

Annual Report 2004-2005

University of Minnesota



Joint Degree Program

in Law, Health, & the Life Sciences™

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



Highlights from 2004–2005:

- 1st volume of *Minnesota Journal of Law, Science* & *Technology* published
- Success on NIH grant proposal on research ethics
- 2 new Consortium members
- Lecture Series on the stem cell debate
- Lunch Series on medical devices & innovation
- Deinard Memorial Lecture on genetics
- Conference on racial
 & ethnic categories
 in biomedical research
- Open-submission symposium on the future of law & science
- Cosponsorship of bioethics conference

- 11 intramural grants awarded
- New Associate Director of Research & Education appointed
- 24 JDP applicants & 5 new JDP enrollees
- 1 new JDP graduate
- Publication from intellectual property symposium in *MJLST*
- Publication from conference on racial & ethnic categories in Nature Genetics
- Publication from bioethics conference in Hastings Center Report
- New Visiting Consortium Professorship

2004-2005 Events

Tuesday, November 2, 2004 Lunch Series on the Societal Implications of the Life Sciences

Prof. Michael Lysaght, Brown University "Risk, Reason & Regulation of Medical Devices"

Wednesday, December 8, 2004 Lecture Series on Law, Health & the Life Sciences

Prof. Evan Snyder, Burnham Institute and University of California, San Diego "Stem Cell Biology: Good Ethics Depend on Good Facts"

Commentators: Profs. Paul Tuite, Jeffrey Kahn, University of Minnesota

Wednesday, February 2, 2005 Lecture Series on Law, Health & the Life Sciences

Prof. Janet Rowley, University of Chicago "Stem Cell Therapy: Hype or Hope?"

Commentators: Profs. Steve Calvin, Carol Tauer, Susan Wolf, University of Minnesota

Tuesday, February 8, 2005 Lunch Series on the Societal Implications of the Life Sciences

Prof. Jonathan Moreno, University of Virginia "The Ethics of Innovative Surgery"

Friday, February 25, 2005
Deinard Memorial Lecture on Law & Medicine

Prof. Ellen Wright Clayton, Vanderbilt University "Over-Reading the Human Genome: The Threat to Privacy, Employment, Group Identity, and Responsibility"

Commentators: Laurie Vasichek, Esq., Equal Employment Opportunity Commission, Prof. Richard King, University of Minneosta Tuesday, April 5, 2005 Lunch Series on the Societal Implications of the Life Sciences

Alan Milstein, Esq., Sherman, Silverstein, Kohl, Rose & Podolsky "Human Subjects Protection: A Plaintiff's Perspective"

Monday, April 18, 2005 Annual Conference

"Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"

Wednesday, April 20, 2005 Lecture Series on Law, Health & the Life Sciences

Prof. Alta Charo, University of Wisconsin "From Stem Cells to Jail Cells"

Commentators: Profs. John Wagner, Bryan Dowd, Vice President for Research R. Timothy Mulcahy, University of Minnesota

Thursday, May 5, 2005 Conference cosponsored with Center for Bioethics

"Future of the Field of Bioethics— What Have We Learned and Where Do We Go?"

Friday, May 20, 2005 Annual Symposium

"Where are Law, Ethics & the Life Sciences Headed? Frontier Issues"

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

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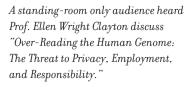
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Law School Dean Alex Johnson spoke at a reception honoring the first issue of the Minnesota Journal of Law, Science & Technology.



Prof. Raj Bhopal, Edinburgh University, at the conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"

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Joint Degree Program

in Law. Health & the Life Sciences™

Consortium on Law and Values

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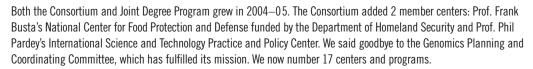


Prof. Susan Wolf, Director and Chair.

Letter From The Director

Dear Colleagues:

In 2004-05, the Consortium and the Joint Degree Program took a giant leap forward. As a Presidential Interdisciplinary Academic Initiative, we received increased funding allowing us to expand our work and move to the next level of excellence. We launched the Minnesota Journal of Law, Science & Technology (MJLST), a unique peer-reviewed multidisciplinary journal edited by University of Minnesota faculty and Law students; offered 10 events including 2 conferences; cosponsored with the Center for Bioethics an invitational meeting for directors of bioethics programs around North America on "The Future of the Field of Bioethics;" and awarded intramural grants totaling \$106,110 for work on the implications of the life sciences. We also published more than ever before. MJLST ran our symposium on "Intellectual Property Rights for the Public Good: Obligations of U.S. Universities to Developing Countries." We placed 2 other symposia slated for publication in 2005–06: "Environmental Threats to Children's Health: Legal and Policy Challenges" in MJLST and "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?" in the Journal of Law, Medicine & Ethics. Nature Genetics carried a report of our meeting on the use of racial and ethnic categories in research. The Hastings Center Report published an analysis of our meeting on the future of the field of bioethics. Finally, we landed an important new grant; the National Institutes of Health (NIH) is funding our grant proposal on "Managing Incidental Findings in Human Subjects Research." This 2-year project, on which I serve as Principal Investigator, will get under way this Fall.



The Joint Degree Program welcomed 6 new students in Fall 2004 and will welcome 6 more in Fall 2005. As of Fall 2005, we have a total of 26 students and have graduated 4 classes. Applications to the Joint Degree Program in 2004-05 were again of exceptional quality. We are clearly attracting a national applicant pool from outstanding undergraduate institutions. Our unique program is offering the best multidisciplinary training in the country for students who want to lead on cutting-edge issues in law and science.



Finally, 2004–05 saw the addition of impressive new staff, including Jordan Paradise, JD, our new Associate Director of Research & Education. We also welcomed 3 new members to our Joint Degree Program Advisory Board: Prof. Amos Deinard (Department of Pediatrics); Byron Starns, Esq. (Leonard, Street & Deinard); and Martha Brand, JD (Executive Director, Minnesota Center for Environmental Advocacy).

The Consortium and Joint Degree Program are now well established. Both programs enjoy a national reputation. Thanks to Presidential Initiative funding, we are moving to a new level of productivity, tackling what remain the most challenging issues of our time, those issues at the intersection of law, ethics, policy, and the life sciences.



Prof. Jim Chen, Director of Special Projects.



Prof. Colin Campbell, Associate Director.



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

Update on the Consortium and Joint Degree Program

The Consortium on Law and Values

In 2004-05, the Consortium on Law and Values in Health, Environment & the Life Sciences was awarded new funds as one of University of Minnesota President Robert Bruininks's 8 Presidential Interdisciplinary Academic Initiatives. We added 2 member centers, the National Center for Food Protection and Defense and the International Science and Technology Practice and Policy Center. We said goodbye to the **Genomics Planning and Coordinating Committee**, led by Vice Provost and Interim Dean of the Graduate School Victor Bloomfield, whose mission is now completed. We submitted another **NIH grant** application, which has succeeded; our project on research ethics will begin Fall 2005. We launched the Minnesota Journal of Law, Science & Technology. Through its Request for Proposals (RFP) process, the Consortium awarded 2 faculty grants, 4 student grants, and 2 grants to centers. With funds from the Presidential Initiative, the Consortium inaugurated a new RFP to Consortium members and JDP partner programs. Four awards were made, bringing the total of all **RFP funding** for 2004-05 to \$106,110. We hired a new Associate Director of Research & Education, Jordan Paradise, JD. The Joint Degree Program and Consortium together sponsored 9 events: 4 lectures in the Lunch Series on the Societal Implication of the Life Science focusing on medical devices and innovation; 3 lectures in the Lecture Series on Law, Health & the Life Sciences focusing on cutting-edge issues in biotechnology, stem cells, and genomics; a national conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?," and a symposium on "Where are Law, Ethics & the Life Sciences **Headed? Frontier Issues."** The Consortium and Center for Bioethics cosponsored a conference on "Future of the Field of Bioethics—What Have We Learned and Where Do We Go?"

The Consortium now coordinates among and builds on the strengths of 17 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 interdisciplinary questions that are difficult for any one program to tackle alone. The 17 constituent programs are:

- Joint Degree Program in Law, Health & the Life Sciences led by Profs. Susan Wolf (law, medicine) 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);
- Center for Microbial and Plant Genomics led by Prof. Ronald Phillips (agronomy and plant genetics);
- Stem Cell Institute led by Prof. Catherine Verfaillie (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;
- Center for Animal Health & Food Safety led by Prof. William Hueston (epidemiology, clinical and population sciences) and Shaun Kennedy;
- National Center for Food Protection and Defense led by Profs. Francis Busta (food science and nutrition, food microbiology) and Michael Osterholm (epidemiology) and Shaun Kennedy;
- **Center for Neurobehavioral Development** led by Profs. Charles Nelson (child psychology, neuroscience, pediatrics, neurology, radiology, psychiatry) and 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) and Associate Dean Beverly Durgan (College of Agricultural, Food, and Environmental Sciences);
- Center for Science, Technology, and Public Policy led by Prof. Kenneth Keller (Humphrey Institute, chemical engineering and materials science) and Dr. Jennifer Kuzma;



Prof. Jay Cohn, University of Minnesota, and Prof. Gregg Bloche, Georgetown University, at the conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"



Prof. Richard King, University of Minnesota Institute of Human Genetics, comments on Prof. Clayton's Deinard Lecture.





Prof. Jeffrey Kahn, Center for Bioethics; and Pamela Cherry, Center for Spirituality & Healing, at a Consortium meeting.



Prof. Will Hueston, Director of the Center for Animal Health & Food Safety, at a Consortium meeting.



Prof. Jeffrey Kahn, Center for Bioethics, and Alan Milstein, Esq. at Mr. Milstein's Lunch Series presentation.

- 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).

The Joint Degree Program

In 2004–05, the Joint Degree Program welcomed 5 new students for a total of 23 and graduated another student. We continued the Deinard Memorial Lecture Series on Law & Medicine with the Center for Bioethics. The Joint Degree Program remains unique in the nation and enables students to combine a JD with a PhD, MS, MPH, or MD in one of 13 graduate and professional programs 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. In Fall 2005 we will have 2 students pursuing *ad hoc* options with Molecular Veterinary Biosciences and Water Resources Science. 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, and Environmental Policy
- a JD with an MD in Medicine
- a JD with an MS or PhD in Health Services Research, Policy, and Administration
- a JD with an MPH in Public Health Administration
- 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





University of Minnesota

Students, Recruitment, and Scholarships

The Joint Degree Program graduated 1 student in 2005 for a total of 6 alumni. Glenna Gilbert received a JD and MS in Pharmacology. She is now employed by the law firm of Schiff Hardin in Chicago, IL.

In 2004–05, we had **23 students** pursuing the following degree combinations:

- JD/PhD in MCDB&G (Katherine Dick, Alex Galaitsis)
- JD/MS in MCDB&G (Sharada Devarasetty)
- JD/PhD in Pharmacology (Jonathan Hareid, Lisbeth Robinson)
- JD/MS in Pharmacology (Glenna Gilbert, Ji Eun Kim, James Zak)
- JD/MS in Science, Technology, and Environmental Policy (Samantha Bohrman, Margaret Jacot, Nicola Kieves, Zeia Lomax, Lesli Rawles)
- JD/PhD in Conservation Biology (Collette Adkins Giese)
- JD/MPH in Public Health Administration (Kari Bomash, Jill Dabrowski, Erin Furlong)
- JD/MS in Health Services Research, Policy and Administration (Kelsey Brodsho, Michelle Dawson, Rebekah Kent)
- JD/MPH in Epidemiology (Robert Berlin)
- JD/MPH in Community Health Education (K.J. Starr)
- JD/MS in Molecular Veterinary Biosciences (Garret Olson)

Michelle Dawson, Sharada Devarasetty, and K.J. Starr were awarded partial **Joint Degree Program Scholarships** in Fall 2004. K.J. Starr also received the School of Public Health's annual **JD/MPH Scholarship**. Kari Bomash was awarded the **Harold M. Fredrikson Memorial Scholarship** in 2004–05, provided by the law firm of Fredrikson & Byron. Sharada Devarasetty was awarded the 2004–05 **Minnesota Intellectual Property Law Association Scholarship** in the Law School.

