BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Janet D. Rowley, M.D.	Blum-Riese Distinguished Service Professor of Medicine, of Molecular Genetics and Cell Biology, and of Human Genetics Section of Hematology/Oncology
eRA COMMONS USER NAME	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Chicago	PhB	1944	College
University of Chicago	BS	1946	Anatomy
University of Chicago	MD	1948	Medicine

A. Positions and Honors

Positions

1949-1950 Research Assistant, University of Chicago, Chicago, IL
1953-1954 Attending Physician, Infant Welfare and Prenatal Clinics Montgomery County (Maryland) Department of Public Health
1955-1961 Research Fellow (part-time), Dr. Julian D. Levinson Foundation, Chicago, IL
1957-1961 Clinical Instructor in Neurology (part-time), University of Illinois School of Medicine, Chicago, IL
1961-1962 USPHS Special Trainee, Radiobiology Laboratory, The Churchill Hospital, Oxford, England
1962-1969 Research Associate (Assistant Professor), Department of Medicine and Argonne Cancer Research Hospital, University of Chicago, Chicago, IL
1969-1977 Associate Professor, Department of Medicine and Argonne Cancer Research Hospital, University of Chicago, Chicago, IL
1977-1984 Professor, Department of Medicine, University of Chicago, Chicago, IL
1984-present Blum-Riese Distinguished Service Professor, Departments of Medicine, of Molecular Genetics and Cell Biology, and Human Genetics, University of Chicago, Chicago, Illinois
2001-2002 Interim Deputy Dean for Science, Division of the Biological Sciences, University of Chicago

Honors

Visiting Scientist, Genetics Laboratory, Department of Biochemistry, University of Oxford, **1970-71**; Dameshek Prize, American Society of Hematology, **1982**; Esther Langer Award, Ann Langer Cancer Research Foundation, **1983**; Kuwait Cancer Prize, April **1984**; The A. Cressy Morrison Award in Natural Sciences from the New York Academy of Sciences, **1985**; The **1986** Woodward Visiting Professor of Medicine Memorial Sloan-Kettering Cancer Center; Texas Federation of Business and Professional Women's Clubs Past State President's Award, **1986**; Karnofsky Award and Lecture, American Society of Clinical Oncology, **1987**; Prix Antoine Lacassagne, Ligue Nationale Francaise Contre le Cancer, **1987**; William Dameshek Visiting Professor of Hematology, Mount Sinai School of Medicine, **1988**; King Faisal International Prize in Medicine (co-recipient), **1988**; G.H.A. Clowes Memorial Award, American Association for Cancer Research, **1989**; Katherine Berkan Judd Award, Memorial Sloan-Kettering Cancer Center, **1989**; William Proctor Prize for Scientific Achievement, Sigma Xi, **1989**; Charles S. Mott Prize from General Motor Cancer Research Foundation, **1989**; Mary Harris Thompson MD Foundation Award, Chicago, **1990**; Allen Award and Lecture (co-recipient), American Society of Human Genetics, **1991**; Steven C. Beering Award, Indiana University School of Medicine, **1992**; de Villiers Award, Leukemia Society of America, **1993**; Cotlove Award and Lecture, Academy of Clinical Laboratory Physicians and Scientists, Syracuse, **1995**; Ham-Wasserman Award and Lecture, American Society of Hematology, **1995**; Gairdner

Foundation International Awards, Toronto, **1996**; Medal of Honor for Basic Research, American Cancer Society, **1996**; Lasker Award for Clinical Science, **1998**; National Medical of Science, **1998**; Golden Plate Award, The American Academy of Achievement, Washington, DC, **1999**; Recipient, 50th Anniversary Commemorative Award, Leukemia Society of America, **1999**; EmileM. Chamot Award, **2001**; Philip Levine Award for Outstanding Research, American Society of Clinical Pathology, **2001** Outstanding Investigator Grant, National Cancer Institute, **1986-1993**, renewed **1993-2000**; Mendel Medal, **2003**; Benjamin Franklin, American Philosophical Society, **2003**; Charlotte Friend Lecture, American Association for Cancer Research, **2003**; Henry M. Stratton Medal, American Society of Hematology, **2003**; Rosalyn Franklin Lecture, National Cancer Institute, **2004**; Kenneth McCredie Lecture, **2004**; Return of the Child Award, LLS, **2005**; Dorothy P. Landon Prize, AACR, **2005**; Award from Amer. Coll. of Physicians for Outstanding Science related to Medicine, **2005**; International Journal Cancer/Meyenburg-Stiftung, Heidelberg, **2006**.

