

# GALE SHEMWELL RUDOLPH, Ph.D., CNS, CFS

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## SUMMARY

RESEARCH SCIENTIST with over forty years of experience in product development, nutrition, and regulatory compliance gained both in domestic and international businesses. Strengths include creativity as well as strong working knowledge of food systems from bench-top to consumer levels. Freelance author, nutritionist, and educator. Projects on-demand only; trying to retire!

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## EDUCATION

### University of California, Los Angeles

Ph.D. in Nutritional Sciences, Minors in Toxicology and Biochemistry - 1987

### Purdue University, West Lafayette, Indiana

M.S. and B.S., Food Science - Magna Cum Laude - 1975, 1974 respectively

### Continuing Education:

- Associate Professor at the University of Utah (Foods and Nutrition: Food Science lectures every winter semester)
  - Certified Nutritional Specialist (CNS 00141 ) AND Certified Food Scientist (#520)
  - HAACP 3-day course Utah State University February 2009
  - Government Regulations and Management Decision Making for the Food Industry
  - Phil Crosby Quality College Education System and the Instructor's Course
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## SUMMARY OF QUALIFICATIONS

- Complete Product Development of Commercially Available Food Products and Dietary Supplements from Benchtop Development to Full Commercial Production
- Experience with Food Products, Processing, and Equipment:
  - **Powdered Products** - High Protein Drink Mixes, High Fiber Drink Mixes, Milk Replacers (Non-Dairy Creamers), Soft-Serve Ice Cream Mixes, Yogurt Mixes, Hot Drink Mixes, Whipped Topping Mixes
  - **Chewable Tablets**-Kids' Vitamin/Mineral and Calcium
  - **Bars**-extruded and baked bars---in-house and at co-packers
  - **Chocolates**-molded and enrobed, **Caramels** and **Omega-3 chocolate bars, Hard Candy, Icing Decos**
  - **Probiotic chocolates** with accompanying shelf-life stability validation
  - **Liquid Beverages** - Isotonic Sports Drinks, Low pH Canned Beverages
  - **Entrées** - Under 300 Calorie Entrées (Teriyaki, BBQ, Cacciatore, Sweet & Sour, Mexican), Low-Moisture Meatballs, High Fiber Chicken Nuggets, Battered & Breaded Chicken Products
  - **Sauces & Spreads** - Barbecue Sauce, Tomato Sauce, Bread Spreads (sweet, fortified), Flavored Mayonnaise
  - **Frozen Entrées** - Microwaveable Sandwiches (Hot Pockets™, Croissant Pockets™ and Lean Pockets™), Spinach Soufflé
  - **Canned Products** - Evaporated Milk, Fortified Soups, Bloody Mary Mix, Chili
  - **Equipment / Processes** - Spray Drying, Cold Extrusion, Homogenization, Freeze-Drying, Retorts (Still and Rotating), Agglomeration, Film Draw Equipment, Battering, Breading, Flash Frying, Mechanical Deboning, Forming Machines, Ribbon and V-Blending, Retorting, and Hot-Fill for High Acid Foods
- Nutritional Labeling Software: ESHA Genesis R&D Product Development & Labeling Software
- Board of Directors: Chapul cricket protein products 2015--present
- Coordinate clinical trials: glycemic index, satiety values of meal replacement shakes

- Provided Teaching and Training to Food and Nutrition Editors, Marketing and Sales Forces, Medical Students, Dieticians, Food Science and Nutrition University Students, Chefs. Topics Included Nutrition Issues, Product Development, Food Regulations, Microbiology, Toxicology, Consumer Affairs, and Careers in the Food Industry

