DOUGLAS E. BRASH PHD

Professor of Therapeutic Radiology, Genetics, Dermatology
Yale University School of Medicine

PROFESSIONAL ADDRESS

Yale University School of Medicine
Department of Therapeutic Radiology
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New Haven, CT 06520-8040
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EDUCATION

1973 BS	University of Illinois, Urbana-Champaign College of Engineering Major: Engineering Physics Minor: Physiological Psychology
1979 PhD	Ohio State University, Columbus College of Life Sciences Major: Biophysics Minor: Neuroscience Mentor: Dr. Ronald W. Hart Thesis: DNA Damage and Repair *In Vivo*
Postdoctoral Training	
1980-1981	Harvard School of Public Health (Molecular Genetics)
1981-1984	Harvard Medical School & Dana-Farber Cancer Institute (Cancer Genetics) NIH Postdoctoral Fellow Mentor: Dr. William A. Haseltine Project: Ultraviolet Photoproducts at Nucleotide Resolution

POSITIONS

1984-1989	Senior Staff Fellow, Laboratory of Human Carcinogenesis National Cancer Institute, Bethesda, MD Branch Chief: Dr. Curtis C. Harris
1989-1992	Assistant Professor, Department of Therapeutic Radiology Yale University School of Medicine, New Haven, CT
1989-	Member, Yale Comprehensive Cancer Center
1992- 1997	Associate Professor, Department of Therapeutic Radiology Associate Professor, Department of Genetics
1997-	Professor, Department of Therapeutic Radiology Professor, Department of Genetics Yale University School of Medicine, New Haven, CT
2003-	Professor, Department of Dermatology Yale University School of Medicine, New Haven, CT
2006-2008	Coordinator, Office of Undergraduate Research Yale College, New Haven, CT

AWARDS AND HONORS

1969	National Merit Scholar
	National Honor Society
	Illinois State Scholarship
	Cook County Scholarship
1969-1973	Edmund J. James Scholar, University of Illinois
1970	Phi Eta Sigma Freshman Scholastic Honorary
1972	Phi Sigma Kappa Foundation Scholarship
1972	Lawrence Livermore Laboratory Summer Research Assistantship, Linear Accelerator Group, Livermore, CA Mentor: Dr. John C. Browne Project: Instrument to Measure the Neutron Capture Cross-Section of Niobium-Tin for the Fusion Power Project
1972	Tau Beta Pi Engineering Honorary (engr. equiv't of **ΦBK**)
1973	B. S. Magna cum Laude
1973-1978	University Fellow, Ohio State University
1974	Fellowship, 4th International Membrane Biophysics Training Course, Yale
1981-1984	NIH NRSA Postdoctoral Fellowship, Harvard (score 1.0)
1990	Argall L. and Anna G. Hull Cancer Research Award, Yale Cancer Center
1991	Swebelius Cancer Research Award, Yale Comprehensive Cancer Center
1994	Distinguished Lecture, National Institute of Environmental Health Sciences, Research Triangle Park, NC
1995	Arnold Rikli Award for Research in Human Photobiology, Institut Friedrich Wolff, Basel, Switzerland
	American Cancer Society Science Writers Selectee, New Orleans (cutting-edge cancer research of interest to the public)
1996	Inaugural Lecture, 1st Gordon Conference on DNA Alterations in Transformed Cells, Tilton School, NH
	Finsen Lecture of the International Association for Photobiology, Vienna
1997	Charles E. Culpeper Foundation Biomedical Pilot Projects Research Award
1998	Plenary Address, Hungarian Dermatology Society, Lillafüred, Hungary
2001	2000 Outstanding Scientists of the 21st Century
2002	Who's Who in America
2003	Who's Who in the World
2004	1st round candidate, NIH Director's Pioneer Award
2006	American Skin Association Achievement Award for Research in Skin Cancer /Melanoma, Philadelphia
2008-	Fellow, Davenport College, Yale University

RESEARCH INTERESTS

Ultraviolet radiation and photobiology
Skin cancer

PROFESSIONAL SOCIETIES (PAST AND PRESENT)

American Association for the Advancement of Science
American Association for Cancer Research
American Federation for Aging Research
Society for Investigative Dermatology
American Society for Photobiology
Sigma Xi

TEACHING

My teaching philosophy is:
Courses. Every subject has a few key insights from which many results flow; the the clearest presentation results from leaving out everything possible while still getting the key insights and consequences across; and people don't really understand a subject until they teach it. The second strategy helps arrange the order of presentation and reveals the logical flow of the subject.
Laboratory research. It is the mouse who teaches the kitten to catch mice (WR Ashby); to accomplish anything significant, you need to be slightly underemployed (JD Watson).

As graduate teaching assistant:

1973-74 Precalculus Mathematics, Ohio State University
lecture/discussion sections of ~ 30 students

1974-76 The Molecular Basis of Life, Ohio State University
discussion sections of ~ 30 non-science majors, to accompany faculty lectures
Teaching evaluations were not given, but in both courses students tended to transfer into my section from others, to the point where it was a bit of an administrative problem.

