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1999 Commencement for Jefferson Medical College and College of Graduate Studies

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175TH COMMENCEMENT



Jefferson Medical College

College of Graduate Studies

of

Thomas Jefferson University

Philadelphia, Pennsylvania

1824-1999

*Thursday, May Twenty-Seventh
Nineteen Hundred and Ninety-Nine
Half Past Ten O'clock*

The Academy of Music

THE OATH OF HIPPOCRATES

I do solemnly swear by that which I hold most sacred:

That I will be loyal to the profession of medicine,
just to its members, and generous to its institutions;

That I will lead my life and practice my art in
uprightness and honor;

That I will give respect and gratitude to those who
have taught me this art;

That into whatsoever house I shall enter, it shall be
for the good of the sick to the utmost of my power,
I holding myself aloof from wrong, from corruption,
from the tempting of others to vice;

That I will exercise my art for the best care of my
patients,
and I will give no drug, perform no operation for
a criminal purpose, even if solicited far less
suggest it;

That whatsoever I shall see or hear of the lives of
my patients which is not fitting to be spoken,
I will keep inviolably secret.

These things I do promise upon my honor.

PROCESSIONAL..... TRUMPET VOLUNTARY JOHN STANLEY
THE JEFFERSON PROCESSIONAL BURLE MARX

OPENING PROCLAMATION JACK FARBER, *Chairman*
Board of Trustees
Thomas Jefferson University

THE NATIONAL ANTHEM

INVOCATION REVEREND EDWARD C. BRADLEY
Thomas Jefferson University

CONVOCATION PAUL C. BRUCKER, *President*
Thomas Jefferson University

CONFERRING OF DEGREES IN COURSE PRESIDENT BRUCKER

Doctor of Philosophy
Presented by JUSSI J. SAUKKONEN, *Vice President*
for Science Policy, Technology Development,
and International Affairs and Dean
College of Graduate Studies

Doctor of Medicine
Presented by JOSEPH S. GONNELLA, *Senior Vice President*
for Academic Affairs and Dean
Jefferson Medical College

The Oath of Hippocrates JAMES S. STUDDIFORD III, *Clinical Assistant*
Professor of Family Medicine

Master of Science
Presented by DEAN SAUKKONEN

CONFERRING OF HONORARY DEGREES PRESIDENT BRUCKER

ARLEN SPECTER, *Doctor of Laws*
Presented by CHAIRMAN FARBER

MACLYN McCARTY, *Doctor of Medical Science*
Presented by DEAN SAUKKONEN

BENEDICTION REVEREND BRADLEY

RECESSIONAL POMP AND CIRCUMSTANCE.....ELGAR

THE REVEREND R. BRUCE TODD, *Organist*

Grand Marshal
R. ANTHONY CARABASI III

Faculty Marshals
BENJAMIN BACHARACH CLARA A. CALLAHAN CHRISTOPHER V. CHAMBERS JAMES B. ERDMANN
GERALD B. GRUNWALD KAREN D. NOVIELLI HOWARD K. RABINOWITZ RICHARD R. SCHMIDT
MARION J. SIEGMAN