Applications to the Joint Degree Program for Fall 2005 again showed impressive strength and geographic diversity. We received 24 applications from students with undergraduate degrees from distinguished institutions including Columbia University, Northwestern University, University of Michigan, University of California at Berkeley, University of Pennsylvania, Vassar College, and Wesleyan University.

In the Fall of 2005 we are welcoming **6 more students** pursuing the following degree combinations: JD/MPH in Public Health Administration; an *ad hoc* JD/MS in Water Resources Science; JD/MS in MCDB&G (2); JD/MS in Science, Technology, and Environmental Policy; and our first JD/MPH in Environmental Health. We have worked closely with the Joint Degree Program graduate programs to recruit these impressive applicants and arrange financial support. One incoming student seeking the JD/MS in MCDB&G has been awarded a scholarship from the **Minnesota Intellectual Property Law Association** plus a partial Law School scholarship. Our incoming JD/MPH student in Public Health Administration has been awarded a partial **JDP Scholarship** in the Law School plus the School of Public Health's annual **JD/MPH Scholarship**. Our incoming student seeking the JD/MPH in Environmental Health has been awarded the **Richard Bond Memorial Scholarship** in the School of Public Health and a partial **JDP Scholarship** in the Law School.

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, and School of Public Health scholarships and support otherwise offered. We are working to expand even further the support available to our students.



 $2004{-}05\,\textit{Joint Degree Program Students}$

Front Row L to R: Kelsey Brodsho, Samantha Bohrmann, Sharada Devarasetty, Nicola Kieves, Erin Furlong.

Second Row L to R: Prof. Susan Wolf, Kari Bomash, Lisbeth Robinson, Rebekah Kent, Jonathan Hareid, Lesli Rawles, Jill Dabrowski, KJ Starr, Ji Eun Kim, Michelle Dawson.

Back Row L to R: Robert Berlin, Garrett Olson, Glenna Gilbert, Collette Adkins Giese, Alex Galaitsis, Margaret Jacot, Katie Dick, Zeia Lomax, James Zak, Prof. Colin Campbell.



Collette Adkins Giese.

Kelsey Brodsho.



Sharada Devarasetty.



Rob Berlin.

Student Honors & Achievements

Students in the Joint Degree Program continue to excel in their studies. Below is a partial list of their accomplishments in 2004-05:

Collette Adkins Giese, JD/PhD in Conservation Biology, held an Environmental Law Fellowship at the law firm of Faegre & Benson in Summer 2005. She completed all of her JD requirements in May 2005 and will clerk for U.S. District Court Judge Jack Tunheim beginning in October 2005 while she completes her dissertation.

Robert Berlin, JD/MPH in Epidemiology, held a 2005 summer fellowship at the Science, Technology and Law Program 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 will serve on the staff of the Minnesota Law Review in 2005–06.

Samantha Bohrman, JD/MS in Science, Technology, and Environmental Policy, held a Minnesota Justice Foundation clerkship in Summer 2005. She worked for the Farmer's Legal Action Group, writing educational materials for small farmers and working on legal strategy for cases overlapping environmental, administrative, and constitutional law. In 2004–05, she served on the staff of Law and Inequality: A Journal of Theory & Practice and will return as an Articles Editor for the journal in 2005-06.

Kelsey Brodsho, JD/MS in Health Services Research, Policy, and Administration worked at the law firm of Halleland Lewis Nilan & Johnson in 2004-05 and served on the staff for the Minnesota Journal of Law, Science & Technology (MJLST). She remained at Halleland in Summer 2005 and will serve as an Articles Editor for MJLST in 2005–06.

Sharada Devarasetty, JD/MS in MCDB&G, studied international intellectual property law in Munich, Germany in Summer 2005.

Erin Furlong, JD/MPH in Public Health Administration, held a 2005 summer internship at the American Bar Association's Commission on Law and Aging in Washington, DC. Her work at the Commission examined trends in state health decisions legislation resulting from the Schiavo case.

Ji Eun Kim, JD/MS in Pharmacology, held a Summer 2005 position at the law firm of Sterne, Kessler, Goldstein & Fox in Washington, DC.

Lesli Rawles, JD/MS in Science, Technology, and Environmental Policy, held a 2005 summer clerkship at the University of Minnesota's Office of the General Counsel. She will serve on the staff of the Minnesota Journal of Law, Science & Technology in 2005-06.

Lisbeth Robinson, JD/PhD in Pharmacology, published an article on "Improved 'optical highlighter' probes derived from Discosoma red fluorescent protein" in volume 88 of the Biophysical Journal. Prof. Jonathan Marchant is the co-author. An abstract and link to the full text article may be found at

<www.biophysj.org/cgi/content/abstract/biophysj.104.045617v1>.



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 our Joint Degree Program addresses with faculty from the cooperating programs and beyond.

In 2004–05, the Proseminar was divided into 2 sections. The first section, required for students in the first two years of the Joint Degree Program, invited 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. 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 labor 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 the Fall of 2004, section 1 of the Proseminar was led by Prof. Susan Wolf. The schedule featured:

- Prof. Susan Wolf (Law School, Medical School) on perspectives on law, science, and bioethics
- Prof. Michael Osterholm (Center for Infectious Disease Research and Policy) on dual-use biological research and its implications for research
- Shaun Kennedy (Center for Animal Health & Food Safety) on animal welfare and ethical agricultural practices
- Prof. Debra DeBruin (Center for Bioethics) on public health ethics
- Prof. Jim Chen (Law School) on legal responses to biodiversity losses
- Prof. Valerie Tiberius (Philosophy) on environmental ethics
- · Prof. Jeffrey Kahn (Center for Bioethics) on ethical guidelines for genetics
- Prof. Dan Kaufman (Stem Cell Institute) on embryo stem cell research and policy issues
- Prof. Bonnie LeRoy (Institute of Human Genetics) on ethical challenges in genetic counseling
- Prof. Susan Foote (School of Public Health) on medical devices
- Prof. Effronsi Kokkoli (Department of Chemical Engineering and Materials Science) on nanotechnology as a drug delivery tool

Section 2 was led by Prof. Colin Campbell, Associate Director of the Joint Degree Program. Student presenters discussed topics such as the U.S. Fish and Wildlife Service's management of depredating and "nuisance" migratory birds, the Digital Millennium Copyright Act and its affect on the field of bioinformatics, and long-term care financing and its implications for policy and law.



Prof. Susan Wolf at the Proseminar.



Bekah Kent and Katie Dick in discussion during Proseminar.



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.

Faculty

Susan M. Wolf, JD, is 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 the 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 is the Executive Editor of the Minnesota Journal of Law, Science, & Technology. She received her AB summa cum laude from Princeton University in 1975 and her JD from Yale Law School in 1980, with graduate work at Harvard University.

After clerking for a federal judge and practicing law for several years, in 1984 she 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 is the author or coauthor of numerous articles and book chapters that have appeared in the 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 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 genetics, assisted reproduction, death and dying, women's health care, managed care, and other topics in health law, law and science, and bioethics. Prof. Wolf's bibliography may be found at <www.law.umn.edu/FacultyProfiles/WolfS.htm>.

Colin R. Campbell, PhD, is Associate Professor and Director of Graduate Studies in the Department of Pharmacology at the University of Minnesota Medical School and 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.

Prof. Campbell received his BS in Biology from Fairfield University in Connecticut in 1981, and his PhD in Biochemistry from Boston University in 1987. 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 a 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>.



Prof. Susan Wolf, Consortium and Joint Degree Program, comments on Prof. Janet Rowley's Lecture Series presentation.

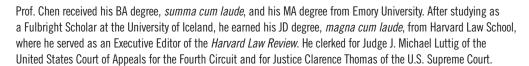


Prof. Kenneth Brooks, Director of Graduate Studies in Natural Resources Science & Management; Prof. Susan Wolf, Consortium and Joint Degree Program; and Prof. Alan Ek, Head of the Department of Forest Resources.



Jim Chen, JD, is the Associate Dean for Faculty and the James L. Krusemark Professor of Law at the University of Minnesota Law School. He also serves as the Director of Special Projects for the Joint Degree Program and Consortium and is a member of the graduate faculty of the University of Minnesota's Conservation Biology Program. Prof. Chen is an editor of Constitutional Commentary, the University of Minnesota's faculty-edited journal on constitutional law, and the founding Faculty Editor-in-Chief of the Minnesota Journal of Law, Science & Technology. In 1998, he was designated a Vance K. Opperman Research Scholar. He was appointed the Julius E. Davis Professor of Law in 2000 and the James L. Krusemark Professor of Law in 2001.

A member of the Law School faculty since 1993, Prof. Chen teaches and writes in the areas of administrative law, agricultural law, constitutional law, economic regulation, environmental law, natural resources law, criminal law, food and drug law, industrial policy, and legislation. A prolific scholar, he has written several dozen scholarly articles. Prof. Chen's bibliography may be found at <www.law.umn.edu/FacultyProfiles/ChenJ.htm>. He has lectured on agricultural subjects for the University of Minnesota's Center for International Food and Agricultural Policy, the University of Arkansas, the Université de Nantes, the American Agricultural Law Association, the Union Mondiale des Agraristes Universitaires, and the Comité Européen de Droit Rural. In 1995, he held a chaire départementale at the Faculté de Droit et des Sciences Politiques of the Université de Nantes. In 1999, he became the first American to teach law as a visiting professor at Heinrich-Heine-Universität in Düsseldorf. He taught in 2000 at Slovenská Poľnohospodárska Univerzita v Nitre (the Slovak Agricultural University in Nitra).



Jordan Paradise, JD, is the Associate Director of Research & Education to the Consortium and Joint Degree Program. She is also an Adjunct Associate Professor in the Law School, a Research Associate in the Center for Bioethics, and a member of the Faculty Editorial Advisory Board for the Minnesota Journal of Law, Science & Technology. Ms. Paradise received a JD and Intellectual Property Law Certificate from Chicago-Kent College of Law in 2003. Prior to joining the Consortium and JDP in June 2005, she was a Legal Fellow with the Illinois Institute of Technology and the Institute for Science, Law and Technology in Chicago. She earned her BS in Biological Psychology & Cognitive Science from the University of Michigan. Ms. Paradise's current research focuses on the legal aspects of gene patents, stem cell research, genetic modification, and nanotechnology. Her recent publications include: "Patents on Human Genes: An Analysis of Scope and Claims" (Science. 2005, co-authored with Lori Andrews and Timothy Holbrook); "Gene Patents: The Need for Bioethics Scrutiny and Legal Change" (Yale Journal of Health Policy, Law & Ethics, 2005, co-authored with Lori Andrews); "European Opposition to Exclusive Control Over Predictive Breast Cancer Testing and the Inherent Implications for United States Patent Law and Public Policy: A Case Study of the Myriad Genetics' BRCA Patent Controversy" (Food & Drug Law Journal, 2004); and "Constructing Ethical Guidelines for Biohistory" (Science, 2004, co-authored with Lori Andrews, et al.).



Jordan Paradise, Associate Director of Research & Education.

