

Haley Curtis Stevens, Ph.D.

Organization: International Formula Council
Atlanta, GA

Presentation: The Importance of Protein Measurements in Infant Formula
Tuesday, June 16 8:30 a.m.

Haley Curtis Stevens, Ph.D. is the Scientific Affairs Specialist for the International Formula Council (IFC). The Council is a trade association of manufacturers of infant formula and adult nutritionals who are based primarily in North America; IFC's members are Abbott Nutrition, Mead Johnson Nutrition, Nestle Nutrition, and Wyeth Nutrition. Dr. Stevens has provided scientific expertise on various recent issues involving infant formulas (e.g, melamine, BPA, perchlorate) as well as worked on the Codex Commission on Nutrition and Foods for Special Dietary Uses (CCNFSDU) methods of analysis for infant formula. Prior to joining IFC, Dr. Stevens completed an undergraduate degree at Vanderbilt University in Nashville, TN and a doctorate in Biological and Biomedical Sciences at Emory University in Atlanta, GA.

Dr. Stevens is speaking at the USP Food Protein Workshop on the importance of protein measurements in infant formula.

Michael Affolter, Ph.D.

Organization: Nestlé Research Center

Presentation: Qualitative and Quantitative Profiling of Bovine Milk Fat Globule
Membrane Protein Fractions
Wednesday, June 17, 2009

Dr. Michael Affolter is a senior research scientist in the Functional Genomics Group at the Nestlé Research Centre (Switzerland) and is heading the proteomics platform with a special focus to implement new technologies for protein analyses in the context of Nutrigenomics. His team develops and integrates mass spectrometry based protein expression profiling with bioinformatics and computational molecular science. Major application fields are immunology, diabetes, obesity, and digestive health. Being educated as an analytical biochemist, Dr. Affolter has acquired extensive research experience over the last fifteen years in the biotechnological and nutritional industry. He holds a M.Sc. and a Ph.D. in Biochemistry, obtained at the University of Berne, Switzerland. During his doctorate and post-doctorate (Prof. R. Aebersold, Biomedical Research Centre, University of British Columbia, Vancouver, Canada), he has specialized in analytical protein biochemistry and mass spectrometry based proteomics. Dr. Affolter has (co-) authored more than 30 peer-reviewed publications and filed over 10 patent applications. He is an active board member of the SPS (Swiss Proteomics Society) and a member of the ASBMB (Am. Soc. Biochem. Mol. Biol.) and the SGMS (Swiss Group for Mass Spectrometry).

John W. Finley, Ph.D.

Organization: Louisiana State University
Department of Food Science

Presentation: Using Total Amino Acid Content for Estimation of Protein in Food
Tuesday, June 16, 2009

Dr. Finley is Head and Professor of Food Science at Louisiana State University. He is leading a program focused on development of functional foods which deliver targeted health benefits and are of culinary quality. Programs to train regulatory scientists, Culinology and Energy efficient processing are being developed. He has also served as the Chief Technology Officer of A.M. Todd Co. a 137 year-old firm specializing in food flavors, ingredients, and specialty agriculture. Under Dr Finley's technical leadership, A.M. Todd transitioned from a commodity supplier to a provider of formulated flavors and functional foods ingredients that enhance health and wellness.

Dr. Finley has had a distinguished career in the food industry as a leader and innovator of new technologies. Prior to his time at A.M. Todd, Dr. Finley served at Kraft Foods where he developed several low calorie technologies and satiety enhancing products. Fostered by his background at Monsanto, John also served as an internal consultant in biotechnology. At Monsanto he was leader of the Food Science program which was focused on delivery of intense sweeteners and reduced calorie ingredient development. He also initiated a program to produce low calorie fats and fats with enhanced fatty acid profiles in conventionally bred and genetically engineered plants. At Nabisco, Dr. Finley assembled and served as leader of the Fundamental Science program which resulted in multiple innovations and technologies to support the Nabisco businesses. In that role he also was co-inventor and leader of the development program for Salatrim and low calorie fat.

