

DIRECTOR, NEW PRODUCT RESEARCH AND R&D LIAISON, GLOBAL ORAL HEALTHCARE R&D, CONSUMER HEALTHCARE R&D

Skill Highlights

SKILL SET \* Growth strategies/new opportunity identification and development \* Scientific strategy/best practice/scientific excellence implementation \* Strong technical expertise (research and product development) \* Cross-functional experience: regulatory affairs, marketing, licensing, legal, clinical, etc. \* Broad background in consumer healthcare (OTC's and medical devices) \* Proven record of new product development (representing \$1B+ sales) \* Ability to conduct and interpret consumer tests and translate consumer needs to products \* Strong ideation, innovation, and claims generation skills \* Leadership of cross-functional, highly matrixed global teams \* Extensive expertise in identification and development of high growth opportunities \* Supervision of technical experts, formulators, and administrative staff of all levels \* Extensive experience in open innovation, licensing and outsourcing \* Comprehensive network of global opinion leaders and track record in leveraging consultants \* Strong negotiation skills \* World-recognized expert in oral healthcare R&D \* Working relationship with FDA, Professional, Industry and Research Associations NOTEWORTHY ACCOMPLISHMENTS \* Led the development of EPT, the world's first lateral diffusion (stick-based) pregnancy test \* Developed the current formula for Listerine, the world's leading mouthwash \* Led R&D on numerous solid, liquid, and semi-solid dosage forms on global brands including Rolaid's, Benadryl, Sinutab, Lubriderm, Trident, Dentine, Aquafresh, and Sensodyne \* Invented neuronal-based biosensors, a new class of biosensors \* Assembled and directed one of the industry's first non-destructive analysis labs \* Identified, in-licensed, and drove commercialization of GSK's largest selling oral care device \* Developed process for pipeline development for GSK's Venture Group \* Identified and led R&D process for licensing Aquafresh White Strips \* Created a new global platform as key growth area for GSK Consumer Healthcare \* Identified and licensed early-stage medical device concept (\$1B opportunity) and drove it to clinical prototype within 6 months \* Led numerous multi-national due diligence teams, including technical due diligence on Block Drug acquisition

Professional Experience

Director, New Product Research and R&D Liaison, Global Oral Healthcare R&D, Consumer Healthcare R&D 01/2011 to Current Company Name City , State Responsibilities Include: Developing and implementing systems to drive scientific excellence world-wide Reviewing all major scientific programs globally to ensure scientific excellence Managing cross-category strategic programs Leveraging scientific programs to develop and support novel claims Coordinating scientific visualization and communication programs Aligning R&D with commercial objectives Developing and implementing metrics for scientific improvement Planning and managing scientific engagement with external experts and organizations Managing global data dissemination plans Supervising strategic publication of scientifically relevant research Developing and managing extensive networks of experts Reviewing and developing talent within R&D Responsibilities Include: Development of global growth strategies Identification and analyses of large growth platforms beyond current divisional expertise Development of technical and business cases for new opportunities Development and implementation of novel research programs to support new initiatives Rx to OTC switches Establishment of new technical and commercial networks to drive Consumer business Technical evaluations for World-Wide Business Development Due diligence for acquisitions Technical support to Marketing, Legal, and Manufacturing Liaising with FDA, CHPA, CTFA, ADA, and other agencies Management of routine and non-budgeted funding appropriations Responsibilities Include: Identification of novel technologies for global oral healthcare business Identification and evaluation of external resources for GSK Evaluation of external oral healthcare technologies Establishment of external research collaborations Establishment and maintenance of academic relationships of interest to GSK Leadership of Strategic Science Initiative for oral mineralized tissue Technical support to Marketing, Legal, Manufacturing, and Business Development Liaising with FDA, CHPA, CTFA, ADA, and other agencies Creating and maintaining network of world-class consultants/collaborators (2002 - 2006) Responsibilities Include: Supervision of Global New Product Research Group All Oral Healthcare Category R&D activities in North America Technical support to Marketing, Legal, Manufacturing, and Business Development Liaising with FDA, CHPA, CTFA, ADA, and other agencies Creating and maintaining network of world-class consultants/collaborators Supervision of senior scientists, scientists, technicians, and administrative staff Identification, evaluation and in-licensing of external technologies Product development, patent, and claims generation Project planning, tracking, and coordination (timing, manpower, budgeting )