Student Marshals
EUGENE H. CHUNG YVETTE HICKMAN

CANDIDATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

- ELIZABETH CAPPER (Developmental Biology & Teratology) Lansdowne, PA
B.S., Chestnut Hill College
Thesis Title: "An Analysis of Cadherin Function in Retinal Pigment Epithelium Development and Pathology."
Thesis Advisor: Gerald B. Grunwald, Ph.D.
- *LARA GAYLE CHEPENIK (Biochemistry & Molecular Biology) Cherry Hill, NJ
B.A., Rutgers University
Thesis Title: "Mechanisms by which the Cellular Protein, Pur- α , and HIV-1 Tat Mediate Transcription of Viral Genes."
Thesis Advisor: Kamel Khalili, Ph.D.
- BRIAN CHRISTOPHER CHO (Genetics) Richmond, VA
B.S., Virginia Polytechnic Institute
Thesis Title: "Transcriptional Regulation of PCNA and p21/wAF1 Reporter Constructs by p53."
Thesis Advisor: W. Edward Mercer, Ph.D.
- EUGENE CHOI (Physiology) Shavertown, PA
B.A., Cornell University
Thesis Title: "Adhesion Molecule Interactions are Required for Human Polymorphonuclear Neutrophils to Proteolytically Penetrate a Matrix Barrier."
Thesis Advisor: John T. Flynn, Ph.D.
- CANDACE HOWARD-CLAUDIO (Genetics) Grayson, KY
B.A., Transylvania University
Thesis Title: "The Effects of RB2/p130 on Tumor Regenesis."
Thesis Advisor: Antonio Giordano, M.D., Ph.D.
- WESTLEY FRIESEN (Genetics) Bryn Athyn, PA
B.S., The Pennsylvania State University
Thesis Title: "Molecular Determinants of Zinc Finger RNA Interaction and Development of a Specific RNA Binding Protein."
Thesis Advisor: Martyn Darby, Ph.D.
- RAMON J. GARCIA (Pathology & Cell Biology) Maple Glen, PA
B.A., La Salle University
Thesis Title: "Activation Mechanisms of Phospholipase D: An Ethanol Metabolizing Enzyme."
Thesis Advisor: Jan B. Hoek, Ph.D.
- *OSCAR BAYLIN GOODMAN JR. (Molecular Pharmacology & Structural Biology) Las Vegas, NV
B.A., Swarthmore College
Thesis Title: "Clathrin Assembly and Adaptor Recruitment in Receptor-Mediated Endocytosis."
Thesis Advisor: J.H. Keen, Ph.D.
- SHAWN GUERRETTE (Molecular Pharmacology & Structural Biology) Madawaska, ME
B.A., Middlebury College
Thesis Title: "Interaction between Human Mismatch Repair Proteins: Association with HNPCC."
Thesis Advisor: Richard Fishel, Ph.D.
- *ANDREW ROBERT HAAS (Biochemistry & Molecular Pharmacology) Williamsport, PA
B.S., Villanova University
Thesis Title: "Chondrogenic Induction by Bone Morphogenetic Protein-2: Involvement of N-Cadherin Associated Functions."
Thesis Advisor: Rocky Tuan, Ph.D.
- BRETT MAHER HALTIWANGER (Microbiology & Molecular Virology) Denver, CO
B.S., Sweet Briar College
Thesis Title: "Characterization of A DNA Base Excision Repair Pathway in the Malaria Parasite *Plasmodium falciparum*: From RIPs to Repair."
Thesis Advisor: Theodore Taraschi, Ph.D.
- MARSHA EILEEN HERSHBERGER (Biochemistry & Molecular Pharmacology) Wynnewood, PA
B.S., Bucknell University
Thesis Title: "Placental 57-kDaCa $^{2+}$ -Binding Protein: Regulation of Expression & Function in Trophoblast Differentiation & Calcium Homeostasis."
Thesis Advisor: Rocky Tuan, Ph.D.
- JASON JONGHO KANG (Biochemistry & Molecular Pharmacology) Blue Bell, PA
B.S., Carnegie-Mellon University
Thesis Title: "Apoptotic Caspase Activation in the Yeast *Saccharomyces cerevisiae*."
Thesis Advisor: Mary-Ann Bjornsti, Ph.D.

