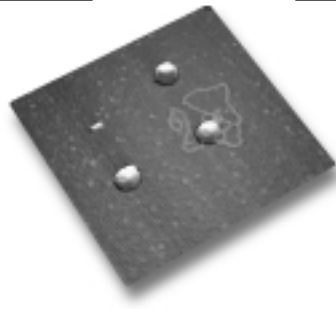


highlights

2000



Graduate
Studies &
Research

The University
of North Carolina
at Chapel Hill

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Cover illustration: Adenovirus particles are used as vectors in gene therapy, traveling into cells and then releasing the genetic material contained in their hollow cores. In this image, created using the nanoManipulator, the virus on the far right has released its DNA, which appears as string-like strands. Image by Atsuko Negishi, a student in materials science.

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The mission of the Office of the Vice Provost for Graduate Studies and Research is to promote the overall research strength of UNC-CH and the individual scholarly activities of its faculty and students. To address the University's research mission, the Office of the Vice Provost oversees the portion of the overhead budget that is used to match faculty research initiatives, assists individuals in their efforts to identify external funds for their research, encourages the development of new research programs, and provides administrative support for new discoveries through its technology development and transfer program. Promoting the University's research mission involves the cooperative efforts of several divisions of the Office of the Vice Provost, including the Offices of Proposal Development, Research Services, Technology Development, Information and Communications, and Economic Development, as well as the Howard W. Odum Institute for Research in the Social Sciences. It also involves close interaction with the Graduate School in its own efforts to improve the quality of graduate programs at UNC-CH and to increase financial support for graduate students.

The Office of the Vice Provost consists of the interim vice provost and two staff members. Together, these individuals provide administrative support for the various divisions of the Office of the Vice Provost. A detailed annual report from each division follows.

Minority Post-Doctoral Program

The Office of the Vice Provost also manages the Carolina Minority Post-Doctoral Program, a high-profile, long-term effort to recruit young scientists to Carolina and to encourage their development as potential faculty members. During the past year, 10 postdoctoral fellows were supported by this program, and three new postdoctoral fellows were selected to join the program in 2000-2001. The increase in minority faculty members at UNC-CH over the past 15 years is a direct result of this program. We are pleased that one of our current fellows will be joining the sociology faculty in 2001-2002. In addition, the Office of the Vice Provost administers the Hettleman awards,

which recognize the achievements of junior tenure-track and/or recently tenured faculty members. Four faculty members received Hettleman awards in 1999-2000: Michael McFee (English), Mark Peifer (biology), Allen Anderson (music), and Yue Xiong (biochemistry). Another four faculty members were selected to receive Hettleman Awards in 2000-2001.

Interdisciplinary Initiatives

The Office of the Vice Provost serves as the entry point for consideration of interdisciplinary, pan-University initiatives and as a facilitator for new interdisciplinary projects. Over the past year, the Office of the Vice Provost developed a collaborative initiative between the Lineberger Comprehensive Cancer Institute and researchers in the social and behavioral sciences within academic affairs. Funds were dedicated to seed new research in this area and a call for proposals was issued during spring semester.

Activity Highlights

Additional activities of the interim vice provost for graduate studies and research during the past year included the following:

- Conducting an external review of the Office of the Vice Provost and in response to the reviewers' suggestions, initiating a reorganization of the office that did not require the addition of new staff members
- Overseeing a cooperative effort between the Offices of Technology Development at UNC-CH and North Carolina State University, the College of Arts and Sciences, and the School of Business for receiving patent donations
- Streamlining the processes used to provide matching funds for faculty research initiatives
- Establishing an initiative to provide support for postdoctoral fellows across campus and appointing faculty member Sharon Milgram to oversee this initiative

The mission of the Office of Information and Communications (OIC) is to promote graduate education and research at UNC-Chapel Hill by reporting the University's achievements and by helping researchers and students find opportunities for funding. During 1999–2000, OIC took several key steps to expand the scope of its communications, increase quality and efficiency, and capitalize on the staff's ability to apply advanced technologies and information science in support of the University's programs.

GrantSource® Assistance

The GrantSource® Library helped 204 UNC-CH faculty, 248 graduate students, and 113 staff members access information about funding opportunities and research at Carolina. The library filled requests for information; maintained the GrantSource® Service's database of 800 records describing current funding opportunities from the National Institutes of Health and the National Science Foundation; added 1,148 records to the Research Abstracts Database (formerly the Faculty Profile System); conducted twice-monthly workshops for students in the use of a variety of online databases; and consulted with individual faculty members about their searches for funding and for potential collaborators. As a result of an aggressive outreach campaign, use of online resources continued to increase. Use of the Community of Science Expertise (COS) database increased from 30,079 page views to 42,015, and faculty members made more efficient use of available tools. While searches of the COS Funding Opportunities database declined from 69,454 to 56,993, 1,636 Funding Alert accounts were active in mid-May 2000 as opposed to 882 in mid-May 1999. Funding Alert accounts reduce the need for repeated searches. Library staff also completed development of a database cataloguing over 1,500 files on private funding agencies maintained by the library.

