
7. Program Income					

REDACTED EXEMPTION 4

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SF-424A (Rev. 4-92)
Prescribed by OMB Circular A-102

Section C - Non-Federal Resources

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) **Totals**
8. Demonstration of Integrated Biorefinery Operations				
9.				
10.		REDACTED EXEMPTION 4		
11.				
12. **Total** (sum of lines 8 - 11)				

Section D - Forecasted Cash Needs

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal					
14. Non-Federal			REDACTED EXEMPTION 4		
15. **Total** (sum of lines 13 and 14)					

Section E - Budget Estimates of Federal Funds Needed for Balance of the Project

(a) Grant Program	**Future Funding Periods (Years)** (b) First	(c) Second	(d) Third	(e) Fourth
16. Demonstration of Integrated Biorefinery Operations				
17.				
18.		REDACTED EXEMPTION 4		
19.				
20. **Total** (sum of lines 16-19)				

Section F - Other Budget Information

21. Direct Charges	$23,142,869	22. Indirect Charges	EX 4

23. Remarks

Instructions for the SF-424A

Public Reporting Burden for this collection of information is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Please do not return your completed form to the Office of Management and Budget; send it to the address provided by the sponsoring agency.

General Instructions
This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the later case, Sections A, B, C, and D should provide the budget for the first budget period (usually a year) and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary Lines 1-4 Columns (a) and (b)
For applications pertaining to a **single** Federal grant program (Federal Domestic Assistance Catalog number) and **not requiring** a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a **single** program **requiring** budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to multiple programs where none of the programs require a breakdown by function or activity, enter the catalog program title on each line in **Column** (a) and the respective catalog number on each line in Column (b).
For applications pertaining to **multiple** programs where one or more programs **require** a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1-4, Columns (c) through (g)

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should not equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

Section B. Budget Categories
In the column headings (a) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets are prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

Lines 6a-i—Show the totals of Lines 6a to 6h in each column.

Line 6j—Show the amount of indirect cost.

Line 6k—Enter the total of amounts on Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5.
Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the federal grantor agency in determining the total amount of the grant.

Section C. Non-Federal Resources

Lines 8-11—Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet.

Column (a)—Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

Column (b)—Enter the contribution to be made by the applicant.

Column (c)—Enter the amount of the State's cash and in-kind contribution if the applicant is not a State or State agency. Applicants which are a State or State agencies should leave this column blank.

Column (d)—Enter the amount of cash and in-kind contributions to be made from all other sources.

Column (e)—Enter totals of Columns (b), (c), and (d).

Line 12—Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f) Section A.

Section D. Forecasted Cash Needs

Line 13—Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14—Enter the amount of cash from all other sources needed by quarter during the first year.

Line 15—Enter the totals of amounts on Lines 13 and 14.

Section E. Budget Estimates of Federal Funds Needed for Balance of the Project

Lines 16-19—Enter in Column (a) the same grant program titles shown in Column
(a), Section A. A breakdown by function or activity is not necessary. For new applications and continuation grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods (usually in years). This section need not be completed for revisions (amendments, changes, or supplements) to funds for the current year of existing grants.
If more than four lines are needed to list the program titles, submit additional schedules as necessary.

Line 20—Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

Line 21—Use this space to explain amounts for individual direct object-class cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

Line 22—Enter the type of indirect rate (provisional, predetermined, final or fixed) that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23—Provide any other explanations or comments deemed necessary.

REDACTED

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PMC123.1 - Budget Justification for SF 424A Budget

Instructions and Summary

Award Number: _____ Date of Submission: _____

Award Recipient: Solazyme Form submitted by: Abengoa Bioenergy

(May be award recipient or sub-recipient)

Please read the instructions on each page before starting.
If you have any questions, please ask your DOE contact. It will save you time!

On this form, provide detailed support for the estimated project costs identified on the SF-424A form (Budget).

- The dollar amounts on this page must match the amounts on the associated SF-424A.
- The award recipient and each sub-recipient with estimated costs of $100,000 or more must complete this form and a SF-424A form.
- The total budget presented on this form and on the SF424A must include both Federal (DOE), and Non-Federal (cost share) portions, thereby reflecting TOTAL PROJECT COSTS proposed.
- For costs in each Object Class Category on the SF-424A, complete the corresponding worksheet on this form (tab at the bottom of the page).
- All costs incurred by the preparer's sub-recipients, vendors, contractors, consultants and Federal Research and Development Centers (FFRDCs), should be entered only in section f. Contractual. All other sections are for the costs of the preparer only.

SUMMARY OF BUDGET CATEGORY COSTS PROPOSED

(Note: The values in this summary table are from entries made in each budget category sheet.)

CATEGORY	Budget Period 1 Costs	Budget Period 2 Costs	Budget Period 3 Costs	Total Costs	Project Costs %	Comments (Add comments as needed)
a. Personnel						
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies						
f. Contractual						
Sub-recipient						
FFRDC						
Vendor						
Total Contractual						
g. Construction						
h. Other Direct Costs						
i. Indirect Charges						
Total Project Costs						

REDACTED
EXEMPTION 4

Additional Explanations/Comments (as necessary)

a. Personnel

PLEASE READ!!!