*Also receiving a Doctor of Medicine degree from Jefferson Medical College

- DAVID KOUBA (Biochemistry & Molecular Pharmacology) Wyckoff, NJ
B.S. Haverford College
Thesis Title: "Transcriptional Regulation of $\alpha 2(I)$ Collagen(COLIA2) Gene Expression by Tumor Necrosis Factor- α ."
Thesis Advisor: Jouni Uitto, M.D., Ph.D.
- *JASON GARRETT KRUPNICK (Molecular Pharmacology & Structural Biology) Huntingdon Valley, PA
B.S., The Pennsylvania State University
Thesis Title: "Molecular Mechanisms of Regulation of G Protein-Coupled Receptor Signaling by Arrestins."
Thesis Advisor: Jeffrey L. Benovic, Ph.D.
- *MONDIRA KUNDU (Biochemistry & Molecular Biology) Wayne, PA
B.S., The Pennsylvania State University
Thesis Title: "Mutual Interactions between HIV-1 & Host Cell Cycle: Implications for Neuropathogenesis of AIDS Dementia Complex."
Thesis Advisor: Kamel Khalili, Ph.D.
- TIMOTHY KENNETH MACLACHLAN (Genetics) Syracuse, NY
B.S., Saint John Fisher College
Thesis Title: "Characterization of the PITALRE & PISSLRE cdc2-related Kinases."
Thesis Advisor: Antonio Giodano, M.D.
- CHARLES C. REED (Molecular Pharmacology & Structural Biology) Boyertown, PA
B.S., Saint Joseph's University
Thesis Title: "Ligand Recognition in Mutant Proteins."
Thesis Advisor: Irene D. Weber, Ph.D.
- MAHMUT SAFAK (Biochemistry & Molecular Biology) Philadelphia, PA
M.S., West Chester University
Thesis Title: "23-Base Pair Sequence Element and Its Role in JC Virus Gene Transcription."
Thesis Advisor: Kamel Khalili, Ph.D.
- DAWN MARIE SERIO (Molecular Biology) Langhorne, PA
B.S., Loyola College
Thesis Title: "Novel HIV-1 Therapeutic Agents based on Virion Targeted Viral Proteins."
Thesis Advisor: Alagarsamy Srinivasamy, Ph.D.
- *ASIT K. SHAH (Biochemistry & Molecular Biology) North Wales, PA
B.S., University of Michigan
Thesis Title: "Effects of TGF-B1 & BMP-2 on Osteoblasts at the Bone-Biomaterial Interface."
Thesis Advisor: Rocky Tuan, Ph.D.
- SCOTT STEELMAN (Microbiology & Immunology) Dallas, PA
B.S., Wilkes University
Thesis Title: "Members of the Meisi Homeoprotein Family are Involved in Binding The Laminin B1 Enhancer."
Thesis Advisor: Arthur M. Buchberg, Ph.D.
- FRANK J. TADDEO (Pathology, Anatomy & Cell Biology) Wayne, PA
B.S., Grove City College
Thesis Title: "Cloning Expression & Purification of Protein Kinase C: A Comparative Study of the Modes of Activation of Protein."
Thesis Advisor: Christopher Stubbs, Ph.D.
- DARIN P. TRELKA (Pathology & Cell Biology) Washington, PA
B.A., Washington and Jefferson College
Thesis Title: "The Ins & Outs of Macromolecular Transport in Malaria-Infected Erythrocytes."
Thesis Advisor: Theodore F. Taraschi, Ph.D.
- JON ALEC UKROPEC (Physiology) Wallingford, PA
B.S., Temple University
Thesis Title: "Regulation of Human Endothelial Cell Adherens Junctions by Fluid Shear Stress."
Thesis Advisor: Marilyn J. Woolkalis, Ph.D.
- MARISA WAGNER (Biochemistry & Molecular Biology) Havertown, PA
B.S., The Catholic University of America
Thesis Title: "Genetic Analysis of a Mitogen-Activated Protein Kinase Required for Spore Morphogenesis in *Saccharomyces cerevisiae*."
Thesis Advisor: Edward Winter, Ph.D.
- JUDITH AFEDUA WUBAH (Developmental Biology & Teratology) Foxridge, Ghana
B.S., B.Ed., University of Cape Coast
Thesis Title: "A Model for Gene-Teratogen Interaction in Early Mouse Embryos."
Thesis Advisor: Thomas B. Knudsen, Ph.D.

*Also receiving a Doctor of Medicine degree from Jefferson Medical College

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B.S., University of Pittsburgh
Internal Medicine — Greenville Hospital System, SC

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B.A., Cornell University
Internal Medicine — University of Chicago Hospital, IL

CAROLYN BETH GLAZER Wynnewood, PA
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Transitional — University of Pennsylvania Health System/
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Internal Medicine — New York Presbyterian Hospital,
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Obstetrics and Gynecology — Pennsylvania Hospital,
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FRANCIS X. HALL Port Jefferson, NY
B.S., United States Naval Academy
Internal Medicine — San Diego Naval Medical Center,
San Diego, CA

RAEANN DENISE HAMILTON San Diego, CA
B.S., California Polytechnic State University
Emergency Medicine — Eastern Virginia Medical School,
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B.A., University of Colorado
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Wright Patterson Air Force Base, OH

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Physical Medicine and Rehabilitation — Thomas Jefferson
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MAUREEN V. ABBEY	Blue Bell, PA
ROLANDA B. COVERSON	Philadelphia, PA
KRISTIN C. DiMEZZES BRODBECK	Mullica Hill, NJ
DANA SUZANNE LEVY	North Wales, PA
HEIDI JEAN MANDEL	Philadelphia, PA
KATHERINE S. ROJAS	Philadelphia, PA
ANGELA VERRECCHIO	Havertown, PA
VANESSA ASHLEY VROMAN	Oklahoma City, OK
RAHSEENA LORIE WATSON	Norristown, PA
DENISE GRACE WHITE	Somerdale, NJ

CANDIDATE FOR THE DEGREE OF MASTER OF SCIENCE IN
DEVELOPMENTAL BIOLOGY AND TERATOLOGY

RACHEL BECK	Collegeville, PA
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DEBORAH LYNN ZAMBONI	New Cumberland, PA

CANDIDATE FOR THE DEGREE OF MASTER OF SCIENCE IN IMMUNOLOGY

PATRICIA A. BRAFFORD	Newport News, VA
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JEAN MARIE CHAMPION	Exton, PA
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KRISTEN MARIE DELIN	Cherry Hill, NJ
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SALVATORE U. VITELLI	Ardsley, PA
JUN YANG	Philadelphia, PA
DENISE J. ZWIER	Wilmington, DE

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DORIS A. CUSH-WALKER	Philadelphia, PA