Associate Director/Category R&D Liaison, Oral Healthcare R&D, Consumer Healthcare R&D 01/1996 to 01/2002 Company Name City , State Responsibilities include: All oral healthcare innovation initiatives in North America Liaising between R&D and Marketing, Legal, Manufacturing, and Business Development Liaising with FDA, CHPA, CTFA, ADA, and other agencies Creating and maintaining network of world-class consultants/collaborators Supervision of senior scientists, scientists, and technicians Evaluation and in-licensing of external technologies Product development, patent, and claims generation Project planning, tracking, and coordination (timing, manpower, budgeting )

Scientist, Analytical Technology Group, Analytical R&D, CPR&D 01/1995 to 01/1996 Company Name City , State Responsibilities included: All investigational research relating to Oral Care (Listerine, CoolMint, etc.) Supervision of senior scientists, scientists, and technicians Generation of novel technology platforms and products Development of novel physico-chemical models and methods Evaluation of external technologies Leadership of numerous oral care items Liaison between consultants, external laboratories, and Warner-Lambert Product development, patent, and claims generation Project planning, tracking, and coordination (timing, manpower, budgeting ) Responsibilities included: All investigational research pertaining to Oral Care (Listerine, Cool Mint, etc.) Supervision of scientific professionals (Ph.D.'s included) Investigational research for major brands: e.g., Zantac, Rolaid's, Benadryl Generation of novel technology platforms and products Team leader of Mouthwash Technology Development Team (12 members) Product development, patent, and claims generation (e.g., FreshBurst Listerine) Support to QA (specialized investigations) Responsibilities included: Supervision of Advanced Microscopy Laboratory Development and implementation of non-standard methods Development of novel non-destructive analytical methods Development of micro analyses (qualitative and quantitative) Support to Product Development Support to QA, Manufacturing, Corporate Legal, Licensing, Parke-Davis, etc. Development and implementation of digital imaging and data archiving system Responsibilities included: Non-destructive and microchemical analyses (qualitative and quantitative) Microscopy and image analysis methods development Wet chemicals methods development Support to Product Development Support to QA, Corporate Legal, Analytical, Licensing, Parke-Davis, etc.

Research Assistant, Hawaii Biosensor Laboratory 01/1989 to 01/1990 Company Name City , State Responsibilities included: Initial installation and configuration of instrumentation in new labs Neuronal biosensor research Microdiagnostic sensor development Training of new graduate students in biosensor research

Teaching Assistant, Department of Chemistry and Biochemistry 01/1986 to 01/1989 Company Name City , State Responsibilities included:

Development and study of intact chemoreceptor-based biosensors Responsibilities included: Laboratory instruction for General Chemistry for majors Laboratory instruction for Instrumental Analysis

Quality Control Analyst 01/1981 to 01/1984 Company Name City, State Responsibilities included: Analysis and release of finished pharmaceutical and consumer products Analysis and release of raw materials Manufacturing Investigations SPECIALIZED TRAINING \*

"Coaching Masterclass for Senior Leaders, Parsippany, NJ \* "Leading with Impact", Penn State Executive Leadership Program, State College, PA \* Marketing Leadership Training, GlaxoSmithKline, Pittsburgh, Parsippany \* Advanced Polarized Light Microscopy, McCrone Research Institute, Chicago, IL \* Colloidal Chemistry, University of Massachusetts, Amherst, MA \* Scanning Electron Microscopy, Leica-Cambridge Co., Dearfield, IL \* Influencing and Negotiation Skills, Matrix, LTD., New York, NY \* Project Management, Catapult Inc., Parsippany, NJ \* Information Systems Project Management, Wilhelm Assoc., Huntington, NY \* Behavioral Interviewing, Behavioral Technology Inc., Memphis, TN

