THE CANARY KIDS PROJECT:
AN INNOVATIVE RESPONSE TO THE NEW CHILDHOOD EPIDEMICS

One of the greatest paradoxes of our times is that the most affluent, resourced and medically advanced societies in the world also have the highest rates of chronic childhood illness. Obesity and diabetes, autism and neurodevelopmental delays, digestive and allergic diseases were rarely found just a generation ago. Today these illnesses are impacting our children in epidemic numbers. The social, economic and human costs are staggering. Our children, the ‘canaries in the coal mine’ of national health, are imploring us to take action now. The Canary Kids Project (CKP) accepts this challenge by offering an innovative and scalable solution to meet this health crisis.

WHAT IS THE CANARY KIDS PROJECT?
The Canary Kids Project (CKP) tests and documents a results-oriented model that looks upstream at the causes, rather than downstream at the symptoms, of chronic illness. There is a vast body of anecdotal evidence indicating that individuals with chronic conditions can fully recover. The Canary Kids Project seeks to test and explore, through proper and rigorous scientific methodology, the underpinnings of these anecdotal successes. The program contains three main pillars:

1. Healing for 14 ‘Canary Kids’
   - Team of experts, including a family health coach and clinical care coordinator
   - Comprehensive therapeutic interventions that address genetic, environmental, and epigenetic causes not symptoms
   - Green, highest quality, non-toxic, hypo-allergenic products
   - Personalized, humane, timely and high quality care and monitoring

2. New Paradigm for Healing
   - Collaborative model where medical mentors bridge the “bench-to-bedside” gap, and translate emerging science to clinicians and physicians
   - Trans-disciplinary developmental screening
   - Predictive and functional laboratory testing (immune, digestive, endocrine, genetic, neurological) and other minimally invasive high-tech assessment tools only recently available
   - Easily accessed, secure, electronic health records to facilitate treatment recommendations as well as scalability of the Canary Kids program

3. Dissemination of Healing and Hope through Education and Media
   - Feature-length documentary film demonstrating evidence of hope and improved health outcomes for our “canary kids”
   - Multi-media grassroots public outreach and support
   - Global training for parents, health coaches, and medical professionals by Canary Kids medical mentors to translate project’s progress, findings and methodology

WHY NOW?
The epidemic of chronic illness in children has reached a critical tipping point and there is an urgent need for practical solutions that can be applied immediately. Some startling statistics:

- Rates of autism have risen over the last few decades from 1 in 10,000 to 1 in 50 children. Autism costs the U.S. $126 billion per year.
- Asthma affects 1 in 8 children, and as many as 1 in 6 African American children. Asthma costs the U.S. $56 billion per year.
- One in 3 American children is either overweight or obese; Obesity-related medical costs account for $190 billion or 21% of medical spending in the United States; childhood obesity carries a price tag of $14 billion a year in direct medical costs.
- One in 30 children is diagnosed with pediatric depression. The U.S. spends $83 billion a year on depression.
- It is estimated that approximately 10% of American children have ADD/ADHD and 17% are labeled as “learning disabled.” ADHD is estimated to cost the US upwards of $100 billion per year.
These are just a few of the areas where allopathic symptom-reactive systems are delivering less than stellar results. CKP acknowledges these issues as a human, societal and economic imperative, and the current medical model must be rethought, repaired, revalidated and reengineered.

GOALS AND IMPLEMENTATION

• CKP aims to enroll (and support) fourteen families in as many as five locations. Up to seven families will be featured in the documentary film.

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<th>THERAPEUTIC CATEGORIES SERVED BY THE CANARY KIDS PROGRAM</th>
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<td><strong>THERAPEUTIC AREA</strong></td>
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<td>Autism Spectrum Disorders</td>
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<td>Atopic Disease/Eczema</td>
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• The ultimate goal of CKP is to help families in their quest to achieve the greatest health potential for their children.
• A secondary goal of the program is to document and track successes and challenges of children as they recover from chronic illness so that others may benefit from this knowledge. Dr. Martha Herbert, MD, PhD of Harvard Medical School and Dr. Russell Jaffe, MD, PhD ELISA/ACT Biotechnologies, PERQUE LLC and Health Studies Collegium will serve as “Medical Mentors” to the program participants (clinicians, health coaches and families) and will lead translational science opportunities that emerge out of the project. Data gathered from CKP may be utilized to create prevention-based models of wellness, with the long-term goal of reducing total disease burden in this country.
• Each family will be paired with a Clinical Care Coordinator, who will be operating under the guidance and support of a team of Medical Mentors, and a Health Coach to help them navigate their way through the many healing challenges and obstacles.
• CKP will ensure that families are provided pro bono with a variety of healing and recovery services including, but not limited to:
  — Personalized Nutritional Support (including whole, organic, biodynamically-sourced food and supplementation if warranted)
  — Comprehensive and Cutting-Edge Laboratory and Developmental Assessments
  — Non-toxic Personal and Home Products
  — Environmental Assessments
  — Personalized Therapeutic Modalities
  — Emotional/Spiritual Support
• CKP healing services will be provided for 18 months.
• The lessons learned from this program will be documented on film and in a published manual, and online resources will be made available to the public.
• Translation science activities lead by our medical experts will be a crucial component of our transformational communication strategy.

