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About the cover...

In fiscal year 1999, RTI took R&D to new levels by expanding across boundaries to solve scientific and social problems. We served our clients in both the private and public sector by providing in-depth R&D and technical services. We formed multidisciplinary project teams, worked worldwide across geographic boundaries, and collaborated with industry, government, and academia.

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RTI staff managed, developed, and assessed technology to move ideas out of the laboratory and into everyday life. It was a year of accomplishment for RTI, as reflected in our corporate growth, enhanced scientific stature, and increased revenue. This annual report shows how we expanded and where we are headed.









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President's Statement

Our 1998 Annual Report showed RTI's growth in all dimensions. In 1999, RTI continued to thrive. There was a significant level of activity and expansion across the Institute – in multidisciplinary R&D, in the number of global projects, in our collaborative efforts in both the public and private sectors, and in technology development.

During 1999, RTI grew 23 percent in revenues, reaching the \$206 million mark. Our staff increased from 1,586 to 1,738, we dedicated a new survey and statistics facility – the Gertrude M. Cox Statistics Building – and made plans to open a new telephone call center to add to our extensive survey research capabilities.

Behind these accomplishments is the continued dedication of RTI staff to serving their clients with expanded services and products that are of benefit to humanity.

In this annual report, you will read how RTI researchers use their expertise in numerous disciplines to bring <u>unique</u>, value-added approaches and solutions to clients. In 1999, RTI demonstrated its skills and capabilities in pharmaceutical research, public health, substance abuse, urban development, technology innovation, environmental management, and many other areas.

The challenge for the new millennium is to channel this momentum through a strategic process so that we position RTI to continue to respond to our clients and their markets. We also want to continue our growth in scientific stature and revenues, and to have an even greater impact on improving human lives worldwide.

This was a year of expansion for RTI, and in the year ahead we intend to push the boundaries even further.

Victoria Franchette Haynes



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RTI-112 may hold promise as a new treatment for cocaine addicts.

Multidisciplinary Research

With strong core capabilities in the statistical, social, physical, and life sciences,

RTI researchers collaborate across scientific boundaries. Using expertise in more than 115 disciplines, they expand scientific knowledge and provide clients with in-depth R&D and technical services. RTI had significant multidisciplinary achievements in 1999, including those in pharmaceuticals, substance abuse, child health and development, and urban redevelopment.

Substance Abuse

RTI researchers attacked the problems of tobacco, drug, and alcohol abuse. RTI chemists are developing RTI-112, a compound to treat cocaine addiction, while epidemiologists and health policy analysts and their clinical colleagues at the University of North Carolina at Chapel Hill (UNC-CH) reported in the *Journal of the American Medical Association* that two new medications – naltrexone and acamprosate – show promise in treating alcoholism. RTI social scientists are collaborating with researchers at UNC-CH to learn more about the nature and extent of alcohol, tobacco, and other drug prevention programs in our nation's middle schools. And to provide extensive information about the problem of drug and alcohol abuse nationwide, RTI survey scientists are conducting the National Household Drug Abuse Survey for the U.S. Department of Health and Human Services.

Pharmaceutical Research

RTI excels in pharmaceutical discovery, development, and outcomes. In 1999, teams of our chemists, toxicologists, economists, and statisticians completed over 50 projects for leading pharmaceutical companies, the Food and Drug Administration, and the National Institutes of Health.

In discovery, RTI chemists designed new compounds to treat cocaine addiction and improve reproductive health. Developers of the anti-cancer drugs Taxol® and Camptothecin[™] screened numerous plant materials for biological activity to find new natural product compounds with therapeutic effects.

In drug development, RTI toxicologists and chemists improved techniques for determining the safety and efficacy of potential new drugs. For example, they developed methods of testing a range of drug delivery systems – including dermal patches, intravenous injection, subcutaneous infusion, and inhalation of vapors. They also conducted drug metabolism and pharmacokinetic studies and performed enzyme assays to help predict drug-drug interactions.



RTI develops electronic data collection instruments for measuring quality of life.



Triple quadrupole mass spectrometry allows RTI investigators to perform high-throughput and sensitive assays.

RTI chemists working with pharmaceuticals, natural products, and materials derived from the biotechnology industry, maintained their leadership in chromatography and mass spectrometry. Using state-of-the-art technology, they evaluated, developed, and validated various methodologies, and used those methodologies to support manufacturing and development of various therapeutic agents.

