

## CURRICULUM VITAE

Name: **Zbigniew (Dzierzykraj) Darzynkiewicz**  
Date of Birth: **May 12, 1936**  
Place of Birth: **Dzisna (Wilno) Poland**  
Nationality: **USA (Naturalized, 1976)**

### EDUCATION:

1945-1949 Primary School, Dzierzoniow, Poland  
1949-1953 High School (Gymnasium and Lyceum) Skarzysko, Poland;  
(graduated with the highest honors)  
1953-1960 Medical University of Warsaw, Poland. Received M.D. degree with the highest honors, 1960

### SCIENTIFIC DEGREE:

The degree **Doctor of Medical Sciences** (equivalent of Ph.D.) awarded by the Faculty Council of the Medical University of Warsaw, Poland, 1966, on the basis of the thesis entitled: "*Studies of the Mechanism of Teratogenic Action of Insulin on Chicken Embryo*", and after passing examinations in Philosophy, Cell Biology, Biochemistry and History of Medicine.

### POSITIONS AND APPOINTMENTS:

1960-61 Resident in Surgery, IVth City Hospital, Warsaw  
1962-65 Predoctoral Fellow, Department of Histology, School of Medicine, Warsaw  
5/65-7/66 Research Associate, Department of Pharmacology, Molecular Enzymology Unit, SUNY at Buffalo, N.Y.  
7/66-9/68 Assistant Professor, Department of Histology, School of Medicine, Warsaw  
9/68-12/69 Visiting Scientist, Laboratory of Cell Research, Medical Nobel Institute, Karolinska Institute, Stockholm, Sweden  
12/69-2/74 Staff Scientist, Boston Biomedical Research Institute, Boston, Mass.  
3/74-12/75 Research Associate, Memorial Sloan-Kettering Cancer Center, New York, N.Y.  
1/76-3/78 Assistant Professor, Cornell University, Graduate School of Medical Sciences, New York, N.Y.  
6/78-6/88 Associate Member, Memorial Sloan-Kettering Cancer Center, New York, N.Y.  
6/78-6/88 Associate Professor of Cell Biology and Biochemistry, Cornell University, Graduate School of Medical Sciences, New York, N.Y.  
1/86-9/90 Head, Laboratory of Experimental Cell Research, Memorial Sloan-Kettering Cancer Center, New York, N.Y.  
7/88-9/90 Member, Memorial Sloan-Kettering Cancer Center, New York, N.Y.  
7/88-9/90 Professor of Cell Biology and Genetics, Cornell University, Graduate School of Medical Sciences, New York, N.Y.  
6/89-9/90 Director, Flow Cytometry Core Facility Network, Memorial Sloan-Kettering Cancer Center, New York, N.Y.  
10/90-pres. Professor of Medicine, New York Medical College, Valhalla, N.Y.  
10/90-pres. Director, Brander Cancer Research Institute (formerly: Cancer Research Institute), New York Medical College, Valhalla, N.Y.  
11/91-pres. Professor of Microbiology and Immunology, New York Medical College, Valhalla, N.Y.  
11/92-pres. Professor of Pathology, New York Medical College, Valhalla, N.Y.

## AWARDS, HONORS, GRANTS:

- 1955-60 Student Scholarship, the award from the School of Medicine (Warsaw) for excellence in academic work and engaging in research (stipend to cover tuition and living expenses)
- 1962-65 Doctoral Fellowship awarded by the Polish Academy of Sciences, Warsaw, Poland
- 1970-72 Scholarship Grant (PS-57) awarded by the American Cancer Society, Inc., New York, N.Y.
- 1972 Included in: "American Men and Women of Science", (Marquis Publ.)
- 1973-75 Research Grant from Charles A. King Trust, Boston, Mass. (Principal Investigator)
- 1975-89 Research Grant from NCI (CA14134) "Automation of Urinary Cytology". Co-Investigator. (M.R. Melamed, Principal Investigator)
- 1978-87. Research Grant from NCI (RO1-CA23296) "Effects of New Antitumor Drugs on the Cell Cycle" (Principal Investigator); competitively renewed in: 1981, 1984 and 1987.
- 1978 "**Gold Millennium of Poland Medal**", awarded by the Polish-American Medical Society, USA, in recognition of research accomplishments. The award was shared with Drs. Andrew Schally, Ludwik Gross, Hilary Koprowski and Zbigniew Brzezinski.
- 1980-pres. **Research Grant from NCI (RO1-CA28 704) "Probes for Cytometry"** (ZD Principal Investigator); competitively renewed in: 1983, 1987, 1990, 1995, 1999, 2005 and 2010.
- 1983-pres. Included in: "Who's Who in America", "Who's Who in Technology", "Who's is Who in Cancer Research", "Who's Who in Medicine and Healthcare" "Who's Who in World" (Marquis Publ.)
- 1985-86 Vice-President and Program Chairman, The Cell Kinetics Society
- 1986-87 **President, The Cell Kinetics Society**
- 1986-99 **Member, Advisory Board, The Alfred Jurzykowski Foundation**, New York, N.Y.
- 1987-92. **NASA consultant** on flow cytometry in the Space Station
- 1987 **MERIT Award Research Grant** from NCI (R37-CA23296) "Effects of New Anticancer Drugs on the Cell Cycle" (Principal Investigator)
- 1990 Grant-Contract from NASA to develop the "Liquid-less" staining of cells applicable to conditions of the Space Station (Principal Investigator)
- 1990-2003 Yearly Research Fund Awards provided by the "This Close" Foundation for Cancer Research, Inc., New Haven, CT.
- 1992-94 **President, the International Society for Analytical Cytology** (ISAC; ~ 2,000 members), Program Chairman, 17<sup>th</sup> ISAC Congress (Lake Placid, NY. 1994)
- 1994 **Honorary Editor**, Cytometry Research (Japan)
- 1994-pres Yearly Research Grants provided by the Robert A. Welke Foundation for Cancer