WHO IS BEHIND THE CANARY KIDS PROJECT?
CKP brings together a coalition of parents, practitioners, scientists, research and health organizations and experts in a cross-section of specialties ranging from bioinformatics to traditional healing who see the current health crisis and understand the urgent need to re-think the way in which we approach health and wellness in the developed world. Following are five collegial organizations participating in CKP as part of a collaborative effort:
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<th>ORGANIZATION</th>
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<td>Epidemic Answers</td>
<td>Epidemic Answers is dedicated to educating the public about the epidemic of chronic illness affecting the current generation of children and providing prevention and healing solutions for parents, caregivers and future parents.</td>
<td>Epidemic Answers will oversee the coordination and implementation of the Canary Kids Healing Program. Epidemic Answers is also responsible for building and supporting the broader grassroots movement and overseeing the documentary film portion of the project. <a href="http://www.epidemicanswers.org">http://www.epidemicanswers.org</a></td>
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<td>Health Studies Collegium</td>
<td>Health Studies Collegium serves as a forum where scientists, health care practitioners, policy leaders and those interested in cost- and outcome-effective health care can share their visions and find a platform for their studies, commentary or projects.</td>
<td>Health Studies Collegium will oversee the “New Paradigm for Healing” Pillar of the project, coordinating the deep dive science. HSC will provide scientific and medical mentorship and be responsible for bringing the perspective of cutting-edge science to the program, including (but not limited to): genetic and epigenetic, metabolomics and microbiomic, prion and functional predictive biomarkers, neurohormone and essential metabolic factor assessments. <a href="http://www.healthstudiescollegium.org">http://www.healthstudiescollegium.org</a></td>
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<td>The Higher Synthesis Foundation’s mission is to inspire, support, coordinate, and perform research about successful approaches to complex health and environmental problems, look for common features leading to successful outcomes, and disseminate these findings and analyses through the internet, media, books and scientific publications.</td>
<td>The Higher Synthesis Foundation will focus on making the Canary Kids program scalable by developing research and clinical platforms that can be used by integrative systems-oriented medical practices and researchers. HSF is responsible for compiling and optimizing data intake and questionnaire materials for clinical history, symptom description and quantification of features of change in clinical outcomes. <a href="http://www.highersynth.org">http://www.highersynth.org</a></td>
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<td>TRANSCEND’s mission is to generate new scientific evidence about neurodevelopmental disorders, using integrative brain and body research tool kits to shed light on real-life issues.</td>
<td>TRANSCEND Research Program (Treatment Research and NeuroScience Evaluation of Neurodevelopmental Disorders) is based at the Massachusetts General Hospital, Harvard Medical School. Its track record includes federal and privately funded pediatric brain imaging studies (MEG, EEG, MRI, MRSI). TRANSCEND’s staff will advise on the construction of data collection, analysis and storage procedures for this complex study, and will particularly perform analysis of any brain data collected. <a href="http://www.transcendresearch.org">www.transcendresearch.org</a></td>
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<td>OMI is thinking outside the box to apply a multi-disciplinary, “big data” approach to advance the understanding of “difficult” diseases and improve patient outcomes. OMI interacts with a large network of like-minded international collaborators — patients, independent physicians, academic centers, informatics groups, laboratories, industry, large health systems, and others.</td>
<td>OMI has developed and is employing a novel technology platform—OpenMedNet—that facilitates information sharing (patient consented and HIPAA compliant) from all sources (patient, caregiver, physician, hospital, lab, etc.) and optimizes collaboration. OMI was founded on the principles of the open source movement, which calls for systems and information to be shared in a community-based, collaborative manner. <a href="http://www.openmedicineinstitute.org">www.openmedicineinstitute.org</a></td>
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**IMPLEMENTATION AND TIMELINE**

CKP will be divided into five distinct phases:

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<th>ESTIMATED TIMEFRAME</th>
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| I     | Pre-Launch | Month 1 - 4        | - Established and coordinated/networked teams of clinicians/medical mentors  
|       |           |                     | - Program Infrastructure  
|       |           |                     | - Establishment of grassroots platform including film production scope/strategy  
|       |           |                     | - Established EHR platform |
| II    | Recruitment and Selection | Month 4 - 7 | - Recruit families  
|       |           |                     | - Select final 14 families |
| III   | Healing Program Implementation and Documentation | Month 8 - 26 | - Capture and analysis of baseline assessments and individual data  
|       |           |                     | - Implementation of personalized recovery program and mentoring procedures  
|       |           |                     | - Assessments at appropriate intervals  
|       |           |                     | - Film production |
| IV    | Synthesis and Translation | Month 18 - 30 | - Film post production (editing, completion)  
|       |           |                     | - Program assessment/meta data review and translation |
| V     | Communication Strategy Implementation | Month 30 - 36 | - Feature Film release, Canary Kids manual, grassroots/broad media strategy including online, print, and broadcast initiatives  
|       |           |                     | - Translational Science initiatives including technical films  
|       |           |                     | - Bioinformatics platform solutions scaled and replicated |

**CANARY KIDS TIMELINE BY PHASE**

**Pre-Launch** (Month 1-4)  
**Recruitment and Selection** (Month 4-7)  
**Healing Program** (Month 8-26)  
**Synthesis and Translation** (Month 18-30)  
**Communication Strategy Implementation** (Month 30-36)  

**36 MONTHS TO COMPLETION**
KEY STAFFING AND LEADERSHIP
Canary Kids Recovery Project brings together tenacious and brilliant health and business professionals.

CKP EXECUTIVE TEAM

Beth Lambert, MA, Executive Producer
Author, educator and former healthcare consultant, Ms. Lambert leads this project. Ms. Lambert has monitored the health challenges facing families of children with chronic illness over six years and has documented better outcomes through research for her book A Compromised Generation, and in her capacity as Executive Director of Epidemic Answers. Ms. Lambert attended Oxford University and graduated from Williams College and holds a Master’s Degree in American Studies from Fairfield University.