In outcomes research, RTI's multidisciplinary staff of economists, statisticians, epidemiologists, and quality of life researchers continued to expand their work in product value assessment. Their work involves a range of cost-effectiveness, quality of life, burden of illness, and product safety analyses based on both primary patient data collection and modeling techniques. RTI also established a European base in Manchester, England, to better serve clients who require multinational outcomes research.



RTI's Early Childhood Resource Center translates developmental research into best practices for practitioners and policy makers.

Child Health and Development

Across RTI, researchers are working to improve the quality of children's health. From reducing infant mortality to examining children's exposure to environmental chemicals to providing professionals with up-to-date information about children, RTI is involved.

In the nation's capital, RTI worked on an innovative approach to reduce infant mortality. As part of the National Institutes of Health's D.C. Initiative to Reduce Infant Mortality, RTI served as the data coordinating center. In this role, RTI assisted with study design, the development of data collection instruments, data collection and management, and analysis of study findings. Out of these efforts, RTI and its collaborators produced publications on Sudden Infant Death Syndrome that appeared in the Journal of the American Medical Association, Journal of Adolescent Health, American Journal of Health Behavior, and Pediatrics.

In 1999, survey specialists, chemists, and early childhood educators at RTI studied children's exposure to pollutants. They examined chemicals, particles, and dosage level from both an environmental and epidemiological perspective to determine health effects. The researchers developed new personal exposure monitors, videotaped the eating habits of small children to learn about their intake of contaminants, and worked with the National Human Exposure Assessment Survey program on methodology for examining particle transfer to humans by all routes, including through the air and through transfer of particles from surfaces to the skin.

RTI maintains the Early Childhood Resource Center to provide training and consultation to professionals who work with young children and their families. The goal of the center is to assist practitioners and policymakers in planning and implementing effective child- and parent-focused programs. RTI researchers also are serving as the project coordinating center for the Centers for Disease Control and Prevention's Legacy of Children, a set of longitudinal studies of at-risk newborns and their families.



RTI helped Durham, North Carolina's Office of Economic and Employment Development plan for the redevelopment of the city's idle properties.

Urban Redevelopment

Across the nation, cities and municipalities are looking at ways to build their communities and curb urban sprawl. Many are looking at the possibility of redeveloping brownfields. These idle or underutilized properties suffer from real or perceived environmental contamination, and the redevelopment process overwhelms many communities. RTI has assembled a team of scientists who help with all aspects of redevelopment, including environmental, business, technology, planning, and community outreach. In 1999, RTI helped the cities of Burlington and Durham, North Carolina, with their redevelopment needs and held a forum for municipalities to discuss brownfields redevelopment in North Carolina.

Global Leadership

In 1999, RTI researchers crossed the geographical boundaries of 105 countries to conduct projects focusing

on education, health, energy, finance, and pharmaceutical and device economics. RTI opened an office in Manchester, England, to provide a springboard for business expansion in Europe centered around health-related research. To effectively assist local populations, RTI maintained project offices in Bangladesh, Bulgaria, Croatia, El Salvador, England, Ethiopia, Republic of Guinea, Indonesia, Poland, Romania, South Africa, Thailand, Turkmenistan, Uganda, and Ukraine. Besides its work in education reform, municipal finance and management, and hydrogen-powered fuel cells, RTI began major research efforts to curb the global resurgence of tuberculosis and to prevent the global spread of AIDS and other sexually transmitted diseases.



RTI continues to help South Africa reform its educational system.

Education Reform

For the past decade, RTI researchers helped South Africa reform its educational system from one governed by an apartheid government to one that provides an equal education opportunity for all South Africans. This year, RTI researchers worked with the U.S. Agency for International Development (USAID) and the South African Department of Education to improve educational management, quality assurance, and funding systems at school, district, and national levels. RTI also is assisting with educational efforts in Ethiopia, Haiti, Swaziland, Bulgaria, Poland, Cambodia, Lao PDR, Thailand, and Vietnam. In the United States, RTI is collaborating with the Southern Regional Education Board on a U.S. Department of Education project to design, implement, and evaluate a comprehensive model for school reform in middle and secondary grades. The project goal is to raise student achievement by strengthening schools and making curricula more rigorous.