Research, Fairfield, CT.

- 1995 **Honorary Member**, Cytometry Society of Japan
- 1995 Special recognition medal from the President of Poland, Lech Walesa: “**Krzyz Oficerski Orderu Zaslugu Rzeczypospolitej Polski**” for the involvement in establishing (together with Prof. Stefan Niewiarowski), the “Committee in Support of Solidarity” to help Solidarity movement in Poland to fight communism.
- 1996 **Member (Foreign), Polish Academy of Learning (PAU)**, Krakow, Poland
- 1996 **Honorary Member and Co-Founder**, Polish Cytometry Society
- 1997-98 Research Grant from Alfacell Corp., Bloomfield, N.J. providing funds to study antitumor activity of ONCONASE (Principal Investigator)
- 1997 **Honorary Member**, Iberian Cytometry Society
- 1997-00 Research Grant from Eli Lilly Pharmaceutical Co., Indianapolis, IN providing funds to study mechanism of action of new antitumor drugs (Principal Investigator).
- 2000 **Medal of Honor** awarded by the Polish Society of Hematology and Transfusion Medicine. Honorary Member of this Society.
- 2001** Research grant provided by the Matrix Charitable Institute, N.J. to study effects of intercellular matrix components on cells. Renewed in 2008.
- 2001 Thomson ISI Essential Science Indicators™ – # 20 on the list of 25 world top ranked authors on topic of “Apoptosis” based on number of papers and citations 1991-2001
- 2002 Distinguished Service Award**, International Society for Analytical Cytology (ISAC)
2003. “**This Close**” for Cancer Research Foundation Special Award
- 2003** The Dean's (New York Medical College) **Distinguished Research Award**
- 2004 “ Best Paper Published in CYTOMETRY in 2003” Award
- 2006 “**The Fulwyler Award for Innovative Excellence**”, bestowed by the International Society for Advancement of Cytometry (ISAC).
- 2009 **Fellow of the College of American Institute for Medical and Biological Engineering (AIMBE)**
- 2009 **Foreign Member of the Polish Academy of Sciences (PAN)**, Warsaw.
- 2010- pres. **Director**, the New York Medical College Flow- and Imaging- Cytometry Core Facility
2011. “**The Marie Sklodowska-Curie Science Medal**” awarded by the Pilsudski Institute in America.
- 2012 **The “Leon L. Wheelless Innovation in Cytometry Award”**, Western New York Cytometry Users Group, University of Rochester Medical Center.

- 2012        **Distinguished Scientist Award**, American Chemical Society, Westchester Division, NY.
- 2014        **The Casimir Funk Natural Sciences Award** from the Polish Institute of Arts and Sciences (PIASA) in New York.
- 2014        **Distinguished Fellow**, The Kosciuszko Foundation Collegium of Eminent Scientists.
- 2014        **Honoris Causa** degree received from Warsaw Medical University, Poland.
- 2014        Great Lakes International Imaging and Flow Cytometry Association (GLIFCA) Conference, Sept. 21-22, 2014, Oconomowac, WI. The “Carlton and Sigrid Stewart **Keynote Lecture**: “*The Biomarkers of Aging and Senescence Assessed by Cytometry*”