Web Development

OIC staff redesigned and reorganized the web sites for all offices of Graduate Studies and Research and for *Endeavors* magazine, making them more user oriented and attractive. The OIC team created "Explore Research at

Carolina," a multimedia sampler. Visitors to Explore can watch movie clips created by Carolina researchers, hear poets read their work, and more. Explore also features a short, dynamic presentation that highlights contributions of research to the state.

Library staff improved the logical arrangement and presentation of information by locating and linking to relevant web pages (e.g., facts and rankings related to research funding); by converting hard copies of key documents (e.g., University Guidelines for Sponsored Research and other policies related to research) to formats that would be available through the web; and by adding additional features such as campus maps highlighting office locations.

As an important part of the redesign of the "Research at Carolina" web pages, library staff developed and implemented a sophisticated, comprehensive, web-based search facility. This search tool indexes the full text of the Graduate Studies and Research web pages; back issues of *Endeavors* dating back to the fall 1995 issue; 10,031 web pages of UNC-CH research centers, institutes, and laboratories; 40 "FYI Research" columns from the University Gazette; 455 research-related news releases from the UNC-CH News Services; and 14,745 research-related web pages from departments across campus.

Endeavors Magazine

In May 2000, OIC and the Office of the Vice Provost reached a cooperative agreement with the UNC General Alumni Association (GAA) to distribute *Endeavors* to 25,000 of the association's life members, beginning with the fall 2000 issue. This more than triples the magazine's distribution, ensuring a broad audience of influential readers who have a vested interest in the University's accomplishments. The move will also dramatically decrease the per-copy cost of the magazine, maximizing our investment in editorial time and production costs.

Meanwhile, OIC continued to "spin off" and recycle elements of the magazine. We developed three web editions of *Endeavors*, with special interactive web-only features, in addition to the full text of all stories from the print version, and marketed these editions nationally. Photos and illustrations generated for *Endeavors* were catalogued

and mounted in OIC's image database (images.unc.edu), which now contains 750 images that can be searched and downloaded by anyone using a campus computer.

In January, *Endeavors* and UNC-CH were hosts for the annual meeting of the University Research Magazine Association. The meeting attracted 40 editors from across the nation and helped to reinforce Carolina's reputation as a national leader in research communications.

As part of its mission, Endeavors hires UNC-CH graduate students as writers and trains them in magazine

journalism. At the end of 1999–2000, two *Endeavors* writers, Mark Briggs and Brady Huggett, completed their M.A. degrees in journalism. Here is a part of what Mark wrote about the experience:

“As a graduate student who spent nearly two years working at *Endeavors*, I feel I improved my writing and interviewing skills, gained professional magazine experience, and now have several work samples on important, intelligent topics.”

This fiscal year 2000 report highlights some of the accomplishments of the Office of Technology Development (OTD) from the past year. OTD continually reviews its internal operations, seeking better ways to accomplish its mission of commercializing UNC-CH inventions. To that end, OTD is more aggressively protecting new UNC-CH inventions by filing more patent applications, which places OTD in a stronger position to negotiate with potential licensees. It is hoped that this approach will lead to more completed licenses and more income for UNC-CH to fund its research, teaching, and public service missions. OTD has filed 76 U.S. patent applications as of April 30 of this fiscal year, an increase of 25 percent over the same period last year. UNC-CH has also had 37 new U.S. patents issued during the fiscal year.

OTD is also proud of its new electronic Materials Transfer Agreement (eMTA) system, which is described below. With the implementation of the internally developed eMTA system already in progress, UNC-CH becomes one of the first universities nationwide to develop an automated, online system for the otherwise time-consuming processing of Materials Transfer Agreements.

Company News

A number of companies that have previously licensed UNC-CH technologies through OTD reached important commercial milestones in fiscal year 2000. Because UNC-CH will ultimately receive royalty payments on sales of products made by these companies, reaching these milestones signifies that UNC-CH can look forward to a steadily increasing stream of royalty payments.