Dr. Finley has authored over 100 technical publications, edited eleven books and holds 47 patents. Currently he is an associate editor for the Journal of Agricultural and Food Chemistry.

Sam K. C. Chang, Ph.D.

Organization: North Dakota State University
Presentation: Status and Future of Colorimetric Methods for Protein Measurement
Tuesday, June 16, 2009

Sam Chang, Ph.D., is a Professor at North Dakota State University with over twenty-nine years of teaching and research experience in academia. He has also held various administrative positions at the university level. His research has focused on legume protein chemistry, functional and nutritional properties. Dr. Chang is an elected Fellow of the Institute of Food Technologists; a member of the editorial board for the Journal of Agriculture and Food Chemistry, Journal of Food Science and the Journal of Food Processing and Preservation; and a member of the Advisory Board of the American Council on Science and Health.

Dr. Chang has given speeches worldwide on the food chemistry, processing and utilization of legumes, including soybean, dry bean and pea beans. He has authored more than 100 refereed journal articles and many review articles on a variety of subjects, including structures, composition, nutritional value and health benefits of components in soybeans and dry edible beans, and legume foods.

D.M. Barbano, Ph.D.

Organization: Cornell University

Presentation: A Kjeldahl Nitrogen-based True Protein Method that Accounts for 12%
TCA Soluble Non-protein Nitrogen
Tuesday, June 16, 2009

Dave Barbano, Ph.D., is a Professor of Food Science at Cornell University. Dave has made outstanding contributions to the advancement of Food Science and the dairy industry in the areas of milk chemistry, analytical methods for milk and dairy products, and dairy product manufacturing technology over nearly three decades in his research, extension, and teaching programs at Cornell. He is a Past President and current Chair of the American Dairy Science Association Foundation, and is a Fellow of the Association of Official Analytical Chemists (AOAC) International and the American Dairy Science Association. Dave has been the leader of 11 successful collaborative studies that have developed new and improved existing analytical testing methods for milk analysis and resulted in new or revised AOAC methods. He has done extensive research on the Kjeldahl nitrogen determination method, including method for direct determination of the true protein content of milk.

Dr. Jürgen Möller, Ph.D.

Organization: FOSS Analytical AB

Presentations: Status of Nitrogen-based Methods for Protein Measurement
Tuesday, June 16, 2009

Possibilities of FTIR and NIR to Detect Adulterations in Food and Feed
Wednesday, June 17, 2009

Jürgen Möller holds a Ph.D. (Dr. rer. Nat.) from the Technical University of Berlin, Germany, in Analytical Chemistry and has recently (May 2009) resigned from a position as lab manager at Foss in Sweden, which he held for almost 30 years. Dr. Möller is still working at Foss as a senior lab manager, research chemist and consultant.

Dr. Möller is the Swedish delegate in the International Standardization Organization (ISO) Technical Committee 34 (Food), Subcommittees 4 (Cereals and cereal products) and 10 (Animal feeding stuff), as well as in the European Standardization Organization CEN, Technical committees TC 275 (Food, horizontal methods), TC 327 (animal feeding stuff), and TC 338 (cereals and cereal products). He is also the convener of CEN TC 338 working group WG9 (NIR) and has been/is project leader for many standardization projects regarding the compositional analysis of food and feed.

Eric Eccleston, Ph.D.

USP Affiliation: Member, Food Protein Workshop Planning Committee

Organization: Aminoacids.com

Presentation: Putting Proteins Together and Taking them Apart – A Review and Critique of Current Technologies for Protein Quantitation
Tuesday, June 16, 2009

What Proteomics Has to Say about Protein Quantitation, Nutrition and Adulteration in Foods
Wednesday, June 17, 2009

Eric Eccleston, Ph.D., has directed protein chemistry service cores at the University of Minnesota Academic Health Center for 22 years in the Department of Biochemistry and in the Institute of Human Genetics. In 2002 he helped establish the Proteomics Core at the Children's Research Institute in Children's National Medical Center in Washington DC and served as its first Director. Since 2005 he has been Chief Science Officer at Aminoacids.com.