As faculty member:

1991 Genetics 921, Readings in Genetics and Molecular Biology, Yale University, "Biology of Aging"

1992 Pathology 650b, Cancer Biology, Yale University, "Tumor Suppressor Genes"
Cell Biology, Advanced Techniques in Cell Biology, Yale University, "Polymerase Chain Reaction"
Scientific Ethics for Genetics Graduate Students, Yale University

1993 Radiation Biology for Radiation Therapy Residents, Yale University
"Techniques of Molecular Biology"

1995 DNA Replication, Damage, and Repair, New York University, "Sunlight and Skin Cancer"

1996 Radiation Biology for Radiation Therapy Residents, Yale University, "Molecular Genetics of Cancer"

1997 Cancer Biology, Stanford University, "Mutations and Apoptosis in Skin Cancer Progression"
Genetics 810, Human Molecular Genetics, Yale University
"Mutations and Apoptosis in Skin Cancer Progression"

1998 Environmental Health Sciences 509a, Environmental Toxicology, Yale School of Public Health, "Sunlight Exposure, Markers, and Protection"
Radiation Biology for Radiation Therapy Residents, Yale University
"Radiosensitizers and Radioprotectants"

1999 Genetics 921, Readings in Genetics and Molecular Biology, Yale University
"BRCA1, BRCA2, and DNA Repair"
Environmental Health Sciences 509a, Environmental Toxicology, Yale School of Public Health,
"Sunlight, Skin Cancer, and Molecular Epidemiology"

2000 Therapeutic Radiology Residents Seminar, Yale School of Medicine, "Sunlight and Skin Cancer"

2001 Therapeutic Radiology Residents Seminar, Yale School of Medicine, "Sunlight and Skin Cancer"

2002 Genetics 675a, Graduate Student Seminar, Yale University, "DNA Repair" and "p53".
Radiation Oncology Residents Seminar, Yale School of Medicine, "Escaping the Stem Cell Compartment: How UV drives clonal expansion in mutant keratinocytes"

2003 Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Cycle, Tumor Suppressor Genes, and Apoptosis"
Organizer, "Microarrays A-Z" 2 day course, Yale University, 150 applicants for 55 spaces

2004 Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"
Organizer, "Microarrays A-Z" 3 day course, Yale University, 60 students
Science 198, Perspectives in Science, Yale College, Discussion section leader

2005 Genetics/Computational Biology & Bioinformatics/Molecular Cell Biology, Genetics & Development 901b, Yale University
"Introduction to Research: Integrity in Biomedicine"
Cell Biology 727b, Graduate Seminars in Advanced Cell Biology, Yale School of Medicine
"UV-Induced Stress Responses and Disease"
Science 198, Perspectives in Science, Yale College, Discussion section leader

Medicine 601, Cellular and Molecular Basis of Disease (1st year MD/PhD students),
Yale School of Medicine, "Cell Injury and Cell Death"
Molecular, Cellular, and Developmental Biology 900a, First-Year Introduction to Research for
Graduate Students, Yale University, "Grant-writing"
Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"

2006 Molecular, Cellular, and Developmental Biology 901b, First-Year Introduction to Research Ethics:
Scientific Integrity in Biomedical Research, Yale University,
"Mentor/Student Responsibilities", "Selecting a Project", "Collaborations"
Internal Medicine 106, Dermatology Frontiers for 2nd Year Medical Students,
Yale School of Medicine
Faculty Advisor, Yale Undergraduate Society for Biological Sciences Journal Club
Co-director, Science 198, Perspectives in Science, Yale College
(course for top incoming freshmen science majors)
Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"

2007 Director, Science 198, Perspectives in Science, Yale College
(course for top incoming freshmen science majors)
Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"

2008 Director, Science 198, Perspectives in Science, Yale College
Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"

2009 Director, Radiation Oncology Residents Seminar, Yale School of Medicine
Lecturer, Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"
Genetics 675, Graduate Student Seminar, Yale University, "Recent Papers in Cancer Genetics"

2010 Genetics 675, Graduate Student Seminar, Yale University
"Classic Papers in Genetics – Overlooked Then or Now Known to be Wrong"
Director, Radiation Oncology Residents Seminar, Yale School of Medicine
Lecturer, Radiation Oncology Residents Seminar, Yale School of Medicine
"Cell Death", "Signal Transduction I", "Signal Transduction II"

TRAINEES

Undergraduate or High School Senior Honors Theses and/or summer research: 26 students
Molecular, Cellular, and Developmental Biology 495/595 (Intensive Research)
Molecular Biophysics and Biochemistry 491 (Intensive Research)
Graduate Thesis committees, reading, rotation: 20 students
Graduate Thesis advisor: 3