Municipal Finance

RTI researchers are working with Indonesia's Ministry of Finance to strengthen the country's municipal system. They are helping the government of Indonesia expand financial resources available to municipalities, enhance the management of existing financial resources, and develop financing mechanisms for urban infrastructure. In El Salvador, RTI is working to increase participation in the local democratic process and make municipalities more responsive to their constituents. In Bulgaria, RTI's technical assistance is designed to strengthen transparent and participatory local government, and to work with municipal associations and the Foundation for Local Government Reform, For USAID's Democracy and Governance Center and Missions, RTI helped develop conceptual frameworks for democratic decentralization and implemented field projects that foster better local governance.



RTI staff based in Indonesia are helping the Ministry of Finance strengthen the country's municipal finance system.

Global HIV Prevention

Recognizing that disease does not respect national boundaries, the National Institute of Mental Health funded the Collaborative HIV/STD Prevention Trial. RTI is serving as the data coordinating center for the trial, which includes prevention initiatives in China, Uganda, Peru, Russia, and India. The goal is to implement public health behavior change initiatives among high-risk populations in all five countries, measure the results, document the lessons learned, and share that information to help build a global perspective on preventing the spread of HIV and other sexually transmitted diseases.



RTI researchers will adapt HIV and sexually transmitted disease behavioral interventions to at least five different languages and cultures.

Tuberculosis Treatment

At the end of fiscal year 1999, the National Institute of Allergy and Infectious Diseases awarded RTI a \$5.9 million, 7-year contract to accelerate the commercial availability of new tuberculosis treatments developed at the National Institutes of Health, universities, and nonprofit laboratories. In 2000, RTI will conduct three types of analyses: epidemiological analyses to assess global tuberculosis trends, business analyses to assess the market, and technical analyses to document the potential of candidate compounds. RTI also will promote promising compounds to the pharmaceutical industry.



Aluminum-hydride cartridges (in foreground) can be used to power a hydrogen fuel cell.

Hydrides

For the U.S. Army Research Office, RTI chemical engineers and their collaborators in Moscow are developing a portable hydrogen generator. They are making aluminum-hydride cartridges that produce a self-sustaining reaction that yields hydrogen. This is a near-perfect fuel that, when converted to energy, leaves water as the only by-product. When the cartridges are combined with a hydrogen-powered fuel cell, the result is an energy source that is more reliable, lighter weight, and longer-lived than batteries. The RTI/Russian team developed a prototype of the device in 1999 and will continue its development in 2000.



The global resurgence of tuberculosis presents an urgent need for new therapies. RTI is helping to bring new treatments to market.

Technology Innovation

RTI crosses the boundaries of the usual to provide new or improved technology. We develop state-of-

the-art solutions to complex problems. In 1999 RTI formed Technology Ventures to focus on commercializing its intellectual property. To aid this endeavor, RTI opened the Office of Commercialization and Intellectual Property to license RTI technology and help form joint ventures and spinoff companies. This year's innovations include work in technology-assisted learning, technology management, improved fuel resources, semiconductors, thermoelectrics, and speech processing technology.

Technology-Assisted Learning

Using customized tools and devices, RTI develops and supports creative interactive instructional materials and systems. In 1999, projects included a military maintenance training system, a training program for asphalt plant operators, a real-time, physiologically accurate, 3-D virtual reality trauma patient simulator for emergency care training, and AvaTALK[™] – avatars with emotion used to train employees, such as survey interviewers and bank tellers, in effective communications.



Maria Ward Ashbaugh and Jorge Montoya converse with AvaTALK's Roxanne, a virtual human who responds with changing emotions and facial gestures and context-specific speech.

Technology Management

RTI's multidisciplinary technology commercialization team provides technology assessment and consulting for government and corporate clients. RTI has worked with the National Aeronautics and Space Administration (NASA) for over 25 years to commercialize the agency's research. Over the past 5 years, the group evaluated more than 1,000 NASA technologies, helped NASA develop 55 licensing agreements, and brought 27 products to market. Through its ongoing alliance with the international consulting and accounting firm of Deloitte & Touche, RTI continues to expand its work assessing and commercializing the intellectual property of major corporate clients.



Ashok Damle, Ph.D., holds a ceramic membrane that will have palladium deposited on its interior surface. The resulting composite membrane will be used to convert fossil fuels into hydrogen and carbon dioxide.