Josie Nelson, MA, HHC, Program Director
Ethicist, consultant, and certified health coach, Ms. Nelson is the project’s Program Director. Ms. Nelson has been helping families navigate the complexities of childhood chronic illness since 2002. She is a former management consultant with a background in best practices and business ethics. She holds degrees from Georgetown University and the University of Chicago, where she received a Masters degree and completed coursework and qualifying exams towards a doctoral degree.

Russell Jaffe, MD, PhD, Medical Advisory Co-Chair
Dr. Jaffe is an internist, molecular biochemist, clinical pathologist, and diagnostician. Dr. Jaffe graduated with his BS, MD and PhD, in eight years, from Boston University with doctoral research from Medical College Dean Emeritus, Carl Franzblau. Dr. Jaffe now leads the Health Studies Collegium and serves as Lab Director of Elisa/Act Biotechnologies, LLC. Dr. Jaffe is known for his work in applying first principles of biology to clarify the causal mechanisms of good and ill health. He has published over 100 articles and invited reviews. Dr. Jaffe most recently presented to the Institute for Medical Studies (IMS) current understanding and research on the human microbiome, the totality of microorganisms residing on and in the human body, their genetic elements (genomes), and their interactions with their host.

Martha Herbert, MD, PhD, Medical Advisory Co-Chair
Dr. Martha Herbert is an Assistant Professor of Neurology at Harvard Medical School, a Pediatric Neurologist at the Massachusetts General Hospital in Boston, and an affiliate of the Harvard-MIT-MGH Martinos Center for Biomedical Imaging, where she is director of the TRANSCEND Research Program. Dr. Herbert earned her medical degree at the Columbia University College of Physicians and Surgeons. Prior to her medical training she obtained a doctoral degree at the University of California, Santa Cruz, assessing evolution and development of learning processes in biology and culture in the History of Consciousness program, and then did postdoctoral work in the philosophy and history of science. She trained in pediatrics at Cornell University Medical Center and in neurology and child neurology at the Massachusetts General Hospital, where she has remained. She received the first Cure Autism Now Innovator Award and is now on the Scientific Advisory Committee of Autism Speaks. Her background in pediatric neurology, evolutionary biology and history of science has oriented her toward systems biology, brain connectivity and dynamism, and brain-body interrelationships.
MEDIA AND DEVELOPMENT

Maria Rickert Hong, Media Director
Maria is a Certified Holistic Health Counselor trained at the Institute for Integrative Nutrition. She specializes in helping parents with special diets for children with autism, ADHD, allergies, asthma, autoimmune and more. Maria has recovered herself and her children from chronic illnesses. She is a Board member of Epidemic Answers. Maria is a former equity research analyst covering the oil services sector at Salomon Smith Barney and Lehman Brothers. Later, she covered the gaming, lodging & leisure sector at Jefferies & Co. and Calyon Securities. She quit working on Wall Street when her first son was born. Prior to working on Wall Street, she was a marketing specialist for Halliburton in New Orleans, where she also received her MBA in Finance & Strategy from Tulane University.

Eileen Iorio, Co-Director Development
Eileen Iorio earned her Bachelors Degree in Business Studies from the University of Limerick, Ireland. She worked as an accountant for Ernst & Young and later as a relationship manager for Northern Trust before taking time off to have her 3 children. When her son developed autism, a journey of discovery led her to the world of healing through biomedical protocols for children with autism and other chronic illnesses. Her son is finally on a path to recovery. Eileen is currently studying to become a health coach to further her learning on the health and nutritional needs of our children. Currently, Eileen is serving as a Board member of Epidemic Answers.

Mary Toulouse, Co-Director Development
Mary Elizabeth Toulouse graduated from Boston College and holds a Bachelor of Arts Degree in Communications. Mary worked in fixed income at Cantor Fitzgerald International in London and New York as well as in Fixed Income at JP Morgan. After leaving finance, Mary began a second career in education. She taught at Greenwich Academy, while pursuing her Master's in Elementary Education at Manhattanville College in Purchase, NY. Mary also worked at her alma mater, Convent of the Sacred Heart in Greenwich, CT. Currently, Mary is serving as a Board member of Epidemic Answers. Mary became involved with Epidemic Answers and the Canary Kids Project because she believes so deeply that children can get better and works diligently everyday on this goal with her son Connor, who was diagnosed with autism at age two.

CANARY KIDS MEDICAL ADVISORY BOARD

Russell Jaffe, MD, PhD, Medical Advisory Co-Chair
Dr. Jaffe is an internist, molecular biochemist, clinical pathologist, and diagnostician. Dr. Jaffe graduated with his BS, MD and PhD, in eight years, from Boston University with doctoral research from Medical College Dean Emeritus, Carl Franzblau. Dr. Jaffe now leads the Health Studies Collegium and serves as Lab Director of Elisa/Act Biotechnologies, LLC. Dr. Jaffe is known for his work in applying first principles of biology to clarify the causal mechanisms of good and ill health. He has published over 100 articles and invited reviews. Dr. Jaffe most recently presented to the Institute for Medical Studies (IMS) current understanding and research on the human microbiome, the totality of microorganisms residing on and in the human body, their genetic elements (genomes), and their interactions with their host.