Postdoctoral fellows:	1988-1989	Robert Metcalf, MD
		I. C. Hsu, MD
		Sara Bodner, MD
	1989-1996	Subbu Kunala, PhD
	1991-1994	Annemarie Ziegler, PhD
	1992-1993	Harsh W. Sharma, PhD
	1995-1999	Ming Liu, PhD
	1996-1999	Norbert Wikonkal, MD
	1998-2000	Fredrik Pontén, MD PhD
	1999-2001	Eva Remenyik, MD PhD
	1999-2008	Wengeng Zhang, MD, PhD
	2001-2002	Seiji Takeuchi, MD PhD
	2002-2003	Vipin Paliwal, PhD
	2005-2008	Patrick Rochette, PhD
	2010-	Sanjay Premi, PhD
Howard Hughes fellows:	1988-1989	Josh McDonald, MD
Graduate Students:		
thesis	2000-2005	Dejan Knezevic (Physiology)
	2004-2006	Ayse Ercan (Hacettepe Univ., Ankara)
	2011	Silvia Wallisch (Univ. Vet. Med., Vienna)
thesis committee	1995-1998	M. Difilippantonio (Genetics, David Schatz)
	1995-1998	Zhaoxia Sun (Pathology, David Stern)
	1998-2002	Alan Jonason (Genetics, Joann Sweasy)
	2003-2006	Damon Banks (Genetics, Hui Zhang)
	2007-	Molly Rorick (Genetics, Gunter Wagner)
reading committee	1992	Charles Hong (Genetics, Carl Hashimoto)
	1993	Lei Du (Genetics, Steve Warren)
	2003	Lorrie Marek (Genetics, Allen Bale)
	2006	Thomas Ni (Genetics, Tian Xu)
laboratory rotation	1993	Jonathan Kimmelman (Mol. Bioph. Bioch.)
	1994	Alka Agrawal (Pharmacology)
	1995	Maria Mateyak (Genetics)
	1997	Erik Burnett (Genetics)
	2000	Dejan Knezevic (Cell Biology)
	2000	Isabel Beerman (Genetics)
	2002	Jessica Tanis (Biology)
		Kristin Yates (Biology)
	2003	Tracie Addy (Pharm. Mol. Med.)
		Elizabeth Ziegler (Pharm. Mol. Med.)
Undergraduates:	1985	Myra Quanrud* (Catholic U.)
(Honors Theses/summer research)		Marie Caruolo* (Catholic U.)
		Deborah Perino (Catholic U.)
	1986	Anthony Welch (Drexel)
	1987-1988	Kirsten Watson* (Catholic U.)

	1989	Eliz. Sylander (Sacred Heart)
		Ira Gurland* (Union)
		Jeffrey Rudolph* (Yale)
	1990	Kelly Shine* (Yale)
		Anthony Lin* (Yale)
	1990-1991	Gregory McKenna* (Yale)
	1993	James Lee* (Yale)
	1995-1996	Evelyn Chu* (Yale)
	1998-1999	Ahud Sela (U. California)
	1998-1999	Lanna Kwon* (Yale)
	1999	Vlad Sandulache* (U. Rochester)
	1999-2000	Debby Ngo* (Yale)
	2000-2001	John Phillips* (Yale)
	2003	Alejandra Diaz (Yale, STARS)
		Victoria Pham* (Yale)
		Adam Sussman (Yale)
	2004	Aaron Laviana* (Notre Dame)
		Nora Kurose* (Yale)
		Deniz Simsek (Sabanci University, Istanbul)
	2006-07	Rosy Priya Kodiyanplakkal* (Yale)
		*pre-med
High School:	2005	Ashley Borom (Westport, CT)

Training Record for Yale Trainees

Past trainees		Period	Prior Degree	Yr	Institution	Research Project	Current Position
Subbu Kunala	Post	1989-1996	PhD	'88	U. Hyderabad India	DNA repair at nucleotide resolution	Regeneron Pharmaceuticals Information Technology
Annemarie Ziegler	Post	1991-1994	PhD	'90	U. Basel Switzerland	p53 mutations in basal cell carcinoma and actinic keratosis	Project Leader Lab. Molec. Oncol. University Hospital Univ. Zurich
Harsh Sharma	Post	1991-1993	PhD	'90	U. Leeds UK	Genes deleted in human skin diseases; p53 mutations in basal cell carcinoma and actinic keratosis	Co-lead, Green Business Maturity Model Program, Object Mgmt Group
Ming Liu	Post	1995-1999	PhD	'94	U. Nebraska	Transformation-specific apoptosis by antioxidants	Associate Director Global Commercial Development Alexion Pharm., Inc.
Norbert Wikonkal	Post	1996-1999	MD PhD	'92 '00	U. Debrecen Hungary	Genes involved in UV-apoptosis	Vice Chair Dept Dermatology Semmelweis U. Sch. Medicine Budapest, Hungary