Fuel

A goal of RTI chemical engineers is to develop a more thermally efficient and environmentally friendly process to generate electricity from coal, the single largest indigenous energy resource in the United States. In 1999, they developed a zinc titanate sorbent that can drastically reduce sulfur emissions from advanced coal-fired power plants. The sorbent performed well in tests at Kellogg Brown and Root's pilotscale desulfurization reactor. In 2000, there will be several other tests of RTI fuel-related technology, including tests at power plants and at the U.S. Department of Energy's (DOE's) Power Systems Development Facility. RTI and DOE also are developing technologies for cleaning and conditioning highefficiency gaseous fuel to meet contamination tolerance limits for power generation and chemical production processes. Other RTI researchers are at work on a portable hydrogen generator.



RTI developed a fabrication technique that promises to revolutionize the performance and packaging of microprocessors.

Low-Power Semiconductors

In 1999, RTI demonstrated new circuits that could be used to produce microprocessors with speeds in excess of 100 gigahertz. Other laboratories using RTI's proprietary high-speed transistor technology achieved results suggesting that even greater speeds are possible. The potential of this technology includes significant savings in weight, power, and space, and opportunities for custom packaging throughout the electronics industry. In addition, the processes used to make these devices provide unique methods for achieving integrated circuits significantly different and more efficient than those currently in use.

Thermoelectrics

Based on their increased knowledge of the thermoelectronic properties of superlattices, RTI researchers are developing new technologies for device cooling, power generation, thermal signature reduction, and heating, ventilation, and air conditioning. In 1999, they demonstrated superlattices with atomic layers only 5 atoms wide and confirmed them by transmission electron microscopy. They published a paper in *Applied Physics Letters* showing for the first time that these ultra-small superlattices can enhance electronic properties. In *Physical Review B* they discussed the mechanism for reducing deleterious heat conduction in thermoelectronics through superlattices.

Speech Processing

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A multidisciplinary team of scientists, electrical engineers, and clinicians is improving the design and performance of inner-ear implants to restore useful hearing to the deaf. The team includes investigators at RTI and at many collaborating institutions in the United States and Europe. The team's recent advances include development of new speech processing strategies for coordinated stimulation of bilateral implants. Such strategies and implants may enable users to localize sources of sounds and to attend to one talker in environments with multiple talkers or other background noise.



With the help of Michael Pierschalla (left), RTI's Dewey Lawson evaluates speech processing techniques.

Collaborative R&D

RTI believes in reaching beyond its own boundaries to provide all-encompassing R&D. RTI's history of collab-

oration began with its founding in 1958 by three universities: Duke University, the University of North Carolina at Chapel Hill, and North Carolina State University. Today, RTI continues its relationship with these universities and other institutions, organizations, and companies worldwide.

Collaboration with Industry

Environmental Benchmarking

RTI's Environmental Benchmarking Program enables electric utility companies to compare their environmental performance to a peer group of other utilities. In 1999, more than 20 of the nation's major electric utilities participated in the program, which helps them identify their strengths and weaknesses and allocate their environmental expenditures more effectively.

Remedial Technologies Network, LLC

Scientists at RTI and Remedial Technologies Network developed and maintain the Remediation Information Management System (RIMS2000[™]), an Internetbased library of environmental remediation technologies. Currently, more than 880 of these technologies are featured on RIMS2000 in a searchable, online database that is updated monthly. For each entry, the user can review an abstract and obtain a description, case histories, cost data, journal articles, and other information on the technology and its vendor.



RIMS2000, an Internet-based library of environmental remediation technologies, can be accessed through EnviroGlobe.com (http://www.enviroglobe.com).



RTI geographic information system researchers are creating a National Hydrography Database that will include information about all U.S. surface waters.

Collaboration with Government

Mapping the Nation's Waters

In research funded by the U.S. Environmental Protection Agency, RTI is merging hydrographic databases from EPA and the U.S. Geological Survey. The resulting National Hydrography Database will have information about the location, shape, and type of all surface water features in the United States. It will be used by federal, state, and local government agencies and will support emergency management analyses and a variety of other water quality applications.

Food Safety

For the past 14 years, RTI economists have evaluated policies and regulations affecting food products. In 1999, their work for the U.S. Food and Drug Administration (FDA) expanded to include evaluations of the dietary supplement industry. They provided a profile to describe the nature, size, and scope of the industry. RTI economists and statisticians gathered data about the recommended dosages and health claims of dietary supplements available at stores, in catalogs, and on the Internet. In another survey for FDA, RTI economists are conducting a telephone survey of dietary supplement manufacturing facilities to see if they follow Good Manufacturing Processes. RTI economists also are estimating consumer welfare losses resulting from potential fraud in the dietary supplement industry.