#### Education

Ph.D. : Analytical Chemistry 1990 UNIVERSITY OF DELAWARE City, State, US UNIVERSITY OF DELAWARE, DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY, NEWARK, DE 19711 Ph.D., Analytical Chemistry, 1990 Advisor: Dr. G.A. Rechnitz, Unidel Professor of Chemistry and Biotechnology Dissertation: Intact Chemoreceptor-based Biosensors

M.S. : Analytical Chemistry 1987 UNIVERSITY OF DELAWARE City, State, US UNIVERSITY OF DELAWARE, DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY, NEWARK, DE 19711 M.S., Analytical Chemistry, 1987 Advisor: Dr. G.A. Rechnitz, Unidel Professor of Chemistry and Biotechnology Dissertation: Development and Study of Biosensors Utilizing Intact Chemoreceptor Structures

B.A. : Chemistry FRANKLIN AND MARSHALL COLLEGE City, State, US FRANKLIN AND MARSHALL COLLEGE, LANCASTER, PA 17604 B.A., Chemistry (American Chemical Society Certified)

#### Certifications

Identified, in-licensed, and drove commercialization of GSK's largest selling oral care device CTFA B.A., Chemistry (American Chemical Society Certified)

#### Professional Affiliations

Institute on Science for Global Policy (membership by invitation only)

#### Publications

Saliva Diagnostics: A new Industry" in Saliva Diagnostics, Wong, DT, ed., der-Smith, "", J. Dent. Res. 86 (Spec. Iss. A) 2097, 2007 Wiley-Blackwell, Baek, JH, Hammer-Wilson, MJ, Buch, RM, Lee, K, Ahn, Y, Than, S, Chen, Z, Wil Efficacy of Marketed Dentifrices Using an In Situ Caries Model Zero, D, Proskin, HM, Buch, RM, Bosma, ML, Smith, SR, Impact of Peroxide on Enamel Hardness Gambogi, R.J., Bosma, M.L., Buch, R.M., Schemehorn, B.R., Verification of Caries Inhibition by a Tartar Control Toothpaste Tanzer, J.M, Pelligrino, J., Thompson, A., Buch, R. M., A Novel Pharmacological Probe Links the Amiloride-Insensitive NaCl, KCl, and NH<sub>4</sub>Cl Chorda Tympani Taste Responses DeSimone, J., Lyall, V., Heck, G., Phan, T., Alam, R., Feldman, G., Buch, R.M., Intact Chemoreceptor-Based Biosensors: Antennular Receptrodes Biosensor Design and Application, P.R. Mathewson, J.W. Finley, Intact Chemoreceptor-Based Biosensors Barker, T.Q., Buch, R.M., Rechnitz, G.A. Neuronal Biosensors Buch, R.M., Rechnitz, G.A.,

