Northern California health facilities got greener in 2010! This year, we are proud to have completed a 2-year project with the Coastal Health Alliance (CHA) to “green” three community health centers in Pt. Reyes Station, Bolinas and Stinson Beach. Teleosis helped CHA form the EverGreen Team, a dedicated group of staff including the executive director, medical director, several clinical providers, site managers, and front office staff. The EverGreen Team implemented a comprehensive recycling program, switched to Electronic Medical Records, and incorporated LEED green building guidelines during their clinic remodel.

“How does it compare to other green initiatives?” you may ask. Well, in recognition of our results, Coastal Health Alliance received the prestigious Clinic Partner for Change Award in May 2010 at the annual CleanMed Conference. CHA was one of the first clinics in the country to receive this award from Practice Greenhealth, a national membership organization consisting of over 1000 hospitals in the United States. These competitive awards are given to health care institutions for outstanding programs that reduce the facility’s environmental footprint.

And to bring green health services outside the clinic and into the community, in June 2010 Coastal Health Alliance and Teleosis partnered with the Point Reyes Farmer’s Market to promote local health services and healthy foods available in the community. We called this collaboration “Healthy People, Healthy Communities.” If you spent some time at farmer’s markets during the summer, you may have seen CHA staff offering free health screenings, safe medicine disposal collection, and a variety of information on health and nutrition.

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Children First: 
Promoting Ecological Health for the Whole Child

In October 2010, Dr. Joel Kreisberg presented his talk on “Cultivating Leadership of Ecological Sustainability” at the Children First Symposium. This gathering was hosted by The Whole Child Center, the UCSF Osher Center for Integrative Medicine, and the Collaborative on Health and the Environment, with the goal of engaging health professionals in discussions on holistic, whole-child approaches to pediatric medicine. The symposium opened critical discussions about the variety of combined factors that influence child health and development, including nutrition, education, socio-economic status, exposures to toxic chemicals, and access to preventative health care. Teleosis is proud to sponsor the work of leaders in fields of expertise such as nutrition and education, to take concrete steps toward creating sustainable environments in which children can thrive and reach their fullest potential.

Green Tree Care Initiative: 
Lee Klinger, PhD

Teleosis is proud to support the work of Dr. Lee Klinger, PhD in the Green Tree Care Initiative, where he applies “fire mimicry” methods to improve tree health and soil fertility without the use of chemical pesticides or fungicides. In 2010, the Green Tree Care Initiative estimated to have examined and treated over 400 oak trees in California and Oregon. Dr. Klinger’s extensive research is documented by over 60 published case studies. For more information visit: suddenoaklifeorg.wordpress.com.

2010 Leadership in Green Health Care Graduates

In the last three years, 80 health professionals have graduated from the Leadership In Green Health Care course. Below are the 9 graduates from 2010:

Physicians
• Neetu Ahluwalia, MD
• Aparna Boie, MD
• Vickas Dagayach, MD
• Nao Sakurai, MD
• Jennifer Zumsteg, MD

Health Professionals
• Forrest Batz, PharmD
• Aura Rose

Nurses
• Anna Parker, RN
• Jessica Livneh RN, PhD
Green Pharm Coalition Projects

The San Francisco Bay Area Green Pharmacy Coalition is now 2 years old! Teleosis continues to spear-head the Coalition with the purpose of engaging Bay Area stakeholders in discussions about pharmaceutical pollution, improper disposal of consumer’s unused pharmaceuticals, over supply and over prescribing practices, and patient safety issues. The Coalition builds working relationships with primary stakeholders involved in the delivery and disposal of pharmaceuticals and is creating local solutions that minimize accumulations of unused pharmaceuticals.

We would like to acknowledge The San Francisco Foundation for their generous support.

THE SAN FRANCISCO FOUNDATION
The Community Foundation of the Bay Area

Alameda County Medication Disposal Initiative

In January 2010, Teleosis joined the Medication Disposal Initiative Workgroup, under the leadership of Supervisor Nate Miley, Alameda County District 4, and CommPre: A Program of Horizon Services Inc. The mission of this Initiative is to implement a safe and convenient medication disposal program for the citizens of unincorporated Alameda County. Teleosis helped to recruit and train permanent medicine take-back sites at convenient locations where you can bring your unused medicines. These sites include pharmacies, a health clinic, a sheriff station, and community events. It is only a beginning, and Teleosis will continue expanding medicine disposal sites throughout Alameda County in 2011, as well as helping to plan a regional conference focused on policy change to support take-back sites.

