Kafryn W. Lieder, Ph.D.

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EXPERIENCE

Scientific Technical Writer and Grants Manager

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

- Provide scientific/technical writing, editing, and consulting to companies and university faculty and staff in Wisconsin and other states. Find funding opportunities.
- Prepare SBIR/STTR grant/contract applications for Federal (DOD, DoEd, NIH, NSF, USDA) funding agencies (more than 130, to date). Assist with grant/contract management.
- Lead SBIR/STTR workshops
- Prepare foundation grant applications for not-for-profit organizations. [American Heart Association, Chicago Community Trust, CLOCC (Consortium to Lower Obesity in Chicago Children), The Conservation Fund (National Forum on Children and Nature), The Dana Foundation, Echoing Green, Humana Inc. (Chicago Benefits), Wisconsin Humanities Council].
- Write and/or edit peer-reviewed manuscripts, trade journal articles, dissertations, user protocols and manuals, sales sheets, brochures, website copy, and press releases.
- Edit business plans.

Technical Writer

EMD Biosciences, Inc. (Novagen brand), Madison, WI ***2003–2004***

- 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.
- Helped create brochure and flyer for trade show launch of automated liquid dispenser.

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, Third Wave's S-1 filing for IPO.
- Developed templates used for more than 35 protocols for molecular diagnostic products.

SKILLS

- Extensive familiarity with the Federal grant and contract (SBIR/STTR) application processes, especially NIH and NSF.
- Detail-oriented, critical thinker; able to rapidly acquire and utilize new scientific knowledge.
- Excellent communicator, effective networker, and team builder with strong problem-solving abilities.
- Able to adapt a variety of technical information for presentation to non-technical audiences.
- Functions well under pressure; able to meet deadlines consistently.
- Experienced with Microsoft Office, EndNote, QuickBooks.

EDUCATION

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

PROFESSIONAL AFFILIATIONS

- American Chemical Association (ACS)
- BioForward (formerly Wisconsin Biotechnology & Medical Device Association: WBMDA)
- International Professionals, Inc.
- Madison Area Business Consultants (MABC)
- Wisconsin Entrepreneurs' Network (approved service provider)

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 B_{12} and B_{12} Proteins. *Proceedings of the 4th European Symposium on Vitamin B_{12} and B_{12} 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)

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

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

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

Trade Journals – Product-based Articles – Editor/Author

Wakatsuki, T., Lieder, K.W., Annac, A. Engineered tissue models: Innovative tools for early-stage, information-dense, high-throughput screening for drug discovery. *Am Biotech Laboratory* **Nov/Dec 2006**, 10–11 [americanbiotechnologylaboratory.texterity.com/abl/20061112/?pg=4] (2006).

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).

Book Chapter – Editor

I. Rodan. Understanding the Cat and Feline-friendly Handling. *In* The Cat: Clinical Medicine and Management (in press).

Scientific Articles – Editor

Lynch-Sauer J, VandenBosch T, Kron FW, Gjerde CL, Arato N, Sen A, Fetters MD. Nursing students' attitudes toward video games and related new media technologies: Implications for nursing education. *J Nurs Educ* **May** (31) 1–11 (2011).

I. Rodan. Understanding feline behavior and application for appropriate handling and management. *Topics in Companion Anim. Med.* **25** (4) 178–188 (2010).

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).

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).