



Joint Degree Program in Law, Health & the Life Sciences*

Consortium on Law and Values in Health, Environment & the Life Sciences*

UNIVERSITY OF MINNESOTA

Annual Report
2006–2007



Highlights from 2006–2007

- NIH-funded grant “Managing Incidental Findings in Human Subject Research: From Imaging to Genomics”
- NSF-funded grant to develop oversight models for nanobiotechnology
- Greenwall Foundation grant (with the Mayo Clinic and the Center for Bioethics) to host the 2007 Oscar M. Ruebhausen Visiting Professor
- Publication of articles and symposia in *BioWorld Perspectives*, *Temple Journal of Science, Technology & Environmental Law*, the *Hastings Center Report*, *Minnesota Journal of Law, Science & Technology*, and the *Journal of Law, Medicine & Ethics*
- Law School ranked top-10 in Healthcare Law by *U.S. News & World Report*
- 7 new JDP enrollees for a total of 36 students
- Susan Wolf appointed McKnight Presidential Professor of Law, Medicine & Public Policy
- Deinard Memorial Lecture on neuroscience
- Lecture Series on nutrigenomics, nutraceuticals, and direct-to-consumer marketing
- Lunch Series on science and politics
- Annual Conference on creating stem cells by research cloning
- Jordan Paradise named *MLST* Faculty Editor-in-Chief
- *MLST* ranked #1 in submissions for Environmental Law for 2006 by *ExpressO* (the online submission service of the Berkeley Electronic Press) and #1 in submissions for Science & Technology Law for 2007
- 11 Consortium intramural grants awarded
- First Consortium Visiting Professor: Thomas L. Greaney, JD (St. Louis University)
- Carol Rachac appointed Associate Program Director

2006–2007 Events

The University of Minnesota's Consortium on Law and Values in Health, Environment & the Life Sciences and the Joint Degree Program in Law, Health & the Life Sciences sponsor numerous events each year to create a community of interdisciplinary thinkers on law and science. We welcome students, faculty, legislators, policymakers, attorneys, researchers, healthcare professionals, community members and others interested in attending. For video of past events, visit www.lifesci.consortium.umn.edu.

Tuesday, September 19, 2006

Lunch Series on the Societal Implications of the Life Sciences

“Science and Politics: Problems and Solutions”
PROF. KURT GOTTFRIED, PHD
(Cornell University and Union of Concerned Scientists)

Wednesday, October 4, 2006

Lecture Series on Law, Health & the Life Sciences

“Nutraceuticals: Dietary Supplements, Botanical Drugs, and Natural Products—Science, Safety & Efficacy”
MARK BLUMENTHAL
(Founder & Executive Director, American Botanical Council)

Commentators: Prof. Theodore Labuza, Prof. Bonnie LeRoy (University of Minnesota)

Tuesday, October 31, 2006

Visiting Consortium Professorship

“Medicare ‘Modernization:’ Nation Building or Insurgency?”
PROF. THOMAS L. GREANEY, JD
(St. Louis University)

Commentators: Prof. Steven Miles, Prof. Lynn Blewett (University of Minnesota)

Tuesday, November 14, 2006

Lunch Series on the Societal Implications of the Life Sciences

“Science and Politics in Environmental Policymaking: Can This Marriage Be Saved?”
PROF. HOLLY D. DOREMUS, JD, PHD
(University of California, Davis)

Thursday, January 25, 2007

Lunch Series on the Societal Implications of the Life Sciences

“Dual Use & National Security”
PROF. DAVID RELMAN, MD
(Stanford University)

Thursday, February 1, 2007

Deinard Memorial Lecture on Law & Medicine

“New Neuroscience, Old Legal Problems: The Case of Juvenile Responsibility”
PROF. STEPHEN J. MORSE, JD, PHD
(University of Pennsylvania)

Commentators: Prof. Monica Luciana, Prof. Barry Feld (University of Minnesota)

Wednesday, February 7, 2007

Lecture Series on Law, Health & the Life Sciences

“Genomic Nutritional Profiling – the Ethics of Nutrigenomics”
PROF. DAVID CASTLE, PHD
(University of Ottawa)

Commentators: Dean Allen Levine (University of Minnesota), Kristin Oehlke (Minnesota Department of Health)

Monday, February 26, 2007

Annual Conference

“Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal & Policy Challenges”

Wednesday, March 7, 2007

Lecture Series on Law, Health & the Life Sciences

“Nutrigenomics: Science, Regulation, and Policy”
PROF. JOSE M. ORDOVAS, PHD
(Tufts University)

Commentators: Vice President and Dean Charles Muscoplat, Prof. Jeffrey Kahn (University of Minnesota)

Thursday, April 12, 2007

Lunch Series on the Societal Implications of the Life Sciences

“Science and Politics: FDA Perspectives”
SCOTT GOTTLIEB, MD
(formerly of the U.S. Food and Drug Administration)

Tuesday, May 1, 2007

Annual Symposium

“Managing Incidental Findings in Human Subjects Research: From Imaging to Genomics”

Annual Report 2006 – 2007

Joint Degree Program in Law, Health & the Life Sciences
Consortium on Law and Values in Health, Environment & the Life Sciences

Table of Contents

- 2 Letter from the Director and Chair
- 3 Update on the Consortium and Joint Degree Program

Joint Degree Program in Law, Health & the Life Sciences

- 5 Students, Recruitment & Scholarships
- 6 Student Honors & Achievements
- 8 Graduates
- 9 Joint Degree Program Proseminar
- 10 Joint Degree Program Faculty & Governing Committee
- 16 Joint Degree Program Advisory Board
- 20 Concentration in Health Law & Bioethics
- 21 Deinard Memorial Lecture Series on Law & Medicine

Consortium on Law and Values in Health, Environment & the Life Sciences

- 22 Consortium Members
- 24 Presidential Interdisciplinary Initiative on Law and Values
- 25 Minnesota Journal of Law, Science & Technology
- 27 Visiting Consortium Professor
- 27 Consortium Requests for Proposals (RFPs)
- 29 Grants and Research

Co-sponsored Activities

- 31 Executive Committee
- 32 Lecture Series on Law, Health & the Life Sciences
- 33 Lunch Series on the Societal Implications of the Life Sciences
- 34 Annual Conference
- 35 Annual Symposium
- 36 Publications
- 38 Websites and Technology

Shared Staff & Support

- 39 Staff
- 40 Support & Acknowledgements



*Audience members at the May 1, 2007
symposium on "Managing Incidental
Findings in Human Subjects Research."*



*Prof. Stephen J. Morse, JD, PhD,
University of Pennsylvania, delivers
the 2006-07 Deinard Memorial
Lecture on Law & Medicine.*



*Prof. Vivek Kapur, PhD, Microbiology,
Division of Microbial and Plant
Genomics, moderates a Lecture
Series presentation by Prof. David
Castle, PhD, University of Ottawa,
on "Genomic and Nutritional Profiling:
The Ethics of Nutrigenomics."*

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*Consortium on Law and Values in Health, Environment
& the Life Sciences and Joint Degree Program in Law,
Health & the Life Sciences, University of Minnesota.*

Photography by Tim Rummelhoff, Tony Nelson, and Mike Habermann.



Letter from the Director and Chair



Prof. Susan M. Wolf, JD
McKnight Presidential Professor of
Law, Medicine & Public Policy
Faegre & Benson Professor of Law,
Professor of Medicine
Director, Joint Degree Program in
Law, Health & the Life Sciences
Chair, Consortium on Law and
Values in Health, Environment &
the Life Sciences

Dear Colleagues:

The **Consortium on Law and Values in Health, Environment & the Life Sciences and the Joint Degree Program in Law, Health & the Life Sciences** had a tremendously successful year in 2006-07. Our first proposal to the National Science Foundation (NSF) was funded; we began work on "Evaluating Oversight Models for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Societal Context" in September 2006. Our grant project funded by the National Institutes of Health (NIH) on "Managing Incidental Findings in Human Subjects Research" resulted in a May 1, 2007 symposium that will be published in the *Journal of Law, Medicine & Ethics (JLME)* in 2008. We feel gratified that our work is now funded by both NIH and NSF. We joined with the Center for Bioethics and the Mayo College of Medicine and successfully sought funding from The Greenwall Foundation to host Prof. Zach Hall (founder and former director of the California Institute on Regenerative Medicine (CIRM)) for the 2007 Oscar M. Ruebhausen Visiting Professorship in Bioethics in October, 2007. Generous gifts from Prof. Amos S. Deinard, Jr. and Miriam Kelen, as well as the law firm of Leonard, Street and Deinard allowed us to offer the Deinard Memorial Lecture again in 2006-07 and will allow us to offer the lecture annually in the future. We awarded 11 intramural grants totaling over \$120,000 for work on the implications of the life sciences. We are pleased that the **Consortium** remains a **Presidential Interdisciplinary Academic Initiative** and delighted that Senior Vice President and Provost E. Thomas Sullivan is now leading this Presidential Initiative.

Funding from the Presidential Initiative has been critical in growing our programs and has allowed the continued success of the **Minnesota Journal of Law, Science & Technology (MJLST)**, a unique multidisciplinary journal edited by University of Minnesota faculty and Law students. Jordan Paradise, JD was appointed Faculty Editor-in-Chief for *MJLST* in 2007. *MJLST* was ranked #1 in submissions for 2006 Environmental Law journals by ExpressO, the online submission service of the Berkeley Electronic Press, and #1 in submissions for 2007 for Science and Technology Law journals.


The **Joint Degree Program** enjoyed great success in 2006-07. *U.S. News & World Report* ranked the University of Minnesota Law School in the top 10 health law programs in the nation. We welcomed 7 new students in Fall 2007 for a total of 36 and saw 2 students graduate in 2006-07. Applications to the Joint Degree Program in 2006-07 were again of exceptional quality. We worked closely with the Law School to continue to offer a Concentration in Health Law & Bioethics for JD students. Our unique program trains talented students who want to lead on cutting-edge issues in law, medicine, and science. Additionally, we welcomed 3 new members to our Joint Degree Program Advisory Board: Vanessa Laird, JD (Medtronic, Inc.), Martin Stillman, JD, MD (Hennepin County Medical Center/University of Minnesota), and Judith Walker, JD (Blue Cross Blue Shield of Minnesota). 2007 saw the addition of new staff members, including Carol Rachac, Associate Program Director, and Julie Johnson, Program Assistant.

Our programming continued with exceptional results. In 2006-07 we offered 11 events including the inaugural **Visiting Consortium Professorship**, and were pleased to host 2 conferences, bringing to campus eminent scholars and national leaders. Speakers in our Lecture Series on Law, Health & the Life Sciences focused on the implications of nutraceuticals, nutrigenomics, and direct-to-consumer marketing. Our Lunch Series on the Societal Implications of the Life Sciences tackled issues in science and politics. We offered a national conference on "Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal, and Policy Challenges. Our annual symposium was a full-day event on "Managing Incidental Findings in Human Subject Research." With the Center for Bioethics, we continued the highly successful Deinard Memorial Lecture Series on Law & Medicine.

In 2007-08 we are presenting 7 events: 3 presentations in the Lecture Series on "Emerging Debates on Oversight and Policy in Biomedicine & the Life Sciences;" Prof. Zach Hall as the Oscar M. Ruebhausen Visiting Professor in Bioethics in conjunction with the Center for Bioethics and the Mayo Clinic; a conference on "Emerging Problems in Neurogenomics: Ethical & Policy Issues at the Intersection of Genomics & Neuroscience;" Prof. George Annas as this year's lecturer for the Deinard Memorial Lecture on Law & Medicine, jointly sponsored by the Center for Bioethics; and we will also welcome Prof. Stephen W. Pacala (Princeton University), as the 2007-08 Consortium Visiting Professor.

The Consortium and Joint Degree Program are now clearly recognized as leading national programs. We are gratified to be tackling what remain the most challenging issues of our time, those issues at the intersection of law, ethics, policy, and the life sciences.

All the best,


Susan M. Wolf



Update on the Consortium and Joint Degree Program

Update on the Consortium on Law and Values

In 2006-07 the Consortium on Law and Values in Health, Environment & the Life Sciences continued work on the NIH-funded project, **"Managing Incidental Findings in Human Subjects Research"** which will result in a major symposium in the *Journal of Law, Medicine & Ethics* in 2008. We also completed the first year of work on our 4-year project funded by a National Science Foundation (NSF) grant, **"NIRT: Evaluating Oversight Models for Active Nanostructures and Nanosystems: Learning from Past Technologies in Societal Context."** Thanks to a grant from The Greenwall Foundation, we hosted the 2007 Oscar M. Ruebhausen Visiting Professor, with the Center for Bioethics and the Mayo Clinic. Through our Request for Proposals (RFP) process, the Consortium awarded 3 faculty grants, 4 student grants, 1 grant to centers, and 3 grants to Consortium members and JDP partner programs. The Consortium thus awarded a total of \$122,641 in intramural funding for 2006-07. The Joint Degree Program and Consortium together sponsored 11 events: 4 lectures in the **Lunch Series on the Societal Implication of the Life Sciences** focusing on controversies in regulation and national security; 3 lectures in the **Lecture Series on Law, Health & the Life Sciences** focusing on nutrigenomics, nutraceuticals, and direct-to-consumer marketing of genomic nutritional profiling; the **Deinard Memorial Lecture on Law & Medicine**; a national conference on **"Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal & Policy Challenges;"** a symposium on **"Managing Incidental Findings in Human Subjects Research: From Imaging to Genomics;"** and lectures by the first Visiting Consortium Professor, Prof. Thomas L. Greaney of St. Louis University. The Consortium also oversaw the publication of volume 8 of the *Minnesota Journal of Law, Science & Technology*.

The Consortium and Joint Degree Program now cross all colleges at the University of Minnesota. The Consortium coordinates among and builds on the strengths of 18 University centers and programs, establishing a national identity for the University of Minnesota as a leading institution working on law and values in health, environment, and the life sciences. The Consortium brings these programs together to address those interdisciplinary questions that are difficult for any one program to tackle alone. The 18 constituent programs are:

- **Joint Degree Program in Law, Health & the Life Sciences** led by Profs. Susan Wolf (law, medicine, bioethics) and Colin Campbell (pharmacology);
- **Center for Bioethics** led by Prof. Jeffrey Kahn (medicine, philosophy, public health);
- **Biomedical Genomics Center** led by Prof. Vivek Kapur (veterinary pathobiology, microbiology);
- **Microbial and Plant Genomics Institute** led by Profs. Neil Olszewski (plant biology) and Michael Sadowsky (soil, water and climate);
- **Stem Cell Institute** led by Prof. Jonathan Slack (genetics, cell biology & development) and is also represented by Prof. Dan Kaufman (medicine);
- **Institute of Human Genetics** led by Profs. Harry Orr (laboratory medicine, pathology) and Bonnie LeRoy (genetic counseling);
- **Center for Infectious Disease Research & Policy** led by Prof. Michael Osterholm (epidemiology) and Jill DeBoer (Academic Health Center);
- **Center for Animal Health & Food Safety** led by Prof. William Hueston (epidemiology, clinical and population sciences) and Shaun Kennedy (veterinary medicine);
- **National Center for Food Protection and Defense** led by Profs. Francis Busta (food science and nutrition, food microbiology), Michael Osterholm (epidemiology), and Shaun Kennedy (veterinary medicine);
- **Center for Neurobehavioral Development** led by Prof. Michael Georgieff (pediatrics, child psychology);
- **Center for Environment and Health Policy** led by Prof. William Toscano (environmental health);
- **Center for Plants and Human Health** led by Prof. Gary Gardner (horticultural science);
- **Program in Agricultural, Food, and Environmental Ethics** led by Prof. Dan Philippon (rhetoric);
- **Institute on the Environment** led by Interim Director Prof. Deborah Swackhamer (environmental health);



Prof. Deborah Swackhamer, PhD, Interim Director, Institute on the Environment, moderating the Lunch Series presentation by Professor Kurt Gottfried, PhD on "Science and Politics: Problems and Solutions."



- **Center for Science, Technology, and Public Policy** led by Senior Fellow Steve Kelley (Humphrey Institute);
- **International Science and Technology Practice and Policy Center** led by Prof. Philip Pardey (applied economics);
- **Water Resources Center** led by Profs. James L. Anderson (soil, water, and climate) and Deborah Swackhamer (environmental health); and
- **Center for Spirituality and Healing** led by Prof. Mary Jo Kreitzer (nursing).



Panelists Prof. Dan Kaufman, MD, PhD; Katherine Ku, MS; Brock Reeve, MPhil, MBA; and Steven Teitlebaum, MD at the conference on "Creating Stem Cells by Research Cloning."

Update on the Joint Degree Program

In Fall 2007, the Joint Degree Program welcomed 7 new students for a total of 36 and graduated 2 students. We added 3 Advisory Board members: **Vanessa Laird, JD**, Vice President and Senior Counsel for Medtronic's Cardiac Rhythm Disease Management; **Martin Stillman, JD, MD**, Professor, University of Minnesota Medical School, and practicing physician, Hennepin County Medical Center; and **Judith Walker, JD**, Vice President of Regulatory Affairs and Chief Compliance and Ethics Officer, Blue Cross and Blue Shield of Minnesota. We continued the **Deinard Memorial Lecture Series on Law & Medicine** with the Center for Bioethics. *U.S. News & World Report* ranked the University of Minnesota Law School in the top 10 in its national survey of health law programs. We continued to offer a new Concentration in Health Law & Bioethics for JD students.

The Joint Degree Program remains unique in the nation and enables students to combine a JD with a PhD, MS, MPH, or MD in less time, with more academic support, and with potentially more financial support than if the students were to pursue the 2 degrees separately. Students who show good cause may also create an *ad hoc* joint degree with a Graduate School program relating to health, environment, or the life sciences that is not formally part of the Joint Degree Program.

The *ad hoc* option is increasingly attractive to applicants. Students pursuing Graduate School degrees have the option of completing graduate minors in Bioethics, Bioinformatics or Human Genetics. The Joint Degree Program spans 8 collegiate units plus the Center for Bioethics and involves more than 400 faculty members. We partner with 13 graduate and professional programs on campus and offer the following degree combinations:

- a JD with an MS or PhD in **Molecular, Cellular, Developmental Biology & Genetics (MCDB&G)**
- a JD with an MS or PhD in **Pharmacology**
- a JD with an MS in **Science, Technology & Environmental Policy**
- a JD with an MD in **Medicine**
- a JD with an MS or PhD in **Health Services Research, Policy & Administration**
- a JD with an MPH in **Public Health Administration & Policy**
- a JD with an MPH in **Epidemiology**
- a JD with an MPH in **Maternal and Child Health**
- a JD with an MPH in **Community Health Education**
- a JD with an MS or PhD in **Ecology, Evolution, and Behavior**
- a JD with an MS or PhD in **Conservation Biology**
- a JD with an MS, PhD, or MPH in **Environmental Health**
- a JD with an MS or PhD in **Natural Resources Science and Management**



Commentators Prof. Monica Luciana, PhD (left), and Prof. Barry Feld, JD, PhD (right), with Deinard Memorial Lecturer, Prof. Stephen J. Morse, JD, PhD (center) at the Deinard Memorial Lecture on Law & Medicine.





Joint Degree Program in Law, Health & the Life Sciences™

UNIVERSITY OF MINNESOTA

Students, Recruitment & Scholarships

The Joint Degree Program graduated 2 students in 2006-07 for a total of 12 alumni to date. **Robert Berlin** received his JD and MPH in Epidemiology in May 2007. He joined the law firm of Hogan & Hartson in Washington, DC following graduation. **Lesli Rawles** completed a JD and an MS in Science, Technology & Environmental Policy from the Hubert H. Humphrey Institute of Public Affairs in December 2006. Ms. Rawles is employed in the San Diego office of the law firm of Heller Ehrman.