Take-back Sites launched in 2010:
• Davis Street Family Clinic, San Leandro, CA
• Teds Drug Store, Hayward, CA
• Medical Arts Pharmacy, Hayward, CA
• Alameda County Sheriff Substation – Eden Township, San Leandro, CA
• Healthy Living Festival medicine take-back event at the Oakland Zoo

Partners & Sponsors:
Bay Area Medication Disposal Study 2009: An Inventory of Household Pharmaceutical Waste

In early 2010, Teleosis finished collecting the first comprehensive analysis of pharmaceuticals returned for incineration in the nine counties of the San Francisco Bay Area region. The 126 take-back sites that we monitored collected a total of 60,365 pounds of unused pharmaceuticals. We did not stop at inventorying the total pounds of unused pharmaceuticals collected, we also analyzed the therapeutic classes, dosage formulations, packaging waste, and the cost of disposal of the drugs returned. We found that the most common classes of medications discarded are CNS, respiratory, topical, and psychotherapeutic agents. Based on the inventoried samples, the total quantity consisted of 85% pharmacological ingredient and 15% packaging material. The total cost of disposal for pharmaceuticals was $119,000 with an average cost of $1.99 per pound. Through a close examination of the nature of these collected wastes, we can take the necessary steps to reduce them, lowering the risks and improving health for people and the environment.

Supporters: Johnson & Johnson

Pharmaceutical Mail Back Pilot for Hospice

In 2010, we launched a new program for people to safely dispose of their unused medicines—with mail-back envelopes! With the support of Sharps, Inc. and the Bay Area Pollution Prevention Group, we completed the hospice pilot program which trained 26 hospice nurses in a Sutter VNA in Concord, CA, to offer patients a medication disposal service through the use of mail-back envelopes. Over the six-month study period, 160 of the 400 distributed mailers were returned for disposal. The total weight of pharmaceuticals diverted for incineration was 107 pounds, with an average weight of 0.66 pounds per mailer. Teleosis compiled the research data from the hospice project into the report, “Managing Unused and Unwanted Pharmaceuticals in a Hospice Setting.” We look forward to sharing our findings in a future publication.

Supporters: Sharps, Inc., Take Away, Bay Area Pollution Prevention Group

Legislation Supporting Medicine Take-Back Programs

In October 2010, President Barack Obama signed the Safe Drug Disposal Act of 2010. Intended to help prevent prescription drug abuse and diversion, the bill amends the Controlled Substances Act to allow patients to return unused or unwanted prescription drugs and controlled substances to authorized persons in accordance with regulations issued by the Attorney General. The law would also allow long-term care facilities to dispose of unused drugs according to the adopted regulations. In addition, this act would require that the National Drug Control Policy director and the Environmental Protection Agency (EPA) implement a public education program. Stay tuned for more on this exciting development.
A new online program was born in 2010! In the Fall, Teleosis and Touro University Nevada created the Institute for Environmental Medicine (I4EM) under the direction of Dr. Ilene Ruhoy. I4EM is now offering GreenPharmEdu, an online continuing educational program designed to educate health professionals on why and how to reduce unused pharmaceuticals accumulating in the environment. We have decided to charge a fee only for continuing education credits—it means that if you just want to educate yourself on the topic, you are welcome to take our class free of charge.

GreenPharmEdu offers five modules of unique curricula, and continuing education credits are available for physicians, nurses, and pharmacists:

• Rationale for A Focus on Unused Pharmaceuticals
• Pharmaceutical In the Environment: An Evidence-based Review
• Minimizing Pharmaceutical Waste in Clinical Care: A Medical Perspective
• Minimizing Pharmaceutical Waste in Clinical Care: A Nursing Perspective
• Pharmaceutical Disposal: What Pharmacists need to Know

For more information visit www.GreenPharmEdu.org.