Immtech International Inc., a biopharmaceutical company focused on the delivery and commercialization of drugs for the treatment of fungal diseases, cancer, tuberculosis, pneumonia, and diarrhea, announced that its first pharmaceutical product, DB-289, for the treatment of pneumocystis carinii pneumonia (PCP) and trypanosomiasis, is on schedule to begin clinical trials in the third quarter 2000. Immtech, which was first publicly traded in 1999, is based on technology developed by a consortium of universities led by Dr. Richard Tidwell of the Department of Pathology and Laboratory Medicine at UNC-CH.

An invention by former School of Dentistry faculty member Dr. Gerald L. Mechanic was introduced as part of a commercial product by Sulzer Medica. The CardioFix Pericardium for intracardiac repair and pericardial closure was made possible by Dr. Mechanic's PhotoFix Technology, which strengthens live tissues.

The Hangers Cleaners dry cleaning franchise, which is based on technology invented by Dr. Joseph M. DeSimone of the Department of Chemistry and licensed to Micell Technologies, now has 28 stores open in four states. Hangers plans to have over 100 stores open in seven states by year-end 2000.

Inspire Pharmaceuticals develops and commercializes new drugs to treat pulmonary diseases and is based on discoveries made at UNC-CH. Inspire continues to attract new funding and to develop new partnerships. In fiscal year 2000, Inspire entered into a partnership agreement with Genentech and also filed a Registration Statement with the Securities and Exchange Commission to offer its common stock for sale in an initial public offering.

Inside OTD

An electronic Materials Transfer Agreement system was created (see <http://mta.unc.edu/>) to facilitate the process of sending or receiving research materials. The eMTA system, which was fully operational on June 1, 2000, was designed with the faculty's interests in mind. With the eMTA system, faculty members can (1) obtain Material Transfer Agreements to send out their own research reagents, (2) log in their requests for materials from third parties, and (3) track existing activities. eMTA provides faculty members with the ability to receive or send materials at any time. We expect that eMTA will save time for both our faculty members and OTD. In the second half of the year, OTD will begin work on the electronic Confidentiality Agreement (eCDA) system, which will allow faculty members to print out personalized Confidentiality Agreements to cover the transfer of their proprietary information to external collaborators.

OTD continues to administer the Glaxo Wellcome/UNC-CH Collaborative Research Program (CRP) in Target Discovery, as the fourth year of the five-year program nears completion. Through the first four years of the program, 31

research projects were funded. We anticipate announcing a call for proposals for the final year of the CRP around September 1, 2000.

A recent trend in corporate America is the donation to universities of company-owned patents that for various reasons do not fit a company's business plans. OTD continues to learn about and support UNC-CH's efforts in this area.

The director and several OTD staff members taught a technology transfer course to second year M.B.A. students as part of the Program in Entrepreneurship and New Ventures at the Kenan Flagler Business School (KFBS). This course will help to develop stronger ties between

KFBS and OTD, and in the future OTD expects to utilize more frequently the expertise of M.B.A. students on joint business development projects. In addition to the technology transfer course, the director of OTD participated in approximately 35 outreach programs to provide information about the activities and accomplishments of OTD to scientists and others both within and outside the University.

On January 24, Marie-Christine Piriou began work as a technology development associate in OTD. On May 31, Mark Turner resigned his position as technology development associate; OTD is actively recruiting for Mark Turner's replacement.

The Office of Research Services promotes and facilitates research and sponsored programs at the University of North Carolina at Chapel Hill by building, with faculty and staff, a partnership dedicated to creating the premier public research university in the United States. In pursuit of this goal,

We teach grant-writing and grant-preparation skills and consult actively with faculty members and staff to ensure that all proposals meet or exceed the standards required by sponsors;

We provide small research and publication grants to stimulate high-quality research and help faculty members become more competitive for extramural support;

We help the university community seek support and manage and assess research activities by compiling and disseminating information and data resources on sponsored programs;

We promote open inquiry by protecting contractually the academic freedom and intellectual property of the faculty and the University;

We serve and protect the public by maintaining high standards of performance and accountability in areas where research may involve risk.

In all that we do, we strive for excellence through the continuous improvement of our procedures, so that we add value to the University each day through our performance.

Commitment to Service

The Office of Research Services (ORS) honored its commitment to process proposals within four hours of submission. Over a 12-month period (April 1, 1999 to March 31, 2000), ORS met its four-hour turnaround goal with 95 percent of proposals submitted. This rate rose to 99 percent during the final quarter of the fiscal year. These successes came at a time when grant proposals were processed in record numbers—2,289 grant proposals, requesting a total of \$1,224,162,396, were received.

