Dear Teleosis Supporter,

As I review our accomplishments in 2007, I continue to appreciate the importance of the work we do at Teleosis in shifting to a sustainable society. While health care continues to consume more of the earth’s resources, the demand for green health care grows as well. In 2007, I realized that the tools and skills required to shift to a more just medical system are also simpler. The desire for and ability to create change became apparent with the explosive growth of the Green Pharmacy Program this past year. Not only did we collect over 700 pounds of expired and unwanted medicines, we did it efficiently and inexpensively. Why? Because most practitioners and patients want to do the right thing, and intuitively know the consequences of pollution and unsustainable waste. Many were waiting for this healthier solution.

In 2007, we focused on cultivating leadership. Our online course, Leadership In Green Health Care, engaged health providers in taking greater initiatives for safer, improved health care. Our 2007 issue of Symbiosis Journal offered the first comprehensive journal presenting the complex issues surrounding pharmaceuticals in the environment. The Green Pharmacy Program offers a replicable model for effectively reducing the environmental impact of medicine, while engaging all parties associated with the medical waste stream.

Most importantly, we’re asking YOU to take a leadership role in minimizing pharmaceutical pollution. Participate in sustainable medicine today! Check your medicine cabinet, collect all the unused and expired medicines, and bring them to a medicine take-back site for environmentally safe disposal. Taking part in this simple but vitally important practice makes a difference in our communities and the environment.

A healthy environment and a sustainable future for ourselves and our children begins with our personal health. Focusing on wellness and prevention maximizes our health and vitality. Eating right, exercising, minimizing obvious stress, plus taking time to be present to the wonders of being alive are the foundation for wellness. This personal commitment results in feeling more fully alive and, in the process, saves money on your medical bills and generates less waste.

As we move into the changes of 2008, we can all make a difference! Join me in creating a healthy world.

Joel Kreisberg, DC
Executive Director
Green Health Care Program

2007 Program Review

Teleosis Institute’s Green Health Care program grew significantly in 2007. In response to growing interest in the emerging field of sustainable medicine, Teleosis developed an 8-week online course, Leadership In Green Health Care. This groundbreaking program introduces participants to best practices for initiating sustainable medicine—from greening their offices, to offering affordable and renewable medical treatments, and promoting community and environmental health.

Teleosis is honored to serve as the foundation for the Green Health Care movement, by working to recognize the link between the environment, medicine and human health and seeking to provide better health care while protecting our limited environmental and medical resources.

Accomplishments in 2007

• Developed online course, Leadership In Green Health Care
• Graduated nine Green Health Care providers
• Created alumni forum for graduates to share experiences related to Green Health Care
• Partnered with Team and A Dream to initiate a Green Health Care marketing plan
• Collaborated with Lifelong Over 60 Health Center – Berkeley to promote Sustainable Medicine
• Expanded curriculum from four to eight modules. The curriculum now includes:
  – Leadership and Green Health Care
  – Integral Theory and Medicine
  – Ecological Literacy
  – Sustainability
  – Creating Sustainable Medicine
  – Precautionary Principle and Wellness
  – Biological Systems and Stressors
  – Green Pharmacy

Green Health Care graduates include physicians, nurses, naturopaths, dentists, and health educators from places as close as California and as far as Nepal.
Teleosis Collaborates with Lifelong Community Clinic

In July 2007, Teleosis was awarded a grant from the Community Clinics Initiative to promote green strategies for community health at Lifelong Over 60 Health Center, which provides high-quality health and social services to underserved seniors in South Berkeley, California. Teleosis is bringing the principles of Green Health Care to local community clinics in a live format, with our tailored education program and sustainable business consulting.

Teleosis is supporting Lifelong in the certification process for the Bay Area Green Business Program by integrating the results from the Green Workplace Audit. Dr. Joel Kreisberg is providing education for health providers and administrators about various aspects of Sustainable Medicine, including pharmaceutical waste management, environmentally preferable purchasing, and strategies for identifying local environmental health issues.