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Sidney Baker, MD
Dr. Baker is a former faculty member of Yale Medical School, where he received his medical and specialty training in pediatrics. He is former director of the Gesell Institute of Human Development. Dr. Baker’s practice has gradually shifted from pediatrics and family medicine to treatment of adults and children with complex chronic illness. Dr. Baker is the author of Detoxification and Healing, The Circadian Prescription, Autism: Effective Biomedical Treatments (with Jon Pangborn, PhD), and Child Behavior (with Ilg and Ames) among other titles. In 2000 he founded Medigenesis.com (Autism360.com), which is based on the proven capacity of structured clinical data to capture the threads of individuality into a tapestry in which we can see otherwise invisible patterns. Honored for his contribution to the development of integrative medicine, he has practiced and published the principles that underlie effective listening, recording, retrieving and reporting the details that allow us to see and present ourselves as individuals, regain balance and retain the control that favors healing of chronic illness. He is currently in private practice in Sag Harbor, NY.

Jennifer Boyd, PA
Physician Assistant Jennifer Boyd graduated Summa Cum Laude from the prestigious PA program at LIU/Brooklyn Hospital after a career in international business development and an undergraduate degree from Syracuse University. Jennifer has multiple post-graduate certifications and has completed professional coursework in Functional Medicine, Biological Medicine, Darkfield Microscopy, Biological Terrain Analysis, Lyme Literacy, and Organic Land Management. She has also earned her Master designation as a Reiki professional. Jennifer is the owner of Boyd Wellness, a holistic practice for patients engaged in the serious pursuit of wellness.

Geri Brewster, RD MPH CDN
Geri began her clinical career nearly 30 years ago, specializing in pediatric and young adult developmental disabilities, including metabolic and gastrointestinal disorders; specialized tube feedings; dysphagia; autism; behavioral, attention, sensory and oral-motor integration disorders; and eating disorders. Ms. Brewster received a Bachelor of Science in Human Nutrition and Foods from Virginia Polytechnic Institute and State University in Blacksburg, Virginia, where she graduated summa cum laude. She earned her Masters in Public Health Nutrition from New York Medical College in Valhalla, New York and was awarded the Sirach Award for outstanding achievement in the field of Public Health. Ms. Brewster is a registered dietitian-nutritionist with the State of New York. She also holds certificates of study in Chronic Fatigue Syndrome and Fibromyalgia from Dr. Jacob Teitelbaum, IAACN, and the Institute of Functional Medicine, in addition to an advanced certificate in Adult Weight Management from the American Dietetic Association.

James Bronson, DDS
Dr. James M Bronson is a 1983 Cum Laude Graduate of Georgetown University School of Dentistry. Dr. Bronson taught for 5 years at Georgetown University School of Dentistry in the Department of Fixed Prosthodontics. For 30 years, he has maintained a private practice in McLean, Virginia that is dedicated to “Whole Body Dentistry”, with special interests in TMD, Cranial Facial Pain, Implant Dentistry, Orofacial Myofunctional Therapy, and Transformational Orthodontics. Dr. James M. Bronson has lectured in the US, Canada, Asia, and Europe on: The ALF Paradigm Cranial Friendly OrthodonticsTransformational Orthodontics A Team Approach and “The Platinum Age of Dentistry.

Patricia Fitzgerald, DAOM, DHM, LAc, CCN
Dr. Fitzgerald founded the Santa Monica Wellness Center in 1994 after being in private practice for several years. She has a Doctorate Degree in Acupuncture and Oriental Medicine, a Master's Degree in Traditional Oriental Medicine, and a Doctorate in Homeopathic Medicine. She is a licensed acupuncturist and herbalist, as well as a Certified Clinical Nutritionist. She has served on the faculty of Yo San University and is the Wellness Editor of the AOL Huffington Post Media Group. Dr. Fitzgerald is the author of the best-selling award winning book, The Detox Solution: The Missing Link to Radiant Health, Abundant Energy, Ideal Weight, and Peace of Mind. Dr. Fitzgerald is a member of the American Association of Acupuncture and Oriental Medicine and the California State Oriental Medical Association. She serves on the Board of Directors of Emperor’s College of Traditional Oriental Medicine and the Professional Advisory Council of the American Holistic Veterinary Association Foundation.

Sylvia Fogel, MD
Dr. Fogel is a board-certified psychiatrist and psychoanalyst practicing in New York City. She completed her degree and her medical training at Cornell University. Dr. Fogel went on to complete a psychiatry residency at Columbia University and the New York State Psychiatric Institute. Since graduating from residency, Dr. Fogel developed an
interest and expertise in perinatal and reproductive psychiatry. In addition to her private practice, Dr. Fogel is an Assistant Professor of Clinical Psychiatry at Columbia, where she supervises psychiatric residents and also teaches and supervises fellows at the Women’s Program. Dr. Fogel is also a faculty member at the Columbia University Center for Psychoanalytic Training and Research, where she teaches and serves on the executive council. Dr. Fogel has had a long-standing interest in integrative and alternative methods for healing but immersed herself more fully in functional medicine and alternative modalities after her youngest son regressed into autism around the age of 2. She now integrates an aggressive focus on nutrition and toxicity in her work with patients and in her own life. She is delighted to be a part of Canary Kids and hopes to inspire and empower parents to become active agents in their children’s healing.