In 2006-07, we had **31 students** pursuing the following degree combinations:

- JD/MS in MCDB&G (Sharada Devarasetty, Lilly Ewing, Alex Galaitsis, Laurel Kilgour, Susan Pribyl)
- JD/PhD in MCDB&G (Rachel Herder, Katherine Dick Krueger, Stephanie Westcot)
- JD/PhD in Conservation Biology (Collette Adkins-Giese)
- JD/MPH in Environmental Health (Marie Quasius)
- JD/MD (Greg Long, Lindsey Yock)
- JD/MS in Health Services Research, Policy & Administration (Kelsey Brodsho, Michelle Dawson)
- JD/MPH in Public Health Administration & Policy (Kari Bomash, Ilina Chaudhuri, Crystal Liu, Geeta Naidu, Britta Orr)
- JD/MPH in Epidemiology (Robert Berlin)
- JD/MPH in Community Health Education (Lindsey Hopper, Anne McNamara, KJ Starr)
- JD/MS in Science, Technology & Environmental Policy (Samantha Bohrman, Andrew Gibbons, Sarah Johnson Phillips, Lesli Rawles)
- JD/PhD in Pharmacology (Jon Hareid, Lisbeth Robinson)
- JD/MS in Water Resources Science (Stephanie Johnson)
- JD/MS in Computer Science/Bioinformatics (Garret Olson)

Four students were awarded partial **Joint Degree Program Scholarships** in Fall 2006; two JDP students each received partial **Medical School Scholarships**; one JDP student was awarded the 2006-07 Minnesota Intellectual Property Law Association Scholarship in the Law School; and three JDP students were awarded partial **Law School Scholarships**.

Applications to the Joint Degree Program for Fall 2007 again showed impressive strength and geographic diversity. We received 25 applications from students with undergraduate degrees from distinguished institutions across the country including University of Arizona, University of Chicago, University of Colorado-Boulder, Emory University, Harvard University, Macalester College, Marquette University, Michigan State University, University of Missouri-Kansas City, University of Wisconsin-Madison and Wellesley College.

In the Fall of 2007 we welcomed **7 new students** pursuing the following degree combinations: JD/PhD in Molecular, Cellular, Developmental Biology & Genetics, JD/MHA in Healthcare Administration, JD/MPH in Public Health Administration & Policy (4), and JD/MPH in Epidemiology.



*Joint Degree Program students from
Left to Right: Greg Long, JD, MD candidate;
Alex Galaitsis, JD, MS candidate in
MCDB&G; and Sharada Devarasetty, JD,
MS candidate in MCDB&G.*



We have worked closely with the Joint Degree Program graduate programs to recruit these impressive applicants and arrange financial support. One incoming JD/MPH student in Epidemiology has been awarded a partial **Harold M. Fredrikson Memorial Scholarship** in the Law School. Another student pursuing a JD/PhD in MCDB&G received a partial **Law School Scholarship**. Three incoming JD/MPH students in Public Health Administration & Policy also received scholarships. One student received a partial **JDP Scholarship** and other two students each received partial **Law School Scholarships**.

Joint Degree Program students are thus eligible for several targeted scholarships in addition to being eligible for the full range of Law School, Graduate School, School of Public Health, and Medical School scholarships and support otherwise offered. We are working to expand even further the support available to our students.

Student Honors & Achievements

Students in the Joint Degree Program continue to excel. They are passionate about their studies and we look forward to watching their ambitious goals be realized. Below is a partial list of their accomplishments in 2006-07, with the degree combination each is pursuing:

Collette Adkins-Giese, JD, PhD in Conservation Biology, was the winner of the 2005-06 legal writing contest sponsored by the *Journal of Animal Law and Ethics*. Her essay on "Inadequate USDA Regulations Thwart the Congressional Mandate to Protect Primate Psychological Well-Being" was published in 2006 in the inaugural issue of that journal. She began as an Associate at Faegre & Benson LLP in Fall 2007.

Irina Chaudhuri, JD, MPH in Public Health Administration & Policy, spent Summer 2007 in Washington, DC at the National Business Group on Health and the O'Neill Institute for National and Global Health Law at Georgetown University, where she co-authored an "Assessment of Laws and Policies Related to HIV/AIDS in Trinidad" with Associate Dean Lawrence Gostin. She plans to pursue a career in health policy focusing on issues such as lack of insurance and comparative health systems and is particularly interested in working towards greater U.S. insurance coverage.

Michelle Dawson, JD, MS in Health Services Research, Policy & Administration, and her competition partner won both the Regional and National Giles S. Rich Intellectual Property Moot Court Competition, arguing in front of two Federal Circuit Judges in the final round of the National Competition in Spring 2007. She also won Best Advocate in the Regional Competition. Ms. Dawson published a Recent Development titled "*Metabolite Labs* and Patentable Subject Matter: A Review of Federal Circuit and PTO Precedent was Narrowly Averted, but for How Long?" in the *Minnesota Journal of Law Science & Technology*, Winter 2007. She has accepted a permanent position at the law firm of Dorsey & Whitney, where she was a summer associate in 2007. She hopes to do patent prosecution and IP litigation.

Sharada Devarasetty, JD, MS in Molecular, Cellular, Developmental Biology & Genetics, was President of the University's Student Intellectual Property Law Association and a Director for the Intellectual Property Moot Court. She completed her Master's degree in May 2007. During Summer 2007, she worked as a Summer Associate in the Intellectual Property Department at Goodwin Procter, LLP in Boston, MA. For the Fall 2007 semester, she is participating in an exchange program with Bucerius Law School in Hamburg, Germany, taking classes in corporate law.

Lilly Ewing, JD, MS in Molecular, Cellular, Developmental Biology & Genetics, published an article in the *Minnesota Journal of Law, Science & Technology* in Spring 2007 entitled "In Re Fisher: Denial of Patents for ESTs Signals Deeper Problems in the Utility Prong for Patentability." During Summer 2007 she was an Associate at Wilson Sonsini Goodrich & Rosati in Silicon Valley. Ms. Ewing will serve as a 2007-08 Articles Editor of the *Minnesota Journal of Law, Science & Technology*.



Michelle Dawson, JD, MS candidate
in Health Services Research, Policy
& Administration.



Andrew Gibbons, JD, MS in Science, Technology & Environmental Policy, served as a staff member on the *Minnesota Journal of Law, Science & Technology* during the 2006-07 academic year and was a Co-Chair of the Environmental Law Society, a student group at the Law School. Mr. Gibbons's primary interests are in the areas of alternative energy and climate change policy.

Jonathan Hareid, JD, PhD in Pharmacology, served on the staff of the *Minnesota Journal of Law, Science & Technology* as an Articles Editor in 2006-07. His article on "Testing Drugs and Testing Limits: *Merck KGaA v. Integra Lifesciences I, Ltd.* and the Scope of the Hatch-Waxman Safe Harbor Provision" was published in Volume 7 of *MJLST*. In Summer 2007 he worked as a Minnesota Justice Foundation volunteer for the ElderCare Rights Alliance, doing legal research on state-by-state regulation of assisted living facilities. He hopes to pursue a career in patent law or food and drug law.

Rachel Herder, JD, PhD in Molecular, Cellular, Developmental Biology & Genetics, conducts research focused on developmental timing as it relates to steroid hormone synthesis in the fruit fly and she is a contributing author of a paper published July 2007 in the *Journal of Neuroscience* entitled "Presynaptic Contributions of Chordin to Hippocampal Plasticity and Spatial Learning." In January of 2007, she participated in the Asylum Law Program through UMN where she traveled to Miami to help those seeking asylum in the United States. Ms. Herder served as an officer of the Students in Intellectual Property Law Association at the Law School.

Lindsey Hopper, JD, MPH in Community Health Education, clerked in Summer 2007 for Justice James C. Nelson who sits on the Montana Supreme Court. She will return to clerk for him in Summer 2008 as well. Ms. Hopper helped the Montana Department of Public Health and Human Services draft a benchbook on public health emergency preparedness and the judiciary. She will serve as a 2007-08 staff member for the *Minnesota Law Review*.

Stephanie Johnson, JD, MS in Water Resources Science, has worked as a Research Assistant in the Law Library, assisting Prof. Suzanne Thorpe with faculty research requests since 2006. In Summer 2007, Ms. Johnson was a Summer Associate in the Environmental and Natural Resources group of Fennemore Craig in Phoenix, AZ. In Fall 2007, she will be interning at the Centre for Environmental Economics at Central Queensland University in Australia. Ms. Johnson plans to pursue a career in natural resource and environmental law and policy.

Laurel Kilgour, JD, MS in Molecular, Cellular, Developmental Biology & Genetics, will publish an article titled "Building Intellectual Property Management Capacity in Public Research Institutions in Vietnam: Current Needs and Future Directions" in the Winter 2008 issue of the *Minnesota Journal of Law, Science & Technology*.

Katherine Dick Krueger, JD, PhD in Molecular, Cellular, Developmental Biology & Genetics, co-authored an article titled "Spectrin Mutations Cause Ppincerebellar Ataxia Type 5" that was published in *Nature Genetics* in 2006. Ms. Krueger has also been awarded a Doctoral Dissertation Fellowship for Fall 2007 from the Graduate School.

Crystal Liu, JD, MPH in Public Health Administration & Policy, was on the 2006-07 Deans List with an "A" average. She also received a Book Award for Civil Procedure in Spring 2007 and Criminal Law in Spring 2007. Her research focuses on preimplantation genetic diagnosis and the ethical, legal, and social implications that arise with the use of such reproductive technologies.

Alissa Lyon, JD, MPH in Public Health Administration & Policy, spent Summer 2007 working in the Office of Ethics and Compliance at Medtronic. She will serve as a staff member in 2007-08 for the *Minnesota Journal of Law, Science & Technology*. She plans to practice FDA and health law.

Anne McNamara, JD, MPH in Community Health Education, spent Summer 2007 working for a legal think tank called Common Good that focuses on health care and education reform. She researched alternatives to medical malpractice litigation, such as health care courts and binding arbitration clauses.

Geeta Naidu, JD, MPH in Public Health Administration & Policy, was a Minnesota AIDS Project Policy Intern in Spring 2007 and she completed an internship with Prairie State Legal Services in Waukegan, IL in Summer 2007. Ms. Naidu plans to pursue a career in health law and public interest law, working to improve the health status of minority and impoverished peoples.



*Katherine Dick Krueger, JD, PhD
candidate in MCDB&G.*



Garret Olson, JD, MS in Computer Science/Bioinformatics, served on the staff of the *Minnesota Journal of Law, Science & Technology* in 2006-07, and will serve as an Articles Editor for 2007-08. He plans to pursue a career in intellectual property law.

Britta Orr, JD, MPH in Public Health Administration & Policy, worked with an economic development firm that focuses on biotechnology and the life sciences during Summer 2007. She researched state investment in the biosciences and the trajectory of the medical device market.

Sarah Johnson Phillips, JD, MS in Science, Technology & Environmental Policy, spent Summer 2007 as a law clerk at Farmer's Legal Action Group where she worked on a legal wind energy guide for farmers and researched agricultural law issues. In 2007-08, she will serve as a staff member for the *Minnesota Journal of International Law*.

Susan Pribyl, JD, MS in Molecular, Cellular, Developmental Biology & Genetics, will serve as a 2007-08 staff member for the *Minnesota Journal of Law, Science & Technology*. She plans a career focusing on intellectual property law.

Marie Quasius, JD, MPH in Environmental Health, spent Summer 2007 as an Associate at Hallelund Lewis Nilan and Johnson. In 2007-08 she will serve as a staff member for the *Minnesota Law Review*.

Lisbeth Robinson, JD, PhD in Pharmacology, published an article titled, "Calcium Influx: Beyond 'Current' Biology" in *Current Biology*. After graduation in 2008, Ms. Robinson will join Fish & Richardson, P.C. as a biotech patent prosecution Associate.

Kathleen (K.J.) Starr, JD, MPH in Community Health Education, spent 6 months in Mexico City during 2007, where she attended law school and studied a federal anti-poverty program. She has also been awarded a Foreign Language Area Studies (FLAS) fellowship for 2007-08 to study Hindi. She is hoping to draw on her experiences in India and Mexico to study people-centered development and anti-poverty programs that incorporate behavior change to improve public health.

Lindsey Yock, JD, MD, has a forthcoming article on "Communicable Dis-Ease: Breach of Privacy in a World of Electronic Health Records and a New Theory for Recovery" that will be published in the *Minnesota Law Review*. Ms. Yock will also serve as a Note & Comment Editor for the *Minnesota Law Review* in 2007-08. She is interested in using her training to work at the intersection of law, medicine, and public policy.



Robert Berlin, JD, MPH
in Epidemiology.

Graduates

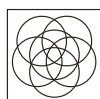
The Joint Degree Program graduated 2 students in 2006-07 for a total of 12 alumni to date:

Robert Berlin received his JD and MPH in Epidemiology in May 2007. He held a 2005 summer fellowship with the Committee on Science, Technology and Law, which is part of the Global Affairs Division of the National Academy of Sciences. He researched and wrote on quarantine law, national security and science, and other topics. He served on the staff of the *Minnesota Law Review* in 2005-06 and was a Managing Editor of the Law Review in 2006-07. Mr. Berlin won 1st place in the American Bar Association's 2006 TIPS Law Student Writing Contest with his paper on "Epidemiology as More Than Statistics: A Revised Tool for Products Liability." In Summer 2006, he served as a Summer Associate for the law firm of Hogan & Hartson in Washington, DC, focusing his work on FDA law. He joined the firm following graduation.



Lesli Rawles, JD, MS in Science,
Technology & Environmental Policy.

Lesli Rawles completed a JD and an MS in Science, Technology & Environmental Policy from the Hubert H. Humphrey Institute of Public Affairs in December 2006. She was a member of the International Moot Court's competition team in 2004-05. In Summer 2005 she worked at the Office General Counsel at the University of Minnesota. Additionally, Ms. Rawles served on the staff of the *Minnesota Journal of Law, Science & Technology* and was Director of the International Moot Court competition team in 2004-05. Ms. Rawles is now employed by the San Diego office of Heller Ehrman.



Joint Degree Program Proseminar

The Joint Degree Program Proseminar is a course required of all Joint Degree Program students each Fall. Entitled "Law, Health & the Life Sciences: Joint Degree Program Proseminar," Law 6875 is a one-credit pass/fail seminar that meets Wednesdays over lunch and provides a supportive and collegial forum in which students can explore the interdisciplinary issues that our Joint Degree Program addresses with faculty from the cooperating programs and beyond.

The Proseminar is divided into two sections. The first section, required for students in the first two years of the Joint Degree Program, invites guest speakers to present to the group on the legal, ethical, and policy implications of their work, followed by discussion led by students. The roster of speakers for this section changes every year and includes University of Minnesota faculty and researchers, as well as lawyers and other law or science professionals in the community. This section is open to non-Joint Degree Program students with advanced degrees in health or the life sciences by consent of the instructors if space permits. In the second section, Joint Degree Program students with more than 2 years of experience make presentations to their peers. Each student is responsible for making one presentation per term. Students are given broad latitude in choosing topics to present. Presentation options include results from their own research (either lab- or literature-based), a published article, or an overview of a developing topic within their general field of study. This 2-section format was designed to meet the needs of all Joint Degree Program students and to prepare advanced students to meet the challenges ahead.

In Fall 2006, section 1 of the Proseminar was led by **Prof. Susan Wolf, JD** and **Adjunct Prof. Jordan Paradise, JD**. The schedule featured:

- **Rep. Phyllis Kahn, PhD, MPA** (MN House of Representatives; Joint Degree Program Advisory Board) on the use of science in the legislative process;
- **Prof. Phillip Pardey, PhD** (Applied Economics; International Science and Technology Practice & Policy, University of Minnesota) on the science and economics of international policies on genetics;
- **Prof. Deborah Swackhamer, PhD** (Environmental Chemistry, Division of Environmental Health Sciences, School of Public Health; Co-Director, Water Resources Center; Interim Director, Institute on the Environment, University of Minnesota) on policy choices on water quality and conservation of the Great Lakes;
- **Prof. Mary Faith Marshall, PhD** (Center for Bioethics, University of Minnesota) on the ethics, law, and policy of perinatal drug use;
- **Robert Hauser, MD** (Minneapolis Heart Institute) on device failure, regulation, and litigation;
- **Thomas Schroeder, JD** (Faegre & Benson LLP) on HIPAA privacy rights and online health records;
- **Prof. Barbara Koenig, PhD** (Mayo College of Medicine; Center for Bioethics, University of Minnesota) on ethical, legal, and social implications of DNA biobanking;
- **Keith Dunder, JD** (Academic Health Center, University of Minnesota) on medical tort reform;
- **Prof. Daniel Philippon, PhD** (Program in Agricultural, Food & Environmental Ethics, University of Minnesota) on narrative, values, and the environment;
- **Prof. Mary Jo Kreitzer, PhD, RN** (Center for Spirituality & Healing, University of Minnesota) on complementary and alternative medicine for solid organ transplant patients; and
- **Prof. Mark Mahowald, MD** (Neurology; Minnesota Regional Sleep Disorders Center, University of Minnesota) and **Michel Cramer-Bornemann, MD** (Neurology, University of Minnesota) on the science, ethics, and law of sleep disorders.

Section 2 was led by **Prof. Colin Campbell, PhD**, Associate Director of the Joint Degree Program. Student presenters discussed a variety of topics including recent developments in the FDA approval process, evolution and intelligent design, interstate nurse licensure, the False Claims Act and off-label promotion of drugs, and direct-to-consumer advertising of prescription drugs.



Joint Degree Program students from Left to Right: Rachel Herder, JD, PhD candidate in MCDB&G; Sarah Johnson Phillips, JD, MS candidate in Science, Technology & Environmental Policy; and Lindsey Hopper, JD, MPH candidate in Community Health Education.



Representative Phyllis Kahn, PhD, and Joint Degree Program student Alex Galatsis, JD, MS candidate in MCDB&G at the 2006 Joint Degree Program Advisory Board Reception.



Joint Degree Program Faculty & Governing Committee

The Joint Degree Program is run by a faculty Director and Associate Director with the help of a Governing Committee comprised mainly of the Director of Graduate Studies (DGS) or equivalent in each cooperating program plus a Joint Degree Program student elected by his or her peers.



Prof. Susan M. Wolf, JD, at the welcome reception for Joint Degree Program students.

Susan M. Wolf, JD, is the McKnight Presidential Professor of Law, Medicine & Public Policy at the University of Minnesota; the Faegre & Benson Professor of Law at the University of Minnesota Law School; Professor of Medicine at the University of Minnesota Medical School; and a Faculty Member in the University's Center for Bioethics. She is also founding Director of the University's Joint Degree Program in Law, Health & the Life Sciences and founding Chair of the University's Consortium on Law and Values in Health, Environment & the Life Sciences. She received her AB *summa cum laude* from Princeton University and her JD from Yale Law School, with graduate work at Harvard University.

After clerking for a federal judge and practicing law for several years, in 1984 Professor Wolf became a National Endowment for the Humanities Fellow and then Associate for Law at The Hastings Center, a nonprofit research institute now in Garrison, NY, specializing in bioethics. She also taught law and medicine at New York University Law School for 6 years as an Adjunct Associate Professor. She was a Fellow in the Program in Ethics and the Professions at Harvard University in 1992-93, before joining the Minnesota faculty in the Fall of 1993.