Aerospace Safety

RTI aerospace engineers in Hampton, Virginia, and Cocoa Beach, Florida, will work with government and industry clients in 2000 to help improve the safety of air travel and rocket launches. In Hampton, RTI researchers will complete their highly successful, NASA-sponsored development of wake vortex detection systems and turn to the study of a similar aviation hazard, turbulence. RTI staff will again work with their NASA counterparts on ways to predict an aircraft encounter with turbulence, a very familiar phenomenon but one that has resisted detection and characterization. Also in the Hampton office, RTI engineers will exploit the results of NASA general aviation technology programs to promote a new transportation concept: the Small Aircraft Transportation System (SATS). An alternative to automobile or scheduled air carrier for trips in the 150- to 900-mile range, the modern, small, general aviation aircraft could revolutionize the nation's travel habits. The coming year will see RTI staff evaluating the potential of SATS through market analyses they will perform for various state governments in the southeastern United States. At RTI's office in Cocoa Beach, Florida, aerospace engineers work with several government agencies and commercial organizations worldwide to ensure the safe launch and reentry of space vehicles. Besides helping the Federal Aviation Administration (FAA) complete safety regulations for the booming commercial launch business, they will continue to support the FAA in reviewing and evaluating license applications. Other staff in Florida will turn their attention to safety issues posed by two new classes of launch vehicles: evolved expendable launch vehicles and their potential successors, reusable launch vehicles.



Colored smoke rising from the ground reveals an airplane's wake vortex.



RTI's aerosol researchers are providing data about the composition of and personal exposure to particulate matter smaller than 2.5 micrometers in diameter ($PM_{2.5}$). These particles, which come from vehicle exhaust, industrial emissions, and combustion sources, are a concern because they can penetrate deeply into the human lung. In addition to performing laboratory studies, RTI filed a patent for a wearable system to monitor personal exposure to $PM_{2.5}$ particles.



Particles in the atmosphere smaller than 2.5 micrometers in diameter (PM2-5) originate from industrial, vehicular, and natural sources.

Collaboration with Academia

Evidence-Based Practice Center

RTI and the University of North Carolina (UNC) at Chapel Hill are jointly producing evidence reports on various health care topics. These comprehensive reviews and rigorous analyses of scientific data help public agencies and private organizations, as well as patients and consumers, make more informed health care decisions. Currently, the RTI-UNC Evidence-Based Practice Center is conducting reviews for the National Cancer Institute and the National Institute on Dental and Craniofacial Research and is supporting the U.S. Preventive Services Task Force. Topics include management of preterm labor, screening for lipid disorders, screening for prostate cancer, and chemoprophylaxis for breast cancer.

Center for Excellence in Health Statistics

In 2000 researchers at the University of North Carolina at Chapel Hill and RTI will create a Center for Excellence in Health Statistics. Funded by a grant from the Centers for Disease Control and Prevention, the center will bring together top-level researchers in the Research Triangle area of North Carolina to address important statistical design and analysis issues. The focus will be on research issues relevant to minority populations, especially those providing insight on health promotion and disease prevention. RTI will use its expertise in small area estimation to identify the high-risk areas and populations that are the targets of prevention and other health intervention programs in North Carolina. The hard work and success of RTI's staff in 1999 resulted in the

Corporate Resources

strongest financial position ever reported by the Institute. Revenue from research contracts grew by 23 percent over the previous year to \$206.6 million. RTI translated this revenue growth into even stronger growth in net income, all of which RTI reinvests in capabilities and facilities. In 1999, RTI's net income jumped by more than 50 percent to \$8.4 million.



A new call center will increase RTI's telephone interviewing capacity.

In 1999, RTI made plans to open a second call center for telephone surveys. The new call center in Greenville, North Carolina, will open in March 2000. It will increase RTI's telephone interviewing capacity at least 50 percent, from 94 to about 142 stations. The Greenville facility will include the latest in computer-assisted telephone survey hardware and software systems. Interviewers and survey specialists experienced in conducting largeand small-scale telephone surveys will staff the new center.