Fredrik Ponten	Post	1998-2000	MD PhD	'86 '96	Uppsala U. Sweden	Phenotype of p53 mutations in skin cancers	Chair, Dept Pathology Professor, Genetics Site Director, Swedish Human Proteome Resource Project Uppsala University Uppsala, Sweden
Eva Remenyik	Post	1999-2001	MD PhD	'80 '97	U. Debrecen Hungary	Regression of UV-induced precancers	Chair Dept Dermatology Univ. Debrecen Hungary
Wengeng Zhang	Post	1999-2004	PhD	'99	Chinese Aca. Sciences Beijing	Clonal expansion of p53-mutant cells	Instructor Forsythe Institute Harvard Medical School
Dejan Knezevic	Pre	2000-2005	BS	'99	U. Bridgeport CT	UV-induced apoptosis pathways	Development Scientist Genomic Health, Inc. Redwood City, Ca
Seiji Takeuchi	Post	2001-2002	MD PhD	'91 '98	Osaka U. Japan	Induction of apoptosis by UV-irradiated melanin	Dept Dermatology Kobe University Japan
Vipin Paliwal	Post	2001-2003	PhD	'85	Postgrad. Inst. Med. Res. Chandigara India	UV-induced signaling via small molecules	Director Biotechnology Program Milwaukee School of Engineering
Ayse Ercan	Pre	2004-2005	BS	'98	Hacettepe U. Ankara Turkey	Phenotype of p53 mutations in skin cancers	Associate Professor Dept Biochemistry Hacettepe University Ankara, Turkey
Patrick Rochette	Post	2005-2008	PhD	'04	Laval U. Quebec	DNA repair in telomeres, Genome-wide variation in DNA repair	Assistant Professor Laval Univ Quebec, Canada
Present trainees							
Sanjay Premi	Post	2010-	PhD	'08	Natl Inst. Immunol. New Delhi India	Interaction of UV, melanin, and reactive oxygen in inducing melanoma	Dept. of Defense Translational Collaboration Grant to DB
Silvia Wallisch	Pre	2011-	BS	'09	U. Vet. Med. Vienna Austria	Interaction of UV, melanin, and reactive oxygen in inducing melanoma	Dept. of Defense Translational Collaboration Grant to DB

ADVISORY COMMITTEES AND SERVICE – UNIVERSITY

As Undergraduate:

Panhellenic Council Representative, University of Illinois

Chancellor's Commission on the Reform of Undergraduate Education and Living (CRUEL), University of Illlinois, convened by Chancellor Jack W. Peltason.
Elected student delegate.
The major achievement of this commission was to create an experimental residential college to foster individually tailored learning in a close student-faculty setting.

As Faculty member:

1989-2003	Radiation Safety Officer, Radiobiology Research Group
1989-2003	Core & Floor Tasks distribution, Radiobiology Research Group
1992	Faculty Search Committee, Dept. Therapeutic Radiology, Yale School of Medicine
	Grand Rounds, Department of Pathology, Yale School of Medicine
1993	Award Review Committee, Collaborative Research Award, Yale Cancer Center
	Founding Advisory Committee, Yale Critical Technologies in Molecular Medicine
1994	Faculty Search Committee, Dept. Genetics, Yale School of Medicine
	Award Review Committee, Yale Critical Technologies in Molecular Medicine Program Research Award
1995	Advisory Committee, Director Search, Office of Technology Transfer, Yale School of Medicine
	Fellowship Review Committee, Leslie H. Warner Postdoctoral Fellowship, Yale Comprehensive Cancer Center
1996	Grand Rounds, Dept. Therapeutic Radiology, Yale School of Medicine
1997	Fellowship Review Committee, Leslie H. Warner Postdoctoral Fellowship, Yale Comprehensive Cancer Center
	Minority Medical Eduction Program, research lecture
1999	Award Review Committee, Swebelius Research Award, Yale Comprehensive Cancer Center
1999	Senior Faculty Allotment Committee, Yale School of Medicine
2000	Senior Faculty Allotment Committee, Yale School of Medicine
	Award Review Committee, Hull Award, Yale Comprehensive Cancer Center
	Biotechnology Incubator Development Ad hoc Committee, Yale/Connecticut Innovations, Inc.
2002	Grand Rounds, Yale Comprehensive Cancer Center
	Award Review Committee, Swebelius Award, Yale Comprehensive Cancer Center
	Award Review Committee, Hull Translational Research Award, Yale Comprehensive Cancer Center
	Evaluation Committee for Tenure Track Structure – Investigator Track
2003	Speaker, Sixth Spring Cancer Center Conference, Lawrence & Memorial Hospital, New London, CT
	Faculty Search Committee, Dept. Therapeutic Radiology, Yale School of Medicine
	Yale Skin Disease Research Center Imaging Instrumentation Development Committee
	Renovations Committee, Dept. Therapeutic Radiology, Yale School of Medicine
	Organizer, Microarrays A-Z 2-day course, Yale School of Medicine
2004	Renovations Committee, Dept. Therapeutic Radiology, Yale School of Medicine
	Award Review Committee, Swebelius Award, Yale Comprehensive Cancer Center
	Organizer, Microarrays A-Z 3-day course, Yale School of Medicine
	Organizer, Human Genetics and Molecular Medicine Brown Bag Lunch, Yale School of Medicine
	Speaker, Ninth Fall Cancer Prevention Community Seminar, Lawrence & Memorial Hospital, New London, CT
2006	Coordinator, Office of Undergraduate Research, Yale College
	Judge, Undergraduate Research Symposium, Yale College
	Faculty Advisor, Yale HHMI-Future Scientists Journal Club

