

Biography

Sandra J. Wrobel

Chief Executive Officer and Managing Director

Sandra J. Wrobel is chief executive officer, managing director, and co-founder of Applied Strategies, a specialty consulting firm dedicated to bridging the discoveries of life sciences and the needs of global health with innovative strategy development, R&D portfolio management, and organizational design and development of public-private partnerships. Her visionary leadership and passion for excellence has established Applied Strategies as an expert resource for vaccine development and investment strategies in the global health community. In the pharmaceutical, consumer healthcare, and biotechnology industries, she leads Applied Strategies' extensive work helping executives develop robust corporate and asset strategies, transform their portfolio management decision-making processes, and improve business operations.

Ms. Wrobel works with many public-private partnerships on framing, defining, and gaining consensus for supply strategies that meet country demand and are priced to work for both suppliers and donor organizations.

She also led Applied Strategies' groundbreaking work to model and analyze the financial and risk implications of Advance Market Commitments (AMCs), a new financial mechanism for creating an economically attractive low-income country market for vaccine suppliers. This project was requested by the G8 and sponsored by the World Bank and GAVI Alliance. Ms. Wrobel gained the buy-in needed from a diverse community of stakeholders including the World Bank, GAVI, the Bill & Melinda Gates Foundation, Center for Global Development, multinational and emerging vaccine suppliers, government finance ministries, and six of the vaccine-focused public-private partnerships. Applied Strategies' analytical work was instrumental in convincing government donors to raise \$1.5B to support a pilot AMC for pneumococcal vaccines.

Ms. Wrobel's consulting experience includes 13 years at Strategic Decisions Group, a global strategic management consulting firm, where she served as a senior managing director and member of the Executive Committee and the Board of Directors. As the head of the Life Sciences practice, she was instrumental in developing a portfolio prioritization and resource allocation methodology and process that was successfully applied in 12 of the world's top 15 pharmaceutical and 3 of the top 5 biotechnology companies during her tenure. As a consultant, she also led strategic management engagements in the financial, utility, oil and gas, and nuclear industries.

She held key leadership roles at IntraBiotics Pharmaceuticals (IBPI), a biopharmaceutical start-up specializing in the prevention and treatment of infectious diseases. As vice president of corporate strategy and finance, she developed corporate strategy, established and managed methodologies and processes for analyzing the risk and return of research and development investments, and oversaw processes for supporting real-time decisions in resource allocation.

As IBPI's chief financial officer and vice president of business operations, Ms. Wrobel directed the corporate budget, delivered quarterly financial analysis and results to the Board of Directors and Wall Street, performed business due diligence on acquisition targets, and developed licensing and negotiation strategies.

At Rockwell International, she was a sought-after expert in nuclear waste management. As a program management engineer in the joint office of the Department of Energy, Westinghouse, and Rockwell, she was responsible for conducting risk analyses and developing strategies involving the long-term management of weapons-related transuranic-level radioactive waste.

Ms. Wrobel earned an MBA from Stanford University with an emphasis in the decision sciences and a BS in chemical and petroleum refining engineering with highest honors from the Colorado School of Mines.

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Carol A. Marzetta, Ph.D.

Chief Scientific Officer

Dr. Carol Marzetta, Chief Scientific Officer and co-founder of Applied Strategies, brings over 20 years of scientific and strategy development expertise to life science, biotech, and global health organizations needing high-quality, efficient strategic solutions. Dr. Marzetta's rare perspective stems from experience in small molecule and biologic drug development that has spanned from drug discovery to clinical development to launch. Her background in designing and implementing drug and vaccine development strategies, integrating project and line management team processes, and developing portfolio prioritization and resource allocation processes and methodologies in both pharmaceutical and biotech settings helps bridge partnerships between industry and global health.

In the life sciences sector, Dr. Marzetta help clients assess the value of their current drug and vaccine development programs and explore alternative development approaches to determine the optimal strategy for each candidate. For licensing negotiations, she helps companies conduct transparent and comprehensive asset evaluations and identify which deal term trade-offs are most beneficial to both parties. Dr. Marzetta has extensive experience establishing and revitalizing strategic planning, portfolio management, and project management groups in the pharmaceutical and biotech sectors.