Prof. Wolf's recent research has been funded principally by the National Institutes of Health and the National Science Foundation. She is also participating in a national project on law and neuroscience funded by the MacArthur Foundation. She is the author or coauthor of numerous articles and book chapters that have appeared in the *Science*, *Nature Genetics*, *New England Journal of Medicine*, *Journal of the American Medical Association (JAMA)*, *American Journal of Public Health*, *Hastings Center Report*, *Kennedy Institute of Ethics Journal*, *American Journal of Law & Medicine*, *Journal of Law, Medicine & Ethics*, various law reviews, and other publications. She is editor of *Feminism & Bioethics: Beyond Reproduction* (Oxford University Press, 1996) and directed the Hastings Center project that produced *Guidelines on the Termination of Life-Sustaining Treatment and the Care of the Dying* (Indiana University Press, 1987). She is currently participating in a Hastings Center project to revise and reissue the *Guidelines*. She has served on advisory bodies for the American Bar Association (ABA), American Medical Association (AMA), and the American Society for Reproductive Medicine (ASRM), among others. She is a Fellow of The Hastings Center, a past member of the Board of Directors of the American Society for Bioethics and Humanities (ASBH), and past-chair of the Association of American Law Schools' (AALS) Section on Law, Medicine, and Health Care. She writes frequently on death and dying, genetics, assisted reproduction, women's health care, managed care, and other topics in health law and bioethics. Prof. Wolf's bibliography may be found at <www.law.umn.edu/FacultyProfiles/WolfS.htm>.



Prof. Colin Campbell, PhD, Associate Director, Joint Degree Program.

Colin R. Campbell, PhD, is Associate Professor in the Department of Pharmacology at the University of Minnesota Medical School. He is Associate Director of the Joint Degree Program. Prof. Campbell is also Co-Director of the University of Minnesota's Life Sciences Summer Undergraduate Research Program. He received his BS in Biology from Fairfield University and his PhD in Biochemistry from Boston University. He pursued post-doctoral studies in molecular genetics at the University of Illinois at Chicago and the Albert Einstein College of Medicine in New York, where he was also appointed an Instructor of Molecular Genetics. Prof. Campbell joined the University of Minnesota Pharmacology faculty as an Assistant Professor in 1992, and was promoted to his current rank in 1998.

Prof. Campbell's laboratory focuses on the relationship between nuclear and mitochondrial DNA instability and human pathologies including cancer and aging. Their research has been published in the *Journal of Biological Chemistry*, *Molecular and Cellular Biology*, *Nucleic Acids Research*, and other journals, and has been presented at numerous



national and international scientific meetings. Prof. Campbell's research has most recently been funded by the National Institutes of Health, the American Heart Association, and the American Cancer Society. More information on his research and publications may be found at <www.pharmacology.med.umn.edu/staffcampbell.html>.

Jordan Paradise, JD, is the Associate Director of Research & Education for the Consortium and the Joint Degree Program. She is also an Adjunct Associate Professor of Law, a Research Associate in the Center for Bioethics, and the Faculty Editor-in-Chief of the *Minnesota Journal of Law, Science & Technology (MJLST)*. She received her BS from the University of Michigan and her JD from Chicago-Kent College of Law. She worked previously as a Research Fellow at the Illinois Institute of Technology's Institute for Science, Law and Technology in Chicago. Her current research focuses on the legal and policy implications of emerging technologies including genetics and nanotechnology. She is a Co-Principal Investigator on the Consortium's NSF grant on "Evaluating Oversight Models for Active Nanostructures and Nanosystems." She has authored numerous articles published in journals such as *Science*, *Nature Reviews Genetics*, *The Food and Drug Law Journal*, and *Yale Journal of Health, Policy, Law & Ethics*. More information on her research and publications may be found at <www.lifesci.consortium.umn.edu/publications/paradise.php>.

Governing Committee

Kenneth N. Brooks, PhD, is Professor in the Department of Forest Resources and Director of Graduate Studies in Natural Resources Science and Management. His teaching and research focus on forest hydrology, wetland and riparian hydrology, agroforestry, and watershed management. Prof. Brooks is also Co-Director of the Center for Integrated Natural Resources and Agricultural Management at the University of Minnesota. He is a recipient of the University of Minnesota Distinguished Teaching Award for Graduate-Professional Teaching (2000-01). He received his doctorate from the University of Arizona.

Bryan E. Dowd, PhD, is Professor in the Division of Health Policy & Management in the School of Public Health. His primary research interests are markets for health insurance and health care services and the evaluation of non-experimental data. Recently, he has directed studies of biased selection, health plan choice, and employers' health insurance purchasing strategies. He received his PhD in Public Policy Analysis from the University of Pennsylvania.

Lilly Ewing, JD, MS in MCDB&G, served as the 2006-07 student representative to the Governing Committee. Ms. Ewing joined the Joint Degree Program in 2006 after completing her first year of Law School. She received her BS in Health Sciences at Purdue University and her MA in English Studies at the University of London. She studied intellectual property law at the Max Planck Institute in Munich, Germany in the Summer of 2006. Her master's research involves the creation of bacterial-resistant Arabidopsis plants through the use of a retroelement restriction protein. In 2007 she published an article for the *Minnesota Journal of Law, Science & Technology* entitled "In Re Fisher: Denial of Patents for ESTs Signals Deeper Problems in the Utility Prong for Patentability." This past summer she was a Summer Associate at Wilson Sonsini Goodrich & Rosati in Silicon Valley. In 2007-08 she is serving as an Articles Editor of the *Minnesota Journal of Law, Science & Technology*. She plans to pursue a career in patent law, specializing in technology patents.

Susan Galatowitsch, PhD, is Professor of Horticulture Science in the Division of Plant Sciences in the College of Food, Agricultural and Natural Resource Sciences. Her research to date has focused primarily on smaller scale wetland ecosystem restoration projects and methods for re-establishing native plant populations, controlling invasive plant species, and analyzing related wildlife habitat loss and recovery. Prof. Galatowitsch received her doctorate from Iowa State University in 1993. She has been named the 2007-08 Fesler-Lampert Chair in Urban and Regional Affairs.

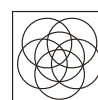
Judith McKinnon Garrard, PhD, is the Senior Associate Dean of Academic Affairs and Research at the School of Public Health. She is an experienced health services researcher with publications on prescription drug use by elderly people in the community, nursing homes, and assisted living facilities. Her research specialty is pharmacoepidemiology and patient outcomes. She teaches graduate courses in research methods, program evaluation, and epidemiological applications to health services research. Dean Garrard received the Leonard M. Schuman Excellence in Teaching Award in 1989 and in 1991, a Career Research Award in social and behavioral geriatrics from the National Institute on Aging, NIH. She received her PhD from the University of Minnesota.



Jordan Paradise, JD, Associate Director of Research & Education for the Consortium and Joint Degree Program, moderating a Lunch Series presented by Scott Gottlieb, MD on "Science and Politics: FDA Perspective."



From Left to Right: Prof. Susan M. Wolf, JD; Visiting Prof. Thomas L. Greaney, JD, St. Louis University; Prof. Lynn Blewett, PhD; and Prof. Steve Miles, MD at the Consortium Visiting Professor Lecture on October 31, 2006.





Prof. Mary Jo Kreitzer, PhD, RN, Director, Center for Spirituality and Healing, moderates the Lecture Series presentation by Mark Blumenthal on "Nutraceuticals: Dietary Supplements, Botanical Drugs, and Nature Products—Science, Safety, and Efficacy."



Prof. Ronald M. Green, PhD, Dartmouth College, speaks at the 2007 annual conference on "Creating Stem Cells by Research Cloning."

George D. Green, PhD, is the Morse-Alumni Distinguished Teaching Associate Professor of History and Associate Dean of the University of Minnesota's Graduate School. His scholarly specialty is American economic and business history. He earned his PhD in Economics and History at Stanford University.

Sarah H. Hobbie, PhD, is Associate Professor and Director of Graduate Admissions in Ecology, Evolution, and Behavior. Her research interests include ecosystem ecology, carbon and nutrient cycling, decomposition, species effect on ecosystem processes, and plant-soil interactions. She received her doctorate at the University of California, Berkeley.

Helene Horwitz, PhD, is the Associate Dean for Student Affairs in the Medical School. Dean Horwitz oversees student services, student counseling including academic and career counseling, the residency application process, coordination of dual and joint degree programs, and related matters. She worked as an academic advisor and career counselor for several years before completing her PhD in Higher Education, with an emphasis on Academic Administration and Planning, at Southern Illinois University. Dean Horwitz has served as Chair of the Central Region Group on Student Affairs of the Association of American Medical Colleges (AAMC) and as a member of the national Committee on Student Affairs of the AAMC.

Jeffrey P. Kahn, PhD, MPH, holds the Maas Family Chair in Bioethics and is Director of the University of Minnesota's Center for Bioethics. He is also Professor in the Medical School's Department of Medicine and holds graduate faculty appointments in the School of Public Health and Department of Philosophy. Prof. Kahn works in a variety of areas of bioethics including research ethics, ethics and genetics, ethics and organ transplantation, and ethical issues in public health. In addition to numerous scholarly publications, he wrote the bi-weekly column "Ethics Matters" on CNN.com from 1998-2002. During 1994-95, he was Associate Director of the White House Advisory Committee on Human Radiation Experiments and continues to serve on numerous state and federal advisory panels. He earned his MPH at Johns Hopkins University and PhD in philosophy and bioethics at Georgetown University.

Erin Keyes, JD, is Assistant Dean of Students at the University of Minnesota Law School. She oversees student services for all of the 850 JD and LLM students and advises student groups on public service programs. She previously worked as an attorney for Central Minnesota Legal Services, handling family and housing law issues for low-income clients. She received her JD *cum laude* from the University of Minnesota and was awarded the Excellence in Public Service Award.

Meredith M. McQuaid, JD, was the Associate Dean of Administration and Director of International and Graduate Programs at the University of Minnesota Law School. She was appointed Associate Vice President and Dean, International Programs in September 2007. While at the Law School she was primarily responsible for policy implementation and day-to-day operations. Additionally, she administered and supervised the LLM program for foreign lawyers and oversaw exchange programs for Law School students. She also served on the University of Minnesota China Advisory Board. She received JD *cum laude* from the University of Minnesota.

Thomas Neufeld, PhD, is Associate Professor in the Department of Genetics, Cell Biology and Development and Co-Director of Graduate Studies in Molecular, Cellular, Developmental Biology and Genetics. His research focuses on the basic mechanisms of cell growth control using the fruit fly *Drosophila* as a model system to investigate signaling pathways and cellular functions that regulate growth. He received his doctorate from the University of California, Berkeley.



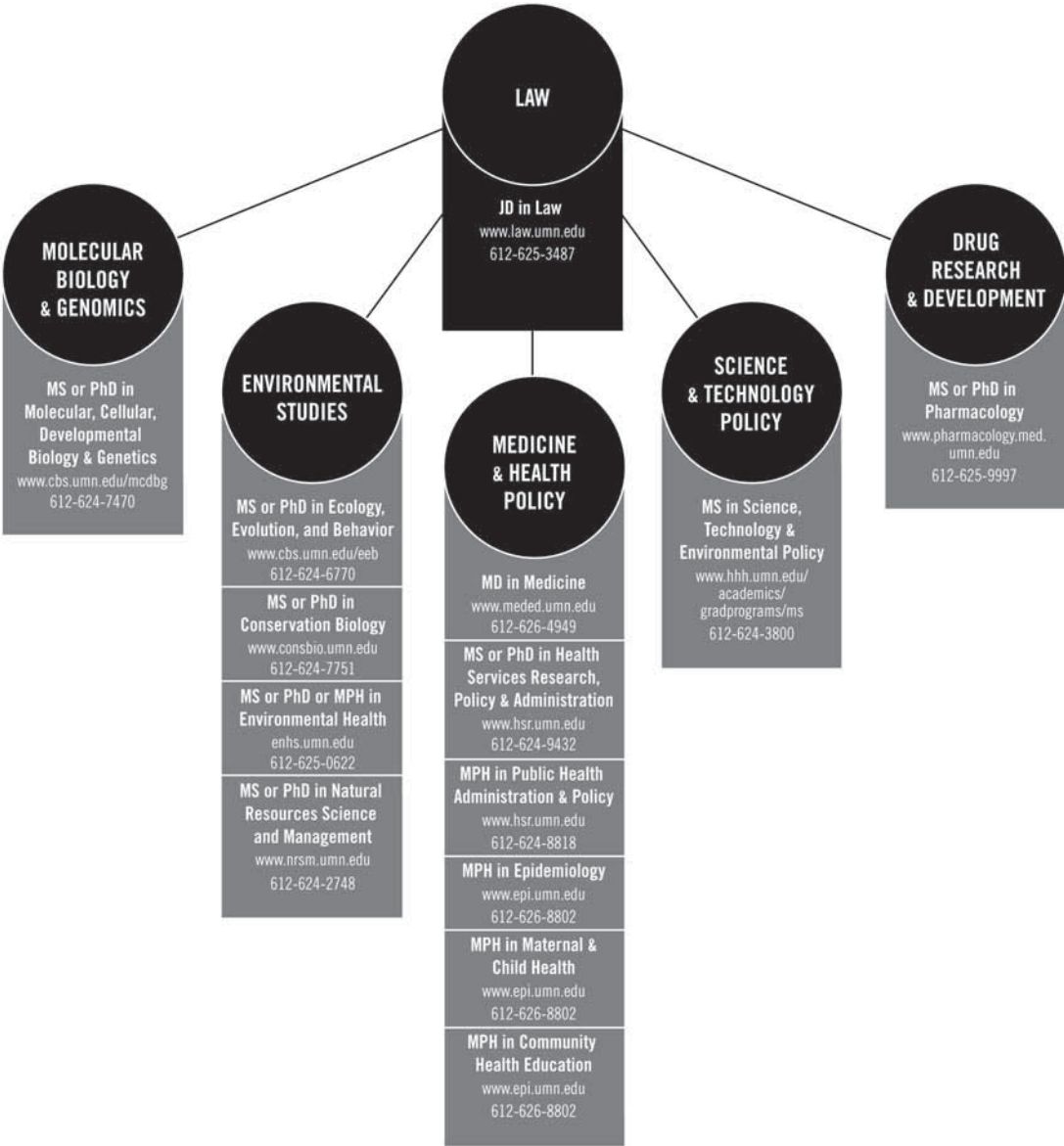
Jocelyn Shaw, PhD, is Associate Professor and Co-Director of Graduate Studies in Genetics, Cell Biology, and Development. Her current research examines the role that gap junctional communication plays in animal embryogenesis. She received her doctorate from the University of Toronto.

Elizabeth V. Wattenberg, PhD, is Associate Professor and Director of Graduate Studies in the Division of Environmental Health Sciences in the School of Public Health. Her laboratory investigates the molecular mechanisms by which carcinogenic agents interfere with the signaling pathways that control cell fate and function. Understanding this may help predict how environmental chemicals affect carcinogenesis and lead to methods for preventing and treating cancer. Prior to her appointment at the University of Minnesota, she worked at the Minnesota Department of Health on issues concerning health risk assessment and environmental regulation. She received her doctorate from the Massachusetts Institute of Technology.

Elizabeth Wilson, MS, PhD, is an Assistant Professor of Energy and Environmental Policy and Law at the Humphrey Institute of Public Affairs. She holds a doctorate in Engineering and Public Policy from Carnegie Mellon University and a master's degree in Human Ecology from the Free University of Brussels in Belgium. Her research focuses on the development of carbon-managed energy systems. Recent work examines the regulatory and legal contexts for the deployment of carbon capture and sequestration technologies.



*Prof. Holly Doremus, JD, PhD,
University of California at
Davis, presents at the Lunch
Series on "Science and Politics
in Environmental Policymaking:
Can This Marriage Be Saved?"*



Structure of the Joint Degree Program.



Faculty Roster

Nationally recognized scholars from across the University comprise the faculty of the Joint Degree Program. A large roster of faculty members is available to work with our students:

Law

Stephen F. Befort
Dan L. Burk
Ann M. Burkhart
Laura J. Cooper
Tom Cotter
Daniel J. Gifford
Michele Goodwin
Oren Gross
Ralph Hall
Claire Hill
Brad Karkkainen
Alexandra Klass
William McGeveran
Fred L. Morrison
Ruth L. Okediji
Myron W. Orfield
David Weissbrodt
Susan M. Wolf

Molecular, Cellular, Developmental Biology & Genetics (MCDB&G)

Vivian J. Bardwell
Judith G. Berman
Susan A. Berry
Bruce Blazar
Robert Brambl
Robert J. Brooker
Lihsia Chen
Duncan Clarke
Kathleen F. Conklin
Sean Conner
Dana Davis
Robert P. Elde
Michael Farrar
Laura Gammill
Stuart F. Goldstein
William Gray
David Greenstein
Perry B. Hackett
Thomas S. Hays
Betsy A. Hirsch
Kristin A. Hogquist
Victoria Iwanji
Stephen C. Jameson
Ross G. Johnson
Dan Kaufman
Nobuaki Kikyo

Richard A. King
David Kirkpatrick
Deanne Koepp
Michael Koob
Ryoko Kuriyama
Lorene Lanier
David A. Largaespada
Paul A. Lefebvre
Bonnie S. LeRoy
Paul C. Letourneau
Richard W. Linck
Dennis M. Livingston
Louis Mansky
Cary N. Mariash
Paul Marker
M. David Marks
James B. McCarthy
R. Scott McIvor
Linda McLoon
Steven C. McLoon
Matthew F. Mescher
Jeffrey Miller
Yasushi Nakagawa
Hiroshi Nakato
Thomas Neufeld
Michael B. O'Connor
David Odde
Neil E. Olszewski
Harry T. Orr
Ronald L. Phillips
Mary E. Porter
Laura P.W. Ranut
Ken Roberts
Ann E. Rougvie
Anton Sanderfoot
Lisa Schimmenti
Janet L. Schottel
Scott Selleck
Jocelyn E. Shaw
Naoko Shima
Yoji Shimizu
Carolyn D. Silflow
Michael J. Simmons
Jeffrey A. Simon
Amy P.N. Skubitz
Jonathan Slack
Nikunj Somia
Robert L. Sorenson
Clifford J. Steer

Margaret A. Titus
Howard C. Towle
Brian G. Van Ness
Ken Vernick
Chester B. Whitley
Susan M. Wick
Robin Wright
David Zarkower

Ecology, Evolution, and Behavior
David Andow
Donald N. Alstad
Franklin H. Barnwell
Mark Bee
Mark Borello
Patrick Brezonik
Jeannine M. Cavender Bares
James B. Cotner
James W. Curtsinger
Edward Cushing
Margaret Davis
Antony M. Dean
R. Ford Denison
Jacques C. Finlay
David Fox
Lee Frelich
Susan Galatowitsch
Jeff Gralnick
George Heimpel
Sarah E. Hobbie
Sharon A. Jansa
Susan Jones
Thomas C. Johnson
Jennifer Y. King
Linda Kinkel
Scott M. Lanyon
Diane Larson
Clarence L. Lehman
Georgiana May
David Mech
Joseph P. McFadden
Rebecca Montgomery
Patrice A. Morrow
Claudia Neuhauser
Raymond Newman
Karen Oberhauser
Craig Packer
John Pastor

Stephen Polasky
Jennifer Powers
Anne Pusey
Philip J. Regal
Peter Reich
Michael Sadowsky
Andrew Simons
Ruth G. Shaw
Peter Sorenson
Marla Spivak
David W. Stephens
Robert W. Sterner
Shinya Sugita
Peter Tiffin
G. David Tilman
Michael Taravisanio
George Weiblen
Susan Weller
Robert M. Zink

Conservation Biology

Ira R. Adelman
Deborah L. Allan
David E. Andersen
Charles S. Anderson
Dorothy H. Anderson
Neil O. Anderson
David Andow
Gerald T. Ankley
Todd W. Arnold
Marvin E. Bauer
Dennis R. Becker
Jay Bell
David Bengston
Robert B. Blair
Charles R. Blinn
Paul V. Bolstad
Jeffrey Broadbent
Thomas E. Burk
Vernon B. Cardwell
Jeannine Marie Cavender-Bares
Jay S. Coggins
Yosef Cohen
Meredith Wynn Cornett
Dean Alan Current
James W. Curtsinger
Edward J. Cushing
Francesca J. Cuthbert
K. William Easter