Jay Gordon, MD
Dr. Gordon is a pediatrician in private practice in Santa Monica, California. He is a fellow of the American Academy of Pediatrics, a member of the attending staff, and teaches at Cedars-Sinai Medical Center, as well as an assistant clinical professor of pediatrics at UCLA School of Medicine. Dr. Gordon is also an inspirational lecturer, author, television and radio commentator, and is internationally recognized in the areas of pediatric nutrition and breastfeeding. Dr. Gordon is the first male physician to sit for and pass the International Board of Lactation Certification Exam and has served on the Professional Advisory Board of La Leche League for twenty-four years. Dr. Gordon has authored many books including: Good Food Today, Great Kids Tomorrow, Brighter Baby, Good Nights,, Preventing Autism, among other titles. He is also a journalistic contributor to New York Parent, Parenting Magazine, the Huffington Post, among other widely circulated print and online publications.

Mark Hyman, MD
Dr. Hyman has dedicated his career to identifying and addressing the root causes of chronic illness through a groundbreaking whole-systems medicine approach known as Functional Medicine. He is a family physician, a six-time New York Times bestselling author, and an internationally recognized leader in his field. Through his private practice, education efforts, writing, research, advocacy and public-policy work, he strives to improve access to Functional Medicine. Dr. Hyman is Chairman of the Institute for Functional Medicine, and was awarded its 2009 Linus Pauling Award for Leadership in Functional Medicine. He is currently medical editor at the Huffington Post and on the Medical Advisory Board at The Doctor Oz Show. He is on the Board of Directors of The Center for Mind-Body Medicine, and a faculty member of its Food As Medicine training program. He is also on the Board of Advisors of Memhet Oz’s HealthCorps.

Andreas Kogelnik, MD, PhD
Dr. Kogelnik is founder and Director of Open Medicine Institute and a practicing physician. Prior to OMI, Dr. Kogelnik founded two companies and a non-profit organization. Having received his MD from Emory University, a PhD in Bioengineering from Georgia Tech, and completing his medical residency and fellowship at Stanford, he has been centrally involved in the information and genomic revolutions in medicine. He has served as an advisor/consultant to many Silicon Valley biotech and IT organizations including Epocrates, Counsyl, the Fogarty Institute for Innovation, and the El Camino Hospital Genomic Medicine Institute.

Lisa Nagy, MD
Lisa Lavine Nagy M.D. graduated Magna Cum Laude from The University of Pennsylvania and then from Cornell Medical College in 1986. After a surgical internship she completed Emergency Medicine residency in NYC and practiced in Los Angeles. She is now president of Preventive and Environmental Health Alliance, which is a group focused on educating medical students, doctors, the AMA, congress and the public and assists patients to find help for environmental illness nationwide. She was appointed as a delegate to the Massachusetts Medical Society and to the CDC’s National Conversation on Chemicals and Public Health. Lisa was also named to a roundtable at NIH on Buildings and Health and maintains her own practice called Vineyard Personalized Medicine in Martha’s Vineyard, MA.

Joseph E. Pizzorno Jr., ND
Dr. Pizzorno is one of the world’s leading authorities on science-based natural/integrative medicine. He was appointed by President Clinton in December 2000 to the White House Commission on Complementary and Alternative Medicine Policy and by President Bush’s administration in 2002 to the Medicare Coverage Advisory Committee. A naturopathic physician, educator, researcher and expert spokesman, Pizzorno is founding president of Bastyr University. Under his
leadership, Bastyr became the first fully accredited, multidisciplinary university of natural medicine and the first NIH-funded center for alternative medicine research. From 1996 to 2002, he served on the Seattle/King County Board of Health and, in 1996, was a founding board member of the American Herbal Pharmacopoeia. He served as chairman of the American Public Health Association SPIC on CAM from 1999 to 2001. He has been a licensed naturopathic physician in Washington State since 1975. In June 2000, Pizzorno retired after 22 years from the presidency of Bastyr University. He continues as president emeritus. Dr. Pizzorno is the author of Total Wellness and co-author of the internationally acclaimed Textbook of Natural Medicine and its companion books, Natural Medicine Instructions for Patients and the Handbook of Natural Medicine among other publications.

Norman Schwartz, MD
Dr. Schwartz is an integrative medicine specialist with over 30 years’ experience and an extensive background in treating complex chronic health problems. Formerly medical director of Integrative Medicine for Wheaton Franciscan Healthcare in Milwaukee, Wisconsin, he is now in private practice, focusing on helping individuals and families who are dealing with ADHD and autism spectrum and neurodevelopmental disorders. As a Defeat Autism Now! practitioner, he approaches autism as a medical disorder that is treatable. Dr. Schwartz has a special interest in the application of ecological principles for the creation of a safer, more sustainable world for present and future generations. In addition to his medical degree and residency training, Dr. Schwartz has received postgraduate training and education from the American Academy of Environmental Medicine, the Santa Fe Institute for Complex Studies, the Functional Medicine Institute, the International College of Integrative Medicine, and the American Academy for the Advancement of Medicine. He is a founding member of the American Society of Integrative Medical Practice and a Fellow of the Health Studies Collegium, a health policy and clinical outcomes research foundation.