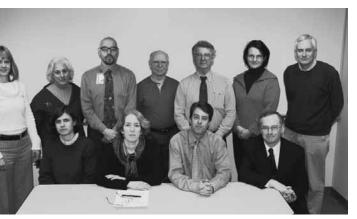


Audience at the conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"



Governing Committee

Collette Adkins Giese was the 2004–05 student representative to the Governing Committee. She joined the Joint Degree Program in 2001. She received her BA summa cum laude in Biology and Environmental Studies from Concordia College in Moorhead, MN, an MS in Wildlife Conservation from the University of Minnesota, and has been awarded full scholarships for both her legal studies and her doctoral studies in Conservation Biology. She has held summer



Governing Committee

Front Row, L to R: Prof. Meg Titus, Prof. Susan Wolf, Prof. Jeffrey Kahn, Dean John Finnegan.

Back Row, L to R: Dean Meredith McQuaid, Dean Helene Horwitz, Prof. Colin Campbell, Prof. Kenneth Brooks, Dean George Green, Dr. Jennifer Kuzma, Prof. Bryan Dowd.

Not Pictured: Collette Adkins Giese, Prof. Francesca Cuthbert, Prof. Nancy Eustis, Prof. Claudia Neuhauser, Dean Mary Story, Prof. Betsy Wattenberg. internships at Defenders of Wildlife in Washington, DC; Earthjustice in Denver, CO; and Faegre & Benson. Ms. Adkins Giese presented papers at the 2003 and 2004 Annual Meetings of the Society for Conservation Biology and received a grant from the Consortium for her 2004 presentation on "Societal Concerns Versus Sound Science: A Review of U.S. Fish and Wildlife Management of Depredating Migratory Birds." She was a staff member for Law & Inequality: A Journal of Theory & Practice in 2003-04 and published an article on "The Big Bad Wolf Hybrid: How Molecular Genetics Research May Undermine Protection for Gray Wolves under the Endangered Species Act" in the Minnesota Journal of Law, Science & Technology in 2005. She graduated from the Law School in May 2005 and will start a federal judicial clerkship in October 2005.

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. He 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.

Francesca J. Cuthbert, PhD, is a Professor in the Department of Fisheries & Wildlife and co-Director of Graduate Studies for the Conservation Biology Program. Her research interests include conservation and biology of birds focusing on colonial waterbirds and shorebirds, recovery of endangered populations using an ecosystem perspective. She received her doctorate at the University of Minnesota.

Bryan E. Dowd, PhD, is Professor and Director of Graduate Studies in the Division of Health Services Research & Policy 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.

Nancy Eustis, PhD, is Professor and Director of Graduate Studies in the Hubert H. Humphrey Institute of Public Affairs. She also serves on the University's gerontology faculty and is affiliated with the University's Department of Sociology and School of Public Health. She is an author and researcher long-term care and personal assistance services for older people and people with disabilities. Her research focuses on consumer-directed long-term services and quality and cost-effectiveness of in-home and nursing home care. She also has studied health services planning. She earned a doctorate and a master of arts degree in Sociology from the University of Minnesota.

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.

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.

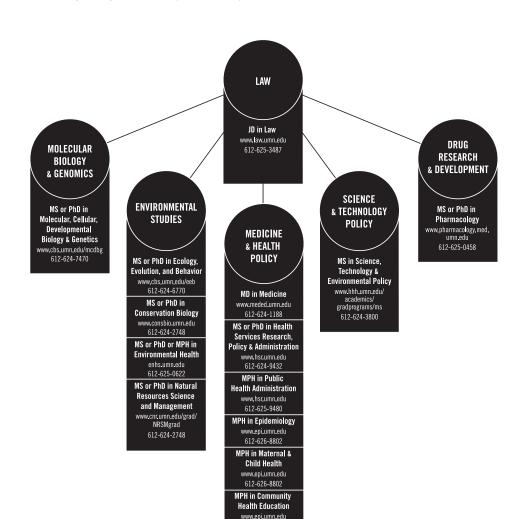


Jeffrey P. Kahn, PhD, MPH, holds the Maas Family Chair in Bioethics and is Director of the University of Minnesota's Center for Bioethics. He is also Professor in the Medical School's Department of Medicine and holds graduate faculty appointments in the School of Public Health and Department of Philosophy, 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 1998-02. 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.

Kenneth H. Keller, PhD, is the Charles M. Denny, Jr. Professor of Science, Technology, and Public Policy in the Hubert H. Humphrey Institute of Public Affairs, where he directs the Center for Science, Technology, and Public Policy. He also holds an appointment in the Department of Chemical Engineering and Materials Science. His current research examines the intersection of science and technology with international affairs. His recent writings have dealt with information technology and national sovereignty, the environment, the globalization of research and development, and policy issues in high-technology medicine. He has spent most of his career at the University of Minnesota where he joined the faculty in 1964, became Vice President for Academic Affairs in 1980, and University President in 1985. From 1990 to 1996, he was Senior Fellow for science and technology at the Council on Foreign Relations and, for 2 of those years, the Council's Senior Vice President for Programs. He earned a master's degree and doctorate in Chemical Engineering from Johns Hopkins University.



Prof. Bryan Dowd at a Joint Degree Program Governing Committee meeting.



612-626-8802

Structure of the Joint Degree Program.





Profs. Steve Calvin, Janet Rowley, and Carol Tauer, respond to audience questions at the Lecture Series on Law, Health & the Life Sciences.



The Joint Degree Program's Governing Committee meets 3 times per year.

Meredith M. McQuaid. JD. is Associate Dean of Administration and Director of International and Graduate Programs at the University of Minnesota Law School. She is primarily responsible for policy implementation and day-to-day operations. Additionally, she administers and supervises the LLM program for foreign lawyers and oversees exchange programs for Law School students. Dean McQuaid teaches

Introduction to American Law and the LLM legal writing course. Dean McQuaid currently serves on the University of Minnesota China Advisory Board. She is Chair of the ABA Section of Graduate Programs for Foreign Lawyers for 2005. She received her JD cum laude from the University of Minnesota.

Claudia Neuhauser, PhD, is Professor and Head of the Department of Ecology, Evolution and Behavior. She is an applied mathematician. Her research interests are ecology and genetics, where she studies the role of local spatial interactions in community dynamics and how selection affects genealogies. These investigations are theoretical, relying on mathematical models, analytical methods, and partially on computer simulations. Prior to her appointment at the University of Minnesota, she held faculty appointments at the University of Southern California and the University of Wisconsin in Madison. She has also held a faculty appointment at the University of California, Davis. She received her master's degree at the University of Heidelberg, Germany, and her doctorate from Cornell University.

Mary Story, PhD, is Associate Dean of Student Affairs for the School of Public Health. She is also a Professor in the Division of Epidemiology. Her research focuses on child and adolescent nutrition, obesity prevention, eating behaviors, and environmental and policy change related to healthy eating. She has been honored with the Betty Hubbard Maternal and Child Health Leadership Award from the Minnesota Department of Health and the Minnesota Maternal and Child Health Advisory Task Force and the American Dietetic Association President's Circle Nutrition Education Award, among many other honors and awards. She received her PhD at Florida State University.

Margaret A. Titus, PhD, is Associate Professor in the Department of Genetics, Cell Biology, and Development and Director of Graduate Studies of the Graduate Program in Molecular, Cellular, Developmental Biology & Genetics. Her research laboratory focuses on cellular functions of unconventional myosins in both the simple eukaryote Dictyostelium discoideum and the nematode Caenorhabditis elegans. The studies are conducted through a combined approach that includes genetic, molecular genetic, cell biological, and biochemical techniques. Prof. Titus received her doctorate from Brandeis University.

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.



Faculty Roster

Beyond the core faculty directly involved in Joint Degree Program governance, a larger roster were available to work with our students in 2004-05:

Law Befort, Stephen F. Bix, Brian Burk, Dan L. Burkhart, Ann M. Chen, Jim Gifford, Daniel J. Gross, Oren Karkkainen, Brad Morrison, Fred L. Okediji, Ruth L. Orfield, Myron W.

Weissbrodt, David S.

Molecular, Cellular,

Wolf, Susan M.

Developmental Biology & Genetics (MCDB&G) Ahrens, Mary Ellen J. Baker, Janice A. Baldinger, Shari R. Bardwell, Vivian J. Behrens, Timothy W. Berman, Judith G.

Brooker, Robert J. Chen, Lihsia Clarke, Duncan J. Conklin, Kathleen F.

Brambl, Robert M.

Berry, Susan A.

Bower, Matt

Conner, Sean Conrad, Beth Ann

Coucouvanis, Electra C. Davis, Dana

Ekker, Stephen C. Elde. Robert P. Farrar, Michael A. Fox, MaryAnn V.

Fuhrmann, Kathrine N. Garza, Judy

Goldstein, Stuart F. Gray, William M.

Gustin, Joy Ann

Hackett, Perry B. Hamilton, David W. Hatten, Bonnie A.

Hays, Tom S. Herman, Robert K. Hirsch, Betsy A. Hogquist, Kristin A.

Iwanij, Victoria Jameson, Stephen C.

Johnson, Ross G. King, Richard A. Kirkpatrick, David T.

Koepp, Deanna Koob, Michael D Kuriyama, Ryoko

Lanier, Lorene M. Largaespada, David A. LeRoy, Bonnie S.

Lefebvre, Paul A. Letourneau, Paul C.

Linck, Richard W. Livingston, Dennis M.

Magee, Paul T. Mansky, Louis M. Mariash, Cary N.

Marker, Paul C. Marks, M. David McCarthy, James B.

McIvor, R. Scott McLoon, Steven C. Mendelsohn, Nancy J.

Mescher, Matthew F. Miller, Jeffrey R.

Moser, Kathy L. Nakato, Hiroshi Neufeld, Thomas P. O'Connor, Michael B.

Olszewski, Neil E. Orr, Harry T.

Petzel, Sue Phillips, Ronald L. Porter, Mary E.

Ranum, Laura P. Roggenbuck, Jennifer A.

Rougvie, Ann E. Rubin, Karol R. Sanderfoot, Anton

Schimmenti, Lisa A.

Schottel, Janet L. Selleck, Scott B. Shaw, Jocelyn E.

Shawlot, William Shimizu, Yoji Silflow, Carolyn D.

Simmons, Michael J. Simon, Jeffrey A.

Skubitz, Amy P. Somia, Nikunj V. Sorenson, Robert L.

Spear, Alysia B. Steer, Clifford J. Titus, Margaret A.

Towle, Howard Van Ness, Brian G. Verfaillie, Catherine M.

Vernick, Kenneth D. Whitley, Chester B.

Wick, Susan M. Wright, Robin L. Zarkower, David A.

Ecology, Evolution, and Behavior

Alstad. Donald N. Andow, David Barnwell, Franklin H.

Brezonik, Patrick L. Cavender Bares, Jeannine M.

Cotner, James B. Curtsinger, James W. Cushing, Edward J.

Davis, Margaret Dean, Antony M. Denison, Robert F.

Finlay, Jacques C. Frelich, Lee E.

Galatowitsch, Susan M. Heimpel, George E. Hobbie, Sarah E.

Jansa, Sharon A. Johnson, Thomas C. King, Jennifer Y.

Kinkel, Linda L.

Lanyon, Scott M. Larson, Diane Lehman, Clarence L. May, Georgiana

McFadden, Joseph P. Mech, L. David Megard, Robert O.

Montgomery, Rebecca A. Morrow, Patrice A. Muller-Landau, Helene

Neuhauser, Claudia Newman, Raymond M.

Oberhauser, Karen S. Packer, Craig Pastor, John J.