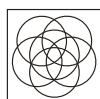
Mohamed E. El Halawani
Jacques C. Finlay
Thomas R. Fiutak
Lee E. Frelich
David C. Fulton
Susan M. Galatowitsch
David L. Garshelis
Tamara L. Giles-Vernick
Robert G. Haight
Jay T. Hatch
Sarah E. Hobbie
Frances R. Homans
Pamela Jakes
Frederick J. Jannett, Jr.
Sharon A. Jansa
Douglas H. Johnson
Susan D. Jones
Nicholas R. Jordan
Anne R. Kapuscinski
K. Ullas Karanth
Mike Kilgore
Katherine Klink
Jennifer Kuzma
Jeffrey W. Lang
Scott M. Lanyon

Diane Larson
Clarence L. Lehman
John P. Loegering
Steven M. Manson
Robert B. McMaster
L. David Mech
Loren M. Miller
Ron Moen
Helen Murray
Laura Musacchio
Richa Nagar
Kristen C. Nelson
Claudia Neuhauser
Raymond M. Newman
Gerald J. Niemi
Stephen James O'Brien
Karen S. Oberhauser
Craig Packer
John Pastor
Donald L. Pereira
James A. Perry
Daniel J. Philippon
Stephen Polasky
Anne E. Pusey
Patrick T. Redig

Philip J. Regal
Peter B. Reich
C. Ford Runge
Abdi Ismail Samatar
Ingrid E. Schneider
Ruth G. Shaw
Andrew Simons
Donald B. Siniff
James L. Smith
Peter W. Sorensen
George R. Spangler
Roderick H. Squires
Robert W. Sterner
Shinya Sugita
Edward B. Swain
Steven J. Taff
G. David Tilman
Ronald L. Tilson
Bruce Vondracek
George D. Weiblen
David Western
Naomi Zeitouni
Susy S. Ziegler
Robert M. Zink

Environmental Health

John L. Adgate
Bruce H. Alexander
Paul Allwood
Lisa M. Brosseau
Timothy R. Church
Susan G. Gerberich
Ian A. Greaves
Craig W. Hedberg
William Lohman
George Maldonado
Jeffrey H. Mandel
Patricia M. McGovern
Nancy M. Nachreiner
Debra K. Olson
Lisa A. Peterson
Gurumurthy Ramachandran
Peter C. Raynor
Matt F. Simcik
Randall Singer
Kirk E. Smith
Deborah L. Swackhamer
William A. Toscano, Jr.
Elizabeth V. Wattenberg



Natural Resources Science & Management

David Eric Andersen
 Dorothy Helen Anderson
 Todd Arnold
 Mark E. Ascerno
 Marvin E. Bauer
 Melvin J. Baughman
 Dennis Becker
 William Ambler Befort
 David Bengston
 Erwin Berglund
 Robert B. Blair
 Robert A. Blanchette
 Mary M. Blickenderfer
 Charles R. Blinn
 Paul V. Bolstad
 Steven Bratokovich
 Kenneth N. Brooks
 Thomas Edward Burk
 Stephan Paul Carlson
 John J. Cogan
 Yosef Cohen
 Merdedith Wynn Cornett
 Dean Alan Current
 Edward J. Cushing
 Francesa J. Cuthbert
 Andrew J. David
 Glenn David Del Giudice
 Michael C. Demchik
 Karlyn Eckman
 Alan R. Ek
 Daniel Lee Erkkila
 Fred Finley
 Alan Franklin
 Lee E. Frelich
 David C. Fulton
 David L. Garshelis
 Bill Gartner
 David T. Grimsrud
 Ralph J. Gutierrez
 Robert G. Haight
 Mark Hansen
 Sarah E. Hobbie
 Howard M. Hoganson
 Patrick Henry Huelman
 Gjalte Huppel
 Pamela Jakes
 Douglas H. Johnson
 Gary Ronald Johnson
 Peter A. Jordan
 Mike Kilgore

Richard O. Kimmel
 Randy Kolka
 Jeffrey S. Lawrence
 John P. Logging
 Joe Magner
 Joe Gerald Massey
 Leo McAvoy
 Ronald E. McRoberts
 David L. Mech
 Kristine F. Miller
 Rebecca Anne Montgomery
 Keith W. Moser
 Kristen C. Nelson
 John Little Nieber
 Joseph G. O'Brien
 Karen S. Oberhauser
 Jacek Oleksyn
 Michael E. Ostry
 Brian J. Palik
 Charles H. Perry
 James A. Perry
 Harlan D. Petersen
 Michael J. Phillips
 Stephen Polasky
 Shri Ramaswamy
 Peter Bernard Reich
 Mike Reichenbach
 Brian Kevin Reilly
 Don E. Riemenschneider
 R. Roger Ruan
 C. Ford Runge
 Keith C. Russell
 Simo Sarkanen
 Jonathan S. Schilling
 Elmer Lyle Schmidt
 Thomas L. Schmidt
 Ingrid Eleanore Schneider
 John H. Schomaker
 Rachel Schurman
 Robert Thomas Seavey
 Steve John Severtson
 Donald B. Siniff
 Rubin Shmulsy
 J.L. David Smith
 Timothy M. Smith
 Stephanie Ann Synder
 Robert A. Stine
 Sangwon Suh
 Alfred D. Sullivan
 Steven J. Taff
 Jerrilyn L. Thompson
 Urike Waltrau Tschirmer

Elon Sanford Verry
 Ping Wang
 Jerry Winandy
 Gary L. Worry
 Diomides S. Zamora
 John C. Zasada
 Eric K. Zenner

Medicine

A complete list of Medical School Faculty may be found in the Medical School Catalog on-line at www.catalogs.umn.edu/tcmed/index.html

Health Services Research, Policy & Administration

Jean M. Abraham
 James W. Begun
 Lynn A. Blewett
 Kathleen Thiede Call
 Jon B. Christianson
 Michael E. Davern
 Bryan E. Dowd
 Roger D. Feldman
 Susan Bartlett Foote
 Judith M. Garrard
 Leslie Alan Grant
 Ayse Gürses
 Robert L. Kane
 Rosalie Kane
 Karen Kuntz
 Donna D. McAlpine
 A. Marshall McBean
 Jeffrey McCullough
 Ira S. Moscovice
 Gordon Mosser
 John A. Nyman
 Sandra J. Potthoff
 William J. Riley
 Todd H. Rockwood
 Robert J. Town
 Beth A. Virnig
 Vernon E. Weckwerth
 Douglas R. Wholey

Public Health Administration & Policy

Jean M. Abraham
 James W. Begun
 Lynn A. Blewett
 Kathleen Thiede Call
 Jon B. Christianson
 Michael E. Davern
 Bryan E. Dowd
 Roger D. Feldman
 Susan Bartlett Foote
 Judith M. Garrard
 Leslie Alan Grant
 Ayse Gürses
 Robert L. Kane
 Rosalie Kane
 Karen Kuntz
 Donna D. McAlpine
 A. Marshall McBean
 Jeffrey McCullough
 Ira S. Moscovice
 Gordon Mosser
 John A. Nyman
 Sandra J. Potthoff
 William J. Riley
 Todd H. Rockwood
 Robert J. Town
 Beth A. Virnig
 Vernon E. Weckwerth
 Douglas R. Wholey

Epidemiology, Maternal & Child Health, and Community Health Education

Kristin E. Anderson
 Richard S. Crow
 Ellen W. Demerath
 Susan J. Duval
 Darin Erickson
 John R. Finnegan, Jr.
 Andrew Flood
 Aaron R. Folsom
 Jean L. Forster
 Simone French
 Lisa J. Harnack
 Bernard Harlow
 Eileen Harwood
 Wendy L. Hellerstedt
 Deborah J. Hennrikus
 John H. Himes

David R. Jacobs, Jr.
 Robert W. Jeffery
 Rhonda J. Jones-Webb
 Harry A. Lando
 Deann Lazovich
 Alan R. Lifson
 Jennifer Linde
 Russell V. Luepker
 Leslie A. Lytle
 Michael Miller
 Claudia Munoz-Zanzi
 Heather H. Nelson
 Toben F. Nelson
 Ruby Nguyen
 Dianne Neumark-Sztainer
 Michael Oakes
 Charles Oberg
 James Pankow
 Marquerite Pappaianou
 Joän Patterson
 Mark Pereira
 Kim Robien
 Simon Rosser
 James Rothenberger
 Pamela Schreiner
 John Sirard
 Lyn Steffen
 Mary Story
 Traci Toomey
 Jian-Min Yuan

Science, Technology & Environmental Policy

Dean E. Abrahamson
 Kenneth H. Keller
 Steve Kelley
 Jennifer Kuzma
 Ann R. Markusen
 Lee W. Munnich
 Elizabeth Wilson

Pharmacology

Frank H. Burton
 Colin R. Campbell
 Gregory J. Connell
 Bianca M. Conti-Fine
 Earl W. Dunham
 Esam E. El-Fakahany
 Carolyn A. Fairbanks
 S. Hossein Fatemi

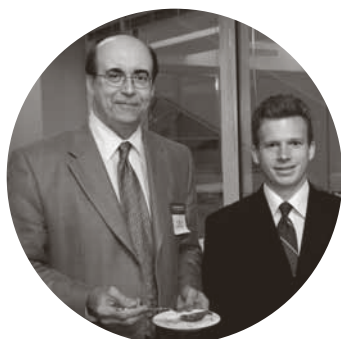
Patrick E. Hanna
 Hiroshi Hiasa
 Jordan L. Holtzman
 Carol A. Lange
 Ping-Yee Law
 Fang Li
 Horace H. Loh
 Jonathan S. Marchant
 Kirill Martemyanov
 Paul R. Pentel
 Sundaram Ramakrishnan
 Daniel P. Romero
 Sabita Roy
 Norman E. Sladek
 Stanley A. Thayer
 Timothy F. Walseth
 Elizabeth V. Wattenberg
 Li-Na Wei
 Kevin D. Wickman
 George L. Wilcox
 W. Gibson Wood
 Douglas Yee
 Yan Zeng

Center for Bioethics

Dianne Bartels
 Muriel Bebeau
 Debra DeBruin
 Barbara Elliott
 Carl Elliott
 Rosalie Kane
 Jeffrey Kahn
 Barbara Koenig
 Joan Liaschenko
 Mary Faith Marshall
 Steven Miles
 Gregory A. Plotnikoff
 Edward Ratner
 David Satin
 John Song
 Carol Tauer
 Maryam Valapour
 Beth Virnig
 Susan M. Wolf



Joint Degree Program Advisory Board



Advisory Board member Mark Ellinger, JD, with Joint Degree student Jon Hareid, JD, PhD candidate in Pharmacology, at the Fall 2006 Advisory Board Reception.



Joint Degree students Kari Bomash, JD, MPH candidate in Public Health Administration & Policy and Lisbeth Robinson, JD, PhD candidate in Pharmacology, with Profs. Lynn Blewett, PhD, MA, and Susan B. Foote, JD, MA, at the Fall 2006 Advisory Board Reception.

The Joint Degree Program is indebted to an active and growing Advisory Board. The Board consists of prominent community members whose own work is at the intersection of law, policy, science, and health. Board members meet twice annually to advise Program faculty and staff and serve as mentors to the Joint Degree Program students. Each Fall the Board hosts a reception for the students. Donald Lewis, Esq. and the law firm of Halleland Lewis Nilan & Johnson were our hosts in 2006. The 2006-07 Board included:

Martha Brand, JD, is Executive Director of the Minnesota Center for Environmental Advocacy (MCEA), a nonprofit organization working to protect Minnesota's natural resources, wildlife, and the health of its people. Prior to being selected as Executive Director of the MCEA, she completed a Bush Foundation Leadership Fellowship and served as an environmental consultant, after having been a partner at the Minneapolis-based law firm of Leonard, Street and Deinard practicing environmental law from 1981 to 1998. Currently, along with her executive directorship of the MCEA, Ms. Brand serves as Chair of the Board of Directors of American Rivers in Washington, DC. In Minnesota, Ms. Brand is active in the local community as a member of organizations including the Minnesota State Bar Association and the Citizen's League. She earned her JD at Boston University.

Amos S. Deinard, Jr., MD, MPH, is an Associate Professor in the Department of Pediatrics at the University of Minnesota Medical School. His long career has focused on aiding underserved communities in the Twin Cities. He worked for 15 years (1969-84) as the Pediatric Consultant to the Minneapolis Health Department's Maternal and Child Health program, followed by 15 years as Director of the Community-University Health Care Clinic (CUHCC). CUHCC serves uninsured and underinsured children in the Phillips neighborhood. That neighborhood is one of the poorest in the state, and consists of a highly diverse community of Native American, Hispanic, Southeast Asian, Somali, and white residents. Prof. Deinard has received numerous awards, including the University of Minnesota's Award for Outstanding Community Service, the Minneapolis Award for Contributions to the City of Minneapolis, and the Minnesota Department of Health Betty Hubbard Maternal and Child Health Leadership Certificate of Recognition. He received his MD and MPH from the University of Minnesota.

Mark Ellinger, JD, PhD, is the Managing Principal in the Twin Cities office of Fish & Richardson, one of the country's largest firms practicing intellectual property, litigation, and corporate law. Dr. Ellinger's practice emphasizes patent prosecution, opinions, due diligence investigations, and licensing and counseling in the medical biotechnology, agricultural biotechnology, diagnostic, pharmaceutical, and medical science fields. His practice has involved subject matter such as genomics, proteomics, gene therapy, xenotransplantation, transgenic animals, transgenic plants, metabolic engineering, immunoassays, nucleic acid-based assays, antisense technology, nucleic acid analogues, microarrays, vaccines, peptide therapeutics, stem cells, medical devices, food science, and potential treatments for diseases such as cardiovascular disease, cancer, allergy, arthritis, diabetes, and Alzheimer disease. Dr. Ellinger received his JD from Harvard University and his PhD in Developmental Biology from the University of Minnesota.

Hubert (Skip) H. Humphrey, III, JD, is a Senior Fellow in Public Health Policy and Law in the Division of Epidemiology at the University's School of Public Health, Senior Vice President at Tunheim Partners, and currently serves as President of AARP-Minnesota. He is a former State Senator and Minnesota Attorney General. As a longtime advocate for non-smoking, Mr. Humphrey was the first attorney general in the nation to bring an antitrust and consumer fraud lawsuit against the tobacco industry, reaching a landmark settlement. In 1999, he was awarded the Tobacco Free World Prize by the World Health Organization. Mr. Humphrey holds a JD from the University of Minnesota.

Ryan Johnson, JD, is a member of Fredrikson & Byron's Health Law, Corporate, and Medicare Fraud and Abuse Groups. Among his clients are hospitals, physician groups, medical device companies, physician management companies and other health care professionals and businesses. Mr. Johnson's experience includes representation of buyers and sellers in health care mergers and acquisitions; representation of health care providers in structuring joint ventures and strategic alliances; representation of physician groups and hospitals in civil and criminal investigations; analysis of physician self-referral (Stark), fraud and abuse, and other federal and state regulatory issues in operational matters affecting health care providers; and advising health care providers, health plans, and device manufacturers regarding patient privacy issues, including compliance with HIPAA. Mr. Johnson received his JD at the University of Minnesota.

Rep. Phyllis Kahn, PhD, MPA, is a member of the Minnesota legislature serving her 17th term. Her legislative interests include issues dealing with pension and investment policy, science and technology (most recently DNA testing and the role of biotechnology in agriculture), information policy, natural resources, and women's rights. She has been the chief author of the Minnesota Clean Indoor Air Act (controlling smoking in public places), the computer crime



and computer virus laws, and legislation on nuclear safety, radioactive waste disposal, field tests of genetically modified crops, and infectious waste disposal. Rep. Kahn has also authored laws to require gender equity in athletics and laws prohibiting discrimination based on age or disability. She has been instrumental in obtaining funding for parks, trails, historic preservation, art-enhancement of state buildings, and the expansion of community and urban forests. She has served on many national committees, particularly in the field of science and public policy. She has been elected a Fellow of the American Association for the Advancement of Science (AAAS) and the Chair of the AAAS section on "General Interest in Science and Engineering." Rep. Kahn received a PhD in Biophysics from Yale and a MPA from the J.F.K. School of Government at Harvard University.

Vanessa Laird, MA, JD, is the Vice President and Senior Counsel for Medtronic's Cardiac Rhythm Disease Management business. Ms. Laird joined Medtronic in 1998 as Senior Legal Counsel for Europe, Middle East, and Africa based in Tolochenaz, Switzerland, and served as the Vice President and Senior Counsel for the company's Neurological Division before moving into her present role. Prior to Medtronic, she practiced U.S. and international law in the Legal Adviser's Office at the U.S. Department of State. Earlier in her career, she taught law at the University of Sheffield in England, and clerked for Judge Stephen S. Trott of the U.S. Court of Appeals for the 9th Circuit. Ms. Laird holds a BA in English and political science from Williams College, *magna cum laude* with Highest Honors in English; a BA and MA in politics, philosophy and economics from Oxford University (Worcester College); and a JD from Stanford University.

Donald Lewis, JD, is a founding shareholder of the law firm of Halleland Lewis Nilan & Johnson. His practice includes employment and commercial litigation. His clients include ANC Rental Corp., Ford Motor Company, Home Depot USA, JP Morgan Chase, the Metropolitan Council, the City of Minneapolis, Minneapolis Public Schools, and Target Stores. Prior to entering private practice, Mr. Lewis served for 6 years as an Assistant U.S. Attorney for the District of Minnesota, working as a federal criminal prosecutor focusing on economic and tax crimes. He was formerly employed as a trial attorney in the Civil Rights Division of the U.S. Department of Justice in Washington, DC. He has served on boards of directors of several non-profit organizations, and is Chair of AMICUS. He is a former member of the Board of Governors of the National Bar Association, and has served as President of the Minnesota Minority Lawyers Association. He has been a legal writing instructor and tutor at the William Mitchell College of Law. He is a Fellow of the American College of Trial Lawyers, the American Bar Foundation, and the American Law Institute. Mr. Lewis received his undergraduate journalism degree with distinction from Northwestern University and is a graduate of Harvard Law School.

Kenneth A. Liebman, JD, Faegre & Benson LLP, is Chair of Faegre & Benson's Intellectual Property Group. He served as lead counsel for the University of Minnesota in its patent licensing litigation with Glaxo Wellcome over the AIDS drug Ziagen. The case settled with the defendant recognizing the validity of the University's patents and agreeing to pay royalties estimated to be \$300 million over the life of the patents. The settlement is reported to be the largest ever obtained by any public university in patent license litigation. He has also been an Adjunct Professor at the University of Minnesota Law School and William Mitchell Law School. Mr. Liebman received his JD from Yale Law School.

Ruth A. Mickelsen, JD, MPH, is Vice President & Ethics Advisor in the Office of Clinical Excellence for Allina Hospitals and Clinics, a nonprofit health care organization headquartered in Minneapolis that includes community and tertiary care hospitals and a multi-clinic physician organization. She has been an Adjunct Professor of Health Law at the University of Minnesota Law School and William Mitchell College of Law. She was appointed a Distinguished Practitioner in Residence at William Mitchell College of Law during the 1999-2000 academic year. Ms. Mickelsen was a member of the Board of Directors of the American Society of Law, Medicine & Ethics (ASLME) (1997-2003) and a past-President of ASLME (2002). She is also a legal advisor to the Minnesota Center for Healthcare Ethics. She is co-author of *Law and Mental Health Professionals* (revised 1998) and a writer and lecturer on issues of health law, policy, and ethics. Ms. Mickelsen was awarded a Bush Leadership Fellowship in 1985 and has been named a leading health law lawyer by the *Minnesota Business Guidebook to Law and Leading Attorneys*. She received her JD from William Mitchell College of Law and her MPH from Harvard University.