Maya Shetreat-Klein, MD
Dr. Shetreat-Klein is an integrative pediatric neurologist who is board-certified in Adult and Pediatric Neurology as well as in Pediatrics. She teaches integrative neurology as faculty at New York Medical College and UMDNJ, and lectures nationally and internationally. She completed residency training for Pediatrics at Long Island Jewish Medical Center, and then her Adult and Child Neurology fellowship at Montefiore Medical Center. Prior to that, she received her medical degree from Albert Einstein College of Medicine, where she was awarded the Edward Padow Award for Excellence in Pediatrics and graduated with a Special Distinction in Research in Child Neurology for her work in Autism. Dr. Shetreat-Klein graduated with honors from Columbia College in New York City with a B.A. in English literature. Dr. Shetreat-Klein sits on expert advisory boards for Autism Society of America’s Treatment Guided Research Initiative founded by Dr. Martha Herbert, for Healthy Child, and for Better School Foods. A “foodie” and lifelong environmental activist, Dr. Shetreat-Klein’s passion is to understand the connection between food, environmental exposures and health. In 2008, she started Mitzvah Meat and Mindful Meat, a co-op bringing local, grass-fed, humanely-raised and -slaughtered meat and chicken to both kosher and non-kosher communities in the tri-state area.

Heather Tallman Ruhm, MD
Dr. Tallman Ruhm is a Board Certified Family Physician whose primary focus is integrative medicine and patient education. She draws on both her conventional western training and experience with complementary health. Dr. Tallman Ruhm specialty is in utilizing integrative approaches to facilitate autism recovery. Dr. Tallman Ruhm was born and raised in Montana. She attended Montana State University as an undergraduate and later the Kennedy School of Government at Harvard where she received a Master’s in Public Policy. She then attained her MD degree from the University of New Mexico School of Medicine and completed her Family Medicine Residency in Colorado and Alabama. She practiced ambulatory medicine on the West Coast first with a large HMO and then with an integrative clinic, the Whitaker Wellness Institute, before settling in Southern New Hampshire with her family.

Eva Vanamee, PhD
Dr. Vanamee is a research scientist with expertise in protein chemistry, structural biology and bioinformatics. Dr. Vanamee earned her Master's Degree in Chemistry from Budapest, Hungary. She completed her post-graduate education at Georgetown University and at the Albert Einstein College of Medicine, where she earned her Ph.D. in Biophysics. Her research interests include DNA regulation, autoimmunity, and biomarker development. Her awards include a long-term fellowship from the Human Frontiers Science Program in Strasbourg, France and a National Research Service Award Fellowship from the National Institutes of Health. She is currently an independent research consultant and an adjunct assistant professor at the Icahn School of Medicine at Mount Sinai.
Suruchi Chandra, MD
Dr. Chandra is a board-certified holistic psychiatrist practicing at Whole Child Wellness in Belmont, CA. In addition to her psychiatric degree, Dr. Chandra has completed extensive biomedical training that she uses in an integrative approach to help children and adults with challenging psychological, behavioral, and medical issues. Dr. Chandra has an undergraduate degree from Harvard University and a medical degree from Yale University. She completed her residency in psychiatry at Massachusetts General Hospital/McLean Hospital combined program at Harvard Medical School. After residency, Dr. Chandra spent 5 years studying with, and working with, Dr. William Lee Cowden, MD a leading expert in the treatment of chronic Lyme disease and other complex medical conditions. Dr. Chandra is a member of the Autism Research Institute think tank, and meets regularly with researchers and other clinicians to discuss cutting edge research and treatments for ASD.

Richard Ash, MD
Richard Ash, MD is an internal medicine specialist who is a leader in the field of Integrative and Environmental medicine. Once a victim of his toxic environment, Dr. Ash was able to heal himself through alternative therapies and has developed a program that achieves dramatic, lasting improvement for patients who have not found relief from conventional methods. Dr. Ash’s approach to health and wellness includes treating the body as a unique whole and getting to the root cause of illness instead of just masking symptoms.

Dr. Ash founded The Ash Center for Comprehensive Medicine in New York City, WellNEST, a center for healthy living in the Hamptons, and has been educating the public for the past 20 years through his radio talk show, “Sick and Tired of Being Sick and Tired” live global broadcast on WOR 710AM. Dr. Ash is an author, has lectured nationally, and made numerous radio and television appearances including ABC’s World News Tonight with Peter Jennings, The Sunday Times UK, DuJour, Hamptons Magazine, Gotham Magazine & Martha Stewart’s Whole Living.

Rachel Paletsky Ash
Rachel Paletsky Ash runs complimentary programming at The Ash Center for Comprehensive Medicine, a leading center in Integrative/Alternative medicine, in New York City. She is the Founder of wellNEST, a center for healthy living in the Hamptons and wellNEST Energy School in Litchfield County, CT. Rachel has developed a yoga, healing and spirituality studio within wellNEST and offers classes, lectures and training in various healing modalities. Rachel is also the Co-Founder of Mama Glow, a holistic maternal lifestyle company.

In addition to the Medical Advisory Board, The Canary Kids Project is also guided by a distinguished panel of advisors and experts from a variety of professional fields including: filmmaking, marketing, media, healthcare, autism and developmental education among other specialties. To learn more about this advisory committee, please visit: http://www.canarykidsmovie.com/the-team/advisory-board

FREQUENTLY ASKED QUESTIONS

How is your program different from other approaches to treating chronic illness?
Conventional medicine tends to view chronic illness as something to be managed based on symptoms, rather than something that can be reversed based on an understanding of underlying causes. Far too often, clinicians focus on symptom suppression and control. In contrast, the Canary Kids Project focuses on addressing and mitigating upstream causes of dis-ease, rather than on downstream symptom management. We aim to show that when individuals are provided with the appropriate therapeutic support and a healing environment, chronic illnesses begin to reverse.