Polasky, Stephen Pusey, Anne Regal, Philip J.

Reich, Peter B. Sadowsky, Michael J.

Shaw, Ruth G. Simmons, Michael J.

Simons, Andrew Sorensen, Peter W.

Spivak, Marla Starfield, Anthony M.

Stephens, David W. Sterner, Robert W.

Stromberg, Bert E., Jr. Strong, Ellen E.

Sugita, Shinya Tiffin, Peter L.

Tilman, G. David Weiblen, George D.

Weller, Susan J.

Zink, Robert M.

Adelman, Ira R. Allan, Deborah L. Alstad, Donald N. Andersen, David E. Anderson, Charles S. Anderson, Dorothy H.

Anderson, Neil A.

Andow, David

Conservation Biology

Ankley, Gerald T. Arnold, Todd W. Barnwell, Franklin H. Bauer, Marvin E.

Bell, Jay

Bengston, David Blair, Robert B. Blinn, Charles R. Bolstad, Paul V. Bowyer, Jim L. Broadbent, Jeffrey

Burk, Thomas E. Cardwell, Vernon B. Chen, Jim Coggins, Jay S.

Cohen, Yosef Corbin, Kendall W. Cornett, Meredith W. Cunningham, William P.

Curtsinger, James W. Cushing, Edward J. Cuthbert, Francesca J. Easter, K. William

El Halawani, Mohamed E.

Ellefson, Paul V. Finlay, Jacques C. Fiutak, Thomas R. Frelich, Lee E.

Fulton, David C. Galatowitsch, Susan M. Garshelis, David L.

Giles-Vernick, Tamara L. Haight, Robert G. Hatch, Jay T.

Hobbie, Sarah E. Homans, Frances R. Jannett, Frederick J. Jansa, Sharon A. Jordan, Nicholas R.

Jordan, Peter A. Kapuscinski, Anne R.



Karanth, K. Ullas Kilgore, Mike Klink, Katherine Lang. Jeffrev W. Lanyon, Scott M. Larson, Diane Lehman, Clarence L. Loegering, John P. Manson, Steven M. McMaster. Robert B. Mech, L. David Miller, Loren M. Morrow, Patrice A. Musacchio, Laura R. Nagar.Richa Nelson, Kristen C. Neuhauser, Claudia Newman, Raymond M. Niemi. Gerald J. Oberhauser, Karen S. O'Brien, Stephen Packer, Craig Pereira, Donald L. Perry, James A. Philippon, Daniel J. Polasky, Stephen Pusey, Anne E. Redig, Patrick T. Regal, Philip J. Reich, Peter B. Richards, Carl Runge, C. Ford Samatar, Abdi Ismail Schneider, Ingrid E. Shaw, Ruth G. Simons, Andrew Siniff. Donald B. Smith, J.L. David Snider, Anthony G. Sorensen, Peter W. Spangler, George R. Sauires. Roderick H. Starfield, Anthony M. Sterner, Robert W. Strong, Ellen E.

Sugita, Shinya Swain, Edward B. Tilman, G. David Tilson, Ronald L. Vondracek, Bruce Western, David Zeitouni, Naomi Ziegler, Susy S. Zink, Robert M.

Environmental Health Adgate, John L. Alexander, Bruce H. Bender, Alan Boyle, Debora Jo Brosseau, Lisa M. Campbell, Colin R. Carpenter, Hillary M. Church, Timothy R. French, Lewis R. Gerberich, Susan G. Goyal, Sagar M. Greaves, Ian A. Hedberg, Craig W. Holtzman, Jordan L. Lungu, Claudiu T. Maldonado, George Mandel, Jeffrev H. McCullough, Nicole V. McGovern, Patricia M. Messing, Rita B. Nachreiner, Nancy M. O'Boyle, Carol Ann Olson, Debra K. Peterson, Lisa A. Ramachandran, Gurumurthy Ravnor, Peter C. Roy, Robert R. Simcik, Matt F. Singer, Randall Skoglund, Robert S. Smith. Kirk E. Sparber, Sheldon B. Swackhamer, Deborah L. Toscano Jr, William A. Vesley, Donald

Natural Resources Science & Management

Anderson, Dorothy Helen Ascerno, Mark E. Bauer, Marvin E. Baughman, Melvin J. Befort, William A. Bengston, David Berglund, Erwin R. Blair, Robert B. Blanchette, Robert A. Blickenderfer, Mary M. Blinn, Charles R. Bolstad, Paul V. Bowyer, Jim L. Bratkovich, Stephen M. Brooks. Kenneth N. Burk. Thomas Edward Carlson, Stephan Paul Cogan, John J. Cornett, Meredith W. Current, Dean Alan Cushing, Edward J. David, Andrew J. Demchik, Michael C. Dodds, Kevin J. Eckman, Karlyn Ek, Alan R. Erkkila, Daniel Lee Finley, Fred N. Frelich, Lee E. Fulton, David C. Gilmore, Daniel William Grimsrud, David T. Haight, Robert G. Hansen, Mark H. Hendrickson, William A. Hobbie.Sarah E. Hoganson, Howard M. Huelman, Patrick Henry Jakes, Pamela Johnson, Gary Ronald

Kolka, Randy Massey, Joseph Gerald McAvoy, Leo H. McRoberts. Ronald E. Miller, Kristine F. Montgomery, Rebecca A. Moser, W. Keith Nelson, Kristen C. Nieber, John Little Oberhauser, Karen S. O'Brien, Joseph G. Oleksyn, Jacek Ostry, Michael E. Palik, Brian J. Perry. Charles H. Perry, James A. Petersen, Harlan D. Polasky, Alan Stephen Ramaswamy, Shri Reich, Peter Bernard Reichenbach, Mike Riemenschneider, Don E. Runge, C. Ford Sarkanen, Simo Schmidt, Elmer Lyle Schmidt, Thomas L. Schneider, Ingrid Eleanore Schomaker, John H. Seavey, Robert Thomas Severtson, Steve John Shmulsky, Rubin Smith, J.L. David Smith, Timothy M. Snyder, Stephanie A. Stafford, Susan G. Stine, Robert A. Sullivan, Alfred D. Taff, Steven J. Thompson, Jerrilyn L. Tschirner, Ulrike W. Verry, Elon S. Winandy, Jerry Worry, Gary L. Yin, K. Karen Yin, Xiwei

Zasada, John C.

Zenner, Eric K.T

Medicine

A complete list of Medical School Faculty may be found in the Medical School Catalog on-line at:

www.catalogs.umn.edu/tcmed/

Health Services Research, on Policy & Administration

Abraham, Jean M. Begun, James W. Bershadsky, Boris Blewett, Lynn A. Call, Kathleen Thiede Christianson, Jon B. Connor, Robert A. Dahl, Tor Davern, Michael E. Dowd, Bryan E. Feldman, Roger D. Finch, Michael D. Foote, Susan Bartlett Garrard, Judith M. Grant, Leslie Alan Holtzman, Jeremy L. Jonk, Yvonne Catharin M. Kane, Robert L. Kane, Rosalie A. Kralewski, John E. McAlpine, Donna D. McBean, A. Marshall Moscovice, Ira S. Nyman, John A. Parente, Stephen T. Potthoff, Sandra J. Radosevich, David M. Riley, William J. Rockwood, Todd H. Speedie, Stuart M. Town, Robert J. Virnig, Beth A. Weckwerth, Vernon E. Wholey, Douglas R. Wilson, Amy Reed



Wattenberg, Elizabeth V.

Williams, Allan N.

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Kilgore, Mike

Public Health Administration

Baizerman, Michael L. Bender, Jeff B. Block, Lester E. Blum, Robert W. Brown, Judith E. Garrard, Judith Garwick, Ann E. Gerberich, Susan G. Grant, Leslie A. Hellerstedt, Wendy L. Jeffery, Robert W. Leonard, Barbara J. McBean, A. Marshall McGovern, Patricia M. Patterson, Joan Resnick, Michael D. Schacht, Lee E. Veninga, Robert L.

Epidemiology, Maternal & Child Health, and Community Health Education

Anderson, Kristin E. Bender, Alan Blackburn, Henry Bushhouse, Sally Crow, Richard S. Danila ,Richard N. Desvarieux, Moise Duval, Susan J. Erickson, Darin J. Finnegan, John R., Jr. Flood, Andrew Folsom, Aaron R. Forster, Jean L. French, Simone Gatewood, Lael Grimm, Richard H. Gross, Myron D. Gurney, James G. Harnack, Lisa J. Harwood, Eilleen M. Hellerstedt, Wendy L. Hennrikus, Deborah J. Himes, John H.

Hull, Harry F. Humphrey III, Hubert H. Jacobs, David R., Jr. Jeffery, Robert W. Jones-Webb, Rhonda J. Krinke, Bea Komro, Kelli A. Lando, Harry A. Lazovich, Deann Leon. Arthur S. Lifson, Alan R. Luepker, Russell V. Lytle, Leslie A. Menotti, Alessandro Mertens, Ann C. Miller, Michael Neglia, Joseph P. Neumark-Sztainer, Dianne Oakes, Michael Oberg, Charles N. Osterholm, Michael T. Pankow, James Pappaioanou, Marguerite Patterson, Joän Pereira, Mark Perry, Cheryl Pirie, Phyllis Robison, Leslie Rothenberger, James H. Ross, Julie Schmitz, M. Kathryn Schreiner, Pamela Shahar, Eyal Steffen, Lyn Story, Mary Toomey, Traci Van Ryn, Michelle Wagenaar, Alexander

Science, Technology & Environmental Policy Abrahamson, Dean E. Keller, Kenneth H. Kuzma, Jennifer

Williams, Carolyn L.

Markusen, Ann R. Munnich, Lee W. Schuh, G. Edward

Pharmacology

Bitterman, Peter B. Burton, Frank H. Campbell, Colin R. Connell, Gregory J. Conti-Fine, Bianca M. Dunham, Earl W. Elde, Robert P. El-Fakahany, Esam E. Fairbanks, Carolyn A. Gewirtz, Jonathan C. Hanna, Patrick E. Hecht, Stephen S. Hiasa, Hiroshi Holtzman, Jordan L. Hunninghake, Donald B. Kofuji, Paulo Lange, Carol A. Law, Ping-Yee Lee, Hon Cheung Loh, Horace H. Marchant, Jonathan S. Messing, Rita B. Pei, Duanqing Pentel, Paul R. Portoghese, Philip S. Potter, Lincoln R. Romero, Daniel P. Roy, Sabita Seybold, Virginia S. Shebuski, Ronald J. Sinaiko, Alan R. Sladek, Norman Elmer Sparber, Sheldon B. Sundaram, Ramakrishnan Thayer, Stanley A. Walseth, Timothy F. Wattenberg, Elizabeth V. Wei, Li-Na Wickman, Kevin D. Wilcox, George L.

Wood, W. Gibson

Zimmerman, Ben G.

Yee, Douglas

Center for Bioethics

Bartels, Dianne Bebeau, Muriel Burk, Dan DeBruin, Debra Elliott, Barbara Elliot, Carl Kahn, Jeffrey P. Kane, Rosalie Liaschenko, Joan Marshall, Mary Faith Mayo, David Miles, Steven Plotnikoff, Gregory Ratner, Edward Song, John Taussig, Karen-Sue Valapour, Maryam Virnig, Beth Wolf, Susan M.



Laurie Vasichek, Esq., Equal Employment Opportunity Commission comments on Prof. Clayton's Deinard Lecture.



Prof. Jamie Grodsky, University of Minnesota, moderating a workshop at the annual symposium.