Internal Advisory Committee, Melanoma SPORE Grant Program, Dept. Dermatology, Yale School of Medicine
Yale University Radiation Safety Committee
Advisory Committee, Mellon-Mays-Bouchet Undergraduate Minority Fellowship, Yale College

2007 Coordinator, Office of Undergraduate Research, Yale College
Yale University Radiation Safety Committee
Advisory Committee, Mellon-Mays-Bouchet Undergraduate Minority Fellowship, Yale College
Judge, Undergraduate Research Symposium, Yale College
Coordinator, Yale HHMI-Future Scientists Journal Club
Internal Advisory Committee, Melanoma SPORE Grant Program, Dept. Dermatology, Yale School of Medicine

2008 Coordinator, Office of Undergraduate Research, Yale College
Yale University Radiation Safety Committee
Chair, New Applications Panel, Yale University Radiation Safety Committee
Search Committee, Radiation Safety Officer, Yale University
Advisory Committee, Mellon-Mays-Bouchet Undergraduate Minority Fellowship, Yale College
Internal Advisory Committee, Melanoma SPORE Grant Program, Dept. Dermatology, Yale School of Medicine
Fellow, Davenport College, Yale University
Stakeholder representative, Office of Environmental Health Sciences Research Compliance System Project, Yale University

2009 Vice-Chair, Yale University Radiation Safety Committee
Stakeholder representative, Office of Environmental Health Sciences Research Compliance System Project, Yale University
Faculty Advisor, Yale College Students for Children's Health
Stakeholder representative, Web-Based Conflict of Interest Reporting, Office of the Provost, Yale University

2010 Vice-Chair, Yale University Radiation Safety Committee
Chair, Graduate Student Reading Committee, Y. Pan (Genetics)

ADVISORY COMMITTEES AND SERVICE – NATIONAL & INTERNATIONAL

1985 NIH Low Level Radiation Effects Branch Workshop, National Cancer Institute, Use of Shuttle Vector Technology to Investigate Repair of Radiation Damage

1989 NIH Epidemiology Study Section, ad hoc member

1990 Site Visit Committee, NIH National Cancer Institute, Temple University
Site Visit Committee, Department of Energy, San Francisco
NSF Microbiology Study Section, ad hoc reviewer

1991 Session Chair, Gordon Conference on Mammalian DNA Repair "Mutational Specificity of Alterations in Mammalian DNA"
NSF Microbiology Study Section, ad hoc reviewer
Juvenile Diabetes Foundation, ad hoc reviewer

1992 Scientific Advisory Committee, Lovelace Medical Foundation, Albuquerque, NM

1993 American Cancer Society, ad hoc reviewer
Medical Research Council of Canada , ad hoc reviewer

1994 NIH Radiation Study Section, ad hoc member

1995 Session Chair, Annual Meeting, Society for Investigative Dermatology

1996 Session Chair, Conference on Cancer Susceptibility Genes and Molecular Carcinogenesis American Association for Cancer Research, Keystone, CO

1997 NIH Intramural Program Site Visit Committee, Dermatology Branch, National Cancer Institute, Bethesda, MD
Session Chair, World Congress of Dermatology, Sydney, Australia

1998 US-Japan Workshop on Precancer, Kauai, Hawaii
Legislative Committee, American Association for Cancer Research
Workshop on Risks and Benefits of Exposure to UV Radiation and Tanning, NIAMS/NCI/FDA, Bethesda, MD

1999 Special Emphasis Panel, National Cancer Institute, Melanins
Special Emphasis Panel, National Cancer Institute, Melanoma
Consultant, Ocular and Dermatologic Toxicology Branch, Food & Drug Administration
Discussion Leader, Gordon Conference on Genetic Toxicology, "Genetic Susceptibility and Molecular Epidemiology", Oxford, England

1999 State Legislative Committee, American Association for Cancer Research

2000 Session Chair, Oncogenes and Tumor Suppressor Genes in Non-Melanoma Skin Cancer, 13th International Congress on Photobiology, San Francisco
State Legislative Committee, American Association for Cancer Research
NIH Chemical Pathology Study Section, ad hoc member

2001 NIH Epidemiology II Study Section, ad hoc member
NIH Intramural Program Site Visit Committee, Dermatology Branch, National Cancer Institute, Bethesda, MD

2002 Session Chair, UV-Induced Apoptosis, American Society for Photobiology, Quebec City, Quebec

2003 NIH Cell Development and Function 2 Study Section, ad hoc member
NIH Planning Grant Review Panel, Aging Research in Cancer Centers
Keynote Speaker, NIH Workshop on Critical Sulfhydryl Switches, Diet, and Cancer Prevention, Bethesda, MD

