

Zivko Nikolov

PROFESSOR

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EDUCATION/TRAINING

1986	PhD	Chemical Engineering, Iowa State University, Ames, IA
1983	MS	Chemical Engineering, Iowa State University, Ames, IA
1977	BS	Dipl. Eng. in Food Engineering, University of Novi Sad, Serbia

POSITIONS & EMPLOYMENT

2001-2003	Vice President, ProdiGene Inc., College Station, TX
1999-2001	Director, ProdiGene Inc., College Station, TX
1998-1999	Professor, Iowa State University, Ames, IA
1993-1998	Associate Professor, Iowa State University, Ames, IA
1987-1993	Assistant Professor, Iowa State University, Ames, IA
1986-1987	Senior Scientist, Michigan Biotechnology Institute, Lansing, MI

OTHER POSITIONS AND PROFESSIONAL MEMBERSHIPS

2018	Director, National Center for Therapeutic Manufacturing
2014	Special Issue Editor: Processes – Antibodies
2012-2018	Advisory Board, National Center for Therapeutic Manufacturing, Texas A&M University
2012	Scientific Board, the 6 th Central European Congress on Food, Serbia
2012	Scientific Board: 5th International Congress of Science and Technology of Biofuels, 2012, Bucaramanga, Columbia.
2012-present	Associate Department Head, Texas A&M University
2007-present	Editorial Board, Journal of Biological Engineering
2007-present	Editorial Board, Acta Periodica Technologica, Serbia
2006 - 10	Scientific Advisory Board, ERA Biotech, Spain
2005 - 07	Editorial Board, Brazilian Journal of Chemical Engineering

HONORS & AWARDS

Dow Professor in Bioprocess Engineering, Texas A&M University, 2003-18
Dean's Outstanding Achievement Award for Excellence in Faculty Mentoring, 2017
BAEN Excellence in Research Award, 2011

SELECTED PUBLICATIONS

- Soto-Sierra, L. Stoykova, P. **Nikolov, Z. L.** 2018. Extraction and fractionation of microalgae-based products. *Algal Research*, 36:175-192
- Guo, S., Ravi, A., Mayfield, S, **Nikolov, Z. L.** Exploring the separation power of mixed-modal resins for purification of recombinant osteopontin from clarified E. coli lysates. 2018. *Biotechnol. Progress*, doi: 10.1002/btpr.2722
- Kulkarni, S. and **Nikolov, Z. L.** 2018. Process for selective extraction of pigments and functional proteins from *Chlorella vulgaris*. *Algal Research*, 35: 185-193.
- Ravi, A., Guo, S., Miller Tran, M., Rasala, B., Mayfield, S. **Nikolov, Z. L.** 2018. Separation options for phosphorylated osteopontin from transgenic microalgae *Chlamydomonas reinhardtii*” *International Journal of Molecular Sciences*, 19: 585.
- Marrone et al., 2017. Review of the harvesting and extraction program within the National Alliance for Advanced Biofuels and Bio products, *Algal Research*, in press, doi.org/10.1016/j.algal.2017.07.015
- Wilken, L. Ogle, E.T., Lohrman, T. and **Nikolov, Z.L.** 2016. Impact of dry-milled germ processing on aqueous protein and oil extraction, *Food and Bioprocess Technology*: 612-620