Prof. John Wagner, University of Minnesota's Stem Cell Institute, comments on Prof. Charo's Lecture Series presentation.



Joint Degree Program student Nicola Kieves with Advisory Board member Rep. Phyllis Kahn at the Fall 2004 Advisory Board reception.



Advisory Board member Paul Savereide, Esq. and Joint Degree Program student Ji Eun Kim at the Fall 2004 Advisory Board reception.



Mark Ellinger, Esq., host of the Advisory Board reception at Fish & Richardson.

Joint Degree Program Advisory Board

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. Mark Ellinger, Esq. and the law firm of Fish and Richardson were our hosts in 2004. The 2004-05 Board members were:

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, she 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 has worked as a Pediatric Consultant to the Minneapolis Health Department and Director of the Community University Health Care Clinic (CUHCC). CUHCC serves uninsured or underinsured children in the Phillips neighborhood, one of the poorest neighborhoods in the state, a highly diverse community made up of Native American, Hispanic, Southeast Asian, Somali, and white residents. Dr. Deinard has received numerous awards for his efforts, 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.

Philip M. Goldman, JD, MS, Fredrikson & Byron, PA, joined the firm's Intellectual Property Group in 1992, after serving for 10 years in 3M's Office of Intellectual Property Counsel. He holds a BS in Biochemistry and an MS in Microbiology, has completed pre-doctoral work in radiation and molecular biology, and has worked as a research biochemist. Mr. Goldman's intellectual property experience includes all aspects of U.S. and international matters relating to the health, animal, and agricultural industries, with a particular focus on obtaining, licensing, and enforcing patents in the biomedical and biochemical areas. He is a past-President of the 600+ member Minnesota Intellectual Property Law Association (MIPLA) and is President of Mount Zion Temple in Saint Paul, MN. Mr. Goldman received his JD from William Mitchell College of Law and his MS from Colorado State University. Ryan Johnson, JD will take his place on the Board in 2005-06.

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 for his efforts. Mr. Humphrey holds a JD from the University of Minnesota Law School.

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. She 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." She received a PhD in Biophysics from Yale and MPA from the J.F.K. School of Government at Harvard University.

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 of Ethics and Compliance 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. She is a member of the Board of Directors of the American Society of Law, Medicine & Ethics (ASLME) and a past-President of ASLME. She is also a legal advisor to the Minnesota Center for Healthcare Ethics. Ms. Mickelsen 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*. Ms. Mickelsen received her JD from William Mitchell College of Law and her MPH from Harvard University.

Adonis A. Neblett, JD, is Chair 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, biochemical, and mechanical. Mr. Neblett advises clients on all aspects of intellectual property assets protection as well as technology development and transfer agreements, including licensing and joint ventures. His practice includes product clearance/freedom to operate and due diligence analyses and related opinion work. 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. Mr. Neblett received his JD from the University of Washington School of Law.

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 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 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.



Joint Degree Program student Michelle Dawson with Advisory Board member Skip Humphrey, Esq. at the Fall 2004 Advisory Board reception.



Joint Degree Program student Kari Bomash with Advisory Board member Win Rockwell, Esq. at the Fall 2004 Advisory Board reception.



Rep. Phyllis Kahn, Minnesota House of Representatives, at an Advisory Board meeting.





Advisory Board member Ann Russell, Esq. and Joint Degree Program student Kelsey Brodsho at the Fall 2004 Advisory Board reception.



Mark Skoog, Esq., Merchant & Gould, at the Spring Advisory Board meeting.

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 seventy-five 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 is a frequent speaker on ethical issues and 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 for 10 years.

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, California. He also worked as an associate with the Minneapolis office of the Dorsey and Whitney law firm. Mr. Savereide earned his PhD in Cell and Developmental Biology from the University of Minnesota and his JD from the University of Minnesota in December 1991. 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 sole 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 2 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, PhD. JD. 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.

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.



Deinard Memorial Lecture on Law & Medicine

The Joint Degree Program and Center for Bioethics launched the Deinard Memorial Lecture Series on Law & Medicine in the Spring of 2004. This lecture series is supported by a generous donation from the family of Amos S. Deinard, Sr. (1898–1985) in honor of him 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. A fund has been created in their memory to establish this lecture series on law and medicine.

On February 25, 2006, Prof. Ellen Wright Clayton, MD, JD of Vanderbilt University presented the second Deinard Memorial Lecture on "Over-Reading the Human Genome: The Threat to Privacy, Employment, and Responsibility." Prof. Clayton is the Rosalind E. Franklin Professor and Director of the Center for Genetics and Health Policy, Professor of Pediatrics, and Professor of Law at Vanderbilt University.

Prof. Clayton discussed how increasing understanding of human genomics promises to revolutionize medicine, but has major implications for individual privacy, employment, and insurance. She described the public's poor understanding of genetic contributions to human behavior and of the origins of different populations. She suggested strategies to avoid over-reading of the human genome and attibuting too much to genetics. Prof. Richard King, MD, PhD, Associate Director of the University of Minnesota's Institute of Human Genetics and Laurie A. Vasichek, JD, of the Equal Employment Opportunity Commission provided commentary following Prof. Clayton's lecture.

The event provided 1.5 credits of continuing legal education (CLE), 1.5 credits of continuing medical education (CME), and 1.5 contact hours of continuing nursing education (CNE). Video of the second Deinard Memorial Lecture is available on our websites at <www.jointdegree.umn.edu/conferences/ellen_clayton_2005.php> and <www.lifesci.consortium.umn.edu/conferences/ellen_clayton_2005.php>.



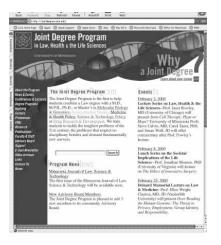
Left: Amos S. Deinard, Sr. (1898-1985). Right: Benedict S. Deinard (1899-1969).



Prof. Ellen Wright Clayton, Vanderbilt University, delivering the Deinard Lecture.

<www.jointdegree.umn.edu>

The Joint Degree Program's website is the best resource for learning about the degree combinations offered by the program, Descriptions of each degree combination are included under "Degree Programs." Application instructions and links to our partner programs may be found at "Applying." The "Careers" page profiles our alumni and others with joint degrees to show prospective students the myriad career options available to them. A search function allows users to access information on the site quickly. Another feature allows users to search for current news on law, health, environment, and life sciences via Google's search engine. Videos from all of the year's lectures, conferences, and symposia are available through portals on the "Conference & Lectures," "News & Events," and "Video Archives" pages. Bios of the Governing Committee, Executive Committee, and Joint Degree Program faculty and staff may be found on the "Faculty & Staff" page. The "Advisory Board" page profiles our Board members. User comments are always welcome e-mail us at jointdgr@umn.edu with your thoughts and suggestions.





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



University of Minnesot











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 in 2004–05 are described below.

The **Joint Degree Program <www.jointdegree.umn.edu>** is represented by its founding Director, Prof. Susan Wolf, Faegre & Benson Professor of Law and Professor of Medicine, and Associate Director Prof. Colin Campbell, Associate Professor and Director of Graduate Studies in the 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 **Center for Microbial and Plant Genomics <www.cmpg.umn.edu>** aims to make the University of Minnesota a world leader in microbial and plant genomics by fostering research and education while building public awareness of genomics and its applications in a societal and ethical context. In 2004–05 the Center was led by Prof. Ronald Phillips, Regents' Professor and McKnight Presidential Chair in Genomics.

The **Stem Cell Institute <www.stemcell.umn.edu>** 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 Center is directed by Prof. Catherine Verfaillie, McKnight Presidential Chair in Stem Cell Biology.

The Institute of Human Genetics <www.ihg.med.umn.edu> 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, and Prof. Richard King, Director of Graduate Studies for the Human Genetics Minor, represent the Institute at Consortium meetings and events.

The **Genomics Planning and Coordinating Committee (GPCC) < www.genomics.umn.edu>** is chaired by Vice Provost Victor Bloomfield, who is also Interim Dean of the Graduate School and Professor of Biochemistry, Molecular Biology & Biophysics. The GPCC provides a mechanism for evaluating and implementing University-wide initiatives in biology at the molecular and cellular levels. Its emphasis is on developing research infrastructure and advanced teaching in interdisciplinary areas. The GPCC has met its goals and is disbanding at the end of 2004–05.



The Center for Infectious Disease Research & Policy <www.cidrap.umn.edu> is led by Prof. Michael Osterholm. Professor in the University's School of Public Health, and Jill DeBoer, MPH. 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 healthcare 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.fpd.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 directed by Prof. Francis (Frank) Busta, Department of Food Science & Nutrition; Prof. Michael Osterholm, Epidemiology; and Shaun Kennedy.

The Center for Neurobehavioral Development <www1.umn.edu/cnbd> is co-directed by Prof. Charles Nelson, Distinguished McKnight University Professor of Child Psychology, Neuroscience, Pediatrics, Neurology, Radiology, and Psychiatry, and 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 <www1.umn.edu/eoh/policy > works to use research, education, and outreach to foster informed, reasonable decisions about protecting the environment and human health. The Center's goals are four-fold: to promote rational, well-reasoned, and credible environmental decision making; to provide independent and objective information on important environmental policy issues; to strengthen the role of science in regulatory decision making by serving as a link between scientists and policy makers; and to train future leaders in environment and health policy. Prof. William Toscano, Head of the School of Public Health's Division of Environmental and Occupational Health, is the Center's director.

The Center for Plants and Human Health <cphh.coafes.umn.edu> is coordinated by Prof. Gary Gardner, Professor of Horticultural Science. The Center takes advantage of the fact that 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 Agricultural, Food, and Environmental Sciences. The Center provides a forum for the development and exchange of information relevant to plants and 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 <www.agricola.umn.edu/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 is directed by Prof. Dan Philippon, Department of Rhetoric, and Associate Dean Beverly Durgan in the College of Agricultural, Food, and Environmental Sciences.

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 is led by Prof. Kenneth Keller, Humphrey Institute and Department of Chemical Engineering and Materials Science, and Jennifer Kuzma, PhD.





NATIONAL CENTER FOR FOOD PROTECTION AND DEFENSE A HOMELAND SECURITY CENTER OF EXCELLENCE









CENTER for SCIENCE, TECHNOLOGY, and PUBLIC POLICY







CENTER FOR SPIRITUALITY AND HEALING

AcademicHealthCenter

University of Minnesota

INTERNATIONAL
SCIENCE AND TECHNOLOGY
PRACTICE AND POLICY CENTER
(INSTEPP)

The Water Resources Center (WRC) < wrc.coafes.umn.edu> 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 multi-disciplinary and interagency partnerships. The Center is directed by Profs. Deborah Swackhamer, Division of Environmental Health Sciences, and James L. Anderson, Department of Soil, Water, and Climate.

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.

The International Science and Technology Practice and Policy Center (InSTePP) <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.

Presidential Interdisciplinary Initiative on Law and Values

The University of Minnesota is building on its breadth by cultivating work across the disciplines. University President Robert Bruininks named 8 Interdisciplinary Academic Initiatives in his October 2, 2003 State of the University Address. One of these interdisciplinary priorities is deepening the University's commitment to the Consortium on Law and Values in Health, Environment & the Life Sciences.

The Consortium is honored to be included among the following Initiatives:

- Arts and Humanities
- Biocatalysis
- Brain Development and Vitality over the Life Span
- · Children, Youth, and Families
- · Environment and Renewable Energy
- · Health Foods, Healthy Lives
- Translational Research in Human Health

In 2004-05, the Presidential Initiative generated new funds to:

- launch the Minnesota Journal of Law, Science & Technology;
- establish an annual Visiting Consortium Professor position;
- offer intramural grant funding to further the work of constituent departments, programs, and centers on the societal implications of the life sciences;
- allow the Consortium to continue its current programming; and
- hire a Project Manager to increase our ability to seek funding for and manage original research.