S. Suzanne Nielsen, Ph.D.

USP Affiliation: Member, Food Ingredient Expert Committee
Member, Food Protein Workshop Planning Committee

Organization: Purdue University
West Lafayette, IN, USA

Presentation: Moderator, Breakout Session B
Tuesday, June 16, 2009
Wednesday, June 17, 2009

S. Suzanne Nielsen, Ph.D., had research and teaching appointments in the Department of Food Science at Purdue University for 20 years before she became Department Head there six years ago. Her major research projects were related to food proteins, specifically an enzyme system in milk that affects the quality of dairy products, and the nutrition and utilization of legumes. Dr. Nielsen taught a graduate-level Food Proteins course for 15 years, and has taught both undergraduate and graduate level classes in Food Analysis for over 25 years. She has edited three editions of a textbook on Food Analysis, published over 90 papers, and trained 35 graduate students.

Dr. Nielsen has received teaching and achievement awards from the Institute of Food Technologists, and alumni awards from the universities where she did her undergraduate and graduate studies. She chaired for four years the Food Chemicals Codex Committee of the National Academy of Sciences, and currently serves on the USP Food Ingredient Expert Committee.

David Honigs, Ph.D.

Organization: Perten Instruments

Presentation: Classification Technology: Changing from Diagnosing Calibrations to Diagnosing Products
Wednesday, June 17, 2009,

David Honigs, Ph.D., has over 25 years' experience in the development and application of NIR analyzers to chemical, pharmaceutical, food and grain analysis. His graduate work in this field was performed under the direction of Professor Gary Hieftje and Dr. Tomas Hirshfeld (for whom the Hirshfeld award in NIR Analysis is named). Over the course of his career, Dr. Honigs has worked both as an academic and an employee of several instrumentation companies in this field including Technicon, NIRSystems (now FOSS) and Perten. He is currently the Principal Scientist at Perten Instruments where he has worked for the past 5 years. At Perten, Dr. Honigs has developed and overseen the installation of NIR instruments in food and feed processing plants around the world including some which had the misfortune to be affected by adulterated products.

David B. Funk, Ph.D., D.Sc.

USP Affiliation: Member, Food Protein Workshop Planning Committee

Organization: USDA — Grain Inspection, Packers and Stockyards Administration
Technical Services Division

Presentation: “Intuitive” Chemometrics for Protein Measurements and Adulterant
Detection
Tuesday, June 16, 2009

Dr. Funk is the Associate Director for Methods Development at the USDA’s Grain Inspection, Packers and Stockyards Administration, where he is responsible for guiding the Agency’s research efforts related to grain quality analyses. He has over 35 years of experience with near-infrared spectroscopy as senior instrument designer, researcher, laboratory manager, professor, and research manager. Dr. Funk is named as primary inventor on six U.S. patents related to agricultural product quality measurements, including one of the earliest NIR instrument patents.

Karl H. Norris, D.Sc.

Organization: Consultant

Presentation: NIR Technology to Help Food Technology
Tuesday, June 16, 2009

Karl Norris has more than 45 years of experience in developing NIR technology as we know it today. He was the first to demonstrate that NIR spectroscopy could be used to measure constituents in food products with little or no sample preparation. The first experiments were in measuring the moisture content of bread flour, and this was followed with the measurement of protein content in wheat flour and ground wheat with NIR reflection. He was a Research Engineer with the Agricultural Research Service of the USDA for 38 years, and has served as a consultant for more than 20 years after retiring from federal service. He is the author or co-author of more than 100 research papers relating to the use of NIR for compositional analyses of foods, fibers, and pharmaceutical products.

