

Professional Experience

President

NordYeast Inc. | Englewood, CO

2014-present

- Founded Biotechnology Consulting Company
- *Technical Advice*: Yeast Metabolic Engineering, Yeast Genetics, Non-Conventional Yeast Molecular Biology & the Design of Commercial Scale Organisms
- *Legal & Regulatory Support*: Expert Witness in Genetics, Molecular Biology, & Metabolic Engineering, Document Reviewer for the Assembly of Discovery Timelines for Litigators & the Design of Microbes Ready for EPA MCAN Submission
- *Business Guidance*: Strain Engineering Project Plan Development, Grant Writing, Science Advisory Panels, Institutional Bio Safety Committees, Start Up Coaching & Support, Assembling High Performing Teams including Interviewing & Coaching and Business Services for Start-Up companies.

Director, Biocatalyst Development

Gevo, Inc. | Englewood, CO

2008-2014

- Successfully assembled and managed a high-performing team of 20+ molecular biologists, metabolic and protein engineers, microbiologists and biochemists.
- Proactively managed strain development projects by leveraging both the expertise and strengths of Gevo scientists as well as external collaborators and consultants.
- Delivered commercial isobutanol biocatalysts for implementation.
- Co-author and Principal Investigator of the USDA BRDI grant "Cellulosic Isobutanol Yeast Biocatalyst."
- Significantly participated in both the prosecution and the litigation of Gevo's patent portfolio.
- Collaborated with Regulatory Affairs for several successful regulatory submissions.
- Subject matter expert: eukaryotic genetics, metabolic engineering, genomics and molecular biology.

Group Leader

NatureWorks | Cargill BioTDC-BioIndustrial | Minnetonka, MN

2007-2008

- Managed major projects focused on cellulosic ethanol and lactic acid production in yeast.
- Supervised a team of nine molecular biologists developing patentable biocatalysts.

Principal Scientist

Cargill Dow | NatureWorks | Minnetonka, MN

2000-2007

- Engineered yeast strains to produce lactic acid at low pH, which were successfully implemented at commercial scale.
- Supported several successful regulatory submissions for commercial organisms.
- Authored patent examples and claims covering biocatalyst inventions.
- Created genetic and molecular tools for the development of novel organisms based on my previous academic research studying non-conventional yeast and algae.
- Served as Biological Safety Officer and conducted biological safety training at both R&D and production facilities.

Microbiologist

Minntech Corporation | Plymouth, MN

1999-2000

- Designed and implemented microbiological testing procedures for FDA 510(k) approval.
- Explored potential biotechnology applications for Minntech's core technologies.
- Advised Minntech's Corporate Development team as a biotechnology consultant.

Post-Doctoral Researcher | University of Minnesota | Saint Paul, MN**Visiting Genetics Professor** | Gustavus Adolphus College | Saint Peter, MN

1995-1996

Graduate Research Assistant | University of Minnesota | Saint Paul, MN

1989-1995

Ph.D. Thesis | Flagellar Length Control in unicellular algal system *Chlamydomonas reinhardtii***Education**

Post-Doctoral Research University of Minnesota Department of Plant Biology	1996-1998
Ph. D. Molecular, Cellular, Developmental Biology & Genetics University of Minnesota	1989-1995
Physiology Course Marine Biological Laboratory Woods Hole, MA	1991
B.S. Biological Sciences University of Nebraska-Lincoln	1984-1987

Issued Patents

1. AU 2003/240481 B8	Methods And Materials For The Production Of D-lactic Acid In Yeast	1/10/08
2. US 8232089 B2	Cytosolic Isobutanol Pathway Localization For The Production Of Isobutanol	7/31/12
3. CN 1735683 B	Methods And Materials For The Production Of D-lactic Acid In Yeast	5/26/10
4. DE 60315028 D1	Verfahren Und Materialien Zur Produktion Von D-milchsäure In Hefe	8/30/07
5. EP 1513923 B1	Methods And Materials For The Production Of D-lactic Acid In Yeast	7/18/07
6. EP 1960516 B1	Lactic Acid-producing Yeast Cells Having Nonfunctional L-or D-lactate: Ferricytochrome C Oxidoreductase Gene	12/26/12
7. ES 2290466 T3	Metodos Y Materiales Para La Produccion De Acido D-lactico En Levadura.	2/16/08
8. US 8071358 B1	Methods Of Increasing Dihydroxy Acid Dehydratase Activity To Improve Production Of Fuels, Chemicals, And Amino Acids	12/6/11
9. US 8017376 B2	Methods Of Increasing Dihydroxy Acid Dehydratase Activity To Improve Production Of Fuels, Chemicals, And Amino Acids	9/13/11
10. US 8137953 B2	Lactic Acid-producing Yeast Cells Having Nonfunctional L- Or D-lactate: ferricytochrome C Oxidoreductase Cells	3/20/12
11. US 8158404 B2	Reduced By-product Accumulation For Improved Production Of Isobutanol	4/17/12
12. US 8273565 B2	Methods Of Increasing Dihydroxy Acid Dehydratase Activity To Improve Production Of Fuels, Chemicals, And Amino Acids	9/25/12
13. ZA 200409531 A	Methods And Materials For The Production Of D-lactic Acid In Yeast.	11/23/05
14. US 8017375 B2	Yeast Organism Producing Isobutanol At A High Yield	9/13/11
15. US 8455239 B2	Yeast Organism Producing Isobutanol At A High Yield	6/4/13
16. GB 2501143 B	Yeast Microorganisms Genetically Engineered To Improve Isobutanol Biosynthesis	3/26/14
17. GB 2487889 B	Methods Of Increasing Dihydroxy Acid Dehydratase Activity To Improve Production Of Fuels, Chemicals, And Amino Acids	12/19/12
18. GB 2492267 B	Yeast Microorganisms With Reduced By-product Accumulation For Improved Production Of Fuels, Chemicals And Amino Acids	5/1/13
19. US 8133715 B2	Reduced By-product Accumulation For Improved Production Of Isobutanol	3/13/12
20. US 8153415 B2	Reduced By-product Accumulation For Improved Production Of Isobutanol	4/10/12

Publications & Presentations

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- Asleson, Catherine M., Eric S. Bensen, Cheryl A. Gale, A.-S. Melms, Cornelia Kurischko, and Judith Berman (2001) "*Candida albicans* INT1-induced filamentation in *Saccharomyces cerevisiae* depends on Sla2p." *Molecular and Cellular Biology* 21(4): 1272-1284.
- Asleson, C.M., J.C. Asleson, E.H. Malandra, S. Johnston, and J. Berman (2000) "Filamentation in *S. cerevisiae* is regulated by extracellular manganese concentration." *Fungal Genetics and Biology* 30(2):155-162.
- Asleson, C.M. and P.A. Lefebvre, (1998) "Genetic analysis of flagellar length control in *Chlamydomonas reinhardtii*: a new *LF* locus and extragenic suppressor mutations." *Genetics* 148:1-10.
- Lefebvre, P.A., C.M. Asleson and L.-T. Tamm, "Control of flagellar length in *Chlamydomonas*." (1995), *Seminars in Developmental Biology* 6: 317-323.
- Grabau, E., Asleson, C., and Gengenbach, B., "Nucleotide sequence and transcription of the soybean mitochondrial ATPase subunit 9 gene." (1990), *Plant Molecular Biology* 15: 183-186.
- Developing the Next Generation of Biofuels: Isobutanol, June 2010. *Sixth International Conference on Renewable Resources and Biorefineries Düsseldorf, Germany*