

Kafryn W. Lieder, Ph.D.

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EXPERIENCE

Technical Writer

The Well-Tempered Word, LLC, Madison, WI **2003–present**

- Provide scientific writing, editing, and consulting to area companies and university faculty and staff.
- Prepare SBIR/STTR grant applications for NIH, NSF, USDA.
- Prepare grant applications for not-for-profit organizations.
- Write and edit peer-reviewed manuscripts, trade journal articles, dissertations, user protocols and manuals, sales sheets, brochures, website copy, and press releases.

Technical Writer

EMD Biosciences, Inc. (Novagen brand), Madison, WI **2004–2005**

- Prepared written materials (promotional literature, news releases, and newsletter articles) for MarCom department; occasionally translated documents from German to English.
- Worked with graphic artists, product managers, and journal editors to prepare text and figures for trade journals.
- Coordinated with San Diego office on managing extensive website re-categorization project.

Technical Writer

Invitrogen Corporation (formerly PanVera), Madison, WI **2002–2003**

- Edited and wrote material for newsletters (print and online), protocols, press releases, product guides, trade journals article, brochures, and website.
- Wrote and/or edited articles published in peer-reviewed and trade journals.
- Drafted clear, accurate description of complicated database development project for presentation to non-technical audience.
- Wrote and/or edited 11 technical and sales training brochures for five different product lines.
- Worked with branch office to create brochure and flyer for newly developed instrument for trade show.

Technical Writer

Third Wave Technologies, Inc., Madison, WI **1999–2002**

- Edited and wrote research articles, clinical study articles, reviews, and grant applications.
- Edited and wrote marketing literature; prepared brochures and flyers for non-technical audiences.
- Researched and verified background information for and drafted sections of TWT's S-1 filing for IPO
- Developed protocol templates used for more than 35 products for molecular diagnostic products.

SKILLS

- Extensive familiarity with all aspects of Federal grant (SBIR/STTR) application process.
- Detail-oriented, critical thinker, with the ability to acquire and utilize new scientific knowledge rapidly.
- Excellent communicator, effective networker, and team builder with strong problem-solving ability.
- Able to adapt a variety of technical information for presentation to a non-technical audience.
- Function well under pressure; able to meet deadlines consistently.
- Experienced with Microsoft Office; EndNote.

EDUCATION

- Ph.D., Biochemistry (minor: Organic Chemistry), University of Wisconsin–Madison.
- B.A., Bryn Mawr College, Bryn Mawr, PA. Major: History of Religion; Minor concentration: German.

PROFESSIONAL AFFILIATIONS

- American Chemical Association (ACS)
- Society for Technical Communication (STC)

PUBLICATIONS AND PRESENTATIONS

Research Articles and Presentations

Lieder, K.W., Booker S., Ruzicka F.J., Beinert H., Reed G.H., and Frey, P.A. S-adenosylmethionine-dependent reduction of lysine 2,3-aminomutase and observation of the catalytically functional iron-sulfur centers by electron paramagnetic resonance. *Biochemistry* **37**, 2578–85 (1998).

Frey, P.A., Reed, G.H., Moss, M.L., Petrovich, R.M., Ballinger, M.D., **Lieder, K.W.**, Wu, W., Chang, C.H., Bandarian, V., Ruzicka, F.J., LoBrutto, R., and Beinert, H. The role of S-adenosylmethionine as a poor man's adenosylcobalamin in the reaction of lysine 2,3-aminomutase. Vitamin B₁₂ and B₁₂ Proteins. *Proceedings of the 4th European Symposium on Vitamin B₁₂ and B₁₂ Proteins*, Chap. 28, pp. 397–408, Wiley-VCH, Weinheim (1998).

Wu, W., **Lieder, K.W.**, Reed, G.H., and Frey, P.A. Observations of a second substrate radical intermediate in the reaction of lysine 2,3-aminomutase: a radical centered on the β -carbon of the alternative substrate, 4-thia-lysine. *Biochemistry* **34**, 10532–10537 (1995).