In the global health sector, she has worked with a variety of global health organizations such as the Bill & Melinda Gates Foundation, The GAVI Alliance, World Bank, PATH, the Micronutrient Forum, and the Johns Hopkins Bloomberg School of Public Health to help develop strategies to accelerate the introduction of life-saving vaccines into developing countries. She has facilitated strategic meetings and helped participants from multiple organizations develop strategy and work plans geared to country implementation. Dr. Marzetta has also worked with many public-private partnerships including those focused on malaria, TB, pneumococcal, rotavirus, HIV, HPV, and Hib-containing vaccines.

As vice president, global project and portfolio management at Baxter BioScience, she designed, implemented, and managed a global development portfolio prioritization process across three business units. She also led and managed a department of 25 people responsible for the project management of approximately 20 drug development projects worldwide.

As vice president, program management at IntraBiotics Pharmaceutical (IBPI), a biotech company specializing in the prevention and treatment of infectious diseases, Dr. Marzetta led the company's two Phase III programs and managed the company's pipeline of projects.

As a key player in Pfizer's Global R&D organization for over a decade, she helped discover drugs and built a late-stage Project Management group of over 25 people responsible for providing project management to all late-stage drug candidates, which included approximately 55 NCE and product line extension projects. She also served on the senior management committee responsible for strategically managing late-stage candidates in the United States, Europe, and Japan.

Dr. Marzetta holds a PhD in comparative and experimental pathology from the Bowman Gray School of Medicine of Wake Forest University and was a postdoctoral fellow in the Department of Medicine at the University of Washington. She holds a BS in zoology from Colorado State University.

Biography

Craig H. Shaffer

Vice President, Applied Analytics and Technology Development

Craig H. Shaffer has more than 20 years of experience applying business management and risk-based decision analysis techniques to major corporate and business unit decisions. He specializes in strategy development, portfolio optimization, and decision system design. He has significant experience in a variety of industries, including pharmaceuticals, oil and gas, entertainment, financial services as well as the global and public health sectors.

Since joining Applied Strategies, Mr. Shaffer and his technology team have developed many customized software solutions in both the public and private sectors. To help a top-ten biopharmaceutical company improve its sales forecasting of drugs in complex disease markets such as pulmonary fibrosis and hepatitis C, Mr. Shaffer designed and implemented easy-to-use dynamic market models that capture the movement of patients through various disease and treatment states under many different treatment, competitive, and marketing scenarios. These tools have enabled the company to identify key areas of influence and to better understand the impact of their sales, marketing, and drug supply decisions on the bottom line.

Under the leadership of Mr. Shaffer, Applied Strategies launched ValueDriver™, a powerful, easy-to-use analytical tool designed specifically for modeling the risk, cost, and commercial value of marketed and in-development drugs. Mr. Shaffer and Applied Strategies consultants routinely use ValueDriver with leading pharmaceutical and biotechnology companies as the asset valuation platform for key drug development plan decisions as well as for generating the strategic asset alternatives supporting portfolio analysis and portfolio strategy decision-making.

Working closely with the Bill & Melinda Gates Foundation, the GAVI Alliance, and the World Bank, Mr. Shaffer and his team designed and implemented an enterprise system that provides both a global donor and individual country perspective of the impact of various global financing and vaccine adoption scenarios for the introduction of new, life-saving vaccines into developing countries.

Mr. Shaffer also led the development of the analytical model used to understand the financial implications and risks of the innovative new global vaccine strategy of Advance Market Commitments (AMCs). This World Bank and GAVI-sponsored project was at the request of the G8 and required achieving model design and analysis results buy-in by a diverse community of stakeholders, including the G8 Finance Ministers, World Bank, GAVI, Center for Global Development, multinational and emerging vaccine suppliers, government finance ministries, and vaccine focused public-private partnerships. The financial implications and risk model (AMC-FIRM) was instrumental in convincing government donors to raise \$1.5B to support a pilot AMC for pneumococcal vaccines.

Prior to joining Applied Strategies, Mr. Shaffer was Vice President of Collaborative Research & Development at Entelos, the industry leader in disease modeling and in silico biosimulation. At Entelos, he built and managed the global R&D services business and was a key member of the executive team. Mr. Shaffer was also a partner at Strategic Decisions Group, a global strategic management consulting firm, where he was a leader in the Life Sciences Practice.