**Dr. Ilene Ruhoy, MD, PhD**

Dr. Ilene Ruhoy is an assistant professor of Basic Science at Touro University School of Medicine in Nevada and is the Director for the Institute for Environmental Medicine. She is also a research contractor with the U.S. Environmental Protection Agency in the Agency’s program to correlate ecosystem health with human disease. Dr. Ruhoy’s research focuses on the sources and implications for human exposure of pharmaceutical residues and other contaminants in the environment. She has written and lectured extensively on the ecological footprint of prescribed medications. Dr. Ruhoy received an M.D. from the University of Pittsburgh School of Medicine in 2000 and a Ph.D. in Environmental Science from the University of Nevada, Las Vegas in 2008. In addition to an internship in Family Medicine, she is a current fellow in the Program for Integrative Medicine at the University of Arizona. Her most recent clinical endeavor includes residency training in pediatric neurology at the University of Washington Seattle Children’s Hospital starting in 2010.
2010 Events and Published Articles

Events and Conference Presentations:

- **Green Medicine Webinar: Sustainability and Oral Surgery** with Dr. Stephen Koos
- **Reductions of Medications to Wastewater: New Procedures by Hospice Care Providers**, California Water Environment Association, Long Beach, CA
- **Green Medicine Webinar: Green Pediatrics** with Dr. Lawrence D. Rosen
- **Eco-Pharmacology: Minimizing Pharmaceutical Waste in Clinical Care**, CleanMed 2010 Pre-Conference Workshop with Dr. Joel Kreisberg, Ilene S. Ruhoy, MD, PhD, and Karen Bowman, MN, RN, COHN-S
- **How to Green Your Medical Practice: Saving Green by Going Green**, Santa Clara Medical Society, Palo Alto, CA
- **Healthy Living Festival**, Medicine Take-back Event and Walkathon for Seniors at the Oakland Zoo
- **HealthCare in the 21st Century**, National Youth Leadership Forum, Berkeley, CA
- **Healthy People, Healthy Communities**, Environmental Health Fair at Pt. Reyes Farmer’s Market co-sponsored by Coastal Health Alliance
- **Healing, Transformation, Integral Ecology Workshop**, with Dr. Joel Kreisberg at Integral Theory Conference, JFK University
- **Creating a Culture of Sustainability through Your Employees and Healthcare Staff**, Sustainable Healthcare & Hospital Development Conference, Los Angeles, CA
- **Cultivating Leadership for Ecological Sustainability** with Dr. Joel Kreisberg at Children First Symposium: Promoting Ecological Health for the Whole Child at University of California, San Francisco, CA
- **Rationale for a Focus on Reducing Pharmaceuticals In The Environment**, National Summit on Preventing Pharmaceutical Waste Product Stewardship Institute, Philadelphia, PA
- **Greening the Clinic: An Introduction to Green Health Care in a Primary Care Setting**, with Davi Pakter, MD at the 18th Annual Region 9 EPA Tribal Conference and RTOC Meeting, San Francisco, CA

Articles by Dr. Kreisberg:

Dr. Kreisberg continues to publish regularly in Integrative Medicines Clinicians Journal. All his articles are available at www.imjournal.com. His most current articles include:

- **Cell Phones and Electromagnetic Radiation: What We Do Not Know**, IMCJ Jun/Jul 2010
- **Energy and the Costs of Health Care**, IMCJ Oct/Nov 2010
Our Mission

Teleosis is dedicated to reducing healthcare’s footprint while broadening its ecological vision. We believe in a health care system that conserves natural resources, promotes personal wellness, and begins with precaution. At the forefront of this sustainable medical system are health providers who take an active role in greening healthcare through example, education and advocacy.

Teleosis Staff

Joel Kreisberg  
Evin Guy  
Luis Frigo  
Connie Zheng  
Olivier Compagne

Teleosis Board

Niyati Desai  
Lee Klinger  
Sam Roberts  
Wendy Buffett

2010 Financial Summary

2010 Revenues  
$253,324

2010 Expenses  
$244,083

Foundation Grants

Abbott Fund  
East Bay Community Foundation  
Inavale Foundation  
Luisa Kreisberg Family Foundation  
Marisla Foundation

Individual Donations

$500-$1,000

Lawrence Rosen  
Jeanine Saperstein

Individual Donations

under $100

Neetu Ahluwalia  
Stacey Antine  
Wendy Buffett  
Roberta Buffett-Bialek  
Niyati Desai  
Janara Iman-Thomas  
Betsy Joyce  
Lee Klinger  
Susan Melnikow  
Elise Miller  
Mary Owen  
Anna Parker  
Sam Roberts  
Ilene Ruhoy  
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Phillip Scott  
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