Wu, W., **Lieder, K.W.**, Ruzicka F.J., Reed G.H., and Frey, P.A. Characterization of substrate radicals at the active site of lysine-2,3-aminomutase. XVth Midwest Enzyme Conference (1995), Chicago, IL. (oral presentation)

Wu, W., **Lieder, K.W.**, Ruzicka F.J., Reed G.H., and Frey, P.A. Characterization of substrate radicals at the active site of lysine-2,3-aminomutase. 208th National Meeting of the American Chemical Society, 1994, Washington, D.C. (poster presentation)

BIBLIOGRAPHY OF INDUSTRY PUBLICATIONS (EDITOR AND/OR AUTHOR)

Clinical Study Articles – Editor/Author

Hessner, M.J., Friedman, K.D., Voelkerding, K.V., Huber, S., Ryan, D., Nuccie, B. and Ledford, M. Multisite study for genotyping of the factor II (prothrombin) G20210A mutation by the invader assay. *Clin Chem* **47**, 2048–2050 (2001).

Ledford, M., Friedman, K.D., Hessner, M.J., Moehlenkamp, C., Williams, T.M. and Larson, R. A multi-site study for detection of the factor V (Leiden) mutation from genomic DNA using a homogeneous Invader[®] microtiter plate FRET assay. *J Molec Diagnostics* **2**, 97–104 (2000).

Newlin, F.H. and Heisler, L.M. The Invader assay: an alternative to PCR-based testing for the detection of point mutations associated with venous thrombosis. *Clinical Hemostasis Review* **14**, 10–11 (2000).

Review Articles – Author

Fors, L., Lieder, K.W., Vavra, S.H. and Kwiatkowski, R.W. Large-scale SNP scoring from unamplified genomic DNA. *Pharmacogenomics* **1**, 219–229 (2000).

Treble, M.J., Neri, B.P., Lieder, K.W. and Kwiatkowski, R.W. Invader[®] technology for SNP detection. *Gene and Medicine* **4**, 68–72 (2000).

Trade Journal Articles for General Public – Author/Co-Author

Heisler, L. and Lieder, K.W. A Guide to Molecular Methods for Detecting Human Genetic Diseases. *Advance for Managers of the Laboratory* **May**, 53 (2001).

Lieder, K.W. Analyzing DNA sequences. *Advance for Medical Laboratory Professionals* **November**, 74–75 (2002).

Lieder, K.W. Excitement builds in molecular biology. *Advance for Managers of the Laboratory* **November**, 50–52 (1999).

Trade Journals – Product-based Articles – Editor/Author

Trubetskoy, V.S. and Burke, T.J. Engineered polymeric micelles: A novel tool for solubilization and stabilization of membrane protein targets for proteomics and drug discovery. *American Laboratory* **37**, 19–22 (2005).

Bruggink, F. and Hayes, S. Identification of DNA binding proteins using the NoShift Transcription Factor Assay Kit. *Nature Methods* **1** (2), 177–179 (2004).

Trubetskoy, O.V., Marks, B.D., Lieder, K.W., Larson, G.A., Volak, L.P., Zlokarnik, G. Detecting Drug Interactions & P450 Inhibition. *Genetic Engineering News* **23** (1), 1–3 (2003).

Lieder, K.W. Invader technology provides alternative to PCR. *Advance for Managers of the Laboratory* **February**, 70–71 (2000).

Book Section – Author

Lieder, K. Signal Amplification Systems: Invader[®] Technology in *Laboratorian Desk Reference*, Vol. I, 5th Edition. (eds. P. Hess and D. Cooper) 129–132 (Clinical Ligand Assay Society, Wayne, Michigan; 2000).

Scientific Articles – Editor

Beebe, J.A., Wiepz, G.J., Guadarrama, A.G., Bertics, P.J. and Burke, T.J. A carboxyl-terminal mutation of the epidermal growth factor receptor alters tyrosine kinase activity and substrate specificity as measured by a fluorescence polarization assay. *J Biol Chem* **278**, 26810–26816 (2003).