RTI's staff expanded in 1999 to 1,738, representing a net increase of over 150 people. This past year RTI moved its London research office to Manchester, England, to accommodate expansion of its pharmaceutical and device economics group. RTI's physical assets also grew in 1999 with the completion of the Gertrude M. Cox Statistics Building. The 58,169-square-foot building provides office space for over 190 staff members in the statistics and health and social policy research programs. The new building includes a conference room with flexible meeting space for groups of up to 135 people. Also in 1999, extensive renovations were made to environmental facilities to develop a world-class aerosol generation and measurement laboratory.

Professional Awards

Professional awards to RTI staff in 1999 show that the Institute's reputation is strong and thriving. RTI researchers

produced numerous professional reports, publications, and presentations, and several received peer recognition awards at professional meetings. RTI staff also won awards for project work from clients and professional organizations.



James O'Rourke, Li-Tzy Wu, and Peter Grohse

Five RTI staff members earned peer recognition awards at professional meetings. The American Association of Pharmaceutical Scientists presented research chemists James O'Rourke and Peter Grohse with an outstanding paper award at its 1999 Southeastern Regional meeting. Research statistician Li-Tzy Wu, Ph.D., received the Dr. Morton Kramer Fund Award for the Application of Biostatistics and Epidemiology in Research on the Prevention and Control of Mental Disorder.

Reproductive and infectious disease epidemiologist David Hubacher,

Ph.D., won the Ortho Prize for Best Scientific Paper presented at the annual meeting of the Association of Reproductive Health Professionals. Kara Morgan, Ph.D., received the 1999 Student Paper Award at the Institute for Operations Research and Management Science Meeting.

David Hubacher and Kara Morgan



R.K.M. Jayanty



In 1999, the American Chemical Society announced that R.K.M. Jayanty, Ph.D., would receive its year 2000 award for applied research on environmental chemistry. The ACS offers awards in several fields of chemistry, and they are considered to be among the world's most significant honors for applied chemistry. Dr. Jayanty became the second RTI person so honored, following Monroe E. Wall, Ph.D., who earned the ACS award for medicinal chemistry in 1998.



Environmental scientist Deborah Franke is a member of an EPA team that received a 1999 Hammer Award from Vice President Al Gore's National Partnership for Reinventing Government. In 1998 two RTI staff members – David Ensor and Jack Farmer – were honored with Hammer Awards for their work on EPA's Environmental Technology Verification Program.

Jack Farmer, Dave Ensor, and Deborah Franke



Cliff Haac, Russ Vandermass-Peeler, and Jack Pless

Cliff Haac, Jack Pless, and Russ Vandermass-Peeler won a regional Silver Reel Award from the International Television and Video Association for training videos produced for the National Household Survey on Drug Abuse.



Malcolm Burgess

RTI's Malcolm Burgess received NASA's "Turning Goals Into Reality" award for his contributions as part of NASA-Langley's Advanced General Aviation Transportation Experiments Team. In addition, three RTI researchers –

George Switzer, Les Britt, and Chi Nguyen – were part of a team that earned a NASA Group Achievement Award. Other members of the team included scientists and engineers from NASA, eight companies, and two universities.



Chi Nguyen and George Switzer

Financial Summary

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The financial statements below show the results from the fiscal years ending September 30, 1999, and 1998.

•Revenue from research operations of \$206.6 million for fiscal year 1999 exceeded fiscal year 1998 revenue by \$38.7 million, an increase of 23 percent.

- •Net income of \$8.4 million for fiscal year 1999 was 51 percent more than in fiscal year 1998.
- Total Institute capital at the end of fiscal year 1999 was \$75.4 million, a 1-year increase of more than \$8 million.

RTI also received \$217 million of new funding for research projects in fiscal year 1999, an increase of 22 percent compared with fiscal year 1998.

come Statement (in thousands of dollars)	1999	1998
Revenue from research contracts	\$206,590	\$167,913
Direct and indirect labor	(100,056)	(87,095)
Other direct costs	(77,899)	(56,800)
Other variable costs	(10,341)	(9,307)
Fixed costs	(10,003)	_(9,639)
Net revenue from operations	8,291	5,072
Other income (net of interest expense)	102	472
Net revenue	\$8,393	\$5,544
alance Sheet (in thousands of dollars)		
Assets		
Current assets	\$50,920	\$39,515
Property and equipment	104,289	93,512
Accumulated depreciation	(49,393)	(44,625)
Other noncurrent assets	2,410	2,229
- Total assets	\$108,226	\$90,631
Liabilities and Institute Capital		
Current liabilities	\$32,872	\$22,045
Long-term notes payable	0_	1,625
Total liabilities	32,872	23,670
Contributed capital (unrestricted)	4,879	4,879
Contributed capital (restricted)	1,950	1,726
Accumulated net revenue invested in research operations	68,525	60.356
Total Institute capital	75,354	66,961
Total liabilities and Institute capital	\$108,226	\$90,631