Why are you including seven different chronic conditions? Why not just one?
Growing scientific literature supports a personalized approach to identifiable molecular, physiologic and functional stresses. Similarly, the methods for reversing underlying inflammatory mechanisms common to most chronic illness can also be applied across many disease categories. As these connections are demonstrated, while addressing the unique aspects of each child’s health, CKP offers hope and a thoughtful challenge to the current common symptom treatment paradigm. By providing a viable alternative to the disease/diagnosis-based ‘siloes’ that characterize our current system, CKP is part of a lasting paradigm shift.

Why hasn’t anyone done this comprehensively before now?
We have witnessed breath-taking advances in human health derived through an enormously rich and complex modern scientific enterprise. We have also been trained to believe that many of the chronic illnesses we see in our children (such as autism) have a thoroughly genetic, as opposed to a life-style epigenetic, basis. Indeed the
specialization that enables our best minds to achieve medical and scientific miracles when it comes to acute care turns out to be a hindrance when it comes to the prevention and treatment of chronic illness. Technological advances sometimes discourage us from examining the profound influence of what we eat, drink, think, and do, or in other words, the influence of lifestyle. The Canary Kids Project is unique because it brings together the best that modern science has to offer with the wisdom of traditional and time-honored healing practices that honor the influence of life choices using least risk, highest gain approaches in systematic and well documented ways.

How is the Canary Kids Project Organized?
We are excited to pilot an elegant model of care that supports families in their individual recovery efforts and makes it possible for our healing professionals to work more collaboratively and effectively towards a common goal. Our model relies on:

• Medical Mentors who interpret laboratory assessments, support treating physicians, and help to identify supports that should be resourced for individual families based on a real-time assessment of each family's needs. Medical mentors have clinical experience but are not full time clinicians. They participate in cutting edge science, but have a deep respect for time-honored traditions and traditional medicine approaches. They are chosen for their unusual combination of breadth and depth across a complex landscape of issues in healthcare; for their ability to tap a vast global network of clinical, research, public policy, industry and esoteric experts in chronic illness; for their demonstrated ability to collaborate across narrow therapeutic boundaries; for professionalism, seniority, and respect amongst colleagues that have earned them the right to mentor; and for their compassion.

• Community health coaches chosen for their experience and compassion, who provide intensive day-to-day support to our families as they undergo assessments, implement lifestyle changes, and develop new habits.

• Physicians with a track record of looking upstream at causes rather than downstream at symptoms, who are trained in functional laboratory assessment and systems biology and with a collaborative approach to recovery that presumes a role for therapeutic modalities which extend beyond their own scope and expertise.

• A carefully vetted pool of expert practitioners in each of our program's five geographic locations who will be called upon in a manner consistent with the individual needs of each child. Examples of skill sets to be represented in the CKP practitioner pool would include nutrition, osteopathy, biological dentistry, developmental optometry, acupuncture, chiropractic, energy medicine among other skills and competencies.

• A state of the art technological interface through the Open Medicine Institute's electronic health record and bioinformatics platform that will enable consistent and accurate data capture for each family enrolled in the project. This technology platform will enable an unprecedented level of communication and collaboration between all members of the family's designated healing team and Canary Kids mentors and experts.

I like your organizational model but who will be working directly with the children?
CKP is building our practitioner pool in each of the five geographic areas where the project takes place. Each child will have a core healing team (master mentor, health coach, clinical care provider, nutritionist and specialists as needed) from our vetted pool that the program determines may be more helpful on a case-by-case basis.

Have you identified your medical mentors?
Currently the Canary Kids Project is fortunate to be under the guidance of two experienced medical mentors, Dr. Martha Herbert and Dr. Russell Jaffe. We are currently identifying select additional medical mentors to become part of our collaborative team. The role of medical mentor is more fully explained elsewhere but requires an unusual combination of experience, skill, seniority, and sensitivity as well as an active commitment to and participation in the operation of the Canary Kids Project.

Is the Canary Kids Project truly multi-disciplinary?
Yes! Our approach is unique in that we have attracted a team of diverse experts to contribute their varied set of clinical, intellectual and scientific resources and to apply their knowledge to a group of sick children. The Canary Kids Project has attracted advisors, clinicians and scientists from the following disciplines: Neurology and neuroscience, Clinical Pathology, Chinese medicine, environmental medicine, developmental optometry, functional dentistry, biologic psychiatry, functional medicine, integrative nutrition, nutrigenomics, homeopathy, internal medicine, Ayurveda, Osteopathy, Anthroposophic medicine, pediatrics, naturopathy, molecular biology, developmental physiology, mindfulness practices, massage and bodywork, systems biology, informatics, methodology, research design and other fields.
You have said your program is multidisciplinary but what type of information will you need to know about the children in order to guide them towards recovery?
Each child will be assessed individually, in a manner that looks closely at things like family health history, family dynamics, lifestyle, and environmental inputs as well as unique biochemistry, energetic profile, physiology, genetics and heritable information. This entails evaluating the individual’s genetics, microbiome, metabolome and other integral components of systems biology as well as their past and current exposome (environmental exposures).

Okay, but what exactly are you going to do with these kids to assess them?
The Canary Kids Project will require select laboratory samples from each child to include the collection of blood, urine, and stool. The project will also require the family's participation in other select non-laboratory assessments. A non-laboratory assessment could be in the form of a questionnaire or an evaluation. It could also be in the form of a visit to one of CKP’s practitioners for something like a developmental vision assessment, an osteopathic evaluation, or an assessment for retained reflexes. Efforts will be made to use the least invasive and most manageable assessments available including biometric.