This year, ORS implemented new proposal procedures to ensure that appropriate credit is given to schools and departments with National Institutes of Health (NIH)

rankings. Each principal investigator is now required to list his or her primary appointing school and department on all NIH applications. This change, which does not affect the unit chosen to administer the grant, is expected to significantly enhance and more accurately reflect UNC-CH's school and departmental rankings.

Human-Subject Protection

ORS is responsible for oversight of the University's system for human-subject protection. During the past fiscal year, Carolina's five Internal Review Boards (IRBs) reviewed a total of 4,079 submissions in the following categories:

New Exempt	523
New Expedited	639
New Full Review	480
Amendments	1,158
Renewals	1,279

In response to new rules for NIH and Office of Protection from Research Risks compliance activities regarding human-subject protection, ORS developed a plan for expanded training, compliance, and monitoring. A new database, designed by ORS to meet the specifications of all five IRBs, was made available, on a test basis, this year. The database, which will be maintained at ORS and utilized by all the IRBs, should be fully operational by fall 2000.

University Research Council

The University Research Council (URC) made 99 awards through its small-grant program, which provides funding to UNC-CH faculty members and professional librarians. Approximately 41 percent of the proposals submitted during the past year were funded, amounting to \$226,957.

The Washington Project

Over the past year, ORS has intensified its efforts to identify federal funding opportunities and quickly notify faculty members of those opportunities. To date, the Washington Project, which was established to provide a presence for the University among federal funding decision

makers, has provided 62 listings, each with multiple funding announcements, to over 540 faculty and staff members. The listings are culled from nine federal agencies that account for more than 95 percent of all federal funding at UNC-CH. In coordination with the Office of Information and Communications, ORS publicizes federal funding information across the campus through a variety of media, including newsletters.

Research Support Newsletter

As the result of a reader survey conducted by ORS, the *Research Support* newsletter will be redesigned and its content revised to focus on funding opportunities. More than one in eight respondents reported receiving a grant

from a sponsor or program that was found through the *Research Support* newsletter.

Electronic Research Administration

The University continued its steady progress toward electronic research administration (ERA) during the year. Phase one of the COEUS™ ERA system, which will allow the submission of paperless NIH grants and is a joint project of ORS, Contracts and Grants, and Administrative Information Systems, will be operational by July 1, 2000. The University also met its goal of preparedness for electronic submission of all National Science Foundation (NSF) applications using NSF's FastLane system.

In today's competitive grants marketplace, new strategies are essential for success. PDI, established in 1996 as a pan-university research support unit, takes an entrepreneurial approach toward meeting such goals. It takes special interest in promoting multidisciplinary and interdisciplinary research development and assists new program teams to formulate their projects at varying stages of proposal development. PDI is also in charge of the University's nominated awards process, overseeing internal reviews for nominees for national and international awards. PDI also serves as an important liaison between researchers and University administration. Finally, PDI facilitates the development of special research programs or projects that involve faculty members from a broad array of disciplines. Our major clients include deans, chairpersons, individual faculty members, faculty research groups, interdisciplinary research teams, central administration, graduate students, research staff, and local and state nonprofit agencies.

University-Nominated (Limited) Awards and Grants

PDI continues to provide a systematic approach to support the nomination of faculty to compete for awards and grants that limit the number of submissions from the University. Many of these awards are aimed at providing resources to exceptional faculty members at an early stage in their careers to allow pursuit of promising research questions and to facilitate development of outstanding programs; other awards are targeted at more senior faculty members. As a group, these awards are prestigious and highly visible, and winning them brings national and international recognition to our faculty and to the University. In support of these awards, PDI solicits nominations, organizes internal review committees, facilitates selection of University candidates, and offers application preparation assistance to nominees. This year PDI handled 22 limited-award and grant programs, sending 40 University nominees forward. Review committees consisted of 26 faculty members, representing more than 10 disciplines. Although many nominations from this past year are still under agency review, we have learned of positive outcomes for seven University nominees to date. They are: Tamera Coyne-Beasley, assistant professor of pediatrics and of internal medicine, was named a William

T. Grant Faculty Scholar; Michel Gagné, assistant professor of chemistry, was the recipient of a Camille Dreyfus Teacher-Scholar Award; Bob Goldstein, assistant professor of biology, was named a Pew Scholar; Steven Rosefielde, professor of economics, was named a Carnegie Fellow; Jeff Sekelsky, assistant professor of biology, was the recipient of an Ellison Medical Foundation New Scholar Award; Oliver Smithies, professor of pathology and laboratory medicine, was the recipient of a Burroughs Wellcome Fund Innovation Award in Functional Genomics; and Yanping Zhang, postdoctoral research associate at the Lineberger Comprehensive Cancer Center, was the recipient of a Burroughs Wellcome Fund Career Award in the Biomedical Sciences. We are thrilled about the recognition our faculty has received through these award programs. This has been an exceptional year.