- Munjal, N., Kulkarni, S., Quinones, K, Tran, M., Mayfield, S.P. and **Nikolov, Z. L.** 2015. Evaluation of pretreatment methods for primary recovery and capture of an antibody fragment (α CD22scFv) from *Chlamydomonas reinhardtii* lysate, *Algal Research* 12: 455-462.
- Munjal, N., Garzon-Sanabria, A. J., Quinones, K., Gregory, J., **Nikolov, Z. L.**, 2014. Light-induced production of an antibody fragment and malaria vaccine antigen from *Chlamydomonas reinhardtii*. *Processes* 2: 625-638.
- Hood, N.C., Hood, K.R., Woodard, S.L., Wilken L.R, **Nikolov, Z.L.**, Howard, J.A, Egelkrout, E and Hood, E. Purification and Characterization of Recombinant Cel7A from Maize Seed. 2014. *Appl Biochem.Biotechnol.* 174: 2864-2874.
- Garzon-Sanabria, A. J., Ramirez-Caballero, S.S., Moss, F., **Nikolov, Z. L.**, 2013. Effect of algogenic organic matter (AOM) and sodium chloride on *Nannochloropsis salina* flocculation efficiency, *Bioresource Technology*, 143: 231-237.
- Barros G.O.F, Ballen, M.A.T., Woodard S. L., Wilken, L. R., White, S. G., Damaj, M. B., Mirkov, T. E., and **Nikolov Z. L.** 2013. Recovery of bovine lysozyme from transgenic sugarcane stalks. *Bioprocess Biosystems. Eng.* 36: 1407-1416.
- Garzon-Sanabria A. J, Davis, R., **Nikolov, Z. L.** 2012. Harvesting *Nannochloris oculata* by inorganic flocculation. *Bioresource Technol.*, 118: 418-424.
- Wilken, L.R. and **Nikolov, Z. L.** 2012. Recovery and purification of plant-made foreign proteins. *Biotechnol. Advances* 30: 419-43.
- Garzon-Sanabria A. J, Davis, R., **Nikolov, Z. L.** 2012. Harvesting *Nannochloris oculata* by inorganic flocculation. *Bioresource Technol.*, 118: 418-424.
- Barros G.O.F, Woodard S.L., **Nikolov Z. L.** 2011. Phenolics removal from transgenic *Lemna minor* extracts expressing mAb and impact on mAb production cost. *Biotechnol. Progr.* 27: 410-418.
- Wilken, L.R. and **Nikolov, Z.L.** 2011. Process evaluation and economic analyses of recombinant human lysozyme and hen egg-white lysozyme purifications. *Biotechnol. Progr.* 27: 733-743.
- Wilken, L.R. and **Nikolov, Z.L.** 2010. Evaluation of Alternatives for Human Lysozyme Purification from Transgenic Rice: Impact of Phytic Acid and Buffer. *Biotechnol. Prog.* 26: 1303-1311.
- Barros G.O.F, Woodard S.L., **Nikolov Z. L.** 2011. Phenolics removal from transgenic *Lemna minor* extracts expressing mAb and impact on mAb production cost. *Biotechnol. Progr.* (DOI: 10.1002/btpr.543).
- Wilken, L.R. and **Nikolov, Z.L.** 2010. Evaluation of Alternatives for Human Lysozyme Purification from Transgenic Rice: Impact of Phytic Acid and Buffer. *Biotechnol. Prog.* 26: 1303-1311.
- Woodard, S. L., Wilken, L. R., Barros, G. O. F., White, S. G., & **Nikolov, Z. L.** 2009. Evaluation of Monoclonal Antibody and Phenolic Extraction from Transgenic *Lemna* for Purification Process Development. *Biotechnol. Bioeng.* 104: 562-571.
- Wilken, L. R., and **Nikolov, Z. L.** 2006. Factors influencing recombinant human lysozyme extraction and cation exchange adsorption. *Biotechnol. Prog.*, 22: 745-752.
- Lamphear, B. J., Barker, D. K. Brookes, C. A. Delaney, D. E., Lane, J. R. Beifuss, K, Love, R. Thompson, K. Mayor, J., Horn, M. E , Streatfield, S. J., **Nikolov, Z.**, Woodard, S.L., Hood E. E., and Howard, J. A. 2005. Expression of the sweet protein brazzein in maize for product of a new commercial sweetener. *Plant Biotechnol. J.*, 3: 103-114.
- Nandi, S, Yalda, E, Lu, S., **Nikolov. Z.L**, Misaki, R., Kazuhito, F, Huang N. 2005. Process development and economic evaluation of recombinant human lactoferrin expressed in rice grain. *Transgenic Res.*, 14:237-249.
- Zhu, L.; van de Lavoie, M. C.; Albanese J.; Beenhouwer, D. O.; Cardarelli, P.M.; Deng, D. F.; Deshpande S.; Diamond, J. H.; Green, L; **Nikolov, Z. L.** et al. 2005. Production of human monoclonal antibodies in eggs of chimeric chickens. *Nat. Biotechnol.*, 23: 1159-1169.
- **Nikolov, Z. L.** ,Woodard, S. 2004. Downstream processing of recombinant proteins form transgenic feedstock, *Curr Opin Biotechnol.*, 15: 479-486.
- Menkhaus, T.J., Bai, Y., Zhang, C., **Nikolov, Z L**, Glatz, C.E. 2004. Considerations for the recovery of recombinant proteins from plants, *Biotechnol Prog.*, 20:1001-1014.
- Yildirim, S., R. G. Fuentes, R. Evangelista, and **Z.L. Nikolov**, 2002. Fractionation of transgenic corn for optimal recovery of recombinant proteins, *J. Am. Oil Chem. Soc.*, 79:809-814.
- Azzoni A. R ,A.R. Kusnadi; E. A. Miranda, and **Z.L. Nikolov**. 2002. Recombinant aprotinin produced in transgenic corn seed: Extraction and Purification Studies, *Biotechnol. Bioeng.*, 80: 268-276.
- Bai, Y., **Z. L. Nikolov**, and C. E. Glatz. 2002. Aqueous extraction of β -glucuronidase from transgenic canola: Kinetics and Microstructure, *Biotechnol. Progress*, 18:1301-1305.
- Bai, Y. and **Nikolov, Z. L.** 2001. Effect of processing on the recovery of recombinant β -glucuronidase from transgenic canola. *Biotechnol. Prog.*, 17: 168-74.
- Ferreira, S. R., **Z. L. Nikolov**, L. K. Doraiswamy, M. A. Meireles, and A. J. Petenate. 1999. Supercritical fluid extraction of black pepper essential oil. *J. Supercritical Fluids*. 14: 235-245.
- Kusnadi, A. R., R. L. Evangelista, E. E. Hood, J. Howard, and Z. L. Nikolov. 1998. Processing of transgenic corn and its effect on the recovery of β -glucuronidase. *Biotechnol. Bioeng.* 60: 44-52.