Mr. Shaffer received an MS in engineering-economic systems from Stanford University and a BS in systems engineering, with distinction, from the University of Arizona.

Biography

Wendy So

Director, Project Portfolio Management

Ms. So brings over 12 years of experience working in the biopharmaceutical industry with extensive project and portfolio management. As director of project portfolio management for Applied Strategies, she is responsible for resource planning for client projects. She also leads projects in global health and life sciences and has performed in-depth competitive market and alliance analyses for biotech companies for corporate and portfolio decision-making. She analyzed development options within and across projects for portfolio analysis. She possesses effective skills for managing and leading operational and strategic teams. She has project and portfolio management experience in oncology, infectious, inflammation, hepatology, and pulmonology disease therapeutic areas.

As senior director of global project leadership at Celgene, she integrated and led a global cross-functional project team for a late-stage anticancer candidate. She partnered with peers and management to establish project management discipline in the organization and develop effective project reviews and a product development plans process.

As director of strategic planning and operations at Threshold Pharmaceuticals, she designed, implemented, and refined the drug development team approach to meet the changing business demands in close partnership with the executive management. She led core teams, sub-teams and ad-hoc teams and was responsible for the company's project management function and was the internal champion for cancer compounds in early to late-clinical development in solid tumors including pancreatic cancer, small cell lung cancer, ovarian cancer and soft tissue sarcoma.

In her previous positions, she directed and performed clinical microbiology experiments for anti-infective candidates from pre-IND to Phase 3. She also facilitated company annual and long-range budget and goals planning and managed clinical operations for clinical trials.

Ms. So has published in the *Journal of Clinical Microbiology* and has presented posters at numerous scientific conferences. She has a BS in biology with a concentration in microbiology from San Jose State University. She speaks intermediate level Cantonese and entry level Spanish and Mandarin.

Biography

Helen Matzger

Senior Consultant

Helen Matzger has over 15 years of experience working in the private and public sectors, including time with Helen Keller International, the Institute for OneWorld Health, and the University of California, San Francisco. Her developing country health sector experiences include serving in Dhaka, Bangladesh, as a project officer for a country-wide health and nutritional surveillance system, and as director for a Phase 4 study and access program in Patna, Bihar, India.

For the Institute for OneWorld Health, Ms. Matzger was the director of access programs in the San Francisco office following time spent as the Phase 4 program director in Patna, India, where she was responsible for the overall tactical planning, implementation, and management of a Phase 4 rural pilot access program to provide treatment for 1350 patients with visceral leishmaniasis. In India, she managed a national staff of 15 to implement all program components – clinical trial compliance, monitoring and evaluation, public health access research, supply chain logistics, training, and field research. Her work required continual collaboration with matrix departments in the San Francisco corporate office. Ms. Matzger also developed and maintained effective partnerships with state and national government officials and local and international partners, including Janani, John Snow International, and Voxiva, as well as hosting visits from the Bill & Melinda Gates Foundation. Upon her return to the San Francisco office, Ms. Matzger designed the global access strategy while developing cross-cultural solutions on staff and programmatic issues for the continuing Phase 4 trial.

As a project officer for Helen Keller International in Dhaka, Bangladesh, she was responsible for analyzing the health and nutritional status of women and children and co-coordinated a unique nationwide health and nutritional surveillance system. Her work included field site visits to ascertain quality of data collection and performing qualitative research. She interfaced with USAID, the principal donor, and was instrumental in developing a successful \$5 million five-year follow-up grant proposal.

As a principal researcher/statistician at the University of California, San Francisco, she served as a research investigator for an 11-year longitudinal study examining a group of treated and untreated problem drinkers. As a result of this work, she first-authored and co-authored articles published in eight leading peer-reviewed journals, presented over five symposia at national conferences, and co-authored a successful \$2.8 million five-year follow-up proposal to the National Institute of Alcoholism and Alcohol Abuse.