Proposal and Grant Development

PDI is the University's formalized program to support large-scale, multidisciplinary research activities on campus. In keeping with the mission of the Office of the Vice Provost for Graduate Studies and Research, PDI responds to a rapidly changing funding environment by evaluating project viability and outcome potential. PDI meets with researchers and research teams, assisting them with everything from idea generation to program design, identifying potential collaborators, and facilitating team-building activities among faculty members from different disciplines. This assistance includes incorporating program evaluation strategies and final reviews for grant submissions. PDI has been successful working with principal investigators to develop highly competitive final products. This past year PDI provided support to more than 45 projects at varying stages of development. Ten projects have been completed and submitted for funding, and are currently under review. We have been notified that projects totaling more than \$68,331,121 received funding this past year.

Selected examples of funded projects for the 1999-2000 year include:

- The Center for Inflammatory Disorders. Schools of Dentistry, Medicine, Pharmacy, and Public Health, College of Arts and Sciences (principal investigator:

Pat Flood). National Institute of Dental Research, National Institutes of Health (NIH). \$22 million.

- Obesity Prevention for African American Girls. School of Public Health (principal investigators: Alice Ammerman and Kristine Kelsey). NIH. \$546,122.
- Center for the Utilization of Carbon Dioxide in Manufacturing. Department of Chemistry (principal investigator: Joe Desimone). National Science Foundation (NSF). \$18 million.
- Online Math Help Center. Department of Mathematics (principal investigator: Idris Assani). NSF planning grant. \$74,999.
- Language Resource Center, Center for Slavic, Eurasian, and East European Studies (principal investigators: Laura Janda and Edna Edwards, Duke). Department of Education Title VI. \$1.2 million.
- Alliance for Seeding Postdoctoral Innovators in Research and Education, Department of Biology, School of Public Health, School of Medicine, College of Arts and Sciences (principal investigator: W.E. Bollenbacher). NIH. \$4.5 million.

Special Projects

Again this year, PDI played a major role in providing coordination, consultation, and facilitation to promote the development of a variety of pan-university programs that support the overall mission of the University. One major effort involved evaluation of the final year of the chancellor's awards for instructional technology and the production of a report studying the impact of the two-year program started and supported by Chancellor Hooker. Another project, initiated at the request of the Office of the Provost, involved working with a large team of faculty members and students to discuss the potential of building a Native American studies program. The proposed three prong (research, teaching/curriculum development, and service and outreach) program would bring together all the schools on the Chapel Hill campus and develop partnerships with the N.C. Native American Community and Pembroke University.

Fiscal year 1999-2000 has been another exciting year. The challenges we faced because of increased demand for our services were successfully met through the efforts of our small but highly professional and dedicated staff. We recognize the support and validation that we have received from our faculty, students, and colleagues. The success of this program could not have been achieved without them.

In 1999–2000 the Office of Economic Development (OED) fulfilled its mission of providing university-based expertise to the state of North Carolina to help bring economic prosperity to the state’s citizens and businesses. We will end the year having completed part or all of twelve new projects (begun in 1999 or 2000), on some of the most visible and pressing economic development issues of the day. The clients for these projects are among the most important policymakers and stakeholders in the economic development arena. A \$150,000 allocation from the chancellor’s office was used to generate \$592,069 in outside funds during 1999–2000. Those funds provided some overhead support for OED and also supported nine graduate students in four different academic units.

Several local governments, and state and federal agencies are represented in this list. Activities related to these projects affected more than half the counties in the state.

The Office of Economic Development also assisted the University by assessing the feasibility of a university-sponsored incubator and representing the University at several high-level meetings.

OED personnel made presentations and speeches to audiences around the state, nation, and world, including:

- Testimony before N.C. House and Senate Joint Committee on Finance
- Town of Carrboro
- North Carolina Economic Developers’ Association
- Chongqing (China) public officials
- West Bank (Palestine) public officials
- Science and technology officials in Mexico
- The Board of Science, Technology, and Economic Policy of the National Research Council of the Academy of Sciences
- N.C. Economic Development Board
- 16 UNC Chancellors
- 58 community college presidents.
- Seven regional economic development partnerships
- Newly reconstituted Progress Board
- N.C. Board of Science and Technology