#### Presentations

Baek, JH, Hammer-Wilson, MJ, Buch, RM, Lee, K, Ahn, Y, Than, S, Chen, Z, Wilder-Smith, "An Optical Approach to the Salivary Pellicle", 85th General Session and Exhibition of the International Association of Dental Research, New Orleans, LA, March, 2007. Saunders, FG, Bosma, ML, Buch, RM, Koller, CM, Zero, D, "Evaluation of Plaque Fluid Fluoride Retention After Dentifrice Application, 85th General Session and Exhibition of the International Association of Dental Research, New Orleans, LA, March, 2007. Zero, D, Proskin, HM, Buch, RM, Bosma, ML, Smith, SR, "Efficacy of Marketed Dentifrices Using an In Situ Caries Model", 85th General Session and Exhibition of the International Association of Dental Research, New Orleans, LA, March, 2007. Wetterer, S.M, Lefever, S.W., Buch, R.M., "Accelerated In vitro Stain Formation for High Throughput Screening of Actives", American Association of Dental Research, Canadian Association of Dental Research 84th General Session, Orlando, FL, March, 2006. Wetterer, S.M., Buch, R.M., Schemehorn, B.L., "Temperature Dependence of Chemical and Mechanical Activity of Traditional Dentifrices", International Association of Dental Research, American Association of Dental Research, Canadian Association of Dental Research 83rd General Session, Baltimore, MD, March, 2005. Gambogi, R.J., Bosma, M.L., Buch, R.M., Schemehorn, B.L., "Impact of Peroxide Treatments on Enamel Hardness", International Association of Dental Research, American Association of Dental Research, Canadian Association of Dental Research 82nd General Session, Honolulu, HI, March, 2004. Tanzer, J.M., Thompson, A., Gambogi, R.J., Buch, R.M., "In vitro Model for the Evaluation of Anticalculus Agent Efficacy", presented at the 32nd Annual Meeting and Exhibition of the American Association for Dental Research and the 27th Annual Meeting of the Canadian Association for Dental Research, San Antonio, Texas, March, 2003. Couzis, A., Buch, R.M., Fares, H.M., "Insights into the Stain Prevention Properties of Aquafresh Whitening Dentifrice", presented at the International Association for Dental Research 80th General Session, San Diego, CA, March, 2002. Schemehorn, B., Wood, G., Buch, R.M., Fares, H., "In vitro Fluoride Uptake Study of an Anti-hypersensitivity Toothpaste", presented at the International Association for Dental Research 79th General Session, Chiba, Japan, June, 2001. Tanzer, J.M., Pellegrino, J., Buch, R.M., Fares, H.M., "Inhibition of Caries in Rats by a Tartar Control Toothpaste", presented at the 30th Annual Meeting of the American Association for Dental Research and the 25th Annual Meeting of the Canadian Association for Dental Research, Chicago, Illinois, March, 2001. Barker, T.Q., Buch, R.M., Rechnitz, G.A.; "Intact Chemoreceptor-Based Biosensors", presented at the ACS 199th National Meeting, Boston, MA, April 1990. Buch, R.M., Rechnitz, G.A., "The Receptrode: A Novel Chemoreceptor-Based Biosensor Utilizing Intact Chemosensing Structures", presented at the Pittsburgh Conference, Atlanta, GA, March 1989. Buch, R.M., "Listerine Prebrush Rinse: The Plax Attack", presented at the Consumer Products R&D Expo, Morris Plains, NJ, February 1994.

#### Additional Information

Buch, Robert M., Gambogi, Robert J, Veleda, Jose L., Dissolvable Tooth Whitening Strip, 20070178055 A1, SmithKline Beecham, Corp., March 31, 2005. Buch, Robert M., Couzis, Alexander, Wetterer, Sean M., Compositions and Methods for Preventing Dental Stain, 20060223865 A1, SmithKline Beecham, Corp., March 10, 2004.

#### Skills

Healthcare, Marketing, Claims, Product Development, Transmissions, Ada, Business Development, Fda, Patent, Class, Comprehensive Large Array Data Stewardship System, Budgeting, Liaison, Project Planning, Technical Support, Associate, And Marketing, Chemistry, Qa, Metrics,

Visualization, Business Cases, Cases, Due Diligence, Brand Marketing, Consumer Products, Laboratory, Training, Non-destructive, Quantitative, Coaching, Electron Microscopy, Interviewing, Leica, Long-term Disability, Ltd, Polarized Light, Polarized Light Microscopy, Project Management, Quality Control, Scanning, Scanning Electron, Biochemistry, General Chemistry, Teaching, Maintenance, Archiving, Data Archiving, Imaging, Implementation, Instrumentation, Sensor, Sensor Development, Acta, Adme, Antimicrobial, Consumer Needs, Dental, Eds, Emc Xiv, Iss, Medical Device, Medical Devices, New Product Development, Optical, Pipeline, Progress, Prototype, Prototypes, Regulatory Affairs, Sales, San, Secretary, Storage Area Network, Translate, Vitro, Xiv, Analytical Chemistry, Biotechnology