Adonis Neblett, JD, is a shareholder of Fredrikson & Byron's Intellectual Property Group. His practice focuses on prosecution of U.S. and international patent applications in a variety of technologies, including chemical, environmental, medical devices, aerospace, films, coatings, alternative energy (solar, wind, and biofuels),



Advisory Board member Ruth Mickelson, JD, with Joint Degree student Iina Chaudhuri, JD, MPH candidate in Public Health Administration & Policy, at the Fall 2006 Advisory Board Reception.



Joint Degree student Sharada Devarsetty, JD, MS candidate in MCDB&G, with Advisory Board member Donald Lewis, Esq., host for the 2006 Advisory Board Reception at the law firm of Halleland Lewis Nilan & Johnson.





*Advisory Board member
Win Rockwell, JD and Joint Degree
student Andrew Gibbons, JD, MS
candidate in Science, Technology &
Environmental Policy, at the
Fall 2006 Advisory Board Reception.*



*Advisory Board member Representative
Phyllis Kahn, PhD, with Joint Degree
program student Alex Galaitis, JD,
MS candidate in MCDB&G, and
Prof. Susan Wolf, JD, at the Fall 2006
Advisory Board Reception.*



*Joint Degree student Kelsey
Brodsho, JD, MS candidate in
Health Services Research, Policy,
and Administration, at the Fall
2006 Advisory Board Reception.*

and mechanical. He advises clients on all aspects of intellectual property assets protection as well as technology development and transfer agreements, including licensing and joint venture agreements. His practice includes product clearance/freedom-to-operate and due diligence analyses, and related opinion work. From 2004 to 2006, he served as Chair of the Intellectual Property Group. Prior to joining Fredrikson & Byron, he practiced environmental law and intellectual property law in both the private and public sector and served most recently in the Minnesota Attorney General's Office. He has litigated in state and federal courts at both the trial and appellate levels. He received his JD from University of Washington School of Law, and his SB from Massachusetts Institute of Technology.

Winthrop A. Rockwell, JD, Faegre & Benson LLP, concentrates on commercial and product liability litigation. He is a member of Faegre & Benson's Management Committee, where his responsibilities include oversight of the firm's international operations and practice development. Mr. Rockwell served for 6 months in 1979 as Associate General Counsel of President Carter's Commission on the Accident at Three Mile Island. He has served as a board member of various Minnesota nonprofit organizations and is a recent past member of the Board of Directors of the Minnesota Center for Book Arts. Mr. Rockwell is a Fellow of the British-American Project founded by the Royal Institute of International Affairs and the Johns Hopkins University School of Advanced International Studies. Before law school, he worked on the foreign desk of the *New York Times* and as an Assistant to the President of Dartmouth College. Mr. Rockwell received his JD from New York University.

Mark Rotenberg, JD, MA, MPhil, has served as the University of Minnesota's General Counsel since 1992. Previously he was a partner at Dorsey & Whitney, specializing in employment litigation and labor law. He served in the U.S. Department of Justice's Office of Legal Counsel, which provides legal counsel to the President, White House staff, and heads of the Executive Departments. Mr. Rotenberg also served as a law clerk to the Honorable Patricia M. Wald, U.S. Court of Appeals, District of Columbia Circuit. He earned his BA *magna cum laude*, from Brandeis University, and his MA, MPhil, and JD degrees from Columbia University, where he also served as an Editor of the *Columbia Law Review*. He is a member of the American Law Institute (ALI), and is an Adjunct Professor in both the Law School and the College of Liberal Arts of the University of Minnesota.

Ann L. Russell, JD, MSW, is a lawyer with 23 years of experience in advising health care entities. Currently an Associate Counsel for Catholic Health Initiatives, a national nonprofit organization with over 60 hospitals, clinics, and skilled nursing facilities, she has also represented the University of Minnesota Hospital and Clinic and Hennepin County Medical Center and Community Health Department. Ms. Russell has extensive experience in advising health care providers on transactional, operational, regulatory, and patient care matters as well as ethical dilemmas. She is currently a member of the Ethics Committees of the University of Minnesota Medical Center, Fairview and Hennepin County Medical Center, and serves on the Ethics Advisory Committee to the Archbishop of St. Paul, MN. She served for 10 years on the Advisory Board to the University of Minnesota Center for Bioethics. Ms. Russell has taught biomedical ethics at William Mitchell College of Law. Prior to practicing law, Ms. Russell was a psychiatric social worker in the Hennepin County Mental Health Center.

Paul Savereide, JD, PhD, is a Senior Associate at Patterson, Thuente, Skaar, and Christensen, a Minneapolis law firm specializing in intellectual property law. Previously, he was a Senior Intellectual Property Attorney at Cargill, Inc. and Corporate Patent Counsel for Chiron Corporation in Emeryville, CA. He also worked as an Associate with the Minneapolis office of the Dorsey & Whitney law firm. Dr. Savereide earned his JD and PhD in Cell and Developmental Biology from the University of Minnesota. He is a member of the Minnesota Bar and is registered to practice before the U.S. Patent and Trademark Office as a Patent Attorney.

Debra A. Shetka, JD, is a solo practitioner in Granite Bay, CA. She is a frequent speaker on biotechnology patent issues and has lectured on patent interference law at Stanford University, Santa Clara University School of Law, and the University of Washington. Her practice focuses on life science patent law with a special emphasis on patent interferences and appeals to the Court of Appeals for the Federal Circuit. Ms. Shetka was involved in two especially important Federal Circuit appeals addressing the patentability of DNA sequences, as principal author in an appeal on behalf of Chiron Corporation and as *amicus curiae* on behalf of the Biotechnology Industry Organization and the Bay Area Bioscience Center. Ms. Shetka received her law degree at the University of Minnesota where she was Editor-in-Chief of the *Journal of Law & Inequality*. After law school, she clerked for the Honorable Daniel M. Friedman, U.S. Court of Appeals for the Federal Circuit.



Mark T. Skoog, JD, PhD, is a partner at Merchant & Gould PC. He practices general intellectual property law with an emphasis on client counseling and patent prosecution. He also has concentrated on infringement and validity analyses of patents in biotechnology, chemistry, and pharmaceuticals. He has drafted and prosecuted patents in the areas of chemistry, biotechnology, pharmaceuticals, medical devices, and power tools. Before becoming a patent attorney, Dr. Skoog spent a decade as a researcher and research manager in the pharmaceutical industry. His research experience includes design, discovery, and evaluation of enzyme inhibitors as therapies for inflammatory, autoimmune, and viral diseases. He received his PhD in Biochemistry at Indiana University and his JD at the University of Minnesota.

Byron E. Starns, JD, is a shareholder and partner at the firm of Leonard, Street and Deinard, practicing in the areas of environmental and public law, energy, and regulated industries. He is chair of the firm's Litigation Division. Mr. Starns served as Minnesota Chief Deputy Attorney General (1974-79) and Deputy Attorney General for the Minnesota Pollution Control Agency (1973-74). He is admitted to practice in the State of Minnesota, the State of Illinois, before the U.S. District Court for the District of Minnesota, before the Eighth Circuit Court of Appeals, and before the U.S. Supreme Court. He earned his JD at the University of Chicago.

Martin Stillman, JD, MD, practices internal medicine at Hennepin County Medical Center and is Assistant Professor of Medicine at the University of Minnesota Medical School. He serves on the Core Curriculum Seminar Steering Committee for the Graduate Medical Education Office at the University of Minnesota as well as the Advisory Committee for the monthly publication, *Minnesota Medicine*. He is a Fellow of the American College of Legal Medicine (ACLM), President of the Minnesota Medical Alumni Society, and co-chairs the Health and Safety Committee for the Herzl Camp Board of Directors. Dr. Stillman graduated from the University of Minnesota Law School in 1993 and the University of Minnesota Medical School in 1997. He completed his training in internal medicine at Hennepin County Medical Center in 2000. During his residency, he was recognized as an outstanding teacher, winning a Minnesota Medical Foundation Distinguished Teaching Award.

Margo S. Struthers, JD, Oppenheimer Wolff & Donnelly LLP, is Chair of the firm's Health Law Practice Group. She represents a variety of health care clients, including hospitals and other health care providers, provider associations, managed care and other insurance companies, and medical manufacturers. Her practice involves organizational structure and other issues affecting nonprofit, professional, and business organizations in health care. She also has substantial experience related to health care contracts, institutional and professional licensure, HMO and insurance regulation, fraud and abuse and other compliance issues, director and officer liability, conflict of interest and tax exemption issues, medical staff bylaws and credentialing, bioethical issues, and health information and confidentiality issues. In addition to being an active member and past-Chair of the Minnesota State Bar Association Health Law Section, she is a member of the American Health Lawyers Association and is a past-President of the Minnesota chapter of the former American Academy of Healthcare Attorneys. Ms. Struthers has also written and lectured extensively on a variety of health care, third-party payment, tax exemption, and other nonprofit organization issues. She received her JD at the University of Minnesota.

Judith Walker, JD, is Vice President of Regulatory Affairs and Chief Compliance and Ethics Officer for Blue Cross and Blue Shield of Minnesota. Ms. Walker is accountable for providing leadership on regulatory compliance issues and for maintaining the company's compliance and ethics program. She has held several positions at Blue Cross since joining the company in 1988, most recently serving as Deputy General Counsel. Prior to joining Blue Cross, Ms. Walker worked for the Minnesota Department of Health in HMO regulation and taught undergraduate students at the University of St. Thomas. Ms. Walker serves on the Advisory Board of the Health Law Institute of Hamline University School of Law and is a member of the Health Law Governing Council of the Minnesota State Bar Association. She has participated in the mentoring programs of the University of St. Thomas Law School and the University of Minnesota School of Public Health. She is currently Board Chair of the Minnesota Literacy Council, a statewide nonprofit organization committed to improving lives by improving literacy. Ms. Walker received her undergraduate degree from St. Mary's University in Winona, MN and her law degree from Hamline University School of Law.



Joint Degree Program student Greg Long, JD, MD candidate, with Advisory Board member Dr. Martin Stillman, JD, MD, at the Fall 2006 Advisory Board Reception.



Advisory Board member Margo Struthers, JD, at the Fall 2006 Advisory Board Reception.



Concentration in Health Law & Bioethics

In 2006-07, the University of Minnesota Law School faculty continued to offer Concentrations, enabling Law students to specialize in fields such as Health Law & Bioethics, Human Rights Law, and Labor and Employment Law.

Prof. Susan Wolf is the Faculty Chair of the Concentration in Health Law & Bioethics, which allows students to focus their studies on health care delivery, public health law and ethics, international health, or bioethics. The Health Law & Bioethics concentration requires 12 credits and a combination of required and recommended courses in the Law School, Graduate School, School of Public Health, and Center for Bioethics. Concentration faculty are drawn from across the University, including faculty from the Law School, School of Public Health, Medical School, and Center for Bioethics. Carol Rachac is the Coordinator for the Concentration; she works with interested students to assure that they complete requirements.

These Concentrations build upon and complement the Law School's rigorous standard curriculum and give students access to the expertise of faculty throughout the University. Interested students confer early in their legal education with the Faculty Chair of a given Concentration to discuss their intended course of study and how a Concentration can enhance their career development. Concentrations are available to all JD and LLM students, including those pursuing dual degrees. Students who have successfully completed the Concentration receive a special certificate and a statement on their transcript saying that the requirements of the Concentration have been fulfilled. More information on the Law School's concentrations may be found at www.law.umn.edu/current/degrees/concentrations.html. For information on the Concentration on Health Law & Bioethics please visit www.jointdegree.umn.edu/degree_programs/concentrations.php.



*Prof. Jeffrey Kahn, PhD, MPH,
Center for Bioethics, moderating
the 2007 Deinard Memorial Lecture
on Law & Medicine.*



*Consortium Research Assistant, Suzanne
Sobotka, MPH, speaks at the May 1, 2006
symposium on "Managing Incidental Findings
in Human Subject Research."*



Deinard Memorial Lecture Series on Law & Medicine

The Joint Degree Program and the Center for Bioethics launched the **Deinard Memorial Lecture Series on Law & Medicine** in the Spring of 2004. This annual lecture series is supported by generous donations from the family of Amos S. Deinard, Sr. (1898-1985) and the law firm of Leonard, Street & Deinard in honor of Amos Deinard, Sr. and his brother, Benedict S. Deinard (1899-1969). The Deinard brothers were founding partners of the Minneapolis-based law firm of Leonard, Street and Deinard. Both attended the University of Minnesota Law School and Harvard Law School. Amos Deinard was a distinguished attorney widely known for his persistent work to eliminate discrimination in hiring. Appointed to the Minneapolis Fair Employment Practices Commission in 1945 by Mayor Hubert H. Humphrey, he served on the Commission for 17 years, 15 of them as chairman. Benedict Deinard was a successful trial lawyer, an Adjunct Professor of Law at the University of Minnesota, a Deputy Attorney General in the U.S. Department of Justice during World War II, and one of 4 civilians asked to participate in the Nuremberg war crimes trials.

Prof. Stephen J. Morse, JD, PhD, University of Pennsylvania, presented the 2006-07 Deinard Memorial Lecture on **"New Neuroscience, Old Legal Problems: The Case of Juvenile Responsibility."** The 2007-08 Deinard lecturer will be **Prof. George Annas, JD, MPH**, Boston University. He will speak on **"The Legacy of the Nazi Doctors' Trial for American Bioethics and International Human Rights Law."**

In his talk, Prof. Morse addressed the legal implications of neuroscientific advances that have been fueled by the revolution in imaging technology. Prof. Morse suggested that, although the technology is new, the challenges it presents are often overstated and actually are familiar. Existing legal, moral, and political resources are adequate to respond. He discussed juvenile responsibility and used the U.S. Supreme Court's recent decision abolishing the death penalty for juveniles, *Roper v. Simmons*, as a case study. Commentators were Profs. Monica Luciana, PhD, Department of Psychology and Barry Feld, JD, PhD, Law School, University of Minnesota.

The event provided 1.5 credits of continuing legal education (CLE) and 1.5 credits of continuing medical education (CME). Further information and video of all the Deinard Memorial Lectures is available on our websites at http://www.jointdegree.umn.edu/conferences/deinard_series.php and http://www.lifesci.consortium.umn.edu/conferences/deinard_series.php.



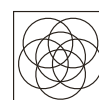
*Left: Amos S. Deinard, Sr. (1898–1985).
Right: Benedict S. Deinard (1899–1969).*



*Prof. Stephen J. Morse, JD, PhD,
University of Pennsylvania.*



*From Left to Right: Prof. Jeffrey Kahn,
Ms. Miriam Kelen, Prof. Amos Deinard, Jr.,
Prof. Stephen J. Morse, Joseph M. Finely,
Esq., Harold D. Field, Jr., Esq., Theodore
Deinard, Byron Starns, Esq., Prof. Susan
Wolf at the Deinard Memorial Lecture
on Law & Medicine.*





Consortium on Law and Values in Health, Environment & the Life Sciences™

UNIVERSITY OF MINNESOTA



Joint Degree Program in Law, Health & the Life Sciences™

UNIVERSITY OF MINNESOTA



AcademicHealthCenter
UNIVERSITY OF MINNESOTA



Consortium Members

As the Joint Degree Program recruits and trains gifted students to tackle interdisciplinary problems in health and the life sciences, the Consortium links leading centers and programs at the University of Minnesota to do the same. Our 18 member centers and programs are described below.

The Joint Degree Program <www.jointdegree.umn.edu> is represented by its founding Director, Prof. Susan Wolf, McKnight Presidential Professor of Law, Medicine & Public Policy; Faegre & Benson Professor of Law; and Professor of Medicine, and Associate Director Prof. Colin Campbell, Associate Professor, Department of Pharmacology.

The Center for Bioethics <www.bioethics.umn.edu> strives to advance and disseminate knowledge concerning ethical issues in health care, biomedicine, and the life sciences. The Center conducts original interdisciplinary research, offers educational programs and courses, fosters public discussion and debate through community outreach activities, and assists in the formulation of public policy. The Center is directed by Prof. Jeffrey Kahn, Maas Family Chair in Bioethics and Professor of Medicine, Philosophy, and Health Services Research & Policy.

The Biomedical Genomics Center <www.bmgc.umn.edu> was created as a part of the University of Minnesota Genomics Initiative to advance genomics research as it applies to human and animal health and to foster intercollegiate programs. Directed by Prof. Vivek Kapur, Professor of Veterinary Pathobiology and Microbiology, the Center is using the vast amounts of information provided by sequencing of human, animal, and microbial genomes to find new ways to treat and prevent disease.

The Microbial and Plant Genomics Institute <www.mpgi.umn.edu> was established in 2006 when the University's Center for Microbial and Plant Genomics and Plant Molecular Genetics Institute merged. The coordinators for the new MPGI are Profs. Neil Olszewski (plant biology) and Michael Sadowsky (soil, water, and climate).

The Stem Cell Institute <www1.umn.edu/stemcell> works to further basic research in genetics and genomics, translate basic research into novel therapies for genetic and degenerative disorders, apply new stem cell-based therapies in the clinic, advance and disseminate knowledge concerning the biology and physiology of stem cells, foster and increase public awareness of stem cells and their potential clinical applications, and address ethical issues in stem cell biology and therapies. The Institute was directed by Prof. Catherine Verfaillie, McKnight Presidential Chair in Stem Cell Biology until 2007 and represented in the Consortium by Prof. Dan Kaufman. The Institute is now directed by Prof. Jonathan Slack.

The Institute of Human Genetics <www.med.umn.edu/ihg> is committed to educating and training students for opportunities in biomedical research and clinical practice. Research areas at the Institute include behavioral genetics, clinical genetics, gene therapy, genetic epidemiology, developmental biology, microchemical facility, and molecular genetics. The Institute is directed by Prof. Harry Orr, Professor of Laboratory Medicine and Pathology. Prof. Bonnie LeRoy, Director of the Graduate Program in Genetic Counseling, represents the Institute at Consortium meetings and events.

The Center for Infectious Disease Research & Policy <www.cidrap.umn.edu> is led by Prof. Michael Osterholm, Director and Professor in the University's School of Public Health; Jill DeBoer, MPH, Associate Director; and Elaine Collison, MPH, Director of Operations. The Center's mission is to support the development of public policy relating to the prevention, control, and treatment of infectious diseases. The Center works to ensure that such policy reflects the most current biomedical knowledge. The Center also strives to promote sound practices among both health care professionals and the public to reduce illness and death from infectious diseases.



The Center for Animal Health & Food Safety <www.cahfs.umn.edu> is led by Prof. William Hueston, Director, and Shaun Kennedy, Associate Director. Prof. Hueston has appointments in the School of Public Health's Division of Epidemiology and the College of Veterinary Medicine's Department of Veterinary Population Medicine. The Center plays a leadership role in assuring food safety from the farm to the consumer. It does this regionally and nationally through aggressive risk communication, applied research, integrated animal and public health surveillance, expanded educational programs, and facilitation of creative prevention and quality assurance strategies involving producers, processors, distributors, retailers, food service, and consumers.



The National Center for Food Protection and Defense <www.ncfpd.umn.edu> is a university-based research center supported by the U.S. Department of Homeland Security bringing together national academic, industry, and public sector partners to develop ways of enhancing our nation's capability to protect the food supply from intentional contamination. The Center is led by Shaun Kennedy, Director, College of Veterinary Medicine, Prof. Frank Busta, Director, Emeritus and Senior Science Advisor, and Jonathan Seltzer, Assistant Director.



The Center for Neurobehavioral Development <www1.umn.edu/cnbd/index.htm> is directed by Prof. Michael Georgieff, Professor of Pediatrics and Child Psychology. The Center studies the developing human brain and its relationship to normal and abnormal development. The Center trains graduate students, funds research projects, and serves as a site for non-medical developmental clinics.