Karl Norris has received many awards from very diverse groups which include:

- Wilson College, Honorary Doctor of Science - 2006
- Royal Society of Chemistry, Sir George Stokes Award - 2001
- ICNIRS, The First Fellow of Near Infrared Spectroscopy -1997
- Pittsburgh Conference, Maurice Hasler Award - 1991
- John C. Halverson Memorial Lectureship Award - 1990
- Agricultural Research Service, Science Hall of Fame - 1989
- Eastern Analytical Conference, NIR Spectroscopy Award -1989
- American Assoc. of Cereal Chemists, Thomas Osborne Award -1986
- Penn State University, Engineering Alumni Award -1986
- U.S. Department of Agriculture, Distinguished Service Award -1986
- Elected to membership in National Academy of Engineering -1980
- Alexander von Humboldt Foundation, Alexander von Humboldt Award, \$10,000 prize for developing NIR technology -1978
- American Academy of Achievement, Golden Plate Award -1975
- American Society of Agricultural Engineers, Cyrus Hall McCormick
- Gold Medal Award for contributions to engineering -1974

Peter R. Griffiths, D. Phil

- USP Affiliation: Member, General Chapters Experts Committee
- Organization: University of Idaho (retired), Moscow, ID
Griffiths Consulting LLC, Moscow, ID
- Presentations: Theory, Instrumentation and Sampling Techniques for
Vibrational Spectroscopy
Tuesday, June 16, 2009
- “Advanced” Vibrational Spectroscopic Techniques for the Investigation of
Adulterants
Wednesday, June 17, 2009

Peter Griffiths, D.Phil., has worked in many different aspects of vibrational spectroscopy since 1964. The research in his laboratory has been largely centered on the application of infrared and Raman spectrometry to the solution of problems of analytical, environmental and structural chemistry. Topics on which he has published extensively include various types of infrared reflection spectroscopy, Raman spectroscopy, chemometrics and data processing, developments of instrumentation for infrared spectroscopy (especially FT-IR), hyphenated techniques, i.e., the interface of vibrational spectrometers with various types of chromatographs, open-path atmospheric monitoring by FT-IR spectrometry and surface-enhanced infrared and Raman spectroscopy. He has also worked on several aspects of reference data and the factors that influence quantitative spectroscopy. Projects that are either being worked on currently or have recently been completed by members of his research group include the development of a completely automated open-path FT-IR spectrometer, investigations into the theory and practice of surface-enhanced infrared absorption and Raman spectrometry, the characterization of mid-infrared diffuse reflection spectroscopy, and the application of an ultra-rapid-scanning FT-IR spectrometer to photochemical inorganic reactions using stopped flow techniques. He is the author of over 280 refereed papers and 45 book chapters, and has written or edited 12 books on various aspects of vibrational spectroscopy, including Fourier Transform Infrared Spectrometry (two editions) and the five-volume Handbook of Vibrational Spectroscopy.

Dr. Griffiths directs the week-long summer courses on the interpretation and applications of infrared and Raman spectra that held annually at Bowdoin College by IR Courses, Inc. He has won a number of national and international awards and was awarded an Alexander von Humboldt Research Fellowship that enabled him to spend a year at the Technical University of Dresden and, most recently, an Erskine Fellowship to the University of Canterbury, New Zealand. He has been very active in activities of the Society for Applied Spectroscopy. He was President of the Society in 1994 and was awarded honorary membership of the Society, as well the Distinguished Service Award. He has served as Associate Editor of the journal Applied Spectroscopy for almost twenty years and will take over as Editor-in-Chief in July 2009.

Robert L. Magaletta, Ph.D.

USP Affiliation: Member, Food Protein Workshop Planning Committee

Organization: Kraft Foods Global
East Hanover, NJ

Presentation: Moderator, Breakout Session A
Tuesday, June 16, 2009
Wednesday, June 17, 2009

Robert (Bob) Magaletta, Ph.D., has 24 years experience in the food industry in various technical and management positions, and experience prior to that in the pharmaceutical/consumer products and industrial coatings industries. He is currently a Kraft Foods Fellow in Analytical Sciences, responsible for the development and implementation of new analytical technologies in the areas of process analytical technology, rapid and combination methods, shelf life research and bioanalytical sciences. Dr. Magaletta has several publications in the area of food analysis, served as chairman of the Industrial Advisory Board of the Center for Process Analytical Technology (CPAC) from 2002-2004, and has been active in AOAC and AACC.

Schimmel Heinz Georg, Ph.D.