Federal Government Public Advisory Committees

Board of Scientific Counselors, National Institute of Dental Research, **1972-1976** (Chair, **1974-76**); National Cancer Advisory Board, **1979-1984**; Board of Scientific Counselors, National Human Genome Research Institute, **1994-1999** (Chair, **1994-1997**); National Advisory Council for National Human Genome Research Institute, National Institutes of Health, **1999-2004**; President's Council on Bioethics, **2002-**.

Honorary Societies

Member, National Academy of Sciences, **1984**; Chairman, Section 41, National Academy of Sciences, **1995-1998**; Member, Institute of Medicine, **1985**; Fellow, American Academy of Arts and Sciences, **1991**; Member, American Philosophical Society, **1993**; Nominating Committee, American Academy of Arts and Sciences, **1998-2001**; Alpha Omega Alpha Alumnus Member, University of Chicago, **1994**; Fellow, American Association for the Advancement of Science, **1998**; Honorary Fellow, American College of Medical Genetics, **1998**; Honorary member, Phi Beta Kappa, University of Chicago Chapter, **2001**

Honorary Degrees

Doctor of Science (D.Sc), University of Arizona, **1989**; D.Sc, University of Pennsylvania, **1989**; D.Sc, Knox College, Galesburg, Illinois, **1991**; D.Sc, University of Southern California, Los Angeles, **1992**; D.Sc, Saint Louis University, **1997**; D.Sc, St. Xavier College, Chicago **1999,** D.Sc, Oxford University, England, **2000**, D.Sc, Lund University, Sweden, **2003**; Dartmouth University, **2004**.

B. Selected Peer-Reviewed Publications (selected from 457 publications)

Zhang, Y., Strissel, P., Strick, R., Chen, J., Nucifora, G., LeBeau, M.M., Larson, R.A., **Rowley, JD**. Genomic DNA Breakpoints in *AML1/RUNX1* and *ETO* cluster with topoisomerase II DNA cleavage and DNase I hypersensitive sites in t(8;21) leukemia. Proc Natl Acad Sci USA, 99:3070-5, 2002.

Klein, F., Feldhahn, N., Lee, S., von Elstermann, M., Wang, H., Ciuffi, F., Toribio, M., Sauer, H., Wartenberg, M., Wang, S.M., Barath, V.S., Kronke, M., **Rowley, J.D**., Muschen, M. T lymphoid differentiation in human bone marrow. Proc Natl Acad Sci USA, 100(11): 6747-6752, 2003.

Zhang, Y, Emmanuel, N., Kamboj, G., Chen, J., Shurafa, M., Van Dyke, D.L., Wiktor, A., **Rowley, J.D**. *PRDX4*, a Member of the Peroxiredoxin Family, is Fused to *AML1 (RUNX1*) in an Acute Myeloid Leukemia Patient with a t(X;21)(p22;q22). *Genes, Chromosomes and Cancer*, Aug; 40(4): 365-70, 2004.

Zhang, Y., Zeleznik-Le, N., Emmanuel, N., Jayathilaka, N., Chen, J., Strissel, P., Strick, R., Li, L., Neilly, M.B., Taki, T., Hayashi, Y., Kaneko, Y., Schlegelberger, B., **Rowley, J.D**. Characterization of Genomic Breakpoints in *MLL* and *CBP* in Leukemia Patients with t(11;16). *Genes, Chromosomes and Cancer*, 41(3): 257-265, 2004.