The Center for Environment & Health Policy <enhs.umn.edu/files/research> is funded by grants from the U.S. Environmental Protection Agency, Legislative Commission on Minnesota Resources, Minnesota Pollution Control Agency, Minnesota Offices of Environmental Assistance, and the University of Minnesota. The Center focuses on improving assessment, management, and communication of environmental health risks and fostering environmental policy decisions. Prof. William Toscano, Head of the School of Public Health's Division of Environmental Health Sciences, is the Center's director.



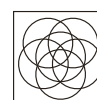
The Center for Plants and Human Health <cphh.cfans.umn.edu> is coordinated by Prof. Gary Gardner, Professor of Horticultural Science. The Center works to develop synergy between agriculture and the health sciences, primarily in research. The potential for plants and plant products to contribute to human health goes under a wide variety of labels – phytonutrients, nutraceuticals, functional foods – and encompasses plant science, natural products chemistry, pharmacology, nutrition, and laboratory and clinical medicine. The University of Minnesota Twin Cities campus is one of the few major research universities in the country that has both an Academic Health Center and a College of Agriculture. The Center provides a forum for the development and interchange of information relevant to human health and serves as a stimulant for interdisciplinary collaboration leading to new research opportunities and funding in this vital area.



The Program in Agricultural, Food, and Environmental Ethics aims to offer educational programs and courses, conduct original interdisciplinary research, and foster public discussion and debate about food consumption, the human relationship to the nonhuman environment, and the ethics of agricultural research, production, and distribution. The goals of the Program are to formulate and identify questions of ethical significance to Midwestern residents concerning agriculture, food, and the environment; to develop and evaluate moral theories and principles related to these questions; and to explore the application of these moral theories and principles by individuals and groups. The Program was directed by Prof. Dan Philippon, Department of Rhetoric, through Spring 2007.



The Institute on the Environment <www.environment.umn.edu> was created in response to a September 2006 report from the Provost's Advisory Committee for the Institute on the Environment. The Institute on the Environment is a portal for environment-related teaching, research, and outreach at the University of Minnesota. It spans all campuses in the University system and all colleges and departments on each campus. Prof. Deborah Swackhamer (environmental health) is the Interim Director.



CENTER for SCIENCE,
TECHNOLOGY,
and PUBLIC POLICY



CENTER FOR SPIRITUALITY AND HEALING

AcademicHealthCenter
UNIVERSITY OF MINNESOTA

The Center for Science, Technology, and Public Policy <www.hhh.umn.edu/centers/stpp> fosters understanding of the role of science and technology in our society, especially in relation to economic growth, health, the environment, education, and national security. The Center also supports research and teaching in the Humphrey Institute's MS degree in Science, Technology, and Environmental Policy. The Center has been led by Profs. Kenneth Keller, Humphrey Institute and Department of Chemical Engineering and Materials Science, and Jennifer Kuzma, PhD, Humphrey Institute. It is now led by Steve Kelley, JD, Senior Fellow, Humphrey Institute.

The International Science and Technology Practice and Policy Center <www.instepp.umn.edu> undertakes economic research on strategic science and technology policies. The Center analyzes private and governmental behavior affecting the conduct, performance, and economic consequences of R&D worldwide. Prof. Philip Pardey, Department of Applied Economics, directs this Center.

The Water Resources Center <wrc.umn.edu/aboutwrc/index.html> conducts and funds research and outreach related to water resources in the state of Minnesota. The graduate program in Water Resources Science also is administered by the WRC. As the focal point for a broad range of research, education, and information exchange related to water resources, the WRC links faculty and student researchers with practicing professionals and citizens to address water resources issues. This facilitates effective delivery of research results to citizens and decision makers and opens new avenues for multidisciplinary and interagency partnerships. The Center is co-directed by Prof. Deborah Swackhamer, Division of Environmental Health Sciences; Prof. James L. Anderson, Department of Soil, Water, and Climate; and Faye Sleeper, MA, College of Food, Agricultural and Natural Resource Sciences.

The Center for Spirituality and Healing <www.csh.umn.edu>, established in 1995, is a nationally recognized leader in integrative medicine, bringing together biomedical, complementary, cross-cultural, and spiritual care. The Center provides interdisciplinary education, clinical care, and outreach integrating evidence-based research to establish a new model of health care in the 21st century. The Center is directed by Prof. Mary Jo Kreitzer, School of Nursing.

Presidential Interdisciplinary Initiative on Law and Values

University of Minnesota President Robert Bruininks named the Consortium on Law and Values in Health, Environment & the Life Sciences one of 8 Interdisciplinary Academic Initiatives in his October 2, 2003 State of the University Address. Given the Consortium's growth and the fact that it now crosses all colleges at the University, President Bruininks named Senior Vice President and Provost E. Thomas Sullivan as head of the Consortium's Initiative in 2006. We are delighted to have Provost Sullivan at the helm and benefit greatly from his guidance.

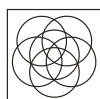
In 2006-07, the Presidential Initiative allowed the Consortium to:

- publish the *Minnesota Journal of Law, Science & Technology*;
- offer intramural grant funding to further work on the societal implications of the life sciences by Consortium member centers and programs or departments participating in the Joint Degree Program;
- offer successful public events including our Lecture Series on Law, Health & the Life Sciences; and
- host the inaugural Visiting Consortium Professor.

The Consortium is grateful to the Office of the President and the Office of the Senior Vice President for Academic Affairs and Provost for their support and confidence. More information on all of the Initiatives may be found at <www1.umn.edu/pres/01_initiatives.html>.



University of Minnesota President
Robert Bruininks, PhD, with
Prof. Susan Wolf, JD, at the Joint
Degree Program Welcome Reception.



Joint Degree Program in Law, Health & the Life Sciences
Consortium on Law and Values in Health, Environment & the Life Sciences

Minnesota Journal of Law, Science & Technology

The Consortium, together with the University of Minnesota Law School, inaugurated this unique journal in 2004-05. The *Minnesota Journal of Law, Science & Technology (MJLST)* is a multidisciplinary journal published twice annually, edited by faculty from across the University of Minnesota as well as by law students. *MJLST* addresses issues in intellectual property, technology policy and innovation, bioethics, and law and science, while maintaining a rigorous grounding in law, values, and policy. *MJLST* is based in the Law School and staffed by law students, but is overseen and managed by the Consortium. The journal is made possible by support received from the Presidential Initiative on Law and Values, the Law School, Advisory Board members, and subscriptions. The journal was formerly known as the *Minnesota Intellectual Property Review (MIPR)*.

The journal features a dual masthead, one for the faculty editors and another for the student editors. *MJLST* is committed to serving as an educational opportunity for law students and a venue for their scholarly publications. The student staff and board are chosen competitively by the students. **Adjunct Prof. Jordan Paradise** is the Faculty Editor-in-Chief, **Prof. Susan Wolf** is the Faculty Executive Editor, and **Profs. Jeffrey Kahn, Ruth Okediji,** and **Daniel Philippon** are the Faculty Associate Editors. **Jennifer Bolos** was the 2006-07 Student Editor-in-Chief; **Benjamin Hendrick** was the Student Executive Editor. **Peter Thomas** is the 2007-08 Student Editor-in-Chief; **Kate Dyson** is the Student Executive Editor. **Monica Wittstock** is the Executive Administrator of *MJLST*. A Faculty Editorial Board helps review and edit faculty-written articles for *MJLST*. The Faculty Editorial Advisory Board includes representatives from Consortium member centers and programs as well as University departments working on the societal implications of scientific advancements. The complete faculty and student mastheads plus the Faculty Editorial Advisory Board roster may be found at <www.mjlst.umn.edu>.

We are also pleased that *MJLST* has been ranked #1 in submissions for 2006 among science and technology law reviews by ExpressO, a manuscript submissions service of the Berkeley Electronic Press. For full rankings, please visit <<http://law.bepress.com/expresso/2007/subject.html>>.

Full-volume subscriptions are \$20 (two issues per volume). Single issues are available for \$12 each. Please subscribe at <www.mjlst.umn.edu> or e-mail us at mjlst@umn.edu.

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The Consortium would like to acknowledge our 2006 Faculty Editor-in-Chief Prof. Jim Chen.

We also thank Senior Vice President for Academic Affairs and Provost E. Thomas Sullivan and Interim Co-Deans Guy Charles and Fred Morrison of the Law School for support we received for the *Minnesota Journal of Law, Science & Technology*.



Volume 8, Issue 1: Table of Contents

ARTICLES

Patent Reform and Differential Impact

Matthew Sag & Kurt Rohde

Curing Confusion: An Overview of the Regulatory Complexities of Obtaining Pharmaceutical Trademarks and a Prescription for Reform

Dana M. Herberholz

Christopher N. Banthin

Potentially Reduced Exposure Cigarettes: The Need for a Public Health Policy

Whatever Happened to the Baby Bells? Internationalization and De-internationalization in the Telecommunications Industry

Jason Whalley & Peter Curwen

SYMPOSIUM

Terrorist Threats to our Food Supply: Food Protection and Defense-Science, Ethics & Law

Colloquy: Towards Progress in Food Protection and Defense

Julie Ostrowsky, Editor

Caroline Smith DeWaal

Food Protection and Defense: Preparing for a Crisis

Role of Regulation in Minimizing Terrorist Threats Against the Food Supply: Information, Incentives, and Penalties

Michael T. Roberts

Donald W. Schaffner

Asha M. George

Modeling the Public Health System Response to a Terrorist Event

The Public Health Tesseract: Managing the Multiplicative Threat

BOOK REVIEW

Our Agriculture Policy Dilemma: The Omnivore's Dilemma: A Natural History of Four Meals, by Michael Pollan (2006)

Morgan L. Holcomb

NOTES

Dad Was Born A Thousand Years Ago? An Examination of Post-Mortem Conception and Inheritance, with a Focus on the Rule Against Perpetuities

Joshua Greenfield

Byron Holz

Chaos Worth Having: Irreducible Complexity and Pragmatic Jurisprudence

RECENT DEVELOPMENTS

Metabolite Labs and Patentable Subject Matter: A Review of Federal Circuit and PTO Precedent was Narrowly Averted, but for How Long?

Michelle E. Dawson

Volume 8, Issue 2: Table of Contents

ARTICLES

Rethinking the Role of the Written Description Requirement in Claim Construction: Whatever Happened to "Possession is Nine-Tenths of the Law?"

Douglas R. Nemec & Emily J. Zelenock

The Science of DNA Identification: From the Laboratory to the Courtroom (and Beyond)

David H. Kaye

Edward R.B. McCabe & Linda L. McCabe

Genomic Medicine: A Future Flooded with Risk Information

SYMPOSIUM

Toward a General Theory of Law and Technology

Introduction

Gaia Bernstein

Kieran Tranter

Nomology, Ontology, and Phenomenology of Law and Technology

Arthur Cockfield & Jason Pridmore

A Synthetic Theory of Law and Technology

Andrea M. Matwyshyn

Technology, Commerce, Development, Identity

Gregory N. Mandel

History Lessons for a General Theory of Law and Technology

Daniel J. Gifford

Law and Technology: Interactions and Relationships

Lyria Bennett Moses

Why Have a Theory of Law and Technological Change?

Frank Pasquale

Technology, Competition, and Values

Gaia Bernstein

The Role of Diffusion Characteristics in Formulating a General Theory of Law and Technology

NOTES

In Re Fisher: Denial of Patents for ESTs Signals Deeper Problems in the Utility Prong for Patentability

Lillian Ewing

Mod as Heck: Frameworks for Examining Ownership Rights in User-Contributed Content to Videogames, and a More Principled Evaluation of Expressive Appropriation in User-Modified Videogame Projects

John Baldrica

C.B.C. Distribution and Marketing, Inc. v. Major League Baseball Advanced Media, LP: Why Major League Baseball Struck Out and Won't Have Better Luck in its Next Trip to the Plate

Daniel Mead



Visiting Consortium Professor

Thanks to funding from the President's Interdisciplinary Academic Initiative in support of the Consortium, we inaugurated the Visiting Consortium Professorship in 2006-07. **Prof. Thomas (Tim) Greaney, JD**, St. Louis University School of Law, visited from October 30-November 2, 2006. Prof. Greaney delivered a public lecture on "**Medicare 'Modernization': Nation Building or Insurgency?**" He also participated in the Law School's Faculty Works-in-Progress series and met with Joint Degree Program students and faculty from across the campus.

Prof. Greaney is the Chester A. Myers Professor of Law and Co-Director of the Center for Health Law Studies at St. Louis University. He also holds an appointment as Associate Professor of Hospital and Health Care Administration at the St. Louis University School of Public Health. His current research focuses on the Medicare Modernization Act's attempt to inject competition into Medicare and analysis of how consumer-directed health plans affect antitrust analyses of markets. A full bio and list of publications may be found at law.slu.edu/faculty/profiles/profile.asp?username=greanetl.

The 2007-08 Visiting Professor will be **Professor Stephen W. Pacala, PhD**, Petrie Professor of Biology and Director, Princeton Environmental Institute. Prof. Pacala will be visiting from March 10-14, 2008 and will present a public lecture on "**Equitable Solutions to Greenhouse Warming: On the Distribution of Wealth, Emissions, and Responsibility Within and Between Nations.**" He will also participate in departmental seminars and meet with JDP students and faculty. A full bio and list of publications may be found at www.eeb.princeton.edu/FACULTY/Pacala/Pacala.html.



2006 Visiting Consortium Professor
Thomas (Tim) Greaney, JD,
St. Louis University.

Consortium Requests for Proposals (RFPs)

To encourage campus-wide work on the societal implications of problems in health, environment, and the life sciences, the Consortium awards intramural grants. In 2006-07 we issued 4 RFPs and made 11 awards totaling \$122,641. The 2006-07 subcommittee recommending the intramural awards for faculty, students, and departments to the full Consortium was Profs. Michael Georgieff, Bonnie LeRoy, Elizabeth Wilson, and Susan Wolf. The subcommittee for the 2006-07 RFP to Consortium members and JDP partners included Profs. Dan Kaufman, Jeffrey Kahn, Deborah Swackhamer, Shaun Kennedy, Bonnie LeRoy, Betsy Wattenberg, and Susan Wolf. Committee members recused themselves from consideration of applications as appropriate.

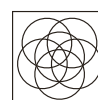
Consortium Members and JDP Partners

In In Spring 2006, we issued a Request for Proposals to Consortium member centers and graduate or professional programs or departments participating in the Joint Degree Program seeking funding for research, projects, or colloquia. These grants are made possible by funds received through the Presidential Interdisciplinary Initiative. The Consortium made 3 awards:

- Profs. Kenneth Brooks, Dorothy Anderson, and Sherry Enzler, Graduate Studies Program in Natural Resources, Science & Management, "Assessing the Success of and the Role of Law in Developing Structures to Protect Watershed Ecosystems and Ecosystem Services" (\$28,543 awarded);
- Profs. Susan Foote, Beth Virnig, Stephen Parente, and Robert Town, Division of Health Services Research, Policy, and Administration, "Mining Medicare Claims Data: How to Improve Quality and Value in Medicare" (\$16,212 awarded); and
- Profs. Kenneth Keller, Elizabeth Wilson, Miriam Fischlein, and Tim Smith, Center for Science, Technology, and Public Policy, "Institutional Considerations for Greenhouse Gas Reductions: Survey and Assessment of Conservation Improvement Programs in Minnesota" (\$32,856 awarded).



Dean and Professor Allen Levine, PhD,
College of Food, Agricultural and
Natural Resource Sciences, comments
on the Lecture Series presentation
by Prof. David Castle, PhD, University
of Ottawa, on "Genomic and
Nutritional Profiling: The Ethics
of Nutrigenomics."



Intramural RFPs

Each year, the Consortium issues 3 intramural RFPs. In November 2006, we again issued RFPs for University of Minnesota faculty; for departments, programs, and centers; and for graduate and professional students.

Faculty

The RFP for faculty invited proposals to fund research, projects, or curricular innovation on the societal implications of problems in health, environment, or the life sciences. The Consortium made 3 awards:

- Prof. David Andow, Entomology, "Improving the International Capacity for Ecological Risk Assessment of Genetically Engineered Crops" (\$10,000 awarded);
- Prof. Kathryn Hanna, Biology, and undergraduates Justin Miles and Sean Polster, "Bursting the Boundaries of Scientific Discoveries: A Colloquium for Undergraduates" (\$3,200 awarded); and
- Prof. Lynda Ellis, Lab Medicine and Pathology, "A Workshop for Predicting the Fate of Chemicals in the Environment" (\$5,613 awarded).

Graduate and Professional Students

The RFP to graduate and professional students was intended to provide a stipend for research and writing in the Summer 2007 or academic year 2007-08. We were delighted that the RFP stimulated 45 proposals from students in 27 programs around the University. Four awards were made:

- Jeannie Shinozuka, PhD candidate, History, "A 'Contagious and Poisonous Yellow Peril'? Japanese and Japanese Americans in Public Health and Agriculture, 1890s-1950" (\$7,000 awarded);
- Hadas Kushnir, PhD candidate, Conservation Biology, "Identifying the Causes of Human-Lion Conflict in Southeastern Tanzania" (\$7,000 awarded);
- Rachel Brummel, PhD candidate, Conservation Biology, "Burning through Boundaries: Science and Social Learning in Collaborative Wildfire Planning Groups" (\$2,000 awarded); and
- Marianne Beth Samayoa, PhD candidate, History, "Shaping Healthcare in Post-Colonial Latin American: Mexico, Guatemala, and Cuba in Transition" (\$5,217 awarded).

Departments/Programs/Centers

The RFP for departments/programs/centers invited proposals seeking matching funds for colloquia addressing the societal implications of problems in health, environment, or the life sciences. The Consortium made 1 award:

- Prof. C. Kenneth Waters, Minnesota Center for Philosophy of Science and Studies of Science and Technology Program, "Studies of Science and Technology Program Colloquia," (\$5,000 awarded).

All awards are contingent on getting IRB and all other necessary approvals. The Consortium is again issuing the RFP to Consortium members and JDP Partners as well as the other intramural RFPs in November 2007. RFPs and reports on the winning projects may be found at <www.lifesci.consortium.umn.edu/rfps>.



Jordan Paradise, JD, moderates the Lecture Series presentation by Prof. Jose Ordovas, PhD, Tufts University, on "Nutrigenomics: Science, Regulation & Policy."



Grants and Research

Since the Consortium was founded in 2000, one of our primary goals has been to compete for grants to produce original intellectual work on the societal implications of the life sciences. 2006-07 saw great growth in the Consortium's and Joint Degree Program's work in this area. Our research in 2006-07 has been funded by the **National Institutes of Health (NIH)**, the **National Science Foundation (NSF)**, and **The Greenwall Foundation**.

The Consortium also finished its first year of work on a project funded by the **National Science Foundation (NSF)**. This 4-year, \$1.22 million project is examining oversight models for nanobiotechnology. The project, entitled "NIRT: Evaluating Oversight Models for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Societal Context," began September 1, 2006 and involves a national Working Group (see next page). Prof. Susan Wolf, JD (Law School) is the Principal Investigator. Co-Principal Investigators are Prof. Jennifer Kuzma, PhD (Humphrey Institute), Prof. Efrosini Kokkoli, PhD (Institute of Technology), Jordan Paradise, JD (Consortium), and Prof. Gurumurthy Ramachandran, PhD (School of Public Health).