#### **EDITORIAL ACTIVITY:**

**Editor-in-Chief: Open Medicine. DE GRUYTER OPEN (2015-present)**

**North American Editor:**

**CELL PROLIFERATION**, (Formerly: **CELL AND TISSUE KINETICS**) (1988-present)  
**CYTOMETRY A** (2007-present)

**Editor or Co-Editor:**

**CYTOMETRY (Reviews)** Journal of the Society for Analytical Cytology (1993-1999)  
**EXPERIMENTAL CELL RESEARCH** (1996 - 2012)  
**CURRENT PROTOCOLS IN CYTOMETRY** (1996 - present)  
**FOLIA HISTOCHEMICA ET CYTOBIOLOGICA** (1998 - present)  
**METHODS IN CELL BIOLOGY** (Ac. Press/Elsevier), **Volumes 33, 41, 42, 63, 64, 75, 102, and 103**, Editor  
**ESSENTIAL CYTOMETRY METHODS** (Elsevier/Academic Press) 2009, Editor

**Associate Editor, Editorial Board Member:**

**CYTOMETRY**, The Journal of the Society for Analytical Cytology (1980-present)  
**JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY** (1983-1993)  
**INTERNATIONAL JOURNAL OF ONCOLOGY** (1992-present)  
**CANCER THERAPY** ([www.cancer-therapy.org](http://www.cancer-therapy.org)) (2003-present)  
**CANCER REPORTS** (open access; 2011-present)  
**LEUKEMIA RESEARCH** (1984-1989)  
**LEUKEMIA** (1988-2004)  
**CELL AND TISSUE KINETICS** (1987-1988)  
**CELL BIOLOGY AND TOXICOLOGY** (1993-present)  
**POLISH JOURNAL OF IMMUNOLOGY** (1995-1996)  
**CENTRAL EUROPEAN JOURNAL OF IMMUNOLOGY** (1996 - present)  
**CYTOMETRY RESEARCH** (Japan). *Honorary Editor* (1994 - present)  
**EXPERIMENTAL ONCOLOGY** (1996-present)  
**"inScight" (Daily Science News Service on the Internet, Academic Press)** (1998-present)  
**HUMAN CELL (Japan)** (2002-present)  
**CELL CYCLE** (2002-present)

**PREVENTIVE MEDICINE** (2003-present)  
**CENTRAL-EUROPERAN J. MEDICINE** (2005-present)  
**THE OPEN ENZYME INHIBITION JOURNAL** (2008-present)  
**THE OPEN CLINICAL CHEMISTRY JOURNAL** (2008-present)  
**OMICS Publishing Group – Journal of Postgenomics: DRUG & BIOMARKER DEVELOPMENT - OPEN ACCESS.** (2010- present)  
**AMERICAN & RUSSIAN BIOSCIENCE** – open access (2013- present)

**MEMBER OF THE REVIEW COMMITTEES, ADVISORY BOARDS OR STUDY SECTIONS, AND/OR CONSULTANT TO (DURING PAST 20 YEARS):**

National Cancer Institute (NIH) Special Study Sections and the Cell Physiology Study Section  
American Cancer Society  
National Science Foundation  
U.S. Department of Energy  
International Advisory Panel N.A.S., Chinese University Development Project  
NASA (Houston, TX)  
Medical Research Council of Canada, Toronto, CA  
Wilhelmina Foundation, The Netherlands  
Alfacell Corporation, Bloomfield, N.J., Advisory Board Member.  
Tobacco-Related Diseases Research Program, University of California, San Francisco, CA.  
Alfred Jurzykowski Foundation Advisory Board Member, New York, N.Y.  
The Israel Science Foundation of the Israel Academy of Sciences and Humanities, Jerusalem, Israel  
National Cancer Institute of Canada  
Eli Lilly Pharmaceutical Co, Indianapolis, IN  
CompuCyte Corp., Cambridge, MA  
PharMingen/Becton Dickinson Corp., San Diego, CA  
Phoenix Flow Systems, Inc., San Diego, CA  
Marsden Fund, The Royal Society of New Zealand, Wellington, New Zealand  
Wyeth-Ayerst Pharmaceutical Co., Princeton, N.J.  
Intergen Co., Purchase, NY  
PharmaSeq Corp., Princeton, NJ. Advisory Board Member  
Agouron Pharmaceuticals, Inc;/Div of Pfizer Corp., San Diego, CA  
United States - Israel Bi-national Foundation, Jerusalem, Israel  
American Health Foundation/Institute for Cancer Prevention, Valhalla, NY  
Mathematical Biosciences Institute, Ohio State U. Columbus, OH  
Aventis Pharmaceutical Co., Paris, France