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.



Minnesota Journal of Law, Science & Technology

The Consortium, together with the University of Minnesota Law School, inaugurated this unique new journal in 2004–05. The Minnesota Journal of Law, Science & Technology (MJLST) is a multidisciplinary peer-reviewed journal published twice annually, edited by faculty from across the University of Minnesota as well as by law students. MJLST remains a journal based at the Law School 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 journal was formerly known as the Minnesota Intellectual Property Review (MIPR).

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. Full text for each volume is available on-line with a one-year delay.

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. **Prof. Jim Chen** is the Faculty Editor-in-Chief, **Victor Jonas** was the 2004–05 Student Editor-in-Chief, and Sarah Bunce is the 2005-06 Student Editor-in-Chief. A Faculty Editorial Board peer reviews and edits faculty-written articles for MJLST. The 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 masthead plus the Editorial Advisory Board roster is listed below.



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Victor Jonas, MJLST Student Editor-in-Chief; Dean Alex Johnson, Law School, and Jacy Jasmer, Student Executive Editor, celebrate the first issue of the Minnesota Journal of Law, Science & Technology.

The Minnesota Journal of Law, Science & Technology gratefully acknowledges the following donors:

- Fish & Richardson P.C.
- Merchant & Gould P.C.
- Faegre & Benson L.L.P.
- Fredrikson & Byron P.A.
- Oppenheimer Wolff & Donnelly L.L.P.

The first issue of MILST (December 2004) featured articles by speakers at the Consortium's April 29, 2004 symposium on "Intellectual Property Rights for the Public Good: Obligations of U.S. Universities to Developing Countries." as well as free-agent submissions and student notes. The second issue (May 2005) featured articles on subjects ranging from regulation of transgenic animals to in vitro fertilization to the UK's regulation of digital television.

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.



Minnesota Journal of Law, Science & Technology ARTICLES CENT DEVELOPMENTS University of Minnesota



Sarah Bunce, incoming MJLST Student Editor-in-Chief; Victor Jonas, ${\bf MJLST} \ {\it Student} \ {\it Editor-in-Chief};$ and Graduate School Dean Victor Bloomfield at the reception celebrating the first issue of MJLST.

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Consortium Requests for Proposals (RFPs)

In order to encourage campus-wide work on the societal implications of problems in health, environment, and the life sciences, the Consortium awards intramural grants. In 2004–05 we issued 4 RFPs and made 11 awards totaling \$106,109.50. The 2004–05 subcommittee recommending the intramural awards for faculty, students, and departments to the full Consortium was Profs. Bonnie LeRoy and Susan Wolf, Shaun Kennedy, and Dr. Jennifer Kuzma. The subcommittee for the 2004-05 RFP to Consortium members and JDP partners included Profs. Francesca Cuthbert, Vivek Kapur, Mary Jo Kreitzer, Deb Swackhamer, and Susan Wolf. Committee members recused themselves from consideration of applications as appropriate.

Consortium Members and JDP Partners

Thanks to the Presidential Initiative, in Fall 2004 we inaugurated a new intramural RFP to Consortium member centers and graduate or professional programs and departments participating in the Joint Degree Program seeking funding for research, projects, or colloquia. We made 3 awards:

- "To Explore the Administrative Review Committee Established by the Consent Order in State of Minnesota v. Blue Cross and Blue Shield of Minnesota"— Division of Health Services Research & Policy (Prof. Susan Foote, Head) (\$19,666 awarded);
- "The Nanotechnology-Biology Interface: Exploring Models for Oversight" Center for Science, Technology, and Public Policy (Prof. Kenneth Keller and Dr. Jennifer Kuzma, Director and Associate Director) (\$21,000 awarded); and
- "Ethical Guidelines for External Support of University Initiatives in Food Safety and Food System Protection" - Center for Animal Health & Food Safety (Prof. Will Hueston and Shaun Kennedy, Director and Associate Director) (\$15,000 awarded).



Each year, the Consortium issues 3 intramural RFPs. In Spring 2005, we again issued RFPs for University of Minnesota faculty, for departments/programs/centers, and for graduate and professional students.

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 2 awards:

- "Identifying a Model of Genetic Counseling Practice: A Consensus Meeting" Prof. Pat McCarthy Veach (Educational Psychology), \$9,999.50 awarded; and
- "Interprofessional Teamwork for Patient-Centered Care" Prof. Karyn Baum (Medicine), \$9,870 awarded.

Departments/Programs/Centers

The RFP for programs/departments/centers invited proposals seeking matching funds for colloquia addressing the societal implications of problems in health, environment, or the life sciences. We made 2 awards:

- Minnesota Center for the Philosophy of Science, lectures in the 2005–06 Studies of Science and Technology Colloquium Series, Prof. C. Kenneth Waters, Director (\$5,000 awarded); and
- UMD Center for Regional and Tribal Child Welfare Studies, colloquium on "Children Impacted by Methamphetamine Use: Best Practices," Prof. Michael Raschick, Head, UMD Department of Social Work (\$5,000 awarded).



Prof. Carol Tauer, University of Minnesota Center for Bioethics, comments on Prof. Janet Rowley's Lecture Series presentation.



Prof. Lars Noah, University of Florida, at the symposium on "Where Are Law, Ethics & the Life Sciences Headed? Frontier Issues."





Prof. Victoria Sutton, Texas Tech University, in a workshop at the annual symposium.

Graduate and Professional Students

The RFP to graduate and professional students was intended to provide a stipend for research and writing in the Summer 2005 or academic year 2005—06. We were delighted that the RFP stimulated 33 proposals from students in 19 programs around the University. Four awards were made:

- "Political Economy of Agriculture in the Yazoo Delta: How Federal Policies Shape Environmental Quality and Social Justice" — Moira McDonald, PhD student, Geography (\$3,965 awarded);
- "Local Knowledge and Human Health Risk: Geographies of Risk Assessment at Two Hazardous Waste Sites"— Ryan Holifield, PhD student, Geography (\$2,989 awarded);
- "Forests, Farms, and Lagoons: Incorporating Multiple Perceptions of Landscapes to Improve Conservation Planning" – Michelle Wieland, PhD student, Conservation Biology (\$7,000 awarded); and
- "Measuring Conservation Strategy Success: Command and Control versus Community-Based Conservation in Tanzania" — Jennifer Schmitt, PhD student, Conservation Biology (\$6,620 awarded).

The Consortium has re-issued the RFP to Consortium members and JDP Partners for 2005—06. We expect to re-issue the 3 intramural RFPs in January 2006. RFPs and reports on the winning projects may be found at <www.lifesci.consortium.umn.edu/rfps>.

Annual Symposium

Each year since 2001 the Consortium has sponsored an annual symposium. On May 20, 2005, the Consortium, with the Joint Degree Program and *Minnesota Journal of Law, Science & Technology*, sponsored a national full-day symposium on "Where are Law, Ethics & the Life Sciences Headed? Frontier Issues." This symposium was an exceptional opportunity for academics, researchers, and policymakers interested in the intersection of law and science to exchange knowledge and ideas on existing and developing areas of science, law, and policy. The conference featured invited speakers as well as speakers chosen competitively in response to our call for papers.

Featured speakers included **Prof. Lars Noah**, **JD** (University of Florida); **Prof. C.S. Holling, PhD** (University of Florida); **Prof. Susan Bartlett Foote**, **JD**, **MA** (University of Minnesota); **Prof. Henry T. (Hank) Greely, JD** (Stanford University); and **Prof. Arti Rai**, **JD** (Duke University). They discussed the frontier issues facing the fields of biotechnology, environment, medical technology, neuroscience, and genetics.

Afternoon workshops featured panelists who submitted winning papers in response to our call for papers. Workshops focused on:

- "Bioethics and Law," moderated by Prof. Susan Wolf, JD (University of Minnesota Law School, Medical School);
- "Behavioral Biology, Evolutionary Theory, and Law," moderated by Prof. Alexandra B. Klass, JD (William Mitchell College of Law);
- "Intellectual Property Protection for Biotechnology," moderated by Prof. Jim Chen, JD (University of Minnesota Law School);
- "Environment," moderated by Prof. Jamie Grodsky, JD, MA (University of Minnesota Law School);
- "Regulation of Biotechnology," moderated by Prof. Ronald L. Phillips, PhD (University of Minnesota College of Agricultural, Food, and Environmental Sciences); and
- "Neuroscience & Law," moderated by Prof. Peter Huang, JD (University of Minnesota Law School).





Prof. Gaia Bernstein, Seton Hall University, asks a question at the annual symposium.



Panelists included:

- Lyria Bennett Moses, JSD, Columbia University
- · Gaia Bernstein, JD, LLM, Seton Hall University School of Law
- Rebecca Bratspies, JD, City University of New York
- Keith Bustos, MA, University of Tennessee
- Elizabeth Chorvat, LLM, University of Virginia
- Terrence R. Chorvat, JD, LLM, George Mason University
- Deb Collier, LLM, University of Cape Town
- Oliver Goodenough, JD, Vermont University
- David Herring, JD, University of Pittsburgh
- Cynthia Ho, JD, Loyola University
- Owen Jones, JD, Vanderbilt University
- Bradley Karkkainen, JD, University of Minnesota Law School
- Douglas Kysar, JD, Cornell University
- Cynthia Lee, JD, MA, University of Texas
- Ron Millen, University of Minnesota
- Erin O'Hara, JD, Vanderbilt University
- Eric Racine, PhD, Stanford Center for Biomedical Ethics
- J.B. Ruhl, JD, Florida State University
- Jeffrey Stake, JD, Indiana University
- Victoria Sutton, JD, PhD, MPA, Texas Tech University
- Colleen Sweeney, JD, PhD, Notre Dame College of Ohio



Audience at the symposium on "Where Are Law, Ethics & the Life Sciences Headed? Frontier Issues."

University of Minnesota Profs. Jim Chen, JD (Law School) and Susan Wolf, JD (Law School, Medical School) acted as moderators for the day.

Video of the plenary presentations may be found on-line at **www.lifesci.consortium.umn.edu/conferences/lawlifesci.php**. Articles from this event will be featured in volume 7 of the *Minnesota Journal of Law, Science & Technology*.

This event provided 6 hours of continuing legal education credit (CLE) for attorneys, 7 hours of continuing medical education credit (CME) for physicians, and 7 contact hours in continuing nursing education (CNE) for nurses.

In 2005—06, the annual symposium will focus on "Understanding, Communicating, and Regulating the Risk Posed by New Biomedical Technologies." Our new Associate Director of Research & Education, **Jordan Paradise**, will play a major part in leading this effort. The Consortium will again request CME and CLE credit for the conference.



Prof. C.S. Holling, University of Florida, at the symposium on "Where Are Law, Ethics & the Life Sciences Headed? Frontier Issues."





National Institutes of Health



Prof. Steve Calvin, University of Minnesota Program in Human Rights and Medicine, comments on Prof. Janet Rowley's Lecture Series presentation.

National Institutes of Health (NIH) Grants

Since the Consortium was founded in 2000, one of our primary goals has been to compete for grants to guarantee original intellectual work on the societal implications of the life sciences. This has required a tremendous effort on the part of all Consortium members and our Consortium staff.