Five members of the Board of Governors hold seats by virtue of their positions: the presidents of The

Board of Governors

University of North Carolina, Duke University, and Research Triangle Institute and the chancellors of North Carolina State University and the University of North Carolina at Chapel Hill; three are specified in the bylaws: William C. Friday, Marcus E. Hobbs, and William F. Little; nine are appointed annually to represent Duke University, The University of North Carolina general administration, North Carolina State University, and UNC-Chapel Hill; and up to fifteen are selected from the business and scientific communities.

Chairman

Earl Johnson, Jr.* Chairman Southern Industrial Constructors, Inc.

Board Members

William F. Little** Retired Senior Vice President, The University of North Carolina

Erich Blach President, Washington Advisory Group, LLC

Enriqueta C. Bond* President, Burroughs Wellcome Fund

Molly Corbett Broad President, The University of North Carolina

H. Keith H. Brodie* President Emeritus, Duke University

Roy Carroll* Senior Vice President and Vice President for Academic Affairs, The University of North Carolina

Julius L. Chambers Chancellor, North Carolina Central University

Ivie L. Clayton* Business Consultant

Thomas F. Darden Managing Director, Cherokee Investment Security

Linda A. Dykstra* Interim Vice Provost for Graduate Studies and Research, University of North Carolina at Chapel Hill

Marye Anne Fox Chancellor, North Carolina State University

William C. Friday President Emeritus, The University of North Carolina

Steve C. Griffith, Jr. Retired Vice Chairman, Duke Power Company

Kermit L. Hall* Provost and Vice Chancellor for Academic Affairs, North Carolina State University

Margaret T. Harper Publisher, The State Port Pilot

Victoria Franchetti Haynes* President Research Triangle Institute

Marcus E. Hobbs* University Distinguished Service Professor Emeritus of Chemistry, Duke University

Edward W. Holmes Dean, School of Medicine, Duke University Medical Center

William G. Howard, Jr. Consultant

Kristina M. Johnson Dean, School of Engineering, Duke University

M. Ross Johnson Retired President and CEO, TRIMERIS

Nannerl O. Keohane President, Duke University

Roger O. McClellan President Emeritus, Chemical Industry Institute of Toxicology William O. McCoy Interim Chancellor, University of North Carolina at Chapel Hill

Charles G. Moreland* Vice Chancellor for Research, Outreach, and Extension North Carolina State University

Richard J. Richardson* Provost, University of North Carolina at Chapel Hill

James N. Siedow* Professor, Department of Botany, Duke University

Gail R. Wilensky Senior Fellow, Project Hope

Phail Wynn, Jr.* President, Durham Technical Community College

Members of the Corporation

Members are the equivalent of RTI shareholders. They elect the Governors who represent the business and scientific communities.

Members of the Corporation include the chairs and presidents of The University of North Carolina and Duke University, and representatives elected annually by the Duke University Board of Trustees and the Board of Governors of The University of North Carolina.

Members of the Corporation representing Duke University are:

John A. Forlines, Jr.

Nannerl O. Keohane

Randall L. Tobias

Thad B. Wester

Members of the Corporation representing The University of North Carolina are:

Molly Corbett Broad

Chancy R. Edwards

W. Travis Porter, III

Benjamin S. Ruffin

Corporate Officers

RTI officers, including the research vice presidents listed on page 24, are elected by the Board of Governors.