LISA H. DOWNS	Philadelphia, PA
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JULIA FINLAY	Philadelphia, PA
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LINDA CHRISTINE LANKENAU	Newark, DE
MARGARET LEITER	Haddon Township, NJ
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JAMIE STRAUSE	Mt. Laurel, NJ
KANNIKA THONGUBON	Chiang Mai, Thailand
LORI ANN WILLIAMS	Mt. Laurel, NJ
LINDA MARIE ZIMMERMAN	York, PA

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NICOLE CAPOZELLO	Reading, PA
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KATHY A. DARCH	Blackwood, NJ
CHRISTINE DZIUBCZYNSKI	Prospect Park, PA
ESTHER MISRAHI ELTING	Manalapan, NJ
KATHLEEN MULQUEEN FOX	Gladwyne, PA
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ALESSANDRA VERSACE	Philadelphia, PA
GINA MARIE WALSH	Barrington, NJ
DANIELLE CHRISTINE WILSON	Stroudsburg, PA

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WILLIAM EDWARD WIXTED	Linwood, NJ

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JOSEPH D. OBERHOLZER	Bethlehem, PA
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GLENN LEWIS READ	Moorestown, PA
DINA MARIE ROBBINS	New Egypt, NJ
BRETT G. SCHIEMER	Pennsauken, NJ
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JENNIFER E. SHAW	Doylestown, PA
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GLEN ANDREW SUMMERS	Philadelphia, PA
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ROBYN LYNNE TOWNER	Hulmeville, PA
DEREK CHRISTIAN TUOHY	Absecon, NJ
VALERIE VISALLI-DRURY	Mantua, NJ
CHRISTINE VLAHOS	Palisades, NY
JASON MATTHEW WAMBOLD	Harleysville, PA
DEREK L. WARNICK	Lancaster, PA
APRIL LYNETTE WEAVER	Lancaster, PA
MEGAN RENEE WELLIVER	Bloomsburg, PA
ARDEN A. WILKINS	Washington, DC
ANTHONY CHRISTOPHER WOODS	Philadelphia, PA

Candidates for the combined B.S./M.S. Program in Physical Therapy have successfully completed all formal course work. They are also required to take two eight-week clinical internships, which will not be completed until late summer. Upon completion of the internship requirements, these students will receive their diplomas for the Bachelor of Science and Master of Science degrees.

It is the policy of the College of Graduate Studies not to award honors to graduates with the doctor of philosophy or master of science degree.

As final action cannot be taken before the program goes to press, Thomas Jefferson University reserves the right to add or withdraw names from the list of candidates for degrees.

AWARDS AND PRIZES

Awarded at Class Day Exercises on Wednesday, May 26, 1999

FACULTY AWARDS

The Christian R. and Mary F. Lindback Award for Distinguished Teaching in a Basic Science.
PETER RONNER, Ph.D., Associate Professor of Biochemistry and Molecular Pharmacology

Dean's Award for Distinguished Teaching in a Clinical Science.
THOMAS J. NASCA, M.D., Clinical Associate Professor of Medicine, Vice Chairman for Education and Associate Dean for Education and Research, Jefferson Health System

Blockley-Osler Teaching Award for Excellence in Teaching of Clinical Medicine. To a faculty member of a Jefferson-Affiliated Hospital.
EDWARD J. FILIPPONE, M.D., Clinical Assistant Professor of Medicine

The Leon A. Peris Memorial Award. To a member of the volunteer faculty for excellence in clinical teaching and superior patient care.
MATTHEW V. DECARO, M.D., Clinical Assistant Professor of Medicine

Healthcare Foundation of New Jersey Humanism in Medicine Award. To an outstanding faculty member demonstrating exemplary compassion in doctor/patient relations.
ERIC L. HUME, M.D., Associate Professor of Orthopaedic Surgery

DEAN'S MEDAL

The Dean's Medal. In recognition of distinguished service to the Medical College.
J. WOODROW SAVACOO, M.D., Honorary Clinical Associate Professor of Medicine

The Dean's Medal. In recognition of distinguished service to the Medical College.
JOHN J. GARTLAND, M.D., Professor Emeritus of Orthopaedic Surgery and University Medical Editor

AWARDS TO GRADUATING STUDENTS

The E. Harold Hinman Memorial Prize, for extraordinary interest and accomplishment in family medicine. Sponsored by family and friends in memory of E. Harold Hinman, Ph.D., M.D., M.P.H., Professor Emeritus of Preventive Medicine.
JULIE H. PROSSEDA (honorable mention: JENNIFER J. RANEY)

The Henry Keller Mohler Memorial Prize in Therapeutics. Sponsored by Mr. Jesse Hubschman in memory of his wife, Natalie, to honor Henry Keller Mohler, M.D.
JOSEPH A. MANFREDI

The Carroll R. Mullen Memorial Prize in Ophthalmology. To the senior who has achieved the highest grade in ophthalmology.
CAROLYN B. GLAZER (honorable mention: GAUTAM MISHRA)