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## EXPERIENCE

- 2010-Present **Basic Research** Salt Lake City, UT  
Research Scientist Dry mixes, Carbonated beverage, Aseptic shakes, Dietary supplements in 1-2 oz bottles  
Starting in 2016: working 1 day/week
- 2004-Present **Dynamic Confections** Alpine, UT  
VP of Functional Foods 6 years. Starting in 2010: working 1 day/week
- 1999-2004 **USANA Health Sciences, Inc.** Salt Lake City, UT  
**Positions: Senior Scientist and Director of Food Product Development**
- Responsible for all foods (bars, dry mixes, beverages) and chewable tablets
  - Glycemic Index clinical trials and product compliance
- 1997 - 1999 **Weider Nutrition International** Salt Lake City, UT  
**Position Held: Director of Product Development**
- Responsible for 15 Food Scientists/Engineers in a 30-Member R&D Department
  - Recruited 13 scientists and engineers within 14 months
  - Product Development and Reformulation of Powdered Beverages, Functional and Isotonic Ready-to-Drink Beverages, and Nutritional Supplements for Sports Nutrition, Mass Market, and Private Label
  - NLEA Nutrition Facts and DSHEA Supplement Facts panels for foods and supplements
  - Technical Support to International Strategic Business Unit, Tablet and Capsule Formulations (botanicals, vitamin/mineral supplements), and Regulatory Compliance
- 1994-1997 **Chef America (now Nestle Hot Pockets®)** Englewood, CO  
**Position Held: Manager, Product Development**
- Development of New, Improved Cost-Reduced, Reduced Fat Products, including Hot Pockets®, Lean Pockets®, School Lunch items, and New Concept Ready for 1998 Launch
  - Supervised consultants on contracted projects
  - Supervised the Development of Pizza Snacks®
  - Responsible for Regulatory Compliance, USDA Labeling Documentation, FDA and USDA Legislation
  - Technical Support to Two Production Facilities (New Product Launches, QA Support, Labeling, and Ingredients)
  - Developed and Managed the System for Analytical Data on All Products (from initial lab work through to Food Service Directors and the documentation provided by Consumer Affairs)
- 1987-1993 **Clorox Technical Center** Pleasanton, CA  
**Positions Held: Senior Scientist, R&D and in Regulatory/Toxicology Group**
- Product Development of Sauces (KC Masterpiece BBQ Sauce), Emulsion Dressings (Hidden Valley Ranch), Retorted Meat Products, Condiments, and Instant (aseptic and dry) Soups
  - Product Developer for the New Business Ventures Group
  - Responsible for Food Labeling, Nutritional Compliance, and Regulatory Issues for both Retail and Food Service
- 1985-1987 **Perdue, Inc., Shenandoah Division** Bridgewater, VA  
**Position Held: Research Scientist**
- Managed the Development Group for Value-Added Poultry Products
  - Supervised Sensory Evaluation, Nutritional Labeling, and Regulatory Issues
  - Group Leader of Breaded Products
  - Developed Low-Calorie Entrées and Managed Consultants on Sauce Projects
  - "Quality Control" College Instructor and Company Spokeswoman to Food Editors, Associations, Universities
- 1983-1985 **Mayhew Foods PLC. (now Northern Foods)** Sussex, England  
**Position Held: Product Research and Development Manager**
- Concept Development of New Products: Retail, Airline, and other Food Service Products
  - Outlined Product Costing and Product Specifications; Initiated Sensory Panels and Product Shelf Life Testing

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1975-1983

**Carnation Research Labs (Nestle)**

Van Nuys, CA

**Positions Held: Food Scientist, Senior Food Scientist, and Research Scientist**

- Research and Development of Non-Dairy Creamers, Whipped Toppings, Dessert Mixes, Hot Cocoa Mixes, Imitation Cheese, Tomato Products, Beverages, Soups, Soft-Serve Ice Cream, and Frozen Yogurt Mixes
  - Conducted Independent and Original Research on the Development of an Alcohol-Stable Creamer System; Patents Awarded
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**PUBLICATIONS**

- Poultry and Egg Processing, co-author with Dr. William Stadelman, E.A. Horwood Publishers, London 1989
  - Co-Author of Nutrition and Health book with Jack LaLanne, awaiting publication
  - Contributor to multiple publications and books for Herbalife
  - Manuscript Reviewer for Eating Right for a New You and Total Juicing by Elaine LaLanne.
  - U.S. Patent 4,331,689 (Alcohol-Stable, Low pH-Stable Fat Emulsion Product) 1982
  - U.K. Patent GB20907 A, B (Emulsion Product) 1984
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**ASSOCIATION MEMBERSHIPS**

- Institute of Food Technologists, Chair, Councilor, and Committee Chairperson in the British, Southern and Northern California, and Rocky Mountain IFT Sections, 1975 - 1988. Board Member or Chair of Utah section 2000-present. Food Science Communicator 2010
  - Institute of Food Technologists National Board: Continuing Education Committee 1999-2002, Diversity Committee 2002-2004, Food Laws and Regulations Member-at-Large 2002-2003. Outstanding Volunteer 2012
  - American Association of Candy Technologists Rocky Mountain Section board member 2007-present
  - National Confectioners Association Technical Committee 2005-present
  - Chairperson of Strategic Planning (Northern California IFT and Rocky Mountain IFT)
  - Honorary Lifetime Member of the British Section of the Institute of Food Technologists (IFT) and Fellow of the Royal Society of Health, London
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**AWARDS AND HONORS**

- University of Utah Associate Professor (1998-present)
- Outstanding Food Scientist Award, Purdue University 2003
- Certified Nutrition Specialist 1993 to present
- Certified Food Scientist 2013 to present
- Lecturer to Culinary Command, a program to assist veterans to transition to civilian careers, 2016--present
- Phi Tau Sigma Food Science Honorary 1975-present
- California Council Against Health Fraud, Speakers Bureau, 1983-1984