The Consortium completed a 2-year project funded by the **National Human Genome Research Institute at NIH** entitled "Managing Incidental Findings in Human Subjects Research" with a national conference on May 1 to present the project recommendations. Prof. Susan Wolf, JD was the Principal Investigator. Co-Investigators were Profs. Jeffrey P. Kahn, PhD, MPH (Center for Bioethics); Frances Lawrenz, PhD (Educational Psychology); and Charles A. Nelson, PhD (Harvard Medical School and Children's Hospital Boston). In collaboration with a Working Group of prominent national scholars (see next page), the investigators studied how researchers handle incidental findings identified in genomic and imaging research and formulated recommendations. Incidental findings are unexpected findings about an individual research participant that are of potential clinical significance that are beyond the aims of the study. Results of the project will be published in 2008 including a symposium in the *Journal of Law, Medicine & Ethics*.

The Consortium and Center for Bioethics, together with the Biomedical Ethics Research Program at the Mayo Clinic and Mayo College of Medicine, were awarded a grant sponsoring a 2007 Oscar M. Ruebhausen Visiting Professorship by **The Greenwall Foundation**. Zach W. Hall, PhD, former-President of the California Institute for Regenerative Medicine (CIRM) visited the University of Minnesota and Mayo Clinic in October 2007 and deliver a major public lecture titled "Stem Cell Research: At the Intersection of Science, Politics, Law & Culture."

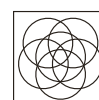
The Consortium and the Institute for Translational Neuroscience (ITN) also received a Presidential Grant from **The Greenwall Foundation** to help support a day-long symposium on "Emerging Problems in Neurogenomics: Ethical & Policy Issues at the Intersection of Genomics & Neuroscience." This symposium will bring together multidisciplinary researchers across the University and invited speakers from beyond the University (see next page) to focus on 4 themes:

- the scope and emerging social implications of neurogenomics;
- ethical, legal, and social issues (ELSI) raised by work on the neurogenomics of childhood disorders such as autism;
- ELSI issues raised by the neurogenomics of adult disorders such as Alzheimer disease; and
- issues raised by collecting, banking, linking, and accessing neuroimaging, genomic, and other data (e.g., clinical records) acquired through neurogenomic research.

In addition to Greenwall funding, support for this symposium is coming from the Academic Health Center, ITN, and the Consortium. Prof. Susan Wolf, JD, is the Principal Investigator and Prof. Harry Orr, PhD and Jordan Paradise, JD, are Co-Investigators on this project.



Prof. Jennifer Kuzma, PhD, Center for Science, Technology & Public Policy, moderated the Lunch Series presentation by Prof. David Relman, MD on "Dual Use and National Security."





U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health

**Working Group for NIH-funded project on
“Managing Incidental Findings on Human
Subjects Research:”**

Prof. Mildred Cho, PhD, Stanford University
Prof. Ellen Wright Clayton, JD, MD, Vanderbilt University
Prof. Joel (JG) Fletcher, MD, Mayo Clinic
Prof. Michael Georgieff, MD, University of Minnesota
Prof. Dale Hammerschmidt, MD, University of Minnesota
Prof. Kathy Hudson, PhD, Johns Hopkins University
Prof. Judy Illes, PhD, University of British Columbia
Prof. Vivek Kapur, PhD, University of Minnesota
Moirá Keane, MA, CIP, University of Minnesota
Prof. Richard King, MD, PhD, University of Minnesota
Prof. Barbara Koenig, PhD, Mayo College of Medicine
Prof. Bonnie LeRoy, MS, University of Minnesota
Prof. Elizabeth McFarland, MD, Washington University in St. Louis
Prof. Lisa Parker, PhD, University of Pittsburgh
Prof. Jordan Paradise, JD, University of Minnesota
Sharon Terry, PhD, Executive Director, Genetic Alliance
and PXE International
Prof. Brian Van Ness, PhD, University of Minnesota
Prof. Benjamin Wilfond, MD, University of Washington



National Science Foundation
WHERE DISCOVERIES BEGIN

**Working Group for NSF-funded project to develop
oversight models for nanobiotechnology:**

Prof. Dan Burk, JD, MS, University of Minnesota
Prof. Stephen Ekker, PhD, Mayo College of Medicine
Prof. Susan Foote, JD, University of Minnesota
Prof. Ralph Hall, JD, University of Minnesota
Robert Hoerr, MD, PhD, President and CEO, Nanocopeia, Inc
Prof. Terrance Hurley, PhD, University of Minnesota
Robbin Johnson, President, Cargill Foundation
Prof. Bradley Karkkainen, JD, University of Minnesota
George Kimbrell, JD, The International Center for Technology
Assessment & the Center for Food Safety
Andrew Maynard, PhD, Chief Science Advisor, Woodrow Wilson
International Center for Scholars
Prof. Kristen Nelson, PhD, University of Minnesota
Prof. David Norris, PhD, University of Minnesota
Prof. Susanna Priest, PhD, University of South Carolina
Prof. David Y.H. Pui, PhD, University of Minnesota
Prof. T. Andrew Taton, PhD, University of Minnesota
Prof. Elizabeth J. Wilson, PhD, University of Minnesota



The Greenwall Foundation

**Participants in a forthcoming symposium on “Emerging Problems in Neurogenomics: Ethical, Legal
& Policy Issues at the Intersection of Genomics & Neuroscience” funded in part by The Greenwall Foundation:**

Prof. David Amaral, PhD, University of California Davis	Prof. Eric T. Juengst, PhD, Case Western Reserve University
Prof. Frank Cerra, MD, University of Minnesota	Prof. Judy Illes, PhD, University of British Columbia
Prof. Mildred Cho, PhD, Stanford University	Prof. Harry Orr, PhD, University of Minnesota
Prof. Ellen Wright Clayton, MD, JD, Vanderbilt University	Prof. Ronald C. Petersen, MD, PhD, Mayo Medical School
Prof. Henry T. Greely, JD, Stanford University Law School	Andrew Singleton, PhD, National Institutes of Health
Prof. Mark Ellisman, PhD, University of California San Diego	Prof. Susan M. Wolf, JD, University of Minnesota





Joint Degree Program in Law, Health & the Life Sciences™

Consortium on Law and Values in Health, Environment & the Life Sciences™

UNIVERSITY OF MINNESOTA

Executive Committee

The Consortium and Joint Degree Program created a joint Executive Committee in 2003. The Executive Committee was established to facilitate the work of the Consortium and Joint Degree Program by spreading the intellectual responsibility for our programming in order to take full advantage of the extraordinary expertise in both programs.

For 2006-07, the Executive Committee was restructured to allow for more continuity by combining elected members with members leading events that year. Committee members were initially elected to 1-3 year terms to establish 3-year staggered terms. Additional committee members led event planning. 2006-07 Committee members included:

Prof. Jeffrey Kahn (Center for Bioethics), elected to a 3-year term beginning 2006, co-directed the annual symposium, "Managing Incidental Findings in Human Subjects Research" with Prof. Wolf; co-led the Lunch Series on the Societal Implications of the Life Sciences, which focused on "Science and Politics: Controversies in Regulation and National Security"; and collaborated with Prof. Wolf on the Deinard Memorial Lecture on Law & Medicine. Prof. Kahn holds the Maas Family Chair in Bioethics and is Director of the University of Minnesota's Center for Bioethics and Professor in the Department of Medicine, Medical School; Division of Health Policy & Management, School of Public Health; and Department of Philosophy.

Prof. Dan Kaufman (Stem Cell Institute) served a 1-year term on the committee as leader of the annual conference on "Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal & Policy Challenges." Prof. Kaufman is an Assistant Professor of Medicine in the Stem Cell Institute.

Shaun Kennedy (National Center for Food Protection and Defense; Center for Animal Health & Food Safety) is serving a 1-year term beginning 2006. He is the Director for the National Center for Food Protection and Defense and Associate Director for the Center for Animal Health and Food Safety. Mr. Kennedy has been elected to a 3-year term beginning in 2007.

Prof. Bonnie LeRoy (Institute of Human Genetics) was elected to a 1-year term in 2006. Prof. LeRoy is the Director of the Graduate Program in Genetic Counseling in Genetics, Cell Biology and Development.

Prof. Deborah Swackhamer (Water Resources Center; Institute on the Environment), elected to a 2-year term beginning 2006, co-led the Lunch Series on the Societal Implications of the Life Sciences, which focused on "Science and Politics: Controversies in Regulation and National Security." Prof. Swackhamer is a Professor of Environmental Chemistry in the Division of Environmental Health Sciences in the School of Public Health, a co-director of the Water Resources Center, and the Interim Director of the new Institute on the Environment.

Prof. Elizabeth Wattenberg (Environmental Health Sciences), was elected to a 3-year term beginning 2006. She is Associate Professor and Director of Graduate Studies in the Division of Environmental Health Sciences in the School of Public Health.



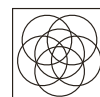
Prof. Deborah Swackhamer, PhD, Interim Director, Institute on the Environment, moderating a Lunch Series presentation by Prof. Holly Doremus, JD, PhD.



Prof. Jeff Kahn, PhD, MPH, Director, Center for Bioethics, commenting on a Lecture Series presentation by Prof. Jose Ordovas, PhD.



Prof. Dan Kaufman, MD, PhD, Stem Cell Institute, speaks at the annual conference.



Lecture Series on Law, Health & the Life Sciences



*Mark Blumenthal,
American Botanical Council*

The Lecture Series has sponsored 3 lectures per year since 2000. Each lecture brings to campus an eminent scholar examining the societal implications of the life sciences, features faculty and others providing interdisciplinary commentary, and is followed by an invitational lunch discussion involving highly selected faculty members, community members, and government leaders as well as our Joint Degree Program students. The 2006-07 Lecture Series focused on nutrigenomics, nutraceuticals, and direct-to-consumer marketing of genomic nutritional profiling.

Wednesday, October 4, 2006

Mark Blumenthal, American Botanical Council, presented “**Nutraceuticals: Dietary Supplements, Botanical Drugs, and Natural Products—Science, Safety & Efficacy.**” Mr. Blumenthal is the Founder and Executive Director of the American Botanical Council (ABC), an independent, nonprofit organization dedicated to disseminating information on herbs and medicinal plants. **Professor Theodore P. Labuza, PhD**, Department of Food Science and Nutrition, and **Professor Bonnie LeRoy, MS, CGC**, Director, Graduate Program in Genetic Counseling, University of Minnesota, provided commentary.

Mr. Blumenthal addressed safety and efficacy concerns that the public faces due to the largely negative reporting of clinical trials on nutraceuticals by the media. Blumenthal noted that studies with negative results are often over-reported the media, but the reports may not consider how the study was conducted, or it may not compare multiple brands or use the correct dosing of nutraceuticals. Prof. Labuza responded by discussing the short shelf-life of nutraceuticals as a potential cause of Mr. Blumenthal's concerns. Prof. LeRoy addressed the issue of nutrigenetics, the study of the interaction between nutrition and genetics, as an additional concern to consider.

Wednesday, February 7, 2007

Professor David Castle, PhD, University of Ottawa, presented “**Genomic Nutritional Profiling: The Ethics of Nutrigenomics.**” Prof. Castle, a professor of philosophy, focuses his research on the philosophy of the life sciences, with emphasis on evolutionary biology and ecology, environmental philosophy, and the ethical implications posed by biotechnology. **Professor Allen Levine**, Dean, College of Food, Agriculture, and Natural Resource Sciences, University of Minnesota, and **Kristin Oehlke, MS, CGC**, State Genomics Coordinator for the Minnesota Department of Health, provided commentary.

Prof. Castle spoke on the recent rise of the field of nutrigenomics and the use of tests for genetic conditions that could be affected by changes in nutrition. He commented that he believed regulation of such tests would increase with the field's popularity. Ms. Oehlke responded by advocating for a greater role for public health agencies to monitor the use of nutrigenomic tests plus continue research and training on the tests. Dean Levine commented on the quick rise of nutrigenomics and articulated the need for further research.

Wednesday, March 7, 2007

Professor Jose M. Ordovas, PhD, Tufts University, presented “**Nutrigenomics: Science, Regulation, and Policy.**” Prof. Ordovas is the Director of the Nutrition and Genomics Laboratory at the USDA Human Nutrition Research Center on Aging at Tufts University and Director of the Cellular and Molecular Nutrition Program at the Friedman School of Nutrition Science and Policy. Commentators were **Vice President and Professor Charles Muscoplat, PhD**, and **Professor Jeffrey P. Kahn, PhD, MPH**, Center for Bioethics, University of Minnesota.

Prof. Ordovas talked about the scientific basis of the rise of nutrigenomics. He discussed the interaction of genes and the environment in activating health issues. He emphasized that some parts of the nutritional supplement industry base their claims on faulty information or preliminary studies, and urged caution in moving forward in the field. Vice President Muscoplat responded by explaining that the vast amount of information on the interaction between food and genetics paralyzes the public because it is impossible to synthesize for each individual. Prof. Kahn raised concerns about federal oversight of research and regulation of nutrigenomic tests and supplements.

The 2007-08 Lecture Series is focusing on “**Emerging Debates on Oversight and Policy in Biomedicine & the Life Sciences.**” The lecturers are **Suzanne Hunt, MA** (formerly of Worldwatch Institutes) on October 31, 2007; **Professor Debora Spar, PhD** (Harvard Business School) on December 12, 2007; and **Professor Patricia King, JD** (Georgetown University) on March 6, 2008. All lectures begin at 11:30am and conclude at 1:00pm. These events are free and open to the public.



*Prof. Jose Ordovas, PhD,
Tufts University*



Lunch Series on the Societal Implications of the Life Sciences

The Joint Degree Program and the Consortium inaugurated the Lunch Series on the Societal Implications of the Life Sciences in the Fall of 2001. The Series sponsored 4 lectures in 2006-07. Each lecture brings to campus an eminent scholar examining the societal implications of the life sciences, who lectures to and meets with faculty, students, and community members. The focus for the 2006-07 Lunch Series was **"Science and Politics: Controversies in Regulation and National Security."** The Lunch Series speakers were:

Tuesday, September 19, 2006

Prof. Kurt Gottfried, PhD, Cornell University and Union of Concerned Scientists, presented **"Science and Politics: Problems and Solutions."** Prof. Kurt Gottfried is Emeritus Professor of Physics at Cornell University and Co-Founder of the Union of Concerned Scientists (UCS). Prof. Gottfried discussed the currently tumultuous relationship between science and government in America, highlighting unprecedented friction that he believes stems from deep cultural and political currents. In order to re-establish a more functional relationship, Gottfried urged that Congress, together with the Executive Branch, scientists, and society as a whole must work to recreate the connection that existed in previous administrations.



*Prof. Kurt Gottfried, PhD,
Cornell University, Union
of Concerned Scientists*

Tuesday, November 14, 2006

Prof. Holly D. Doremus, JD, PhD, University of California at Davis, presented **"Science and Politics in Environmental Policymaking: Can This Marriage Be Saved?"** Prof. Holly Doremus is a Professor of Law and a Member Scholar of the Center for Progressive Reform. She explored how controversial environmental policy decisions require a complex mix of technical and value judgments. Prof. Doremus argued that both science and democracy have legitimate roles to play in making these decisions, and examined strategies for combining sound science with sound politics.



*Prof. Holly Doremus, JD, PhD,
University California at Davis*

Tuesday, February 7, 2006

Prof. David Relman, MD, Stanford University, presented **"Dual Use & National Security."** Prof. Relman is Associate Professor of Medicine and Microbiology & Immunology at Stanford University and Chief of the Infectious Disease Section at the VA Palo Alto Health Care System. His lecture focused on U.S. efforts to conduct scientifically sound risk-benefit analyses for use in crafting regulation that will prevent the misuse of biological knowledge as a security threat, while ensuring that legitimate research is not impeded.



*Prof. David Relman, MD,
Stanford University*

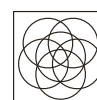
Thursday, April 12, 2007

Scott Gottlieb, MD, formerly of the U.S. Food and Drug Administration, presented **"Science and Politics: FDA Perspective."** Dr. Gottlieb was the Deputy Commissioner for Medical and Scientific Affairs at the U.S. Food and Drug Administration and a former senior official at the Centers for Medicare and Medicaid Services. He discussed the role of science in federal agency policymaking and recent controversies that have arisen at the FDA, such as the debate surrounding medical device recalls.



*Scott Gottlieb, MD, formerly of the
U.S. Food and Drug Administration*

Videos from past lectures are available on our websites at www.lifesci.consortium.umn.edu and www.jointdegree.umn.edu.



Annual Conference



Arlene Chiu, PhD, Science Director, California Institute on Regenerative Medicine, speaking at the conference on "Creating Stem Cells by Research Cloning."

On February 26, 2007 the University of Minnesota's Consortium on Law and Values in Health, Environment & the Life Sciences, the Joint Degree Program in Law, Health & the Life, the Academic Health Center, and the Stem Cell Institute co-sponsored a national conference on "**Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal, & Policy Challenges.**"

This conference explored the implications of somatic cell nuclear transfer (SCNT), also known as research cloning. National experts and the University's stem cell researchers addressed issues raised by SCNT, the options open to universities, and how policy should progress.

Senior Vice President for Health Sciences **Frank B. Cerra, MD** (Academic Health Center) offered opening remarks. **Kevin Egan, PhD** (Harvard University) then presented an overview of the science and issues surrounding research cloning. Other morning sessions featured **Rep. Phyllis Kahn** reviewing federal and state policy on SCNT, **LeRoy Walters, PhD** (Georgetown University) discussing international approaches to SCNT policy, a debate about the ethics of SCNT featuring **Nigel Cameron, PhD** (Chicago-Kent College of Law) and **Ronald Green, PhD** (Dartmouth College), and an update on the impact of the South Korean scandal on stem cell research offered by **Jose Cibelli, DVM, PhD** (Michigan State University). In the afternoon, break-out sessions included a primer on the science of research cloning by **Meri Firpo, PhD** and **Nobuaki Kikyo, MD, PhD** (University of Minnesota); a discussion of funding issues by **Arlene Chiu, PhD** (California Institute for Regenerative Medicine (CIRM)) and **Brock Reeve, MPhil, MBA** (Harvard Stem Cell Institute); consideration of intellectual property issues with **Judith Kim, JD, MS** (Sterne Kessler Golstein Fox); and discussion of state legislative developments and public attitudes toward research cloning with **Patrick Kelly** (Bioethics Industry Organization). To conclude the event, a roundtable moderated by **Jeffrey Kahn, PhD, MPH** (University of Minnesota) considered how universities should proceed with research in this area. Roundtable participants included **Steven Teitelbaum, PhD** (Washington University in St. Louis), **Brock Reeve, MPhil, MBA** (Harvard Stem Cell Institute), **Dan Kaufman, MD, PhD** (University of Minnesota), and **Bryan Dowd, PhD** (University of Minnesota).

Videos of all presentations may be found at <www.lifesci.consortium.umn.edu/conferences/scnt.php>. Publications from the symposium will appear in the Volume 9, Issue 1 of the *Minnesota Journal of Law, Science & Technology (MJLST)* in Winter 2008.

This event provided 7.25 hours of continuing legal education credit (CLE) for attorneys and 7.25 hours of continuing medical education credit (CME) for physicians and health care professionals.

In 2007-08, our annual conference on "**Emerging Problems in Neurogenomics: Ethical & Policy Issues at the Intersection of Genomics & Neuroscience**" will be held on **Friday, February 29, 2008** in the **Coffman Memorial Theater**. The conference will address cutting-edge societal issues in neurogenomics including the neurogenomics of childhood and adult disorders as well as issues emerging from banking and linking neuroscientific, genomic, and other data. Prof. Susan Wolf, Prof. Harry Orr, and Adjunct Prof. Jordan Paradise are taking the lead in planning this event. The Consortium is requesting CME and CLE credit for the conference. This conference will be supported in part by The Greenwall Foundation, as well as the Academic Health Center, the Institute on Translational Neuroscience, and the Consortium.



Audience members at the annual conference on "Creating Stem Cells by Research Cloning."



Prof. LeRoy Walters, PhD, Georgetown University speaking on "International Approaches to SCNT Policy" at the annual conference.