Articles Published on Green Health Care in 2007

- **Green Medicine: An Integral Approach That Benefits Physicians, Patients, Communities, and the Environment**
  by Joel Kreisberg, DC, Integrative Medicine Clinicians Journal, Dec 2007

- **Green Healthcare In America: Just What Are We Doing?**
  by Joel Kreisberg, DC, Explore Journal, September 2007

- **Green Dentistry: West Coast Dentist Opens San Francisco’s First Green Dental Practice**
  by Daniel Casciato, Green Business Quarterly, Fall 2007

- **Beyond the Patient: Prescriptions for an Ailing Society**
  by Lee Thirer, Orion Magazine, March 2007

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**2007 Green Health Care Graduates**

**Educators**
- Krishna Kaphle, PhD
  Chitwan, Nepal
- Kristen Park
  Tom’s River, NJ

**Naturopaths**
- Michael Lipelt, ND, DDS, L.Ac
  Sebastopol, CA

**Nurse Practitioners**
- Antonia Marthaller Andersen, ARNP
  Freeland, WA

**Physicians**
- Jean Eckerly, MD
  Edina, MN
- Luke Fortney, MD
  Madison, WI
- Pamela Pappas, MD
  Scottsdale, AZ
- Rian Podein, MD
  Madison, WI
- Patrick Yeakey, MD
  Phoenix, OR
The Future of the Green Health Care Program

2008 Goals

• Develop an introductory course, Impacts of Health Care on the Environment, for Category 1 Continuing Medical Education (CME) credits
• Offer 4 online leadership training courses and include multimedia communication services
• Recognize 100 new leaders in Sustainable Medicine
• Implement a scholarship fund for Leadership In Green Health Care
• Expand Green Clinic Educational Programs thru Community Clinics Initiative
• Develop consulting services for Green Health Care to include sustainable medicine education, workplace assessment, and green pharmacy program implementation
• Expand outreach efforts to health care training institutions and publications

2008 Partnerships

In 2008, Teleosis will partner with Columbus State Community College and American Medical College of Homeopathy to offer Leadership In Green Health Care to their students. We are partnering with American Medical Students Association (AMSA) to provide leadership training as part of their annual conference in Houston, Texas. In addition, we are working to develop partnerships with environmental justice and public health organizations. Our goals to promote sustainability encourage partnerships with educational organizations to increase the reach of Green Health Care.

Our Dedication to Sustainability

Teleosis Institute is committed to green business practices. We purchase recycled office supplies from a local green business and we recycle over 70% of all our waste including:

• Mixed Paper
• Plastic & glass
• Yard debris & food waste
• Ink cartridges
• Packing supplies
• Batteries
• Electronics

Teleosis Institute is certified by:
Symbiosis:
The Journal of Ecologically Sustainable Medicine

2007 Program Review

In 2007, Teleosis published Green Pharmacy: Pharmaceutical Pollution Prevention, issue 4.2 of Symbiosis: The Journal of Ecologically Medicine. This 54-page issue marked our introduction into the field of Pharmaceuticals and Personal Care Products in the Environment. We investigated the mechanisms for pharmaceutical pollution, highlighted the work of Senior EPA Scientist, Christian Daughton, PhD, and provided the vision and purpose of our Green Pharmacy Campaign to reduce pharmaceutical waste.

Feature articles from the Green Pharmacy Issue (Vol. 4, No.1):

• Pharmaceutical Pollution: Ecology and Toxicology Considerations
• Christian Daughton and the Ecology of PPCPs: An Integral Vision
• The 4 T’s: Assessing Exposure to Multiple Chemicals
• Green Pharmacy: Preventing Pollution with Sustainable Medicine
• Ecological Economics and the Drug Life Cycle: The True Cost of Drugs

The Future of Symbiosis: 2008 Goals

• Publish 4 online articles on the theme of Environmental Justice
• Publish compilation issue at the end of 2008

Environmental Health Brochures

In 2007, Teleosis published and distributed three new brochures:

• Drugs in Our Water — English and Multilingual
• Green Pharmacy Program brochure
• Leadership in Green Health Care Overview
Green Pharmacy Program
Helping Communities Safely Dispose of Unused Medicines

2007 Program Review

In May 2007, Teleosis Institute developed the Green Pharmacy Program and Pollution Prevention Campaign in response to the 2002 USGS study showing over 80% of waterways tested in the U.S. contain traces of common medications such as acetaminophen, hormones, blood pressure medicine, codeine, and antibiotics. The campaign began with the launching of the Green Pharmacy Program, a pilot program in Northern California offering free and safe disposal of unwanted medications for consumers. This program is the first of its kind to incorporate models of product stewardship and personal health, both of which are essential to sustainable pharmaceutical waste management.