The Sarah G. Miller Obstetrics and Gynecology Prize. To a senior who has demonstrated excellence in obstetrics and gynecology during the entire curriculum. Sponsored by Mrs. Sarah George Miller in memory of John B. Montgomery, M.D., Professor Emeritus of Obstetrics.
ERIN C. LANGAN (honorable mention: VIRGINIA R. SMITH)

The Baldwin L. Keyes Prize in Psychiatry. Given by Mr. Joseph H. Levit in memory of his wife Mae K. Levit, in honor of Baldwin L. Keyes, M.D., Sc.D., Professor Emeritus of Psychiatry.
PHILLIP R. REEVES (honorable mention: ALIX O. FAUST)

The Harold L. Stewart, M.D. '26 Prize in Pathology. Awarded to the academically excellent student who has completed a pathology research project.

BENJAMIN L. HOCH

The Philip J. Hodes Prize in Radiology. To the fourth-year medical student displaying outstanding aptitude and interest in radiology.

STEVEN C. WAGNER (honorable mention: JEREMY S. GRAYSON)

The Leopold Z. Goldstein, M.D., Memorial Prize in Obstetrics and Gynecology. To the student with the highest average in obstetrics and gynecology. Sponsored by Mrs. Leopold Z. Goldstein and daughters in memory of Leopold Z. Goldstein, M.D.

JASON T. HUFFMAN (honorable mention: JOSEPH P. BROOKS)

The Dean Marie Baines Memorial Prize in Pediatrics, for excellence in pediatrics. Sponsored by family and friends in memory of Dean Marie Baines, M.D., a graduate of the Class of 1973.

TANDY AYE (honorable mention: LINDA M. COBB)

The Paul D. Zimskind Memorial Prize in Urology, for academic excellence in urology. Sponsored by the National Urologic Forum, in memory of Paul D. Zimskind, M.D., Ph.D., the Nathan Lewis Hatfield Professor of Urology.

CRISTOPHER J. GARLITZ

The William C. Davis Prize. Awarded to a senior who will pursue a career in emergency medicine. Sponsored by Mrs. Charlotte Davis in memory of her son, William C. Davis, M.D., an alumnus of Jefferson Medical College.

RAEANN D. HAMILTON (honorable mention: SCOTT E. WAGNER)

The Arnold R. Weitz Memorial Prize in Hematology. Awarded to a senior medical student for outstanding aptitude and interest in hematology. Sponsored by family and friends in memory of Arnold R. Weitz, M.D.

HARLEY J. COHEN

The William F. Kellow Prize. To the student who most closely exemplifies the attributes of the ideal physician. Sponsored by family and friends in memory of William F. Kellow, M.D., Dean and Vice President of Jefferson Medical College from 1967 to 1981.

ANASTASIA PETRO

Robert J. Mandle Memorial Graduation Award. Given to the graduating student who has shown the greatest proficiency in research in the field of microbiology or related medical science as judged by the faculty of the Department of Microbiology.

JASON G. KRUPNICK

The Clinical Surgery Prize, for general excellence in clinical surgery. In memory of Francis Torrens Stewart, M.D., Professor of Clinical Surgery, 1910-1920.

JOSHUA A. EISENBERG

The Orthopaedic Surgery Prize, for general excellence in clinical surgery. Sponsored by the Department of Orthopaedic Surgery.

WALTER W. FRUEH (honorable mention: PHILIP A. MINOTTI JR.)

The Edward J. Moore Memorial Prize in Pediatrics. To the student demonstrating the greatest aptitude in pediatrics. In memory of Edward J. Moore, M.D.

ARA BALKIAN (honorable mention: RENEE BROWN RIDDLE)

The S. MacCuen Smith Memorial Prize in Otolaryngology. To the most able senior in the field of otology. Sponsored by Mrs. Stuart Lodge Bullivant in memory of her father.

BRYAN T. AMBRO

The Arthur Krieger Memorial Prize in Family Medicine, for excellence in family medicine. Sponsored by family and friends in memory of Arthur Krieger, M.D.

CHRISTOPHER A. HAINES

(honorable mention: REBECCA SIMONS and MARSHA N. WITTINK)

The Hubert Spencer Sear Memorial Award. Awarded to an outstanding fourth-year student in radiology. Sponsored by family and friends in memory of Hubert Spencer Sear, M.D., Class of 1950.

NABILE M. SAFDAR

The Alexander and Lottie Katzman Award in Gastroenterology. Awarded to the most proficient student in gastroenterology as judged by the faculty. Sponsored by Joseph Medoff, M.D., and Mrs. Medoff in memory of Mrs. Medoff's parents.