Annual Symposium

Each year since 2001 the Consortium has sponsored an annual symposium. On May 1, 2007, the Consortium, with the Joint Degree Program sponsored a full-day national symposium on “**Managing Incidental Findings in Human Subjects Research: From Imaging to Genomics.**” This symposium presented the recommendations from a groundbreaking NIH-funded project developing standards for the management of incidental findings identified in research with human subjects. The conference was supported in part by the National Human Genome Research Institute (NHGRI), National Institutes of Health (NIH), grant #1-R01-HG003178-01A1.

Prof. Susan Wolf, JD (University of Minnesota) offered opening remarks and presented the recommendations from the grant project. **Prof. Frances Lawrenz, PhD and Suzanne Sobotka, MPH** (University of Minnesota) presented empirical findings from this study. A panel of national experts then responded to these recommendations. The panel included **Bernard Schwetz, DVM, PhD** (Office for Human Research Protections, Department of Health and Human Services); **Joann Boughman, PhD** (American Society of Human Genetics); **Bradley Peterson, MD** (Columbia College of Physicians & Surgeons); and **Ernest Prentice, PhD** (University of Nebraska Medical Center). Two concurrent sessions then offered participants the opportunity to learn more about incidental findings in genetics/genomics research or imaging research. The genetics/genomics track included a session on understanding incidental findings in the context of genetics and genomics by **Prof. Mildred Cho, PhD** (Stanford University), on incidental findings and whole-genome technologies by **Prof. Brian Van Ness, PhD** (University of Minnesota), and on incidental findings in archival genetic research presented by **Prof. Ellen Wright Clayton, MD, JD** (Vanderbilt University). The imaging track included presentations that addressed incidental findings in neuroimaging research by **Prof. Judy Iles, PhD** (University of British Columbia), incidental findings in CT colonography with **Prof. J.G. Fletcher, MD** (Mayo Clinic), and possible implications for incidental findings as technology moves forward by **Prof. Charles Nelson, PhD** (Harvard Medical School and Children’s Hospital Boston). The remaining sessions synthesized incidental findings issues beginning with a comparison of the issues identified in the concurrent sessions by **Prof. Ellen Wright Clayton, MD, JD** (Vanderbilt University); **Prof. Michael Georgieff, MD** (University of Minnesota); and **Prof. Mildred Cho, PhD** (Stanford University). **Prof. Henry Richardson, PhD** (Georgetown University) presented a lunch address on the researcher’s duty of care regarding incidental findings. **Prof. Kathy Hudson, PhD** (Johns Hopkins University) presented preliminary findings from her study on public attitudes toward genetic incidental findings. **Moirá Keane, MA, CIP** (University of Minnesota) discussed IRB approaches to this issue, and a panel addressed legal issues raised by incidental findings. The legal panel was moderated by **Prof. Judy Iles, PhD** (University of British Columbia) and included **Alan Milstein, JD, MS** (Sherman, Silverstein, Kohl, Rose & Podolsky); **Franklin Miller, PhD** (National Institute of Mental Health, NIH); and **Prof. Susan Wolf, JD**. **Prof. Lisa Parker, PhD**, (University of Pittsburgh) then discussed incidental findings as benefits and **Prof. Benjamin Wilfond, MD** (University of Washington School of Medicine) addressed incidental findings in pediatric research. To end the day, a synthesis of the conference and a discussion of next steps was offered by the project’s investigators, **Prof. Susan Wolf, JD**; **Jeffrey Kahn, PhD, MPH**; and **Frances Lawrenz, PhD** (University of Minnesota); and **Prof. Charles Nelson, PhD** (Harvard and Children’s Hospital in Boston).

The symposium attracted an audience including lawyers and legal experts, ethicists, students, and researchers in neuroimaging, genetics, and colonography. Having a wide variety of audience members sparked discussion and provided new insight in considering how incidental findings should be managed in research. One audience member noted in an evaluation, “**This conference was superb because it drew on the expertise of scientists, philosophers, and lawyers. . . . This is the way society ought to approach policymaking all of the time.**”

Video of the presentations may be found on-line at <www.lifesci.consortium.umn.edu/conferences/incidentalfindings.php> after the full symposium is published in the *Journal of Law, Medicine and Ethics* in 2008.

This event provided 8.0 hours of continuing legal education credit (CLE) for attorneys and 8.0 hours of continuing medical education credit (CME) for physicians.



*Joann A. Boughman, PhD,
Executive Vice President, American
Society of Human Genetics. speaking
at the symposium.*



*Bernard Schwetz, DVM, PhD,
Director, Office for Human Research
Protections, U.S. Department
of Health and Human Services,
speaking at the symposium.*



*Prof. Kathy Hudson, PhD,
Johns Hopkins University, during a
question-and-answer session at the
symposium on incidental findings.*



Publications



Symposium in the *Journal of Law, Medicine & Ethics*.



Article in *Lahey Clinic Medical Ethics Journal*.

In 2006-07, the Consortium published widely. Highlights include:

Articles that resulted from an NIH, National Human Genome Research Institute-funded grant #5R01HG02089, on **“Genetics & Disability Insurance: Ethics, Law & Policy,”** Prof. Jeffrey Kahn (PI), Prof. Susan M. Wolf, Co-Investigator:

- Kahn JP, Wolf SM, eds. Symposium: Genetic Testing and Disability Insurance. *Journal of Law, Medicine & Ethics*. 2007;35:5-89.
- Kahn JP, Wolf SM. Understanding the Role of Genetics in Disability Insurance. *Journal of Law, Medicine & Ethics*. 2007;35:5.
- Wolf SM, Kahn JP. Genetic Testing and the Future of Disability Insurance: Ethics, Law & Policy. *Journal of Law, Medicine & Ethics*. 2007;35:6-32.

An article from our 2006 conference on **“The Risks Posed by New Biomedical Technologies: How Do We Analyze, Communicate & Regulate Risk?”** appeared in the *Lahey Clinic Medical Ethics Journal*:

- Paradise J, Wolf SM, eds. The Risks Posed by New Biomedical Technologies: How Do We Analyze, Communicate & Regulate Risk? *Lahey Clinic Medical Ethics Journal*. 2006;13(3):5-8.

The *Minnesota Journal of Law, Science & Technology* <www.mjlst.umn.edu> published articles from our conference on **“Terrorist Threats to our Food Supply: Food Protection and Defense-Science, Ethics & Law”** as well as a symposium titled **“Toward a General Theory of Law and Technology.”**

Symposium on **“Terrorist Threats to our Food Supply: Food Protection and Defense-Science, Ethics & Law:”**

- Ostrowsky J. Colloquy: Towards Progress in Food Protection and Defense. *MJLST*. 2007;8(1):175-185.
- DeWaal C. Food Protection and Defense: Preparing for a Crisis? *MJLST*. 2007;8(1):187-198.
- Roberts M. Role of Regulation in Minimizing Terrorist Threats Against the Food Supply: Information, Incentives, and Penalties. *MJLST*. 2007;8(1):199-224.
- Schaffner D. Modeling the Public Health System Response to a Terrorist Event. *MJLST*. 2007;8(1):225-235.
- George A. The Public Health Tesseract: Managing the Multiplicative Threat. *MJLST*. 2007;8(1):237-247.

Selected articles from **“Toward a General Theory of Law and Technology”** are:

- Tranter K. Nomology, Ontology, and Phenomenology of Law and Technology. *MJLST*. 2007;8(2):449-474.
- Cockfield A, Pridmore J. A Synthetic Theory of Law and Technology. *MJLST*. 2007;8(2):745-513.
- Matwysyn A. Technology, Commerce, Development, Identity. *MJLST*. 2007;8(2):515-549.
- Gifford D. Law and Technology: Interactions and Relationships. *MJLST*. 2007;8(2):571-587.
- Pasquale F. Technology, Competition, and Values. *MJLST*. 2007;8(2):607-621.
- Bernstein G. The Role of Diffusion Characteristics in Formulating a General Theory of Law and Technology. *MJLST*. 2007;8(2):623-643.



In 2007-08, the *Minnesota Journal of Law, Science & Technology* will feature symposia from our 2007 conference on **“Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal & Policy Challenges,”** and a recent development article in MJLST titled **“Developing Oversight Frameworks for Nanobiotechnology”** from our NSF-funded grant on **“NIRT: Evaluating Oversight Models for Active Nanostructure and Nanosystems: Learning from Past Technologies in a Societal Context.”**

Publications in progress include a symposium on **“Managing Incidental Findings in Human Subjects Research: From Imaging to Genomics”** for the *Journal of Law, Medicine & Ethics*; forthcoming in 2008.

The Consortium and Joint Degree Program also publish a variety of program materials each year including a newsletter, this annual report, and a variety of conference and promotional materials.

In Fall 2001 the Consortium and Joint Degree Program inaugurated their e-newsletter, **LAW/VALUES+LIFE SCIENCES**. The newsletter is distributed via e-mail and is also available on the “Newsletter” page on both the Consortium and Joint Degree websites at www.lifesci.consortium.umn.edu/newsletter/ and www.jointdegree.umn.edu/newsletter/. Each issue highlights recent developments in ethical, legal, and social issues relating to health or the life sciences at the University of Minnesota; profiles a University of Minnesota faculty member making significant contributions in these areas; and describes selected research and publications by Consortium members and Joint Degree Program faculty. The newsletter also provides program-related news and updates, Joint Degree Student and Alumni news, announces upcoming events throughout the University, and offers links to websites of interest to readers. Readers can subscribe by completing a form on the “Newsletter” page of either website or sending an e-mail to lawvalue@umn.edu or jointdgr@umn.edu.

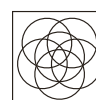
In 2006-07, both the annual conference and annual symposium provided attendees with handouts including speakers' outlines, slides, and background articles, as well as extensive bibliographies citing relevant articles by other authors. The Consortium and the Joint Degree Program published multiple materials about our programs including a new Joint Degree Program catalog and detailed application information for 2007-08. For more information, visit http://www.jointdegree.umn.edu/conferences/conf_symp.php, or http://www.lifesci.consortium.umn.edu/conferences/conf_symp.php.



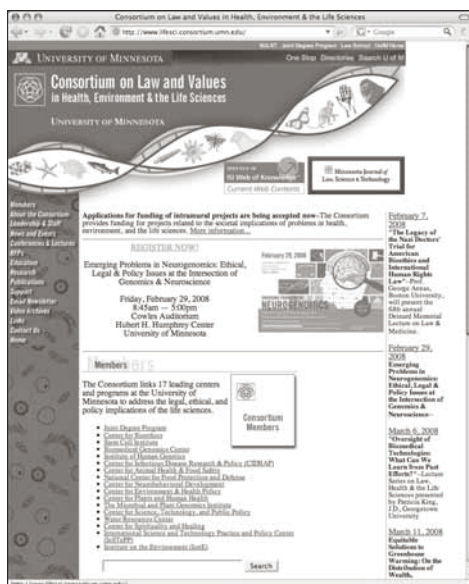
Articles in the *Minnesota Journal of Law, Science & Technology*



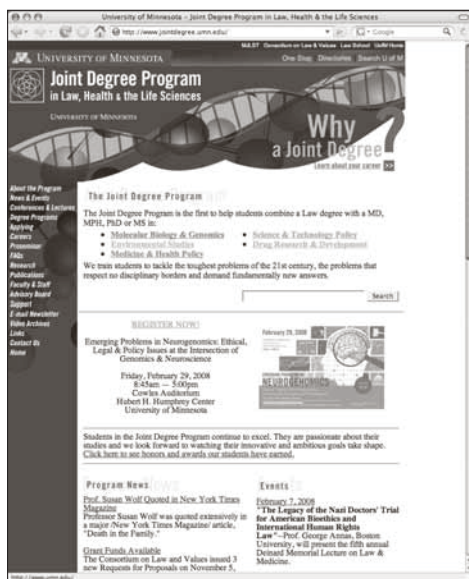
LAW/VALUES+LIFE SCIENCES newsletter.



Websites and Technology



www.lifesci.consortium.umn.edu



www.jointdegree.umn.edu

The Consortium's website <www.lifesci.consortium.umn.edu> serves as a gateway to the members of the Consortium and provides central access to information, news, and events relating to the University of Minnesota's work on societal implications of problems in health, environment, and the life sciences. The site provides information about each of the member centers and programs, including their research and publications. The RFPs page includes a catalog of 67 RFP winners and reports on their projects.

The Joint Degree Program's website <www.jointdegree.umn.edu> is the best resource for learning about the degree combinations offered by the program. Descriptions of each degree combination, application instructions, and links to our partner programs' websites are popular features, as is the "Careers" page, which profiles our alumni and others with joint degrees to show prospective students the myriad career options available to them.

Both the Consortium and Joint Degree Program sites utilize the Google news search feature, which allows users to search for current world news on law and science. Videos from all of the years' lectures, conferences, and symposia are available through portals on the "Conference & Lectures" page. Videos from all of our events held in previous years may be found on the "Video Archives" pages. User comments are always welcome—e-mail us at lawvalue@umn.edu or jointdgr@umn.edu with your thoughts and suggestions.

The website for the *Minnesota Journal of Law, Science and Technology* <www.mjlst.umn.edu> describes how *MJLST* evolved from the *Minnesota Intellectual Property Review* to a premier journal on issues in law, science, and technology. The website also allows visitors to read abstracts and biographies of authors and details how to submit articles to *MJLST* for review. The full-text articles are available on the site one year after their original publication.

The Consortium also created a website for its projects on "Managing Incidental Findings in Human Subjects Research" and "NIRT: Evaluating Oversight Models for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Societal Context." Currently available only to the project Working Groups, these websites provide access to working bibliographies, drafts of papers, meeting agendas, and background information. Upon completion of the "Managing Incidental Findings in Human Subjects Research" project, that website will be transformed into a public site offering the complete annotated bibliography, model consent form language, and information about the project's process and publications.



www.mjlst.umn.edu



Staff

The Joint Degree Program and Consortium share staff and offices. Our staff members include:

Audrey Boyle joined the Consortium and Joint Degree Program in 2005 as Project Manager. She is responsible for managing all of the programs' grants and research projects, administering the Consortium's Request for Proposals (RFPs), and assisting with the programs' daily financial management and annual budgeting. Audrey's previous work experience has primarily been in health care administration. She has degrees from Western Michigan University and the University of Arizona.



Audrey Boyle, Project Manager

Julie Johnson joined the Consortium in December 2007 as the Program Assistant. She began working at the University's Morris campus in 1977. In 1994 she moved to the Twin Cities and accepted a position in the Dean's Office in the College of Biological Sciences on the St. Paul Campus. In 2001 she took a post in the University Senate Office. Prior to accepting the position in the Consortium and Joint Degree Program Office, she held an administrative position at Prince of Peace Church in Burnsville. Julie is responsible for program assistance and support for the Consortium and Joint Degree Program.



Julie Johnson, Program Assistant

Carol Rachac, MA, is the Associate Program Director for the Consortium and the Joint Degree Program. She has worked in academic administration at the University of Minnesota since 1988, spending 8 years in the Department of Sociology prior to joining the Consortium and the Joint Degree Program. She earned a BA in Political Science and an MA in Higher Education Administration from the University of Minnesota. Her duties include management and administration, coordination of admissions, student advising, development, and grants management.



*Carol Rachac,
Associate Program Director*

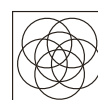
Monica Wittstock began her position as Executive Administrator for the Consortium and Joint Degree Program in 2006. She is the Administrator of the *Minnesota Journal of Law, Science & Technology* and the Consortium and Joint Degree Program's publications and communications. Monica was previously employed at the University's Center for Advanced Research on Language Acquisition, where she was the Editorial Assistant for the newsletter of the American Council on Immersion Education, produced the Center's Working Paper Series, and was responsible for all of the Center's communications.

The Joint Degree Program and Consortium are indebted to the following Research Assistants in 2006-07: **Charlissee Caga-anan** (Law), **Gail Diliberto** (Law), **Rishi Gupta** (Law), **Suzanne Sobotka** (Epidemiology, Health Journalism), **Ashley Wenger** (Law), and **Todd Winter** (Law).

The Consortium would like to acknowledge additional 2006-07 staff members: Glen Anderson, Information Technology Professional; Ann Hagen, Senior Administrative Director; and Cathy Kostka, Program Associate.



*Monica Wittstock,
Executive Administrator*



Support & Acknowledgements

Consortium research is supported by the **National Institutes of Health (NIH)**, the **National Science Foundation (NSF)**, and **The Greenwall Foundation**.

“Managing Incidental Findings in Human Subjects Research”

1 R01 HG003178-01A1 (NHGRI, NIH) (9/26/05 – 7/31/07)

Susan M. Wolf, JD, Principal Investigator; Jeffrey P. Kahn, PhD, MPH, Co-Investigator; Frances Lawrenz, PhD, Co-Investigator; Charles A. Nelson, PhD, Co-Investigator

“NIRT: Evaluating Oversight Models for Active Nanostructures and Nanosystems: Learning from Past Technologies in a Societal Context”

SES 0608791 (NSF) (9/1/06 – 8/31/10)

Susan M. Wolf, JD, Principal Investigator; Efrosini Kokkoli, PhD, Co-Principal Investigator; Jennifer Kuzma, PhD, Co-Principal Investigator; Jordan Paradise, JD, Co-Principal Investigator; Gurumurthy Ramachandran, PhD, Co-Principal Investigator

The Greenwall Foundation granted funds to the Consortium, together with the Center for Bioethics and Mayo Clinic, to host the 2007 Oscar M. Ruebhausen Visiting Professorship.

The Greenwall Foundation’s Presidential Grant is providing support of our project and 2008 Annual Conference on “Emerging Problems in Neurogenomics: Ethical, Legal & Policy Issues at the Intersection of Genomics & Neuroscience.”

The Consortium and Joint Degree Program are deeply gratified by the funding provided through the Presidential Interdisciplinary Academic Initiative on Law and Values in Health, Environment & the Life Sciences. This Initiative is led by Senior Vice President for Academic Affairs and Provost E. Thomas Sullivan. We are indebted to all involved in the Initiative, especially:

- President Robert Bruininks
- Senior Vice President for Academic Affairs and Provost E. Thomas Sullivan
- Executive Associate Vice President Alfred Sullivan
- H. Jeanie Taylor, Assistant Vice Provost for Interdisciplinarity

In addition, the Joint Degree Program and Consortium were indebted to the following for major financial and program support in 2006-07:

- Senior Vice President for Academic Affairs and Provost E. Thomas Sullivan
- Senior Vice President Frank Cerra, Academic Health Center
- Dean Gail Dubrow, Graduate School
- Interim Co-Deans Guy Charles and Fred Morrison, Law School
- Dean Robert Elde, College of Biological Sciences
- Dean John Finnegan, School of Public Health
- Dean Allen Levine, College of Agricultural, Food, and Environmental Sciences

We also gratefully acknowledge the following targeted financial support:

- Professor Amos Deinard, Jr., Miriam Kelen, and the Law Firm of Leonard, Street and Deinard for the Deinard Memorial Lecture Series on Law & Medicine
- The Law Firm of Fredrikson & Byron for the Harold M. Fredrikson Memorial Scholarship
- The Minnesota Intellectual Property Law Association (MIPLA) for a MIPLA Scholarship for 2006-07
- Senior Vice President for Health Sciences Frank B. Cerra and the Academic Health Center for support of our conference on “Creating Stem Cells by Research Cloning: Scientific, Ethical, Legal & Policy Challenges.”



JDP student Alex Galaitis, JD, MS candidate in MCDB&G, Jordan Paradise, JD, and JDP student Ilina Chaudhuri, JD, MPH candidate in Public Health Administration & Policy, at the Fall 2006 Advisory Board reception.



Senior Vice President for Academic Affairs and Provost E. Thomas Sullivan.

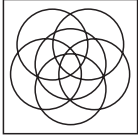


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