Understanding Why Medicines Go Unused

The Green Pharmacy Program is unique in that all returned medicines are documented through the Unused & Expired Medicine Registry, a program developed by the Community Medical Foundation for Patient Safety. Collecting data on unused medicine allows for identification of pharmaceuticals that are most often unused or over-prescribed. This statistically significant documentation will facilitate pharmaceutical researchers, manufacturers and governmental organizations in developing true product stewardship programs such as our Green Pharmacy Program by understanding the details and enormity of the waste involved with pharmaceutical medicines.

Product Stewardship:
A Model of Sustainable Medicine

The Green Pharmacy Program implements a product stewardship model in which all the participants in the product lifecycle—manufacturers, retailers, consumers, and disposers—share the responsibility for reducing the environmental impacts of pharmaceuticals.

The development of a medicine take-back program is simply the first step in a comprehensive approach to sustainable medicine. Our ultimate goal is sustainable medicine through sustaining self. A focus on preventative health reduces overall reliance on pharmaceuticals, and therefore minimizes total pharmaceutical waste. We believe personal wellness strategies are the most environmentally positive method of health care. Teleosis provides education for consumers and health professionals informing all about the risks associated with improper disposal of medications, as well as strategies for improving overall health.
Green Pharmacy Program Goals

The purpose of Green Pharmacy pilot program is to:

• Reduce pharmaceutical pollution
• Provide environmentally safe disposal solutions for unwanted/expired medicines
• Assess the quantity and value of household pharmaceutical waste in the Bay Area
• Gain an understanding of types of medicines most commonly left unused and why
• Engage all sectors involved in the production, distribution, sales and consumption of medicines in environmentally preferable practices
• Develop the tools and educational material required to reproduce the program nationwide
• Enhance participants’ understanding of the value of supporting the health of our environment
• Foster a model health that uses personal wellness strategies in minimizing pharmaceutical waste

2007 Program Accomplishments

• Established 12 medicine take-back sites and sponsored 4 single-day take-back events in the San Francisco Bay Area.
• Collected 750 pounds of unused and expired medications
• Raised over $23,000
• Developed Green Pharmacy Program Website www.teleosis.org/greenpharmacy
• Supported passage of CA Senate Bill 966 Reducing Pharmaceuticals in Waste Stream in October, 2007
• Developed Green Pharmacy Advisory Board

Advisory Board

• Forrest Batz, PharmD - University of California, San Francisco
• Athena Honore - Save The Bay, Oakland, CA
• Calista Hunter, MD - Supervising Physician, Green Pharmacy Program
• Jen Jackson - Wastewater Department at the East Bay Municipal Utility District, Oakland, CA.
• Robert Turner - Environmental Health Specialist, Marin County Environmental Health Services Department
• Rick Vasquez - Owner of Integrated Waste Control, Inc., Hayward, CA

Endorsements

• Mayor Tom Bates, City of Berkeley
• Berkeley Zero Waste Commission
• Northern California Recycling Association
Green Pharmacy Pollution Prevention Campaign

In 2007, Teleosis ran a fundraising campaign to support the Green Pharmacy Program. We successfully raised $23,800! We would like to thank Board Member George Brandt and his wife, Maureen Blanc, for graciously hosting our fall fundraiser event, which raised over $12,000! With this financial support we will open several new locations, develop supporting educational materials, and host additional take-back events in the Bay Area.