Projects and Clients

Title of activity	Duration	External funding	Funding source and/or client
Impact of UNC (16 campuses) on North Carolina	10/1/99-6/30/00	\$10,000	KIPE/UNC General Administration
Technology infrastructure and economic development in distressed communities	10/1/99-8/31/00	\$199,591	U.S. Department of Commerce, Economic Development Administration
Region IV Environmental Finance Center, year two	10/1/99-9/30/00	\$173,125	U.S. Environmental Protection Agency
Economic adjustment strategy for Cherokee County	10/10/99-2/29/00	\$27,500	Cherokee County
Regional industry cluster update and N.C. innovation index	10/15/99-6/30/99	\$16,225	N.C. Board of Science and Technology
Economic impact of Cape Fear Valley Medical Center	2/1/00-6/30/00	\$6,500	Cape Fear Valley Medical Center
Developing specialized training centers for the N.C. Community College System	4/1/00-6/30/00	\$50,338	N.C. Community College System
Developing an economic development monitoring system for N.C.	4/1/00-6/30/00	\$54,290	N.C. Department of Commerce
1999 Economic Development Course	7/1/99-6/30/00	\$26,000	N.C. Economic Developers’ Association
Technology assessment of Cherokee County	9/1/99-12/31/99	\$15,000	Cherokee County
Economic impact of Rockingham motor speedway	1/1/99-12/31/99	\$14,000	Rockingham Motor Speedway
Charette on brownfield financing in Charlotte	7/01/99- 8/31/99	\$6,500	Environmental Protection Agency; city of Charlotte

OED's Success

We measure our success in terms of:

- Inputs: our ability to leverage outside financial resources and interest by students, faculty, and other professionals
- Outputs: the generation of useful reports, papers, books, op-ed articles, testimony, speeches, symposia, charettes, etc.
- Outcomes: the effect we have had on the competitiveness of N.C. businesses, on the formulation of good public policy, and the quality/reputation of the University

By each of these measures we have succeeded in 1999–2000.

Our success in input terms is indicated in the table above. There is a considerable demand for our work—more opportunities than we can seize with existing staff and resources. Most of the 12 projects were supervised by the director; the associate director served as principal investigator on one. OED used contractors on several projects: an ABD from KFBS; a Ph.D. from MIT who lives locally and who also has served as a visiting faculty member in public policy; and a former head of Virginia's Center for Innovative Technology who is entering the public policy Ph.D. program. Three faculty members from city and regional planning, one faculty member from the Institute of Government, an adjunct professor of public policy, and a prominent professor from Penn State University all participated in OED activities this year.

OED published several reports (see list) that were made accessible to the public on the web. The director published a book and several articles in peer-reviewed journals and convened a Ph.D. seminar that required students to prepare academic articles for publication. OED also ran a charette in Charlotte and two sets of meetings in each of the seven economic development partnership regions in the state.

Publications/Reports of the OED in 1999–2000

At the Crossroads: North Carolina's Place in the Knowledge Economy of the Twenty-First Century. For the North Carolina Alliance for Competitive Technologies and North Carolina Board of Science and Technology. By Edward J. Feser, Harvey A. Goldstein, and Michael I. Luger. April 1998.

Best Practices in Science and Technology-Based Economic Development Policy: U.S. and Global. For the North Carolina Board of Science and Technology. By Jun Koo, Michael I. Luger, and Leslie Stewart. September 1999.

The Cost/Benefits of UNC-CH to the Town of Chapel Hill: Implications for Public Finance. For the Town of Chapel Hill. By Johannes Traxler, Cassandra Callaway, and Michael I. Luger. May 1999.

Displaced Workers in North Carolina: Anatomy of the Problem and Analysis of the Policy Approaches. For the North Carolina Department of Commerce. By Michael I. Luger, Lucy Gorham, and Brian Kropp. November 1999.

The Economic Effects of the William S. Lee Tax Act. For the North Carolina Department of Commerce. By Michael I. Luger and Courtney Edwards. April 1999.

Economic Impact of the North Carolina Speedway: Opportunities for Richmond County. For Richmond County, N.C. By Leslie Stewart, Haiyong Liu, and Jonathan Perry. November 1999.

Economic Restructuring Plan for Cherokee County. For Cherokee County Economic Development Commission. By Leslie Stewart, Johannes Traxler, Sam Leaman, and Mike Bryan. March 2000.

The Feasibility of a Small Business Incubator at UNC-CH. For the University of North Carolina at Chapel Hill. By Jonathan Perry and Michael I. Luger. August 1999.

The Hidden Problem of Worker Dislocation in North Carolina. For the North Carolina Department of Commerce. By Michael I. Luger, Lucy Gorham, and Brian Kropp. November 1999.

Knowledge-Based Economic Development: A Coordinated Approach. For the University of North Carolina General Administration. By Deborah T. Watts. March 1999.