2004 American Federation for Aging Research, Research Committee, New York City
Special Emphasis Panel, RO3 Awards, National Institute of Arthritis and Musculoskeletal Diseases
Special Emphasis Panel, SBIR (Small Business) Awards, Musculoskeletal, Oral and Skin Sciences: Integrated Review Group

2005 Yorkshire (UK) Cancer Research, reviewer
American Federation for Aging Research, reviewer, New York City

2006 Italian Association for Cancer Research, reviewer

2007 Melanoma Research Foundation, reviewer

2008 National Cancer Institute (NCI) Think Tank: Physical Sciences Based Frontiers in Oncology – Evolution and Evolutionary Theory and Cancer, McLean, VA

2009 US State Dept., US Civilian Research and Development Foundation for the Independent States of the Former Soviet Union, reviewer
Terry Fox New Frontiers Program (Canada), review panel
Science Advisor, Invisible Exposure – The Science of Ultraviolet Rays (children's book), Compass Point Books

2010 Wellcome Trust, reviewer

Tenure Review:
Harvard
MIT
Stanford
National Cancer Institute
M. D. Anderson Cancer Center
Mt. Sinai School of Medicine
Cancer Research UK (ICRF/CRC)
University of Washington
Georgetown University
Rutgers

Nominator:
Kyoto Prize
General Motors Cancer Research Foundation Awards
National Medal of Science

Grant Reviewer:

NIH
NSF
Department of Energy
US State Department
American Cancer Society
Juvenile Diabetes Foundation
American Federation for Aging Research
Melanoma Research Foundation
Northwest Health Foundation
Cancer Research Campaign (U.K.)
Medical Research Council of Canada
Canadian Institutes of Health Research
Terry Fox New Frontiers Program (Canada)
FWF (Austria)
Volkswagen Fdn.
Netherlands Cancer Society
TeleThon (Italy)
Wellcome Trust

Editorial Boards:

Cancer Prevention Research (AACR)

News & Views for:

Nature
Nature Medicine
Proceedings of the National Academy of Sciences USA
J Investigative Dermatology

Manuscript Reviewer:

Nature
Nature Cell Biology
Nature Genetics
Nature Medicine
New England Journal of Medicine
PLoS Biology
Proc. National Academy of Sciences
Archives of Dermatology
Biochemistry
Biotechniques
BMC Biotechnology
British Journal of Dermatology
Cancer Communications
Cancer Epidemiology, Biomarkers, and Prevention
Cancer Research
Carcinogenesis
Cell Death & Differentiation
Clinical Cancer Research
DNA Repair
Gene
Genes & Development
Int'l. Journal of Cancer
J. Clinical Investigation
J. Investigative Dermatology
J. Molecular Biology
J. National Cancer Institute
J. Photodermatol. Photoimmunol. & Photomedicine
Laboratory Investigation
Molecular Carcinogenesis
Molecular and Cellular Biology
Mutation Research
Nucleic Acids Research
Oncogene
Oncology Research
Photochemistry and Photobiology
Pigment Cell & Melanoma Research
Radiation Research

Scientific Advisory Boards and Consultancies:

1987-1989	Founding Scientific Advisory Board, BioServe Biotechnologies, Laurel, MD
1998-1999	San-Mar Laboratories, Elmsford, New York
1999-2007	AGI Dermatics, Freeport, New York
2001-2002	Council of Healthcare Advisors, Gerson Lehrman Group, New York, NY
2004-2006	InnoCentive R&D Network, Andover, MA
2005-2006	Allux Medical, Menlo Park, CA

Community Activities:

2000-2004	Land Steward, Killingworth (CT) Land Conservation Trust
2009	New Haven – Yale SCHOLAR program (inner city high school science program), Lecture, "Sunlight and Skin Cancer"
	Connecticut United for Research Excellence, BioBus Program, Lecture, "Sunlight and Skin Cancer"

PATENTS

4,885,238	Immortalized Human Bronchial Epithelial and Mesothelial Cell Lines
5,443,954	Immortalized Non-tumorigenic Human Bronchial Epithelial Cell Lines
5,960,384	Method and Device for Parsing Natural Language Sentences and Other Sequential Symbolic Expressions

INVITED LECTURES

1983 Yale University, Dept. Molecular Biochemistry and Biophysics, New Haven

1984 American Federation for Aging Research, NYC

1985 NIH Lambda Lunch, Bethesda, MD

1986 Massachusetts General Hospital, Department of Dermatology, Boston

1987 National Cancer Institute, NIH, Laboratory of Molecular Carcinogenesis, Bethesda, MD

1988 National Cancer Institute, NIH, Laboratory of Molecular Pharmacology, Bethesda, MD
M. D. Anderson Hospital, Science Park, Smithville, TX
"UV-induced photoproducts, mutations, and repair in human cells"
Albert Einstein College of Medicine, Department of Dermatology, New York