Victoria Franchetti Haynes President

Alvin M. Cruze Executive Vice President

Richard C. McGivney Controller

Suzanne P. Nash Corporate Secretary

Carolyn J. Harris Assistant Corporate Secretary

*Member, Executive Committee **Chair, Executive Committee



The Organization

Research Triangle Institute

Board of Governors

Executive Committee

Victoria Franchetti Haynes President	Contracts and Legal Affairs, Lisa J. Gilliland, Senior Director Finance, Richard C. McGivney, Controller Information Technology Services, John A. Dallen, Jr., Senior Director Resources and Facilities, Sally S. Johnson, Senior Director	
Alvin M. Cruze Executive Vice President		
Research Vice Preside	nts Research Centers and Programs	
Ronald W. Johnson Social Sciences and In	iternational Development	
	International Development, Luis A. Crouch, Director Economics Research, Allen K. Miedema, Director Research in Education, Judy M. Thorne, Director Education Surveys Program, John A. Riccobono, Senior Program Direc	Chief Scientists: Becky J. Hayward James S. McCullough tor
Richard A. Kulka Statistics, Health, and	Social Policy	
	Statistics Research, Judith T. Lessler, Director Survey Research, Michael F. Weeks, Director Health and Social Policy, Richard A. Kulka, Acting Director Research Computing, Timothy J. Gabel, Director Marketing and Business Development, Michael E. Samuhel, Director	Chief Scientists: Paul P. Biemer, Survey Methodology Ralph E. Folsom, Jr., Statistical Methods James R. Chromy, Sampling Methodology George H. Dunteman, Social Statistics Kathleen N. Lohr, Health Services Babubhai V. Shah, Statistical Computing
F. Ivy Carroll Chemistry and Life Sci	iences	
	Organic and Medicinal Chemistry, F. Ivy Carroll, Acting Director Bioorganic Chemistry, A. Robert Jeffcoat, Director Life Sciences and Toxicology, Rochelle W. Tyl, Director	Chief Scientists: Monroe E. Wall C. Edgar Cook
Edo D. Pellizzari Analytical and Chemic	cal Sciences	
	Exposure Research Program Mass Spectrometry Research Program, Robert D. Voyksner, Senior Prog Inorganic Chemistry Research Program Pharmaceutical and Chemical Analysis Research Program, Charles M. S	gram Director Sparacino, Senior Program Director
Dale W. Rowe Technology Ventures	Digital Systems Engineering, Samuel S. Field, IV, Director Semiconductor Research, Dale W. Rowe, Acting Director Technology Applications, Doris J. Rouse, Director Auditory Prosthesis Research, Blake S. Wilson, Director	
Dennis F. Naugle Environmental Scienc	es and Engineering	
	Environmental Measurements and Quality Assurance, Clifford E. Decker, Jr., Director Environmental Analysis, Terrence K. Pierson, Director Engineering and Environmental Technology, Jack R. Farmer, Director Aerospace Technology, James G. Haidt, Director	Chief Scientist: David N. McNelis

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About RTI

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Regional Offices

Atlanta, Georgia Atlanta Koger Center Oxford Building, Suite 119 2951 Flowers Road South Atlanta, GA 30341

Telephone: 770.234.5025 Facsimile: 770.234.5030

Washington, DC

1615 M Street, NW Suite 740 Washington, DC 20036 Telephone: 202.728.2080 Facsimile: 202.728.2095

Cocoa Beach, Florida

3000 N. Atlantic Avenue, Suite 108 Cocca Beach, FL 32931 Telephone: 321.799.1607 Facsimile: 321.799.0948 Hampton, Virginia One Enterprise Parkway, Suite 310 Hampton, VA 23666 Telephone: 757.827.1160 Facsimile: 757.827.3273

Chicago, Illinois

203 North Wabash Suite 1220 Chicago, IL 60601 Telephone: 312.456.5240 Facsimile: 312.456.5250

Rockville, Maryland

6110 Executive Boulevard Suite 420 Rockville, MD 20852 Telephone: 301.230.4640 Facsimile: 301.230.4647

RTI's Headquarters

Research Triangle Institute Post Office Box 12194 3040 Cornwallis Road Research Triangle Park, NC 27709-2194 USA Telephone: 919.541.6000 Facsimile: 919.541.5985 E-Mail: listen@rti.org Internet: www.rti.org

International Offices

Jakarta, Indonesia Graha Niaga, 1st Floor Jl. Jend. Sudirman, Kav. 58 Jakarta, Indonesia 12190 Telephone: 62.21.250.5410 Facsimile: 62.21.250.5412

Manchester, England

Unit 10, Williams House Manchester Science Park Lloyd Street North Manchester, M15 6SE United Kingdom Telephone: 44.161.232.3400 Facsimile: 44.161.232.3409

For more information . . .

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