North Carolina's Regions: Transitioning to the Knowledge Economy. For the North Carolina Board of Science and Technology. By Leslie Stewart and Michael I. Luger. September 1999.

Technical Assessment for Cherokee County. For Cherokee County Economic Development Commission. By Johannes Traxler, Leslie Stewart, Kadi Hodges, Sam Leaman, and Mike Bryan. December 1999.

Graduate School highlights during the 1999–2000 academic year include involvement in academic activities, increased financial support for graduate students, minority recruitment and retention, additional efficiencies in admissions, and expanded services to graduate students.

Involvement in Academic Activities

A critical role of the Graduate School is to work with academic units on campus to enhance the quality of graduate education at Carolina. One means of carrying out this role is to conduct program reviews of the graduate and undergraduate programs/offerings of all academic units on a regular (approximately seven-year) cycle. In the current year, the Graduate School conducted external reviews of eight units: Communication Studies, and Exercise and Sports Science in the College of Arts and Sciences; Biochemistry, Microbiology, Pharmacology, and Toxicology in the School of Medicine; Environmental Sciences and Engineering in the School of Public Health; and the School of Information and Library Science. Another aspect of the Graduate School's role in maintaining and enhancing program quality is its review and development of educational policy. This year, a new policy easing the cap of transfer credit into master's degree programs was approved for credits earned in UNC-CH certificate programs, and a similar policy is being developed for credits earned in UNC-CH Continuing Studies. Changes in admission requirements concerning undergraduate degrees and GRE scores were revised, and distance educational guidelines were circulated. Finally, with the help of Carolina's Office of Institutional Research, the Graduate School's collection of exit survey data went online with May graduation.

Financial Support of Graduate Students

The Graduate School pursues two goals with regard to financial support of graduate and professional students: increasing funding for graduate students, and using that funding to assist in recruitment of exceptional students to Chapel Hill and support of them in their educational programs. To achieve these goals, efforts to raise major private gifts continued this year, aided by a new, successful annual gift solicitation strategy. The Graduate School's new

donor-focused publication, the *Fountain*, informed donors of the accomplishments of graduate students and the University's efforts to provide public service and corporate partnerships. A new multidisciplinary top-up fellowship for students in social and human sciences was initiated because of the generous support of private donors. Funds for the Royster Society of Fellows continued to grow, and 32 students will receive Royster fellowships during academic year 2000-2001. These and other private funds have enabled faculty in graduate programs to recruit their top candidates and successfully compete with the best universities nationally for these exceptional students.

Minority Recruitment and Retention

Numerous strategies were utilized to identify, recruit, and retain graduate students from underrepresented groups. Letters were sent to students participating in the National Name Exchange Consortium, GRE Locator Service, Ron McNair Fellows Program, Mellon Fellows, and the SPGRE (Summer Pre-Graduate Research Experience) Program. Graduate School staff also traveled to regional graduate school/career fairs as well as those hosted by HBCUs and GRE Forums. Additionally, faculty-to-faculty and administrator-to-administrator links between programs and institutions were fostered to ensure a constant flow of high-quality applicants. Members of the Graduate School networked with senior staff from undergraduate admissions, administrators who provide support services to undergraduate minority students, the Office of Student Services, and the Office of Minority Affairs. Finally, activities were continually monitored and assessed to determine the most effective method for recruitment of minority graduate students. These activities included determining how minority students learn about UNC-CH and the graduate school/career fairs that yield the greatest number of enrolled minority students.

Admissions

The Graduate School continues to realize process efficiencies offered by electronic (i.e., web-based) application processing. This past year brought continued improvements to the online application for admission, including the introduction of the online application for admission to

international applicants and the implementation of a credit card option for payment of the application fee. These customer-focused improvements yielded a 5 percent overall increase in the total applications for fall 2000, including a 30 percent increase in the international applicant pool. Of the 9,779 new applications received, 5,426, or 57 percent, were submitted by means of the web. Close to half of online applicants paid their application fees by credit card, which allowed the receipt and distribution of their applications the next business day. In addition to web-based application processes, the Graduate School also implemented a number of web-based tools for communicating with the admitting programs. These enhancements, along with the recently implemented option of online submission of graduate program application recommendations, have decreased the turnaround time from receipt of an application to decision notification and increased our competitive edge.