PHILIP M. GINSBURG (honorable mention: SUNGCHUN LEE)

The Philip and Bella Medoff Memorial Prize, for excellence in internal medicine and outstanding contributions to the Hobart Amory Hare Honor Medical Society. Given to a senior who is a member of the Society and who is recommended by the Magee Professor of Medicine and the faculty advisor of the Society. Sponsored by Joseph Medoff, M.D., Mrs. Medoff, and children.

CHRISTOPHER T. OSWALD (honorable mention: CRISTOPHER J. GARLITZ)

The Lemmon Prize in Anesthesiology, for clinical work or writing in the field of anesthesiology. Awarded from an endowment established by family members in memory of William T. Lemmon, Sr., M.D.

PETER C. LIANG

The Annie Simpson General Medicine Prize. Awarded to the medical student who received the best general average in general medicine.

KLARISSA K. NELSON (honorable mention: LAWRENCE D. WARD)

The Annie Simpson Pulmonary Medicine Prize. Awarded to the medical student who received the best general average in pulmonary medicine.

PHILIP M. GINSBURG (honorable mention: ANDREW R. HAAS)

The William Potter Memorial Prize in Clinical Medicine. Given to the highest attaining student in clinical medicine, from a bequest of Mrs. Adaline Potter Wear.

ANASTASIA PETRO

The Hyman Menduke Research Prize. Awarded to the graduating senior who, as determined by the Committee on Research of the faculty, has demonstrated excellence in research while a student at Jefferson Medical College. Sponsored by Michael LeWitt, M.D., Class of 1974.

ANDREW R. HAAS

The Dean's Student Service Award, awarded to the fourth-year student who has given generously of time and talents for the service of classmates and Jefferson Medical College. Selected by the Dean.

LOUIS M. GIANGIULIO

The Alumni Prize, awarded by the Alumni Association of Jefferson Medical College for the highest cumulative record.

BENJAMIN L. HOCH

The Alfred I. duPont Hospital for Children Prize. Awarded to the student whose performance best demonstrates the qualities of academic and clinical excellence, human compassion, and a commitment to the welfare of others as was exemplified by the life and trust of Alfred I. duPont.

REZA J. DAUGHERTY

Healthcare Foundation of New Jersey Humanism in Medicine Award. To an outstanding student demonstrating exemplary compassion in doctor/patient relations.

STEVEN C. WAGNER

The Philip P. Ripepi Prize in General Surgery, to the most promising surgical student in the graduating class.

JOSHUA A. EISENBERG

The J. Woodrow Savacool Prize in Medical Ethics, awarded to the senior medical student who embodies the ideal of the physician's caring commitment to moral and ethical values in medicine. Sponsored by a committee of friends and colleagues of J. Woodrow Savacool, M.D., an alumnus and Honorary Clinical Associate Professor of Medicine, Jefferson Medical College.

JENNIFER J. RANEY (honorable mention: JULIE H. PROSSEDA)

DOCTOR OF LAWS: ARLEN SPECTER

Arlen Specter, Pennsylvania's senior U.S. Senator, chairs the Senate Veterans Affairs Committee and the Appropriations Subcommittee on Labor, Health and Human Services, and Education, which oversees all federal dollars spent on health, education, and labor matters. He is also a member of the Judiciary and Governmental Affairs Committees. In the 104th Congress, he chaired the Intelligence Committee.

Senator Specter is a legislative leader on education, health care, crime, drugs and terrorism. He has led the fight to increase funding for breast cancer, prostate cancer, heart disease, Alzheimer's, mental health and the National Institutes of Health. Senator Specter helped defeat the bureaucratic Clinton national health care plan, and has been pressing his own plan for incremental health care reform, focusing on portability and coverage for children. Senator Specter co-sponsored key domestic violence legislation.

Senator Specter's Armed Career Criminal Act, signed into law in 1984 and expanded in 1986, carries a mandatory 15-year prison sentence for a career criminal found carrying a firearm, and has proven especially effective against major drug traffickers. His death penalty legislation streamlines the once-endless federal appeals process.

A former prosecutor and investigator, Senator Specter in 1995 led the investigation of the killings at Ruby Ridge, Idaho, which prompted changes in FBI and ATF policy. He is currently leading the investigation of Gulf War Syndrome. In the only tangible legislative reform to come from the Iran-Contra scandal, he was responsible in 1989 for creating Inspectors General of the CIA, which in turn exposed Soviet mole Aldrich Ames, assassinations in Guatemala, and tainted Soviet materials passed to the President.

A fiscal conservative, Senator Specter has pressed for the Balanced Budget Amendment and line-item veto, and was the first to introduce a flat-tax bill to lower federal taxes and simplify filing. He has also fought for assistance to farmers and for relief efforts in the wake of droughts, floods, and the Avian Flu.