List costs solely for employees of the entity completing this form (award recipient or sub-recipient). All other personnel costs (of subrecipients or other contractual efforts of the entity preparing this) must be included under f., Contractual. This includes all consultants and FFRDCs.

Identify positions to be supported. Key personnel should be identified by title. All other personnel should be identified either by title or a group category. State the amounts of time (e.g., hours or % of time) to be expended, the composite base pay rate, total direct personnel compensation and identify the rate basis (e.g., actual salary, labor distribution report, technical estimate, state civil service rates, etc.).

Add rows as needed. Formulas/calculations will need to be entered by the preparer of this form. Please enter formulas as shown in the example.

Task # and Title	Position Title	Budget Period 1			Budget Period 2			Budget Period 3			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 1	Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 2	Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 3			
1. Generation 2A Receiver Design													
EXAMPLE	Sr. Engineer												
ONLY!!!	Electrical engineers												
	Technician												
1. (Task 1 Title)													
2. (Task 2 Title)													
3. (Task 3 Title)													
etc.													

REDACTED
EXEMPTION 4

Task # and Title	Position Title	Budget Period 1			Budget Period 2			Budget Period 3			Project Total Hours	Project Total Dollars	Rate Basis
		Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 1	Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 2	Time (Hours)	Pay Rate ($/Hr)	Total Budget Period 3			
	Total Personnel Costs												

Additional Explanations/Comments (as necessary)

REDACTED
EXEMPTION 4

b. Fringe Benefits

	Budget Period 1	Budget Period 2	Budget Period 3	Total
Rate applied:				
Total fringe requested:	REDACTED EXEMPTION 4			

A federally approved fringe benefit rate agreement, or a proposed rate supported and agreed upon by DOE for estimating purposes is required if reimbursement for fringe benefits is requested. Please check (X) one of the options below and provide the requested information, if it has not already been provided to the Contracting Officer, OR if it has changed since it was. Calculate the fringe rate and enter the total amount in Section B, line 6.b. ("Fringe Benefits") of form SF-424A.

____ **A fringe benefit rate has been negotiated with, or approved by, a federal government agency. A copy of the latest rate agreement is included with this application, and will be provided electronically to the Contracting Officer for this project.**
(When this option is selected, a presentation of the budget that demonstrates the appliction of the approved rate, to arrive at the proposed fringes benefits dollars should also be provided.)

X **There is not a current, federally approved rate agreement negotiated and available.**
(When this option is checked, the entity preparing this form shall submit a rate proposal in the format provided at the following website, or a format that provides the same level of information and which will support the rates being proposed for use in performance of the proposed project. Go to https://www.eere-pmc.energy.gov/forms.aspx and select PMC 400.2 Sample Rate Proposal.)

itional explanation/comments (as necessary)

REDACTED
EXEMPTION 4

c. Travel

PLEASE READ!!!

Provide travel detail as requested below, identifying total Foreign and Domestic Travel as separate items. Purpose of travel are items such as professional conference, DOE sponsored meeting, project management meeting, etc. The Basis for Estimating Costs are items such as past trips, current quotations, Federal Travel Regulations, etc.

All listed travel must be necessary for performance of the Statement of Projecct Objectives.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

Purpose of travel	No. of Travelers	Depart From (not required for domestic travel)	Destination (not required for domestic travel)	No. of Days	Cost per Traveler	Cost per Trip	Basis for Estimating Costs
Budget Period 1							
Domestic Travel							
EXAMPLE ONLY!!! Visit to PV cell mfr. to set up vendor agreement							
Domestic Travel subtotal							
International Travel							
International Travel subtotal							
Budget Period 1 Total							

REDACTED
EXEMPTION 4

Purpose of travel	No. of Travelers	Depart From (not required for domestic travel)	Destination (not required for domestic travel)	No. of Days	Cost per Traveler	Cost per Trip	Basis for Estimating Costs
Budget Period 2							
Domestic Travel							
Domestic Travel subtotal							
International Travel							
International Travel subtotal							
Budget Period 2 Total							
Budget Period 3							
Domestic Travel							
Domestic Travel subtotal							
International Travel							
International Travel subtotal							
Budget Period 3 Total							
PROJECT TOTAL							

REDACTED
EXEMPTION 4

Additional Explanations/Comments (as necessary)

d. Equipment

PLEASE READ!!!

Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year. Further definitions can be found at 10 CFR 600 found on the PMC Recipient Resources Forms page at https://www.eere-pmc.energy.gov/Forms.aspx#regs .

List all proposed equipment below, providing a basis of cost such as vendor quotes, catalog prices, prior invoices, etc., and briefly justifying its need as it applies to the Statement of Project Objectives. If it is existing equipment, and the value of its contribution to the project budget is being shown as cost share, provide logical support for the estimated value shown. If it is new equipment which will retain a useful life upon completion of the project, provide logical support for the estimated value shown.

For equipment over $50,000 in price, also include a copy of the associated vendor quote or catalog price list.

Add rows as needed. If rows are added, formulas/calculations may need to be adjusted by the preparer.

Equipment Item	Qty	Unit Cost	Total Cost	Basis of Cost	Justification of need
				dget Period 1	
EXAMPLE ONLY!!! Thermal shock chamber					
				REDACTED EXEMPTION 4	
Budget Period 1 Total					
				dget Period 2	
Budget Period 2 Total					