**MEMBERSHIP IN SCIENTIFIC ORGANIZATIONS:**

American Association for Cancer Research  
American Association for Advancement of Science  
International Society for Analytical Cytology (Charter Member; Hold functions: President of the Society, Councilor, Nominating Committee Chairman, Program Committee Chairman)  
The Cell Kinetics Society (Hold functions: Vice-President, Program Committee Chairman, President of the Society, and Journal Liaison)

International Cell Cycle Society  
N.Y. Academy of Sciences  
European Study Group for Cell Proliferation (ESGCP; Honorary Member)  
Polish Cytometry Society (Honorary Member)  
Polish Society of Hematology and Transfusion Medicine (Honorary Member)  
Cytometry Society of Japan (Honorary Member)  
Iberian Cytometry Society (Honorary Member)  
Polish Institute of Arts and Sciences in America (New York) (Member of the Board, 2006-2013)  
The Jozef Pilsudski Institute of History in New York (Member of the Board, 1994-96)  
Kosciuszko Foundation (Board of Trustees member) (2010-)

**INVITED FACULTY MEMBER AND/OR COURSES/MEETINGS ORGANIZER/CO-ORGANIZER (1980 - 2013):**

3<sup>rd</sup> and 4<sup>th</sup> National Annual Course in Flow Cytometry. University of Rochester, N.Y. (1981,1982)  
First ORTHO Conference on Methods in Flow Cytometry. Boston, Mass. (1982)  
National Flow Cytometry Resource. Annual Course in Flow Cytometry, Los Alamos Natl. Laboratory, Los Alamos, N.M., 1983, 1985, 1987, 1989, 1995, 1997, 1999, 2003; Albuquerque, N.M.,1991;  
National Flow Cytometry Resource. Annual Course in Cytometry, Philadelphia, PA.,1984, 1986, 1988  
"Flow Cytometers and Sorters Course." University of Wisconsin, Madison,WI., 1983  
Advanced Methods Course in Flow Cytometry and Sorting. University of Rochester, N.Y. 1983  
Visiting Professor. Beijing Normal University, Beijing, China, Oct 1 - Nov. 16, 1984  
International Flow Cytometry Course. Villejuif Cancer Center, Paris, France, 1984, 1985,1988, 1990,  
10<sup>th</sup> Annual Meeting of Cell Kinetics Society. Meeting Organizer and Chairman of the Program Committee. Santa Fe, NM, March 18-21, 1986.  
Flow Cytometry and Sorting Course. Waksman Institute of Microbiology, Rutgers University, Piscataway, N.J. October, 1987, November, 1988  
Visiting Professor. Institute of Basic Medical Sciences and Beijing Normal University, Beijing, China, October, 17-26, 1987  
Advanced Course on Flow Cytometry. Loyola University, Chicago, Ill., October, 1988  
BECTON-DICKINSON Workshop on Flow Cytometry. San Francisco, California, December, 1989  
Clinical and Basic Flow Cytometry Course. Cornell University Medical Center, New York, N.Y. May, 1989  
National Annual Course in Flow Cytometry. Bowdoin College, Brunswick, Maine, May, 1990, May, 1996, May 1998, June 2000; June 2004.  
National Annual Clinical Flow Cytometry Course, Dartmouth U., Hanover, NH, 1999; 2001; 2002; 2003; Pittsburgh, PA, 2004.  
15<sup>th</sup> Congress of the International Society of Analytical Cytology (ISAC). August 1991, Tutorial course on cytochemistry,  
NATO Advanced Study Institutes International Course in Flow Cytometry. Villejuif France, 1992 and 1995  
International Workshop on Flow and Image Cytometry. Porto, Portugal, 1991, 1993.  
17<sup>th</sup> Congress of International Society for Analytical Cytology (ISAC), Congress Organizer and Chairmen of the Program Committee, > 1,000 persons in attendance, Lake Placid, NY, October 16-21, 1994. Also giving tutorial course on apoptosis.  
18<sup>th</sup> Congress of International Society for Analytical Cytology (ISAC), Rimini, Italy, April 1996  
Tutorial course on apoptosis  
European Summer School on Clinical Applications of Flow Cytometry, Antwerp, Belgium, July 1-3, 1996; July 2-5; 1997; July 2-4 1998.  
26<sup>th</sup> Congress of the International Society of Hematology (ISH). Singapore, August 1996. Tutorial course

on apoptosis.

19<sup>th</sup> Congress of International Society for Analytical Cytology (ISAC), Colorado Springs, CO. February 28- Mar 4, 1998. Tutorial course on apoptosis

International Workshop on Cytometry Gdansk, Poland, October 19-20, 1998.