Arlen Specter began his public service career as an assistant Philadelphia District Attorney, winning the first conviction in the nation of labor racketeers. He was appointed to the Warren Commission staff where he played a leading role in investigating the assassination of President Kennedy. During two terms as District Attorney, he helped restore death penalty statutes in Pennsylvania, fought against consumer fraud, cracked down on rape, and relentlessly prosecuted corrupt public officials.

Arlen Specter was born to immigrant parents in Wichita, Kan., on Feb. 12, 1930, and grew up in the small town of Russell, Kan. He graduated Phi Beta Kappa from the University of Pennsylvania in 1951, then served stateside in the Air Force Office of Special Investigations for two years. He graduated in 1956 from Yale Law School, where he was an editor of the law journal.

Senator Specter lives in Philadelphia with his wife, Joan. They have two sons, Shanin and Steve. Shanin and his wife, Tracy, have three daughters, Silvi, Perri and Lilli.

DOCTOR OF MEDICAL SCIENCE: MACLYN McCARTY

Maclyn McCarty, professor emeritus of The Rockefeller University, is a world-renowned leader in research on the transformation of pneumococcal types, the biology and immunochemistry of streptococci, and rheumatic fever.

A member of the University faculty since 1941, Dr. McCarty was associated with Oswald T. Avery and Colin MacLeod in the landmark experiments which led to the demonstration, in 1944, that deoxyribonucleic acid (DNA), a major component of chromosomes, is the substance that transmits hereditary information.

The significance of the work of Dr. McCarty and his collaborators lay in the fact that transformation—the artificial transfer of genetic material from one bacterium to another—was brought about in a test tube by a highly refined substance consisting principally of nucleic acid. This was the first direct evidence that DNA, a substance previously thought to lack the necessary chemical diversity, is responsible for genetic continuity. A corollary of this discovery, that nucleic acid in some way specifically controls the synthesis by the cell of certain products, has had far-reaching implications. Dr. McCarty's scientific memoir, *The Transforming Principle: Discovering that Genes Are Made of DNA*, was published in 1985.

After graduating from The Johns Hopkins University in 1937 with a Doctor of Medicine degree, he was successively intern, assistant resident, and assistant in its Department of Pediatrics. He was a medical fellow, doing research on sulfonamide drugs at New York University from 1940 to 1941, before he joined what was then known as The Rockefeller Institute for Medical Research as a National Research Council Fellow. From 1942 to 1946 he was on active duty as a lieutenant commander in the United States Navy Medical Corps with the Naval Medical Research Unit based at The Rockefeller Institute Hospital.

He was named an associate in 1946, associate member in 1948, member in 1950, and professor and senior physician in 1958. From 1960 to 1974, he was physician-in-chief of The Rockefeller University Hospital with responsibility for the development of clinical research and supervision of clinical care. He became a vice president of the University in 1965 and was named a John D. Rockefeller Jr. Professor in 1977. He retired as vice president in 1978, but held the Rockefeller chair until 1981, when he became professor emeritus.

Dr. McCarty has received many honors for his scientific contributions. Among them, in 1990, Dr. McCarty received the prestigious Wolf Prize in Medicine, presented by the Prime Minister of Israel in the Knesset. In 1977 he received the first annual Waterford Biomedical Science Award of Scripps Clinic and Research Foundation. He also received the Academy Medal of the New York Academy of Medicine in 1979, The 1980 Medal of the Board of Regents of the American College of Physicians, and the 1981 Robert Koch Medal of the Robert Koch Foundation.

In 1982 he was awarded the Order of the Republic in the First Degree by the Egyptian government for his service on the advisory board of the Biomedical Research Center for Infectious Diseases of the Ministry of Health, Egypt. In 1984 he was awarded the Commander's Cross of the Order of Merit of the Federal Republic of Germany, the same year he was among the first group of five recipients of the Who's Who in America Achievement Awards.

THE UNIVERSITY MACE

The Thomas Jefferson University mace, carried for the first time in the 1986 commencement ceremonies by Grand Marshal Robert Mandle, Ph.D., was designed and cast by Howard Serlick, member of the Guild of Mastercraftsmen, Winterthur Scholar, and Chief Conservator (Gilding) of the Historical Society of Pennsylvania. It was crafted by silversmith Eugene Zweigle and woodturner Michael Copeland.

The four-foot-long, fourteen-pound mace is made of ebony highlighted with lapis lazuli to reflect Jefferson's colors (black and blue). It features a miniature of Henry Mitchell's sculpture, The Winged Ox, symbol of Saint Luke the Physician, the original of which stands beside the Scott Building on Walnut Street. The miniature was cast in silver by Mister Zweigle, who also fabricated the University seal, the profile of Thomas Jefferson, mounted at the base of the staff. The J. E. Caldwell Company coordinated the project.