1989 Yale School of Medicine, Department of Laboratory Medicine, New Haven

1991 Session Chair, Winter Gordon Conference on Mammalian DNA Repair, Mutagenesis session, Oxnard, CA and Lecture: "Sunlight-Induced Mutations in the p53 Gene in Human Skin Cancer and DNA Repair at Individual Nucleotides"
Yale University Comprehensive Cancer Center, Oncology Fellows Program, New Haven
Yale School of Medicine, Department of Pathology, New Haven
Mutagenesis Association of New England, Sturbridge, MA
Yale School of Medicine, Department of Internal Medicine, New Haven
National Cancer Institute, NIH, Laboratory of Human Carcinogenesis, Bethesda, MD
AACR Conference on Cellular Responses to Environmental DNA Damage, Banff, Alberta, Canada

1992 Yale School of Medicine, Molecular Carcinogenesis Group, New Haven
Grand Rounds, Department of Pathology, Yale School of Medicine, New Haven
Yale School of Medicine, Department of Dermatology, New Haven
Yale School of Medicine, Department of Genetics, New Haven
Harvard Medical School, Cutaneous Biology Research Center, Charlestown, MA
New York University, Department of Pathology, New York City
University of Massachusetts Medical Center, Worcester, MA
New Jersey Medical School, Newark, NJ
Alfred Benzon Symposium on DNA Repair, Copenhagen, Denmark
11th International Congress on Photobiology, Kyoto, Japan

Temple University, Department of Pathology, Philadelphia, PA
Environmental Skin Cancer Conference, Cleveland, OH
Boston University/Tufts/Harvard/Brown, Joint Departments of Dermatology, Boston
Stanford University, Biology Department, Stanford, CA
American Academy of Dermatology, San Francisco, CA
AACR Conference on Chemicals, Mutations, and Cancer, Banff, Alberta, Canada

1993 Sixth International Congress on Environmental Mutagenesis, Melbourne, Australia
Brupbacher Foundation Conference on p53 in Growth Control and Neoplasia, Zurich, Switzerland
Environmental Mutagen Society, Norfolk, VA
Yale University Comprehensive Cancer Center, Oncology Fellows Program, New Haven
Yale School of Medicine, Department of Pathology, Grand Rounds, New Haven
Lovelace Medical Foundation Symposium on The Harmful Effects of Exposure to Ultraviolet Radiation, Albuquerque, NM
Washington State University, Department of Biochemistry and Biophysics, Pullman, WA
Washington State University Cancer Center, Pullman, WA
Yale University, Methods in Molecular Genetics Group, New Haven
Keynote Lecture, 9th Annual Midwestern Regional Radiation Research Meeting, St. Louis

1994 Distinguished Lecture, National Institute of Environmental Health Sciences (NIEHS), Research Triangle Park, NC
Yale School of Medicine, Molecular Virology and Oncology Group, New Haven
The Clinical Research Meeting (AAP, ASCI, AFCR), Baltimore, MD
Institute Juan March, Symposium on Human and Experimental Skin Carcinogenesis, Madrid, Spain
Penn State University, Summer Symposium in Molecular Biology, State College, PA
Rutgers University, Department of Chemical Biology and Pharmacognosy, Piscataway, NJ
American College of Surgeons, Postgraduate Course, Chicago, IL
Yale Department of Genetics Retreat, Woods Hole, MA
Yale University Comprehensive Cancer Center, Oncology Fellows Program, New Haven

1995 American Cancer Society Science Writers Seminar, New Orleans
Yale School of Medicine, Therapeutic Radiology Residents Seminar, New Haven
National Cancer Institute, NIH, Laboratory of Molecular Carcinogenesis, Bethesda
National Institute on Aging, NIH, Laboratory of Molecular Genetics, Bethesda
Session Chair, Society for Investigative Dermatology, Chicago, IL
Gordon Conference on Molecular Toxicology, New London, NH
Charles Heidelberger Conference on Control of Cell Proliferation and Differentiation: Molecular Targets in Carcinogenesis and Cancer Therapy, Essen, Germany
Symposium on the Biology of the Skin: Skin Cancer, Aspen, CO
Symposium on Biologic Effects of Light, Atlanta, GA
Symposium on Photocarcinogenesis: Mechanisms, Models, and Human Health Implications, Washington, DC
Vanderbilt Cancer Center, Department of Biochemistry, Nashville, TN
DNA Replication, Damage, and Repair Course, NYU Medical Center, New York, NY

1996 MIT, Center for Environmental Health Sciences, Cambridge, MA
AACR Conference on Cancer Susceptibility Genes and Molecular Carcinogenesis, Keystone, CO
Ohio State University, Department of Radiology, Columbus, OH
Proctor & Gamble Lecture, U. of Cincinnati, Department of Dermatology, Cincinnati
Medical College of Virginia, Pathology Grand Rounds, Richmond, VA
Yale School of Medicine, Therapeutic Radiology Grand Rounds, New Haven
Wistar Institute Lecture Series, Philadelphia
Gordon Conference on DNA Alterations in Transformed Cells, Tilton School, NH
12th International Congress on Photobiology, Vienna, Austria
American Society of Human Genetics, San Francisco

Harvard Medical School, Department of Dermatology, Boston
Boston University School of Medicine, Department of Dermatology, Boston