Who is going to help the families do what the program requires of them?
A holistic health coach will be available to each family and will play a key role in helping each family to comply with the program guidelines as well as to make lifestyle changes as proposed by the program. In addition, the Canary Kids Project Program Director will be in charge of the project’s master schedule and provide oversight for each family.

Once you have assessed each child, what kind of recommendations are we likely to see you make for the children enrolled in CKP?
CKP has a preference for less toxic solutions that address causes not symptoms. Today, most children with a chronic illness are given pharmaceutical medications to manage and control symptoms, but rarely do clinicians help the patient address underlying root causes of disease. The Canary Kid Project intends to use symptoms only as information, to help establish a complete understanding of underlying imbalances and what can be done to correct those imbalances. Recommendations may include, but may not be limited to: diet modifications, targeted individualized supplementation, developmental interventions, environmental modifications, and emotional, energetic and mindfulness practices. As each child responds and adapts to therapeutic interventions, they will be continuously monitored and reassessed.

Are there any new untested therapeutics that will be trialed in these children?
The Canary Kids Project does not believe that a “magic bullet” therapeutic is the key to healing and recovery. The program is not about testing therapeutics. CKP is about supporting health in ways that respect the innate healing power of the human body. We begin with oft-neglected foundational supports such as nutrition and clean environment. Then we apply an integrative and multi-disciplinary approach that honors the needs of each individual child. Our strength lies in the careful resourcing of experienced and specialized professionals at the appropriate time for each child. The aim is to offer personalized care that results in improved outcomes rather than “one-size-fits-all” medicine.

What makes your team qualified to undertake this task?
Just as the climate change crisis has resulted in an unusual level of collaboration and cooperation among scientists and experts called to action to address the crisis, the health crisis that we are currently facing requires an uncommon and unprecedented level of cooperation among medical, scientific and health experts called to serve this generation of sick children. We have amassed an impressive group of experts that are part of a “coalition of the willing,” and who believe that there is a “fierce urgency of now” to protect the health of our children. Our medical and program advisors collectively have hundreds of years of experience in understanding and reversing chronic disease and have been called to lend their advice, guidance and participation.

How are the laboratory tests that the children receive different from what they might receive at their pediatrician’s office?
To put it simply, CKP’s laboratory assessments will be functional and predictive. We believe that medical science is caught in a bind because while there is much promise about personalized medicine, we are still stuck with methodologies that treat everyone as if they were identical or statistical. It is time to take the next step and really personalize evidence-based care. We know enough today to do functionally meaningful tests and to compare them to goal values not statistical ranges that are easily over-interpreted and misunderstood.
What types of specific laboratory tests or assessments will the Canary Kids participants receive?
If you would like more detailed information about the assessments that have been carefully chosen by CKP, you may request a more detailed summary by contacting the program director, Josie Nelson. Some examples of clinical laboratory tests that the children will receive include:

- Lymphocyte response assay, a means through which food/environmental sensitivities and inflammatory burden can be assessed
- HgbA1c
- Organic Acid Tests of metabolism
- Amino Acid profile of other aspects of metabolism
- Comprehensive digestive stool analysis assessing the microbiome
- Retained reflex assessments assessing function and maturity

The program sounds great, but expensive. How can this model be made scalable and available cost-effectively?
The Canary Kids Project intends to provide 'proof-of-concept' to support this important new model of personalized and comprehensive care and hopes to inspire others to make these solutions available in a cost-effective way. As an example, some of the clinical assessments that the Canary Kids Project will be using are cost-prohibitive because they are new and have not yet achieved traditional market efficiencies. It is our hope that by paving the way forward, there will be more demand for these types of assessments creating economies and efficiencies. Additionally, as part of the Canary Kids Project, our team will be training health coaches across the country, making the model tested in our program accessible to more and more individuals over time.

Is food really that important?
Yes, we believe that it is. In the words of Dr. Herbert “I tell parents of children of special needs that your child cannot afford empty calories. They need the highest possible quality nutrients at every moment because they don’t have time or space to eat calories that don’t also support other needs. And this is something where we’ve been led to believe that doesn’t really matter, but it actually matters a whole lot. In order to maintain resilience in a toxic, stressful world we need to maintain high nutrient density and the maximum possible range of nutrients every day.”

You talk a lot about environmental stressors. Is there one toxin in particular that is affecting these kids?
We are very concerned about the emphasis on trying to find ‘the smoking gun’ for any of these chronic conditions... the one thing, that if eliminated, could return our children to a state of good health. We believe that the problem is much bigger and that we need to modify our exposure to many things that our systems are not equipped to handle. There are certain exposures that no one’s system is equipped to handle such as intense exposure to radiation or a heavy dose of petrochemicals or a large dose of heavy metals. But there are things that some of us have a harder time with than others because of our genetic or epigenetic weaknesses, or because of our inability to fortify our bodies to the point of resilience. We are especially concerned about continuous low-level exposures to multiple chemicals that deplete individuals of their essential protective nutrients and impair a body's ability to self-regulate and heal.

Why are you making a film about this program?
We believe that part of the reason why so many children are sick in this country is because we have damaging and unhealthful habits, practices, and routines that are deeply imbedded in our culture and our collective habits and assumptions. To protect our children’s health, it will require a cultural shift, a conscious effort to modify our ways of living. This is a tall order indeed. We believe that by sharing a message of hope, that children can recover from chronic conditions, and by showing how these children get better in a compelling feature-length film, others will be inspired to take responsibility for the lifestyle and health choices that they make in their own families and communities. We want to provide viewers with evidence of hope so that at they will be inspired to test these practices in their own lives.