Mister Mitchell's original statue of The Winged Ox, adopted by the University in 1976 as its symbol of clinical excellence, is mounted on a column containing the names of fifty medical scientists who have most advanced the art of healing. It also reflects the historical evolution of Thomas Jefferson University from its beginnings as Jefferson Medical College in 1824 to its current status as an academic health center comprising the Medical College, the College of Health Professions, the College of Graduate Studies, and the Thomas Jefferson University Hospital, a part of the Jefferson Health System.

The mace, a grand emblem of the University's heritage, is carried at the head of all formal academic processions.

THE ACADEMIC COSTUME

The wearing of academic dress dates back to the early days of the oldest universities in the world. In the American Council on Education's book entitled *American Universities and Colleges*, it is suggested that "gowns may have been counted necessary for warmth in the unheated buildings frequented by medieval scholars. Hoods seem to have served to cover the tonsured head..."

Throughout the years European universities have continued to show great diversity in their academic dress. American universities on the other hand, when they decided to adopt academic dress in 1895, immediately established a code of regulations which today is followed by almost all American institutions. The establishment of this code has made it possible to distinguish the Associates, Bachelors, Masters and Doctors and at the same time recognize the university which has given them the degree. Revisions to the code have occurred from time to time.

The Associate in Arts and Bachelor's gowns have pointed sleeves and are worn closed. The Master's gown has oblong sleeves, open at the wrist. The rear part of its oblong shape is square cut and the front part has an arc cut away, and is worn open or closed. The Doctor's gown has bell-shaped sleeves. It is worn opened or closed. Cotton poplin or similar material is used for the Associate's, Bachelor's and Master's degrees, and rayon or silk ribbed material is used for the Doctor's degree. The majority of gowns are black but a number of institutions have adopted other colors to identify special programs or groups within the institution.

The hoods vary in length: 48 inches for the Doctor's degree, 42 inches for the Master's and 36 inches for the Bachelor's and Associate's. All hoods are lined in silk in the academic color or colors of the institution conferring the degree. If the institution has more than one color, the colors are shown in divisions using chevrons. The binding or edge of the Doctor's, Master's and Bachelor's hoods are usually made of velvet in the color designating the subject in which the degree was granted. The Associate of Arts hood has no velvet border. The outside is black.

Black mortarboards are most commonly worn; six-sided tams of various colors may be used.

Some of the colors in the bindings of the hoods are:

white	Arts and Letters	green	Medicine
tan	Business	apricot	Nursing
lilac	Dentistry	dark blue	Philosophy
light blue	Education	salmon pink	Public Health
purple	Law	golden yellow	Science

The colors of the linings of the hoods for some Philadelphia academic health institutions are:

black and blue	Thomas Jefferson University	red, white and blue	MCP ♦ Hahnemann
red and blue	University of Pennsylvania		School of Medicine
white and cherry ..	Temple University		

THE JEFFERSON PROCESSIONAL

The Jefferson Processional was commissioned by the Alumni Association of Jefferson Medical College and played for the first time on November 15, 1974, at the Sesquicentennial Celebration of Jefferson Medical College of Thomas Jefferson University. This piece was presented to Thomas Jefferson University by the President of the Alumni Association of Jefferson Medical College, Doctor John J. Gartland. It was composed by Burle Marx.

THE PRESIDENTIAL BADGE OF THOMAS JEFFERSON UNIVERSITY

The President's Badge was created for the Inauguration of Lewis W. Bluemle, Jr., M.D., the third President of Thomas Jefferson University, on September 7, 1977. It consists of four official corporate seals of Thomas Jefferson University and the predecessor corporation, The Jefferson Medical College of Philadelphia. These seals were used to mark diplomas, certificates, and other official documents and have been gold-plated to form the Presidential Badge.

The medallion on the President's right is the corporate seal of Thomas Jefferson University today and was created in 1969 when Jefferson Medical College became Thomas Jefferson University. It carries a contemporary likeness of Thomas Jefferson.

The other three medallions are the various seals that were used in Jefferson Medical College for many years. The oldest marked every diploma that was issued by the College from 1839 to 1967. This seal carries a traditional likeness of a young Thomas Jefferson and the founding date of the College as 1826. Prior to 1839 the diploma of Jefferson Medical College carried the seal of the Jefferson College in Canonsburg, Pennsylvania — the parent institution.

Another seal was developed in 1967 as a result of research done by the late Edward L. Bauer, Emeritus Professor of Pediatrics, who determined that the founding year of Jefferson Medical College was 1824 rather than 1826. This seal is identical to the present corporate seal except the words "Thomas Jefferson University" replace "Jefferson Medical College." It was used for only two years — from 1967 to 1969.

The Presidential Badge is on permanent display in the Scott Library and is used at all convocations of the University.