The Joint Degree Program and Center for Bioethics collaborated on an NIH-funded project that resulted in a conference on "Genetics & Disability Insurance: Ethics, Law & Policy." The resulting symposium will appear in the Journal of Law, Medicine & Ethics in 2006. The Consortium received an NIH grant in 2003 on "Colliding Categories: Haplotypes, Race & Ethnicity." In 2004-05, the Consortium submitted a grant proposal on "Managing Incidental Findings in Human Subjects Research." In 2005 we received the good news that the proposal will be funded by the National Human Genome Research Institute (NHGRI) at NIH. Prof. Susan Wolf, JD is the Principal Investigator. Co-Investigators are Profs. Jeffrey P. Kahn, PhD, MPH (Center for Bioethics), Frances Lawrenz, PhD (Educational Psychology), and **Charles A. Nelson, PhD** (Children's Hospital Boston). This 2-year project will begin in 2005-06.

With support from the Presidential Initiative on Law and Values in Health, Environment & the Life Sciences, the Consortium expects to hire additional staff in 2005–06 to focus on research and grants.

<www.lifesci.consortium.umn.edu>

The Consortium's website serves as a gateway to the 18 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. As on the Joint Degree Program's website, a search function to allow users to access information on the site quickly. The Consortium site also utilizes the Google news search feature, which allows users to search for current world news on law, health, environment, and life sciences. Videos from all of the year's lectures, conferences, and symposia are available on the website, along with videos from all of our events held in previous years. Our "Education" page lists nearly 800 University of Minnesota undergraduate, graduate, and professional courses that address the societal implications of problems in health, environment, or the life sciences. This compendium serves to encourage students to consider taking such courses, show applicants to the University what we offer in this area, educate the public on course offerings, and guide Consortium and broader University efforts to strengthen this critical part of the curriculum. Our RFPs page includes a catalog of 55 grantees and reports on their projects.

 $A standing{-room}$ only audience heard Dr. Evan Snyder present "Stem Cell Biology: Good Ethics Depend on Good Facts.





Annual Report

2004-2005

"Future of the Field of Bioethics— What Have We Learned and Where Do We Go?"

The University's Center for Bioethics together with the Consortium hosted a May 5, 2005 conference in Minneapolis to discuss the future of bioethics as an academic discipline. Attendees invited to participate in the meeting were the directors of the top 50 bioethics programs and centers in the U.S. and Canada. Attendees considered whether bioethics centers and programs should become academic departments, if they should grant tenure in bioethics, if more programs should offer master's degrees and doctorates in bioethics, and how secure the field is within the academy. Meeting co-sponsors were the bioethics programs at Case Western Reserve University, University of Chicago, Georgetown University, The Hastings Center, Johns Hopkins University, University of Louisville, Loyola University-Chicago, Medical College of Wisconsin, Michigan State University, Northwestern University, University of Pennsylvania, Stanford University, University of Texas Medical Branch at Galveston, Tuskegee University, University of Virginia, and the University of Washington. The meeting was supported by The Greenwall Foundation and the Consortium. A report on the May 5 meeting appeared in the July—August 2005 issue of The Hastings Center Report.



Prof. Troy Duster, New York University, listens to a colleague at the conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"

Eastcliff Reception

The Consortium was honored to be featured at the inaugural **President's Interdisciplinary** Initiative Lecture & Conversation at Eastcliff on May 3, 2005. This new lecture series will feature each of University of Minnesota President Robert Bruininks's Interdisciplinary Academic Initiatives. The May 3 event focused on "21st Century Challenges Posed by the Biomedical Sciences." Dr. Susan Hagstrum welcomed the audience and introduced the Interdisciplinary Academic Initiatives. **Prof. Susan Wolf.** Chair of the Consortium, introduced the Consortium and its members. Consortium members **Prof. Jeffrey Kahn** (Director, Center for Bioethics), **Prof. Will Hueston** (Director, Center for Animal Health & Food Safety), and **Prof. Catherine Verfaillie** (Director, Stem Cell Institute) each discussed their center's work and how the Consortium has advanced that work. Attendees were prominent community members, policymakers, and leaders in health care, biotechnology and law. We are grateful to Dr. Hagsrum for hosting this wonderful reception. Eastcliff is the official residence of the President of the University of Minnesota. Information on Eastcliff may be found at <www1.umn.edu/pres/eastcliff/index.html>.



Eastcliff.





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

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

University of Minnesota



Prof. Deborah Swackhamer, Co-Director of the Water Resources Center, speaks at a Consortium meeting.



Prof. Catherine Verfaillie, Stem Cell Institute, introducing Prof. Janet Rowley at her Lecture Series presentation.



Prof. Jeffrey Kahn, Center for Bioethics, introducing Prof. Michael Lysaght at the Lunch Series.

Executive Committee

The Consortium and Joint Degree Program created an Executive Committee in 2003 under the direction of Prof. Susan Wolf, Chair and Director. The Executive Committee is a joint Consortium/Joint Degree Program Committee because nearly all of our events are jointly sponsored, staffed, and funded. 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.

Committee members were each responsible for planning a conference or lecture series, providing input and advice regarding the Presidential Interdisciplinary Initiative on Law and Values, and generally guiding the programs. In 2004–2005 the Executive Committee consisted of:

Prof. Jim Chen, JD (Joint Degree Program and Consortium), took the lead in planning the symposium on "Where Are Law, Ethics & the Life Sciences Headed? Frontier Issues." Prof. Chen is the James L. Krusemark Professor of Law and Associate Dean for Faculty at the University of Minnesota Law School and Director of Special Projects for the Joint Degree Program and Consortium. He is also Faculty Editor-in-Chief for the new *Minnesota Journal of Law, Science & Technology*.

Prof. Jeffrey Kahn, PhD, MPH (Center for Bioethics) took the lead on planning the Lunch Series on the Societal Implications of the Life Sciences with Prof. Susan Bartlett Foote, JD, MA (Division of Health Services Research & Policy). The series focused this year on medical devices and innovation. 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 Services Research and Policy, School of Public Health; and Department of Philosophy.

Prof. Deborah Swackhamer, PhD (Water Resources Center) is a Professor of Environmental Chemistry in the Division of Environmental Health Sciences at the School of Public Health. Her current research is focused on developing chemical indicators of ecological condition for coastal zones of the Great Lakes, and on exposures and impacts of endocrine disruptors. Prof. Swackhamer has been involved in long-term planning of a conference on science and politics.

Prof. Catherine Verfaillie, MD (Stem Cell Institute), took the lead on the Lecture Series on Law, Health & the Life Sciences, which focused on the debate over stem cell research. Prof. Jeffrey Kahn assisted. Prof. Verfaillie is Professor of Medicine in the Division of Hematology, Oncology and Transplantation. She holds the Anderson Chair in Stem Cell Biology; Tulloch Chair in Stem Cell Biology, Genetics and Genomics; and the McKnight Presidential Chair in Stem Cell Biology.

The 2005-06 Executive Committee will include:

- Prof. Kenneth Keller and Dr. Jennifer Kuzma (Center for Science, Technology, and Public Policy) and
 Prof. Dan Philippon (Program in Agricultural, Food, and Environmental Ethics), taking the lead on the Lunch Series
 on the Societal Implications of the Life Sciences, focusing on "Current Debates Over Energy and the Environment:
 Science, Ethics & Policy;"
- Prof. Michael Georgieff (Center for Neurobehavioral Development), taking the lead on the Lecture Series on Law, Health & the Life Sciences, focusing on the ethical, legal, and social issues emerging from neuroscience;
- Prof. Frank Busta (National Center for Food Protection and Defense), taking the lead on the annual conference
 on "Terrorist Threats to our Food Supply: Food Protection and Defense Science, Ethics & Law" with the
 assistance of Profs. William Hueston (Center for Animal Health & Food Safety) and Michael Osterholm
 (Center for Infectious Disease Research & Policy); and
- Prof. Jeffrey Kahn (Center for Bioethics), taking the lead on the Deinard Memorial Lecture Series on Law & Medicine.



Lecture Series on Law, Health & the Life Sciences

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 2004–05 Lecture Series focused on cutting-edge issues in biotechnology, stem cells, and genomics.

Wednesday, December 8, 2005

Prof. Evan Syder, MD, PhD of the Burnham Institute and the University of California, San Diego presented "Stem Cell Biology: Good Ethics Depend on Good Facts." Prof. Snyder is Professor and Director of the Program in Developmental & Regenerative Cell Biology (the Stem Cell Program) at The Burnham Institute, coordinator of the Southern California Stem Cell Consortium, and a faculty member in the Department of Pediatrics and Director of the Basic Science Program in Neonatology at the University of California, San Diego. Prof. Snyder argued that better knowledge of fundamental biology will help resolve some of the debates surrounding stem cells and that facts can provide a basis on which disagreeing parties can achieve consensus. Prof. Paul Tuite, MD, Director of the Movement Disorders Center and Prof. Jeffrey Kahn, PhD, MPH, Director of the Center for Bioethics, provided commentary.

Prof. Evan Snyder, Burnham Institute and the University of California, San Diego.

Wednesday, February 2, 2005

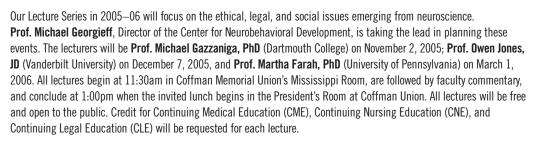
Prof. Janet Rowley, MD of the University of Chicago presented "Stem Cell Therapy: Hype or Hope?" Prof. Rowley is the Blum-Riese Distinguished Service Professor in the Departments of Medicine, Molecular Genetics and Cell Biology, and Human Genetics at the University of Chicago. She cofounded and coedits *Genes, Chromosomes and Cancer*, the premier cancer cytogenetic journal, and is a member of the President's Council on Bioethics. She also served on the National Academy of Sciences (NAS) Committee on Guidelines on Human Embryonic Stem Cell Research that issued a 2005 report addressing the ethical issues posed by stem cell research. Her lecture examined the bioethics issues raised by research on human embryonic stem cells. She argued that adequate guidelines for doing research with human embryonic stem cells do not yet exist and suggested creating a committee to discuss informed consent, storage of embryos, fair distribution, and characterization and cataloguing. **Prof. Steve Calvin, MD**, Chair of the Program in Human Rights and Medicine, **Prof. Carol Tauer, PhD** of the Center for Bioethics, and **Prof. Susan Wolf, JD**, Chair of the Consortium, provided commentary.



Prof. Janet Rowley, University of Chicago.

Wednesday, April 20, 2005

Prof. Alta Charo, JD, University of Wisconsin presented "From Stem Cells to Jail Cells." Prof. Charo is the Elizabeth S. Wilson-Bascom Professor of Law and Bioethics at the University of Wisconsin at Madison. She is a former member of the NIH Human Embryo Research Panel and the National Bioethics Advisory Commission. She, too, served on the NAS Committee on Guidelines on Human Embryonic Stem Cell Research. Prof. Charo's lecture focused on the history of the legal and ethical debates surrounding embryo research, with special attention to the role of social movements and party politics in the construction of the ethical arguments. She addressed evolving discussions concerning the moral status of the embryo, arguments concerning taxpayer complicity with federally financed research, and the interplay between social movements opposing new reproductive technologies or biotechnology and those associated with opposition to abortion. Commentators were the University of Minnesota's Vice President for Research, Timothy Mulcahy, PhD; Prof. John Wagner, MD of the Stem Cell Institute and Division of Hematology-Oncology and Blood and Marrow Transplantation; and Prof. Bryan Dowd, PhD of the Division of Health Services Research and Policy.





Prof. Alta Charo, University of Wisconsin.

Videos from all of the 2004-05 lectures are available on our websites at

- <www.jointdegree.umn.edu/conferences/lecture_series.php> and
- <www.lifesci.consortium.umn.edu/conferences/lecture series.php>.