As a development/research consultant for Asian Immigrant Women Advocates in Oakland, California, she located interested foundations and authored over \$1 million in successful grant proposals to both national and local foundations. In addition, she devised strategies to present agency findings and standardized reporting formats among the various organizational projects. She frequently summarized findings and developed presentations on organizational assessments from donors, staff, participants, and collaborating organizations.

Ms. Matzger holds a BA in development studies and South Asian studies from the University of California, Berkeley, and an MPH in International Health from the University of Michigan, Ann Arbor. She has published articles in over a dozen journals.

Biography

Stephen S. Lee
Consultant

Stephen Lee brings a strong background in bioengineering to Applied Strategies' innovative strategic work in life sciences and global health. His in-depth knowledge of science, project management, and technology development helps Applied Strategies create the strategic bridge between pharmaceutical and global health organizations.

Mr. Lee has extensive experience in biochemical engineering laboratory research in the academic sector. His work at Stanford University demonstrated the efficacy of a novel protein pharmaceutical candidate in accelerating the healing of skin wounds, with potential applications in ulcers of diabetic patients. He has also investigated human embryonic stem cells at the Bioprocessing Technology Institute in Singapore and photopolymerizable hydrogel scaffolds for use in cartilage tissue repair at the Massachusetts Institute of Technology. He is well versed in techniques that lie at the heart of biopharmaceutical discoveries in global health research, such as mammalian cell culture, flow cytometry, and protein purification.

In global health, Mr. Lee has analyzed the diagnostics and treatment landscapes for a comprehensive assessment of tuberculosis and leveraged his scientific background to help prepare fact sheets for high-profile vaccines in the GAVI Alliance's portfolio.

Mr. Lee holds an MS in bioengineering from Stanford University and a BS in biology from Massachusetts Institute of Technology. He also completed an Academic Language Institute study abroad program through the University of Alicante in Spain. Mr. Lee has been actively involved in teaching and community service, having helped conduct MIT's undergraduate introductory biology laboratory class, Stanford's high school summer enrichment class in cardiac electrophysiology, and high school math and science tutoring in his local community.

He has received numerous honors, including a National Science Foundation fellowship. Outside of healthcare work, his leadership skills and passion for music led to fostering music collaborations and cultural exchanges between underprivileged youth in East Palo Alto, California, and Cape Town, South Africa.

Biography

Daniel E.W. Machemer, Ph.D.

Consultant

Dr. Machemer brings his extensive scientific background and volunteer experience as an outside consultant responsible for adaptation and implementation of Episcopal young adult programs to Applied Strategies' client-focused strategy consulting on vaccine development and global health.

Prior to joining Applied Strategies, Dr. Machemer worked as a postdoctoral fellow in the Division of Endocrinology, Gerontology, and Metabolism at Stanford University Medical Center. At Stanford, he created and characterized four transgenic mouse models to further elucidate the relationship between macrophage-mediated inflammation, metabolism, obesity-induced insulin resistance, and type 2 diabetes. As a Ph.D. student, he studied the signal transduction pathways involved in regulation of human and mouse CYP1A1, a liver enzyme involved in metabolism of a variety of carcinogens and ubiquitous environmental contaminants.

Since 2001, Dr. Machemer has served on the Board of Directors of Vocare International, a 501(c)3 nonprofit organization devoted to young adult ministries in the Episcopal Church. He has served as a staff member on 25 Vocare weekend retreats, including 16 weekends in other Episcopal dioceses around the United States and Canada. He has held his current position of Coordinator since 2003, in which he helped start the ministry in seven dioceses with no prior experience with Vocare, and helped restart the ministry after a long hiatus in two additional dioceses. As Coordinator, he serves as the first point of contact for dioceses wishing to begin a local Vocare program, provides logistical support throughout the planning process, helps adapt the program to meet local needs, assists with team training prior to the retreat, and provides on-site assistance as a staff member during the Vocare weekend.

Dr. Machemer holds a Ph.D. in biomedical sciences with a pharmacology concentration from the University of California, San Diego, and a BS in biology with a biochemistry concentration from Duke University. He is currently a Student Member of the Society of Toxicology.

Biography

Kim Swanson
Consultant

Kim Swanson brings extensive experience building support for the development and delivery of new health technologies to Applied Strategies' expertise in vaccine development and commercialization strategies.