Published Articles and Educational Materials

- **Responsibly Recycling Drugs**

- **Green Pharmacy: Pharmaceutical Pollution Prevention**
  Issue 4.2 of Symbiosis: The Journal of Ecologically Sustainable Medicine

- **Medication: It’s in the Water**

- **Greener Pharmacy: Proper Medicine Disposal Protects Environment**

- **Group Looks to Change How Patients Dispose of Medicines**

- **Drugs In Our Water**
  An educational brochure for consumers and health professionals (available in Mandarin and Spanish)

- **Green Pharmacy Program**
  A brochure with take-back locations and safe disposal procedure

Top Therapeutic Agents Returned*

- Psychotherapeutic agents 26%
- CNS (central nervous system) agents 14%
- Topical agents 9%
- Gastrointestinal agents 8%
- Anti-infectives 6%
- Nutritional products 6%
- Respiratory agents 5%
- Cardiovascular agents 5%
- Drug unknown 5%
- Miscellaneous agents 4%
- Alternative medicines 4%
- Immunologic agents 3%

*Data based on frequency of return (not quantity).

Top Drugs Returned Listed by Brand Name*

- Abilify
- Aricept
- Econazole Nitrate
- Effexor Xr
- Geodon
- Ibuprofen
- Luvox
- Serzone
- Serzone
- Tylenol
- Zoloft

*Data based on frequency of return (not quantity).

Preliminary Results of 2007 Green Pharmacy Program

- Total samples of unused and expired medicines collected: 690 pounds

- Total Wholesale Value of collected medicines:
  **$112,658.01** (US)
  (Average wholesale value is 30-60% less than retail value)

- Percentage of Prescriptions Unused: 46.93%

- Percentage of controlled substances turned away*: 1.71%

*Controlled substances are not accepted by take-back programs

Top 3 places of origin: Doctor’s office Hospital or Clinic Pharmacy

Top 3 reasons for return:

- Expired/outdated
- Patient did not want to take it
- Patient died/moved away

*Data based on frequency of return (not quantity).
The Future of the
Green Pharmacy Program

2008 Goals

Expanded Green Pharmacy Program

In 2008, Teleosis Institute’s Green Pharmacy Program will expand to:
• Operate 20 take-back sites throughout Northern California
• Collect 2,000 pounds of pharmaceutical waste
• Host 5 take-back events to promote environmentally safe medicine disposal
• Participate in 5 conferences emphasizing the importance of product stewardship and healthy living
• Expand collection to include sharps and mercury thermometers
• Publish Final Pilot Program Report
• Develop Green Pharmacy Toolkit for program replication nationwide

Increase Program Sponsorship

With the passage of SB 966 (Simitian) bill in California in October of 2007, Teleosis Institute will participate in the process of developing and monitoring pilot programs throughout the state of California. We expect our Green Pharmacy Program to become a model for other programs throughout the state.

In 2008, Teleosis Institute will continue to work with corporate sponsorships for the Green Pharmacy Program. By increasing participation across the product lifecycle of pharmaceutical medicines, we will achieve a unified approach to pharmaceutical pollution in the environment.
2007 Events Summary

Board Member, Dr. Calista Hunter, MD and Dr. Joel Kreisberg, DC presented two seminars for Continuing Medical Education credits:

- **Sustainable Health Care** – John Muir Medical Center
  - February, Walnut Creek campus
  - March, Concord campus

Dr. Joel Kreisberg gave the following presentations:

- **Environmental Burden and Pharmaceutical Pollution**
- **Green Pharmacy Program**
  - Sonoma Symposium on Safe Medicine Disposal, Sonoma, CA, November, 2007
- **Green Your Medical Office: Steps you can use today!**
  - California Naturopathic Doctors Association Conference, San Diego, CA, October, 2007
- **Sustainable Health Care**
  - Sustainable Enterprise Conference, Sonoma, CA, May, 2007
- **Greening Your Health**
  - Joan Kenley Radio Show, Berkeley, CA, March 2007
- **Integrating Environment Health: Three Approaches to Promoting an Environmental Medicine**

Teleosis Co-Sponsored Events:

- **Alameda County Green Business 10th Anniversary Event**
- **2nd Annual Berkeley Sustainability Summit**
- **Green It Yourself Toxic Awareness Campaign**
- **Richmond Community Health Festival at Kaiser**

Teleosis Recognized as Community Leader at:

- **4th Annual UC Berkeley Sustainability Summit - CACS Awards Ceremony**
- **City of Berkeley 4th Annual Green Gathering**

Upcoming Events In 2008:

- **American Medical Student Association: Health Care (R)evolution**, March 12-16
- **Pangea Conference for Integrative Pediatric Wellness**, November 14-15
# 2007 Board, Staff, Interns & Volunteers

## Board of Directors
- George Brandt
- Wendy Buffet, MD
- Sean Esbjörn-Hargens, PhD
- Calista Hunter, MD
- Joel Kreisberg, DC, MA

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- Daniel Callahan, PhD
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- Gil Friend, MS
- Constance Grauds, RPh
- Ben Kligler, MD
- Lee Klinger, PhD
- Tara Levy, ND
- David Orr, PhD
- Tim Owens, RS Hom (NA)
- Carolyn Raffensperger, JD
- Beverly Rubik, PhD
- Paul Sneed, PhD
- Mitch Thomashow, EdD
- Michael Zimmerman, PhD

## Green Pharmacy Advisory Board
- Forrest Batz, PharmD
- Athena Honore
- Calista Hunter, MD
- Jennifer Jackson
- Robert Turner
- Rick Vasquez

## Staff
- Joel Kreisberg, DC, MA
- Niyati Desai, MA
- Luigi Frigo
- Kerry Beuthin, CFRE
- Julie Mitrani
- Evin Guy
- James Dong

## Interns & Volunteers
- Morola Adjibodou
- Melanie Bielefeld
- Ine Collins
- Roya Daizadeh
- Nabeel Fawell
- Caroline Hartridge-Beam
- Colleen Massey
- Sal Nassar
- Elsa Ng
- Guorui Su
- Dan Wu
- Heather Ybaben

## Special thanks to:
- Betsy Joyce, Graphic Designer
- Rob McClintic, Marketing Coordinator
- Suni Nelson, Corporate Fundraiser
- Team and A Dream, Marketing Consultant
**Founders Circle**
Louisa Kreisberg
Barret G. Kreisberg Marital Trust

**Foundations**
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Columbus State Community College
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Integrated Waste Control, L.L.C
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2007 Financial Report
Our Mission
The Teleosis Institute is devoted to developing effective, sustainable health care provided by professionals who serve as environmental health stewards.

Our Vision
Teleosis is dedicated to reducing health care’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 health care through example, education and advocacy.

The Teleosis Institute is a 501 c (3) non-profit organization, serving:
• Health care professionals who witness the impact of environmental and lifestyle decisions on their patients’ health and want to address environmental- and lifestyle-related illnesses in their practices, and
• Health care professionals who seek to introduce health care concerns into environmental issues locally, nationally or globally.

Our Goals
The Institute has three specific goals directed toward promoting high quality, cost-effective, sustainable medical services benefiting underserved populations and the environment in which we live:
• Provide Education in the principles and practices of green health care
• Provide a Forum for continued learning, discussion and collaboration on green health care practices and strategies for change
• Provide Tools for implementing green health care practices
Together We Can Create A Sustainable Future

In 2008, we hope you continue to be a part of the movement for Green Health Care. We ask for your financial support in promoting a vision of sustainable medicine that advocates for environmental stewardship in the health care community. Your past support and encouragement are greatly appreciated.

Please consider:

✓ Giving generously in support of the growth of our new programs and services
✓ Sharing the Teleosis vision of Green Health Care with your community
✓ Participating in safe medicine disposal through the Green Pharmacy take-back program and events
✓ Forwarding our materials (e-newsletters, journal or brochures) to family and friends
✓ Participating in the Leadership in Green Health Care course on sustainable medicine or encouraging your health care provider to do so
✓ Encouraging friends and colleagues to become members of Teleosis
✓ Sharing with us your thoughts and feedback about our programs and services. How can we continue to improve and better serve you and the local environment?

The Teleosis Institute is a 501(c)3 tax exempt organization, IRS Section 170(b)(2)(iii) for both federal and state tax purposes. All contributions are tax deductible. Our federal tax identification number is 94-3400328.

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