The XI<sup>th</sup> Conference on DNA Topoisomerases in Therapy (NY Acad. Sci. Conference co-organizer; Program co-chair) New York, N.Y, October 6 -10, 2001.

International Symposium on Apoptosis (Symposium co-organizer; Program co-chair), Nagasaki, Japan, November 17, 2002.

23<sup>rd</sup> Congress of the International Society for Analytical Cytology (ISAC), Quebec City, Canada. May 19-25, 2006. Tutorial course: Cell cycle and Apoptosis.

24<sup>th</sup> Congress of the International Society for Advancement of Cytometry, Budapest, Hungary, May 16-21, 2008. Tutorial course: Assessment of DNA damage by Cytometry.

25<sup>th</sup> Congress of the International Society for Advancement of Cytometry, Seattle WA, May 8 -12, 2010  
Tutorial course: Cytometry of DNA damage response

28<sup>th</sup> Congress of the International Society for Advancement of Cytometry, San Diego, CA, May 19-22, 2013. Tutorial Course: Apoptosis and DNA damage

## **PUBLICATIONS:**

As of August 2014 Zbigniew Darzynkiewicz is an author or co-author of over 720 peer-reviewed publications, and an author or editor of 15 books. His papers were cited in the biomedical literature over 36,000 times. His “**h-index**” (Hirsh’s) citation ranking is **#91** (ISI Reuters/Thomson) and **# 94** (Google Scholar). <http://scholar.google.com/citations?user=olM19WIAAAAJ&hl=en> Since 1980, by invitation, he presented over 360 lectures and seminars on national and international congresses, symposia, and in research institutions. On the website o Bio Med Experts he is **ranked worldwide # 1 in the fields of: flow cytometry, cell cycle, and acridine orange, and # 7 in the field of apoptosis.**  
[http://www.biomedexperts.com/Profile.bme/1977101/Zbigniew\\_Darzynkiewicz](http://www.biomedexperts.com/Profile.bme/1977101/Zbigniew_Darzynkiewicz)

## **INVENTIONS:**

- (1) Flow cytometry-fluorescence measurements for characterizing sperm.  
U.S. Patent No. 4,559,309; Issued December 17, 1985
- (2) Method for Separating and Analyzing Nucleic Acids.  
U.S. Patent No. 4,801,550; Issued January 31, 1989
- (3) Detection of halogenated precursors incorporation by selective photolysis of halogenate-substituted bases. U.S. Patent No. 5,747,258, Issued May 5, 1998
- (4) Methods for labeling DNA ends with halogenated nucleotides and detecting the same with antibodies, U.S. Patent No. 5,912,126, Issued June 15, 1999
- (5) Physical separation of nucleic acids by antibodies to halogenated nucleotides  
US patent No. 6,417,343, issued July 9, 2002.
- (6) Flow cytometric methods for the concurrent detection of discrete functional conformations of pRb in single cells. US patent No. 6,821,740, issued November 23, 2004.
- (7) Detection of protein conformation in single cells.  
US patent 7,070,943, issued July 4, 2006.
- (8) Approaches to identify less harmful tobacco and tobacco products  
US patent No 7,662,565, issued February 16, 2010.

**LANGUAGES:** *English, Polish, Russian* (limited)

**OFFICE ADDRESS:**

Brander Cancer Research Institute,  
Department of Pathology  
New York Medical College  
Valhalla, NY. 10595  
**Telephone:** (914) 594-3794  
**Telefax:** (914) 594-3790  
**e-mail:** darzynk@nymc.edu

**MILITARY STATUS:**

Never served in the U.S. military forces (naturalized in 1976)

**MARITAL STATUS:**

Married, spouse's name: Elizabeth T. Darzynkiewicz (M.D., Radiologist)

**CHILDREN:**

**Richard B. Darzynkiewicz**, 44: M.S. in Chemistry, University of Rochester (NY). Graduate studies (Ph.D.) in Rice University, Houston, TX; Chief Curator of the Computer Network, United Space Alliance/NASA Houston, TX

**Robert J. Darzynkiewicz**, 42: M.S. in Molecular Biology, U.C. at Berkeley. Graduated (M.D.) at N.Y. Medical College, Valhalla, NY; Resident in Emergency Medicine at Albert Einstein/ Jacobi Hospital, NYC; Attending Physician at EM, Reno Hosp., Reno NE U.S. National Junior Swimming champion (1,500 m freestyle;1988 and 1989); Gold medalist at the 1993 World University Games (1,500 m freestyle swimming). U.S. (junior division) record holder 1,500 m swimming (since 1982).

**HOBBIES:** Swimming, skiing, windsurfing, sailing, photography