Prior to joining Applied Strategies, Ms. Swanson worked as an associate consultant at Global Health Strategies, a global consulting company that uses communications and advocacy to speed the development and delivery of new health technologies. At Global Health Strategies, she worked with one of the world's largest vaccine companies to develop an understanding of stakeholder perceptions of their malaria vaccine candidate. She also helped lead the firm's work to build public support and drive resources for a new, low-cost cervical cancer diagnostic developed through a partnership between one of the world's largest molecular diagnostics manufacturers and PATH, the global health product development partnership.

After graduating from Rice University, she was awarded a Thomas J. Watson Fellowship to undertake a year-long intensive research project in countries outside the United States. As part of this project, she designed and managed several microcredit research projects in East Africa and India. In Tanzania, she focused on examining sources of repayment for microcredit loans, understanding the potentially adverse impacts of using loans for non-business purposes. In India, Ms. Swanson worked with the Gates Foundation's Avahan India HIV/AIDS Initiative, examining how access to microcredit loans impacts rates of condom use among female sex workers. She also traveled to Malawi where she assessed the feasibility of delivering HIV/AIDS education alongside microcredit services. In Uganda, she conducted poverty assessment research for FINCA Uganda, a large Ugandan microcredit bank, to understand the poverty level and credit needs of clients.

Ms. Swanson also worked on communications for DATA (Debt, AIDS, Trade, Africa), the Africa-focused nonprofit founded by U2 singer Bono to increase assistance to Africa. Her work at DATA took her to the 2005 G8 Summit in Gleneagles, Scotland, where she helped organize a global media campaign and worked with journalists from CNN, CNBC, and other outlets to build support for G8 assistance to Africa.

In her work for the HIV/AIDS branch of the United Nations Population Fund (UNFPA) in New York, she designed a program to deliver female condoms to refugees in West African conflict states.

Ms. Swanson holds a BA in mathematical economic analysis from Rice University. At Rice, she directed the Vagina Monologues, which raised \$4,000 to support a Houston-based organization working to halt violence against women. For this work, she was awarded the Outstanding Senior Award for leadership on women's issues.

Biography

Sophie Pinkard Solutions Analyst

Sophie Pinkard brings a strong background in finance, decision engineering, analysis, and model building to Applied Strategies' expertise in framing and modeling complex investment decisions, supply and demand forecasting, and product and portfolio assessments.

At a best practice research and consulting firm focused on hospitals and health systems, she quickly advanced from a senior analyst to an associate director in the Revenue Cycle Business Intelligence Group. She led the technical implementation of a \$4 million business intelligence project for the Cleveland Clinic, finding \$10 million in ROI for the client in the first six months.

Ms. Pinkard managed a pool of 16 client hospitals and worked closely with CFOs and patient financial services directors to realize over \$20 million in ROI by measuring, analyzing, and improving revenue cycle performances. Her work in business intelligence and the programs she wrote significantly improved clients' reimbursement from major payers and caught system errors that were costing millions.

While working for a venture philanthropy organization investing in a portfolio of social enterprises, she created a diagnostic tool to help nonprofit funders determine when to use syndicated funding models and developed monthly financial, operational, and social performance measurement dashboards for two portfolio organizations.

Ms. Pinkard holds an MBA from Stanford University, where she was named an Arjay Miller Scholar and a Siebel Scholar, and a BS in management science and engineering, with distinction, also from Stanford University.

Biography

Priti Daswani

Research Analyst

Priti Daswani has international pharmaceutical experience in strategic market analysis, product registration strategy development for the Middle East and North African markets, and extensive market research. Her educational background in pharmaceutical sciences, management studies, and bioscience business enhances Applied Strategies' analytical capabilities in global health and life sciences.

Prior to joining Applied Strategies, Ms. Daswani was a sales executive for Pharmatrade L.L.C., one of the top five pharmaceutical distributors in the U.A.E. She oversaw sales and expiration-related issues of medicines and collections in various territories and routinely exceeded monthly sales targets by 10-20%. Her new account initiatives contributed 5-10% of new sales growth. As a supervisor in customer service, she coordinated activities among functional departments, the sales team, and the end customers; conducted market research; and coordinated the implementation of an automated invoicing ERP system.