Burke, T.J., Loniello, K.R., Beebe, J.A. and Ervin, K.M. Development and application of fluorescence polarization assays in drug discovery. *Comb Chem High Throughput Screen* **6**, 183–194 (2003).

Marks, B.D., Goossens, T.A., Braun, H.A., Ozers, M.S., Smith, R.W., Lebakken, C. and Trubetskoy, O.V. High-throughput screening assays for CYP2B6 metabolism and inhibition using fluorogenic Vivid substrates. *AAPS PharmSci* **5** (2), article 18 (2003).

Marks, B.D., Smith, R.W., Braun, H.A., Goossens, T.A., Christenson, M., Ozers, M.S., Lebakken, C.S. and Trubetskoy, O.V. A novel HTS assay to screen for CYP2E1 metabolism and inhibition using a fluorogenic Vivid[®] P450 substrate. *ASSAY Drug Devel Technol* **1**, 73–81 (2002).

Neville, M., Selzer, R., Aizenstein, B., Maguire, M., Hogan, K., Walton, R., Welsh, K., Neri, B. and de Arruda, M. Characterization of cytochrome P450 2D6 alleles using the Invader system. *Biotechniques Suppl*, 34–38, 40–33 (2002).

Allawi, H.T., Dong, F., Ip, H.S., Neri, B.P. and Lyamichev, V.I. Mapping of RNA accessible sites by extension of random oligonucleotide libraries with reverse transcriptase. *RNA* **7**, 314–327. (2001).

Dong, F., Allawi, H.T., Anderson, T., Neri, B.P. and Lyamichev, V.I. Secondary structure prediction and structure-specific sequence analysis of single-stranded DNA. *Nucleic Acids Res* **29**, 3248–3257 (2001).

Eis, P.S., Olson, M.C., Takova, T., Curtis, M.L., Olson, S.M., Vener, T.I., Ip, H.S., Vedvik, K.L., Bartholomay, C.T., Allawi, H.T., Ma, W.P., Hall, J.G., Morin, M.D., Rushmore, T.H., Lyamichev, V.I. and Kwiatkowski, R.W. An invasive cleavage assay for direct quantitation of specific RNAs. *Nat Biotechnol* **19**, 673–676 (2001). *Erratum* (an error in concentration of an assay component). *Nat Biotechnol* **20**, 307 (2002).

Hall, J.G., Eis, P.S., Law, S.M., Reynaldo, L.P., Prudent, J.R., Marshall, D.J., Allawi, H.T., Mast, A.L., Dahlberg, J.E., Kwiatkowski, R.W., de Arruda, M., Neri, B.P. and Lyamichev, V.I. Sensitive detection of DNA polymorphisms by the serial invasive signal amplification reaction. *Proc Natl Acad Sci U S A* **97**, 8272–8277 (2000).

Lyamichev, V.I., Kaiser, M.W., Lyamicheva, N.E., Vologodskii, A.V., Hall, J.G., Ma, W.P., Allawi, H.T. and Neri, B.P. Experimental and theoretical analysis of the invasive signal amplification reaction. *Biochemistry* **39**, 9523–9532 (2000).

Neri, B.P., Ganske, R., Iszczyszyn, W. and Beaty, E.L. in *Advances in Nucleic Acid and Protein Analysis* **3926**, 117–125 (2000).

Trubetskoy, O.V., Finel, M., Burke, T.J. and Trubetskoy, V.S. Evaluation of synthetic polymeric micelles as a stabilization medium for the handling of membrane proteins in pharmaceutical drug discovery. *J Pharm Pharmaceut Sci* **9**, 271–280 (2006).

Trubetskoy, O., Marks, B., Zielinski, T., Yueh, M.F. and Raucy, J. A simultaneous assessment of CYP3A4 metabolism and induction in the DPX-2 cell line. *AAPS PharmSci* **7**, E6–13 [<http://www.aapsj.org/articles/aapsj0701/aapsj070102/aapsj070102.pdf>] (2005).