Chen, J., Sun, M., Kent, W.J., Huang, S., Xie, H., Wang, W., Zhou, Z., Zhang Shi, R., **Rowley, J.D**. Over 20% of human transcripts might form sense-antisense pairs. Nucleic Acids Research, 32(16): 4812-20, 2004.

Chen, J., Sun, M., Hurst, L.D., Carmichael, G.G., **Rowley, J.D**. Human antisense genes have unusually short introns: evidence for selection for rapid transcription. Trends in Genetics, 21(4): 203-207, 2005.

Zou, G., Chen, J., Yoder, M., Wu, W., **Rowley, J.D.** Knockdown of Pu.1 by siRNA in CD34+ EB cells derived from mouse embryonic stem cells turn cell fate determination to pro-B cells. Proc Natl Acad Sci U S A, 102(37): 13236-41, 2005.

Murmann, A.E., Gao, J., Encinosa, M., Gautier, M., Peter, M.E., Eils, R., **Rowley, J.D.** Local gene density predicts the spatial position of genetic loci in the interphase nucleus. Experimental Cell Research, 311(1): 14-26, 2005.

Lee, S., Chen, J., Zhou, G., Shi, R., Bouffard, G., Kocherginsky, M., Ge, X., Sun, M., Jayathilaka, N., Kim, Y., Emmanuel, N., Bohlander, S., Minden, M., Kline, J., Ozer, O., Larson, R., LeBeau, M., Green, E., Trent, J.,

Karrison, T., Liu, P., Wang, S.M., **Rowley, J.D.** Gene Expression Profiles in Acute Myeloid Leukemia with Common Translocations using SAGE. Proc Natl Acad Sci U S A, 103(4): 1030-5, 2006.

Rowley, J.D. In Memoriam. Theodore T. Puck (September 24, 1916-November 6, 2005). The American Journal of Human Genetics, 73(3): 365, 2006.

Yan, M., Kanbe, E., Peterson, L.F., Boyapati, A., Miao, Y., Wang, Y., Chen, I.M., Chen, Z., **Rowley, J.D.**, Willman, C.L., Zhang, D.E. A previously unidentified alternatively spliced isoform of t(8;21) transcript promotes leukemogenesis. Nat Med, 12(8): 945-9, 2006.

Zhang, Y., **Rowley, J.D.** Chromatin structural elements and chromosomal translocations in leukemia. DNA Repair, 5(9-10): 1282-97, 2006.

C. Research Support

Active

R01 CA84405 (Rowley) 6/1/00-5/30/05 (no-cost extension) 10%
NIH/NCI $31,900
Mapping and Cloning Translocation Breakpoints

The long-term goal of this project is to identify new genes involved in leukemia; this has been one of the important goals of the laboratory since we cloned our first breakpoint in 1986. The strategy will be to use translocation breakpoints to identify the chromosome location of the involved genes using defined genomic probes and fluorescence in situ hybridization (FISH). Initially, we will use material from two groups of patients. The first group will include patients whom we know have *MLL*, *TEL*, or *AML1* rearrangements (Specific Aim 1). The second group will include patients with breakpoints in 11q, 12p and 21q whose breaks do not involve *MLL*, *TEL*, or *AML1*, respectively (Specific Aim 2).

Role: PI

(Rowley) 10/1/05-9/30/08 20%
Leukemia & Lymphoma Society Translational Grant $180,018
A Custom-Designed Microarray for Diagnosis of Common Translocations and Prediction of Survival in Acute Myeloblastic Leukemia (AML)

The specific aims of this project are: 1) Validate a custom microarray for diagnosis of common recurring translocations in acute myeloid leukemia; 2) To characterize the transcripts that appear to be critical discriminators whose function is not currently understood; and 3) Correlate our transcript expression data in the various translocations with age, sex, race, response to treatment and survival, with other known mutations and with the functional pathways (Gene Ontology) affected by these alterations in transcript level.

Pending

None