As a regulatory affairs assistant for Mayne Pharma in Dubai, she participated in preparing registration strategies, coordinated regulatory activity, and prepared registration dossiers for the Middle Eastern and North African regions.

Ms. Daswani was also a marketing executive for C MARC (I) Pvt. Ltd. in Mumbai, India, where she analyzed prescription data and implemented the strategic analysis for various pharmaceutical brands. She trained clients to use C MARC's customized software for their preliminary research and conducted extensive marketing activities for the Institute for Pharmaceutical and Healthcare Management and Research.

She holds an MBA in pharmaceuticals management from Narsee Monjee Institute of Management Studies in Mumbai, a Bachelor of Pharmaceutical Sciences from Prin. K.M. Kundnani College of Pharmacy in Mumbai, and a certificate in bioscience business and marketing from the University of California, Santa Cruz. In 2004, she published an article entitled *Taking the OTC Route – A New Strategy* in Chronicle Pharmabiz.

Biography

Premalatha A. Grandhi
Senior Software Engineer

Prema Grandhi assists in the design, specification, implementation, and testing of business software applications with proficiency in domain-driven design, test-driven development, component-oriented programming, service-oriented architecture, and software quality engineering. She brings experience in software development and testing and mastery of a wide variety of computer languages and platforms.

Ms. Grandhi applies her decision analytics experience with her computer science and global health knowledge to design forecasting models for the global health market and life sciences industry. She was an important member of the team for the development of Cennium™ Vaccine Landscape, an application used by the Bill & Melinda Gates Foundation, the GAVI Alliance, and the World Bank to better understand the economic impact on global donors and individual countries of various global financing scenarios for supporting the introduction of new vaccines into developing countries.

She led the Malaria Vaccine Initiative model deconstruction and rebuild in .NET; designed, developed, and tested most of the Excel model for the GAVI Vaccine Investment Strategy and the PATH HPV supplier model; and had leadership roles in the development of models for the Hib Initiative and the International Vaccine Initiative.

Prior to joining Applied Strategies, Ms. Grandhi served as a software engineer for Stellartech Research, where she developed automated calibration software and a software TestBed. She also helped develop software for monitoring patients' blood pressure, sleep trends, ECG, and skin temperature.

As a software developer for the Institute of Food and Agricultural Sciences in Gainesville, Florida, she developed modeling applications and database applications for statistical analysis. Prior to that, she was a web developer/software programmer at the Center for Emerging Technologies in Gainesville, where she developed the center's website and developed components of an application for medical imaging and analysis. In addition, she has extensive experience in programming in Java, C/C++, and in distributed network programming.

Ms. Grandhi holds an MS in electrical engineering, an MS in computer science from the University of Florida, and a Bachelor of Technology in electronics and instrumentation engineering from JNT University in India.

Biography

Amy Martinez

Software Engineer

Amy Martinez specializes in designing and programming web-based applications and is especially adept at translating projects into modern software architecture and modern document formats. She combines strong project and team management skills with her extensive understanding of computer languages and business applications to successfully deliver products to client specifications.

Prior to joining Applied Strategies, Ms. Martinez was a software engineer for a software solutions firm and led the team responsible for developing web-based applications to update the state tax system. She was heavily involved in the requirements, design, and implementation phases for a project being translated from COBOL to a modern architecture with Java back end and ASP.Net front end. She oversaw the project from the development phase through to implementation and participated in writing the documentation and technical user guides. This was the first time an effort was made to translate a legacy Integrated Tax System into a modern architecture, and it opened the doors to other states interested in a translational effort.

As a software engineer for a title company, she designed and programmed applications that managed and generated documents and reports. Ms. Martinez led the team assigned to redesign and convert the document generation application into a C#.Net Windows application. She created a formal development procedure, provided project plans and time estimates, and designed databases, internal system logic, and user interfaces. Her new design replaced the automated use of Microsoft Word by building dynamic input forms, applying business logic, and generating the Word documents using Aspose software. The project resulted in a faster and more efficient way to build title documents without the dependency of the MS Word engine.

Ms. Martinez holds a BS in computer science from San Jose State University.