Organization: European Commission
Joint Research Centre
Institute for Reference Materials and Measurements

Presentation: Importance of the Definition of the Measure and of Reference
Materials for Protein Measurement
Tuesday, July 16, 2009

Heinz Schimmel, Ph.D., has over 15 years experience in the development of certified reference materials for organic analytes and microorganisms. Activity areas comprise food chemistry, clinical chemistry / laboratory medicine, molecular biology (GMOs, genetic testing, authentication method validations), microbiology and prion diseases (BSE test evaluation and quality control). He currently serves as the Sector Head for the production of Life Science and food related reference materials and corresponding characterisation approaches.

Dr. Schimmel serves as the IRMM representative in the Scientific Division of the International Federation for Clinical Chemistry and Laboratory Medicine (IFCC). He is also active in international standardisation bodies on 'Life Science' relevant analytes and techniques (CEN, ISO, CLSI). Dr. Schimmel is the co-chair of Working Group 1 on reference materials and reference measurement procedures of the Joint Committee for Traceability in Laboratory Medicine. Lastly, he is a member of the Bioanalysis working group of CCQM aiming at the implementation of metrological principles in Life Science related measurements.\

Darryl Sullivan

USP Affiliation: Member, Food Protein Workshop Planning Committee

Organization: Covance Laboratories, Madison, WI – Scientific Director
AOAC INTERANTIONAL, Gaithersburg, MD – President

Presentation: The Importance of Official Protein Methods and the Process for Validation of New Methods
Tuesday, June 16, 2009

Darryl Sullivan is the Director of Scientific Affairs for Nutrition Chemistry and Food Safety at Covance Laboratories. Mr. Sullivan acts as the primary liaison with food, nutritional and dietary supplement clients as well as providing expertise on designing comprehensive testing programs to meet scientific and regulatory requirements. He has managed a number of different departments in the food and drug analysis areas including lab operations, research and development, client services, sample management, sample preparation and study direction.

Mr. Sullivan received his degree from the University of Wisconsin-Madison and has more than 25 years of experience in laboratory testing of food and dietary supplements. He is considered to be an expert in the field of validation of analytical methods, having served for three years as Chair of the AOAC INTERNATIONAL Official Methods Board. He is currently the President of the AOAC INTERNATIONAL Board of Directors. He is also a former member of the Board of Directors of the AOAC Research Institute.

Mr. Sullivan has developed and validated hundreds of analytical methods in the areas of nutrient and residue testing, and is the author of more than 25 publications and over 100 scientific presentations. In addition, he was the Chair of the AOAC Dietary Supplement Task Group and co-editor of the book *Methods of Analysis for Nutrition Labeling*.

Kristine Patterson, Ph.D.

Organization: U.S. Department of Agriculture
Nutrient Data Laboratory

Presentation: The History and Current Status of Protein Measurement in the USDA
National Nutrient Database Standard Reference
Tuesday, June 16, 2009

Kristine Patterson, Ph.D., has over twenty-five years experience as a chemist at the USDA Human Nutrition Research Center located in Beltsville, MD. Her primary responsibility at the Nutrient Data Laboratory is quality assessment of data obtained from the ongoing National Food and Nutrient Analysis Program, where over 1000 foods have been analyzed for up to 140 nutrients.

Dr. Patterson is a member of the AOAC, American Chemical Society, Sigma Xi and Society for Applied Spectroscopy. She has served on method committees for the AOAG and has also provided data used in the certification of several Standard Reference Materials from the National Institute of Standards and Technology.

Harvey Indyk, Ph.D.

Organization: Fonterra Co-operative Dairy Group

Presentation: Use of an Optical Biosensor to Measure Food Protein and Detect Adulteration
Wednesday, June 17, 2009

Harvey Indyk, Ph.D., has twenty-five years experience in the dairy industry involved with developing analytical methods for nutritional compliance and research application related primarily to dairy products. He has been an active member of AOAC International for more than 10 years and currently serves as GR on the Food Nutrition Committee.

Harvey has authored more than 60 publications in the area of food related micronutrient analysis and in more recent years has been exploring the utility of an optical biosensor platform for the development of assays related to both vitamin and protein composition.