1997 University of Michigan Comprehensive Cancer Center, Grand Rounds, Ann Arbor
Genaissance Pharmaceuticals, New Haven, CT
Stanford University, Cancer Biology course, Dept. Cancer Biology, Stanford, CA
General Motors Cancer Research Conference, Bethesda, MD
World Congress of Dermatology, Sydney, Australia

1998 Yale School of Medicine, Dept. Laboratory Medicine, Research Conference, New Haven
US-Japan Workshop on Precancer, Kauai, Hawaii
Rutgers University, Department of Chemical Biology and Pharmacognosy, Piscataway, NJ
Closing Speaker, National Institute of Arthritis and Musculoskeletal Diseases (NIAMS) Workshop, Risks and Benefits of Exposure to UV Radiation and Tanning, Bethesda, MD
Johnson & Johnson Inc., Skin Biology Research Institute, Skillman, NJ
Plenary Address, Hungarian Dermatology Society, Lillafüred, Hungary
Howard Fox Lecture, NYU Medical Center, Department of Dermatology, New York, NY
Yale University, Department of Dermatology, New Haven, CT
R. W. Johnson Pharmaceutical Research Institute, Raritan, NJ

1999 Thomas Jefferson University, Department of Dermatology, Philadelphia, PA
Janssen Pharmaceuticals Research Foundation, Spring House, PA
American Society for Photobiology / FDA, Symposium on the Science of Photoprotection, Washington, DC
Discussion Leader, Gordon Conference on Genetic Toxicology, session on Genetic Susceptibility and Molecular Epidemiology, Oxford, England

2000 Yale School of Medicine, Therapeutic Radiology Residents Seminar, New Haven
Krasnow Institute for Advanced Studies, George Mason Univ., Fairfax, VA
13th International Congress on Photobiology, Apoptosis Symposium, San Francisco
Chair, Symposium on Oncogenes and Tumor Suppressor Genes in Non-Melanoma Skin Cancer, 13th International Congress on Photobiology, San Francisco

2001 American Academy of Dermatology, 59th Annual Meeting, Course 103, Clinical Disease and Its Molecular Basis - Nonmelanoma Skin Cancer, Washington, DC
Yale School of Medicine, Therapeutic Radiology Residents Seminar, New Haven
Yale Comprehensive Cancer Center, Cancer Genetics Research Program, New Haven
Brookhaven National Laboratory, Biology Division, Long Island, NY
U. Texas Medical Branch, Seely Center for Molecular Biology, Galveston, TX
M. D. Anderson Cancer Center and Hospital, Depts. Dermatology and Immunology, Houston, TX
American Society for Photobiology, Chicago, IL
The Royal College of Pathologists, London

2002 Grand Rounds, Yale Cancer Center, Yale School of Medicine, New Haven, CT
Radiation Oncology Residents Seminar, Yale School of Medicine
American Society for Photobiology, Quebec City, Quebec

2003 Laboratory of Human Carcinogenesis, NCI, NIH, Bethesda, MD
Human Genetics Clinical Service, Yale School of Medicine, New Haven, CT
Sixth Spring Cancer Center Conference, Lawrence & Memorial Hospital, New London, CT
Cancer Institute of New Jersey, Rutgers University, Dept. Toxicology, New Brunswick, NJ
Keynote Speaker, NIH Workshop on Critical Sulfhydryl Switches, Diet, and Cancer Prevention, Bethesda, MD

2004 Harvard Medical School, Wellman Laboratories of Photomedicine, Massachusetts General Hospital, Boston, MA
Loyola University Medical Center, Oncology Institute, Maywood, IL
Food & Drug Administration, Center for Devices and Radiological Health, Rockville, MD
9th Fall Cancer Prevention Community Seminar, Lawrence & Memorial Hospital, New London, CT
Rutgers University, College of Pharmacy, Dept. Chemical Biology, New Brunswick, NJ

2005 Cancer Genetics Program, Yale Cancer Center, Yale School of Medicine, New Haven, CT
European Society for Dermatologic Research, Tubingen, Germany
Beeson Lecture, Dept. Dermatology, Yale School of Medicine, New Haven, CT

2006 Ovarian Cancer Program, Yale Cancer Center, Yale School of Medicine, New Haven, CT
Visiting Professor, Cornell University/New York Presbyterian Medical Center, Dept. Dermatology, New York City
3rd Stem Cell Workshop, Connecticut Stem Cell Initiative, North Haven, CT

Douglas E. Brash, PhD

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□ = *most significant papers*

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6. D'Ambrosio, SM, Modak, SP, Brash, DE and Hart, RW. Detection of DNA strand-breaks and UV-endonuclease sensitive sites in X-ray and UV irradiated cells by alkaline agarose gel electrophoresis. **J. Cell Biol.** 79: 145, 1978.

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9. Brash, DE and Hart, RW. Introduction. In Schimke, RT (Ed.): **Biological Mechanisms of Aging**. Washington, DC, NIH Publication 81-2194, 1981, pp. 196-199.

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