Services to Graduate Students

Working in concert with faculty and staff around campus, the Graduate School continued to address the professional development needs of students. Programs and activities such as the first campuswide orientation that

was integrated into individual department and school activities, thus giving incoming graduate and professional students the opportunity to learn about residency for tuition purposes, funding opportunities, academic services on campus, and participate in a student services information fair. A new Orientation and Relocation web site and workshop titled “GradSchool 101” were offered to facilitate incoming students’ transition to the University. The leadership development series was again offered throughout the academic year and gave participants the opportunity to earn a certificate of participation in this program. The Annual Research Ethics Lecture boasted a turnout of over 100 students to hear Dr. Stuart Bondurant discuss the integrity and quality of scholarship. Workshops discussing the process by which students may apply for residency for tuition purposes were offered both campuswide and for individual departments. A comprehensive assessment of the professional development needs of students was completed, and plans are in development to fully address these needs, effective fall 2000. Finally, well-established programs and activities continued to be offered to students, including foreign language proficiency testing, graduate course clearinghouse, and conference presentation skills.

At four o'clock on June 30, 1924, the Institute for Research in Social Science (IRSS) was formally organized. At the call of Harry Chase, University president, a governing board comprised of Eugene Branson, D. D. Carroll, Edwin Greenlaw, J. G. de R. Hamilton, A. M. Jordan, Howard W. Odum, and Louis Round Wilson assembled in anticipation of receipt of a major grant from the Laura Spelman Rockefeller Memorial Fund, which was to begin July 1, 1924.

To commemorate its founding, a major celebration, with U.S. Senator Paul Wellstone as the featured speaker, was held on September 10, 1999. Senator Wellstone earned bachelor's and doctoral degrees in political science from UNC-CH.

At the September celebration it was announced that the IRSS would officially change its name to the Howard W. Odum Institute for Research in Social Science (OIRSS).

Increase in Services

Over the past year, use of OIRSS's computer-based archive of state, regional, national, and international information increased by almost 20 percent. On average, 4,720 searches were conducted each month.

Short Courses

OIRSS offers 66 short courses in grants; qualitative analysis; statistical computing; the availability of economic, demographic, health, public opinion, and voting data; and the conduct of surveys. Last year total attendance rose to 1,260 students, faculty members, and research staff.

Faculty Working Groups

In addition to the short courses, OIRSS sponsors faculty working groups. Fifteen groups, involving approximately 300 faculty members, studied the African diaspora; applied statistics; early Mediterranean societies; geographic information systems; global history; health care communication; Latin American data; living wage; political economy; qualitative research; religion and American culture; scholarly communication; science, medicine, and technology; social theory and cross-cultural studies; and southern studies over the course of the year.

Faculty Summer Stipends

With \$50,000 in funding from the Latane Fund at the College of Arts and Sciences, 10 faculty members were selected to receive stipends over the summer of 2000. The recipients' areas of focus are memory failure and reliance on social stereotypes (psychology), the impact of tobacco farming changes on small-scale producers (geography), avoidant personality disorder (psychology), Sufism in print (religious studies), synthesis of self-esteem research in Hispanic Americans (psychology), revision of a book on Cornpone Camelot (communication studies), incentives in large economies (economics), shared sovereignty in deeply divided societies (sociology), assigning nationalism in Syria and Iraq (history), and determinants of voter turnout in large electorates (political science).

Faculty Grant Administration

Last year brought a \$207,450 increase in new faculty grants, which represented a 15 percent increase in the \$1,287,915 carried forward from 1998-1999.

New Director

On April 3, 2000, Professor Linda Dykstra, interim vice provost for Graduate Studies and Research, announced that Dr. John Shelton Reed, professor of sociology and director of OIRSS since 1988, would complete his term as director in the summer of 2000. During his tenure, Dr. Reed spearheaded the founding of the UNC-CH Center for the Study of the American South, the journal *Southern Cultures*, and the Southern Focus Poll, a repository of southern public opinion. Dr. Kenneth Bollen, professor of sociology, will become the eighth director of OIRSS on July 1, 2000.

Consequences of Hurricane Floyd

On January 11, 2000, OIRSS held a meeting of social science faculty members and graduate students to initiate social science research on the ramifications of Hurricane Floyd. Research proposals were solicited and of the 19 submitted, eight were selected for immediate funding (a total of \$30,000 was awarded). Funds are being sought for the remaining proposals. The selected proposals focus on long-term mental health needs (psychology), mapping

flood extent using remote sensor and stream-flow data (city & regional planning), a study of the history, culture, and identity of Princeville, N.C. (geography), the challenges and opportunities in the Federal Emergency Management Administration (FEMA) refugee camps (environmental sciences and engineering), an oral history of the “Great

Flood” (history), an assessment of the effects of the flood using a GIS approach (economics), an examination of efforts to help illiterate and low-literate adults manage the effects of a natural disaster (communication studies), and an investigation of the effects of the flood on welfare reform in N.C. counties (political science and social work).