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 3 lectures in 2004–05. 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 2004-05 Lunch Series was medical devices and innovation. The Lunch Series speakers were:

Tuesday, November 2, 2004

Prof. Michael Lysaght, PhD, Brown University, presented "Risk, Reason and Regulation of Medical Devices." Prof. Lysaght is Professor of Medical Sciences and Engineering and Director of the Center for Biomedical Engineering at Brown University. In his presentation he described the genesis of U.S. device regulation. He compared the regulation of products in high-tech medicine to that of less high-tech medicine, pharmaceuticals, and equivalent items in Europe. Prof. Lysaght concluded by calling for more data on the effectiveness of FDA regulation. He suggested that a "soft touch" approach to medical device regulation would better serve the U.S. healthcare system. He proposed exploring of a second-track FDA approval process. He also urged that the FDA adapt to the new environment of "hybrid" devices.

Tuesday, February 8, 2005

Prof. Jonathan Moreno, PhD, University of Virginia, presented "The Ethics of Innovative Surgery." Prof. Moreno is the Emily Davie and Joseph S. Kornfeld Professor of Biomedical Ethics and Director of the Center for Biomedical Ethics at the University of Virginia. He is president of the American Society for Bioethics and Humanities and a member of the Institute of Medicine's Board on Health Sciences Policy. Dr. Moreno described the results of a study focusing on the ethics of experimental surgery by the University of Virginia Center for Biomedical Ethics and discussed the study's implications for national policy.

Tuesday, April 5, 2005

Alan Milstein, JD, MS, of the law firm of Sherman, Silverstein, Kohl, Rose & Podolsky, presented "Human Subjects **Protection: A Plaintiff's Perspective."** Mr. Milstein is a nationally recognized litigator in the areas of products liability. bioethics, and clinical trials litigation. He has represented human subjects in gene therapy, melanoma vaccine, artificial heart, and other research trials as well as soldiers claiming harm from anthrax and smallpox vaccines. Mr. Milstein reviewed the history of human subjects' research and the founding of modern research ethics. He reviewed recent court cases, including Gelsinger and Grimes, which have shifted into the courtroom discussion of research ethics and harm to subjects.

In 2005 – 06 the Lunch Series will focus on "Current Debates Over Energy and the Environment: Science, Ethics & Policy," Prof. Ken Keller and Jennifer Kuzma, PhD, Director and Associate Director of the Center for Science, Technology, and Public Policy, and Prof. Dan Philippon, Director of the Program in Agricultural, Food, and Environmental Ethics, are planning this series. The lecturers will be **Prof. Daniel Kammen. PhD** (University of California, Berkeley) on October 18. 2005; **Donald Brown, Esq.** (Pennsylvania Consortium for Interdisciplinary Environmental Policy) on November 10, 2005; Prof. Richard Howarth, PhD (Dartmouth College) on February 7, 2006; and Richard Sandor, PhD (Chicago Climate Exchange) on April 11, 2006. All lectures are held from 12:15pm—1:30pm in Coffman Memorial Union's Mississippi Room or the St. Paul Student Center's Theater and will be free and open to the public. Continuing Legal Education (CLE) credit will be requested for each lecture.

Videos from all of the 2004 – 05 lectures are available on our websites at www.jointdegree.umn.edu/conferences/lunch_series.php and www.lifesci.consortium.umn.edu/conferences/lunch series.php.



Prof. Michael Lysaght, Brown University.



Prof. Jonathan Moreno, University of Virginia.



Alan Milstein, Esq., Sherman, Silverstein, Kohl, Rose & Podolsky.





Annual Conference

Each year the Consortium and Joint Degree Program sponsor a full-day conference. This year's topic was "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"

This April 18, 2005 conference was co-sponsored by the University of Minnesota's Center for Bioethics and the Minnesota Department of Health's Office of Minority and Multicultural Affairs. Additional support was received from the Law School.

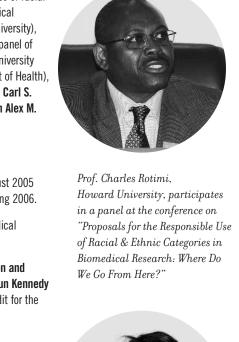
In recent years, tremendous controversy has erupted over whether to continue use of racial and ethnic population categories in biomedical research, and if so, how. Researchers, community members, scientific journal editors, and federal agencies have struggled with questions of how to define these categories, whether they are useful, in what kinds of research, and with what problems. This conference critically examined the range of current national proposals, especially for genetic, epidemiological, and health disparities research. Our goal was to consider where to go from here.

Prof. Troy Duster, PhD (New York University; University of California, Berkeley) gave a historical overview of how racial and ethnic categories have been used in biomedical research and the attendant problems. Prof. Charles Rotimi, PhD, MPH (Howard University), Prof. Mildred Cho, PhD (Stanford University), and Prof. Raj Bhopal, MD, MPH (Edinburgh University) each presented a proposal for how these categories should be used in the future. At lunch, Margaret A. Winker, MD (Journal of the American Medical Association) discussed the use of race and ethnicity in biomedical publication. Afternoon sessions featured **Prof. Morris Foster**, **PhD. MPhil** (University of Oklahoma) on community involvement in formulating and conducting research, Prof. Dorothy E. Roberts, JD (Northwestern University) on legal constraints on the use of racial and ethnic categories in research, and Prof. M. Gregg Bloche, MD, JD (Georgetown University) on pharmaceutical research. Prof. Joycelyn Dorscher, MD (University of Minnesota, Duluth), Prof. Erik Lillquist, JD (Seton Hall University), and Prof. Jay Cohn, MD (University of Minnesota) moderated the afternoon sessions. To conclude the event, a panel of speakers discussed "Where Do We Go From Here?" Panelists were Vice President R. Timothy Mulcahy, PhD (University of Minnesota), Gloria C. Lewis, MA (Director, Office of Minority and Multicultural Health, Minnesota Department of Health), Prof. Rose Brewer, PhD (University of Minnesota), Prof. Barbara Koenig, PhD (Stanford University), and Prof. Carl S. Smith, MD (Hennepin County Medical Center and University of Minnesota), plus Profs. Lillquist and Cohn. Dean Alex M. Johnson, Jr., JD (Law School) offered opening remarks. Prof. Susan Wolf, JD (Law School, Medical School) and Prof. Jeffrey Kahn, PhD, MPH (Center for Bioethics) acted as moderators for the day.

Videos of all presentations and links to additional background information may be found at www.lifesci.consortium.umn.edu/conferences/categories.php. An article on the event will appear in an August 2005 issue of *Nature Genetics* and the full symposium will appear in the *Journal of Law, Medicine & Ethics* in Spring 2006.

This event provided 7 hours of continuing legal education credit (CLE) for attorneys, 7 hours of continuing medical education credit (CME) for physicians, and 7 contact hours in continuing nursing education (CNE) for nurses.

On April 21, 2006, the annual conference will focus on "Terrorist Threats to our Food Supply: Food Protection and Defense—Science, Ethics & Law." Profs. Frank Busta, William Hueston, and Michael Osterholm, plus Shaun Kennedy and Julie Ostrowsky are taking the lead in planning this event. The Consortium will request CME and CLE credit for the conference, as well as credits for Certified Health Education Specialists (CHES).



April 18, 2005

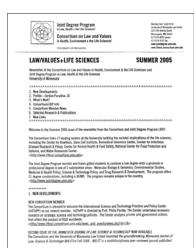
PROPOSALS FOR THE RESPONSIBLE USE OF



Prof. Mildred Cho, Stanford University, at the conference on "Proposals for the Responsible Use of Racial & Ethnic Categories in Biomedical Research: Where Do We Go From Here?"







LAW/VALUES + LIFE SCIENCES Newsletter

In Fall 2001 the Consortium and Joint Degree Program inaugurated their 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. 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, announces upcoming events through-out the University, and offers links to websites of interest to readers. Readers can subscribe by filling out the form on the "Newsletter" page of either website or sending an e-mail to <lawalue@umn.edu> or <jointdgr@umn.edu>.

In 2004-05, the newsletter profiled Prof. Ruth Okediii, LLM, LLB, SJD, the William L. Prosser Professor of Law at the University of Minnesota's Law School and an internationally recognized authority in the area of intellectual property law: and Jordan Paradise. JD. the Consortium's new Associate Director of Research & Education. Newsletters are archived at <www.lifesci.consortium.umn.edu/newsletter/> and <www.jointdegree.umn.edu/newsletter/>.



Audience at Prof. Evan Snyder's Lecture Series presentation.

Thanks to funding from the President's Interdisciplinary Academic Initiative in support of the Consortium, is establishing an annual Visiting Consortium Professor position. The Visiting Professor will be in residence at the University of Minnesota-Twin Cities campus for one semester, teach one course, make a presentation at the Law School's Faculty Works in Progress Series, and participate in other lectures and meetings across campus and throughout the Twin Cities community. He/she will also have an opportunity to pursue his/her own research project on issues at the intersection of law, ethics, policy, and the life sciences. The Visiting Consortium Professor will be announced on our websites; see <www.lifesci.consortium.umn.edu> and <www.jointdegree.umn.edu> for updates.

Staff

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

Ann Hagen, Senior Administrative Director, joined the Joint Degree Program and Consortium in June 2000 as Program Associate. She was appointed Senior Administrative Director in December 2001. Her duties include management and administration of both programs, coordinating student applications to the Joint Degree Program, assisting current and potential students, and grants management. Ann previously worked as a legal assistant at a Chicago law firm specializing in family law litigation. She has degrees from the University of Michigan and the University of Minnesota.

Stephanie Schaffer was the Consortium's and Joint Degree Program's Program Associate in 2004–05. She planned all Consortium and Joint Degree Program events, including lectures, meetings, conferences, and student events. Stephanie previously worked as an Event Planner for Accenture in Minneapolis. She obtained her BA in Business Administration (Management) from Southwest State University in Marshall, MN.

Terry Brashear, was the Consortium's and Joint Degree Program's Information Technology Professional in 2004–05. Terry maintained the programs's websites and oversaw technology use. Terry previously worked as a Computer Consultant specializing in website integration and maintaining large corporate e-mail environments. He has a BS in Natural Resources and Environmental Science from the University of Minnesota.

Alexandra Glynn worked as the Consortium's Principal Administrative Specialist in 2004—05. She administered the *Minnesota Journal of Law, Science and Technology* and provided general administrative support for all Joint Degree Program and Consortium activities. She has a degree in history from the University of Minnesota and recently completed a master's degree at Luther Seminary in Minneapolis.

New staff for 2005–06 include **Sara Zettervall**, Program Associate and **Sabrina Martel**, Executive Administrative Specialist.

The Joint Degree Program and Consortium are indebted to the following Research Assistants in 2004–05: **Jennifer Gassman-Pines** (Law), **Jaime Hoffman** (Philosophy), **Susan Parry** (Philosophy), **Jesse Sitz** (Law), and **Sarah Zeller** (Medicine and Public Health).



Ann Hagen and Prof. Colin Campbell confer during a Joint Degree Program Governing Committee meeting.



Ann Hagen.



Stephanie Schaffer.



Terry Brashear.





University of Minnesota Vice President for Research R. Timothy Mulcahy comments on Prof. Charo's Lecture Series presentation.

Support & Acknowledgements

The Consortium and Joint Degree Program are honored by new funding provided in 2004–05 through the Presidential Interdisciplinary Initiative on Law and Values. We are grateful to all involved in the Initiative, especially:

- President Robert Bruininks
- Executive Associate Vice President Alfred Sullivan
- Jeanie Taylor, Associate for Presidential Initiatives

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