

## **Nancy K. Zeller**

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### Education

Bachelor of Science, 1974

Pennsylvania State University, 1970-1974

Ph. D. Microbiology, 1978

University of Maryland at Baltimore

### Positions

1. Director, Biology Teaching Laboratories  
Department of Biology, American University 1990 – present
2. Adjunct Professor, Department of Biology, Georgetown University 1988
3. Staff Fellow and Senior Staff Fellow, Laboratory of Molecular Genetics, NINCDS  
National Institutes of Health 1980-1987
4. Post-Doctorate, Departments of Pathology and Biochemistry, University of Florida 1978-1980

### Education and Teaching Experience

1. As the Laboratory Director for the Department of Biology, I write and test the curriculum; and organize the information into the undergraduate laboratory manuals for General Biology I and II as well as the general education Great Experiments course. The manuals are updated every semester and produced by the online company University Readers. My responsibilities also include training about 15 teaching assistants a semester to teach 24 laboratory sections and 320 students.
2. Taught Great Experiments Bio 100 over three different semesters, 1992-94
3. Developed and taught continuing education graduate course, Bio 596 Modeling the Scientific Method, for DC public school teachers in grades k-12, 2007.
4. Organized the Montgomery County Public Schools, Scientist Advisory Committee for High School Science Biology Curriculum Review, 2003-04.
5. Participated in the American University Eisenhower Professional Development Program for Middle School Mathematics, Science, and Language Arts Teachers, 2001-2004, using the DNA laboratories described in #6 and introduced various internet sources for useful supporting information and visuals for DC teachers.
6. Participated in training Montgomery County Public School teachers in the Teacher-Scientist Alliance Elementary Schools Science Implementation, 1996-97; and Middle Schools Science Connections Program - NSF Grant, 1997-2000. I trained middle school teachers for Montgomery County Schools in the new connected science curriculum and developed three simple, low cost laboratory exercises to teach students about DNA.
7. Taught the course and developed the labs for 4 credit undergraduate Genetics at Georgetown University, Dept. Biology, 1988.

## Publications

1. Zeller, N.K., N. Bashirelahi, and R.J. Sydiskis. 1978. Particles resembling oncornaviruses in normal rat prostate. *Cancer Res.* 38: 3104-3106.
2. Hawley, C.E., N.K. Zeller, J.R. Mongiello, and W.A. Falkler, Jr. 1978. Surface and thin section ultrastructure of *Fusobacterium polymorphum*. *J. Balt. Coll. Dent. Surg.*
3. Zeller, N.K. and R.J. Sydiskis. The glucocorticoid effects on morphology and fatty acid synthesis in a mouse mammary tumor cell line. Dissertation, Univ. MD. 1978.
4. Zeller, N.K., L. Gazzolo, and C. Moscovici. 1980. A study of the epithelioid transformation of MC29 virus infected chicken embryo cells. *Virology* 104: 239-242.
5. Moscovici, C., N.K. Zeller, and M.G. Moscovici. 1982. Continuous lines of AMV-transformed nonproducer cells: growth and oncogenic potential in the chick embryo. In: *Expression of Differentiated Functions in Cancer Cells*. Raven Press, New York.
6. Tschlis, P.N., L. Donehower, L., G. Hager, N. Zeller, R. Malavarca, S. Astrin, and and A.M. Skalka. 1982. Sequence comparison in the crossover regions of an oncogenic Avian retrovirus recombinant and its nononcogenic parent: genetic regions that control growth rate and oncogenic potential. *Mol. Cell. Biol.* 2: 1331-1338.
7. Zeller, N.K., J. Crossman, E. Jaffe, and P.N. Tschlis. 1984. Expression of the MC29 myc gene in human normal and tumor tissues. In: *The Influence of the Environment of Leukemia and Lymphoma Subtypes*, Vol. 27, pp. 363-372. Raven Press, New York.
8. Zeller, N.K., M.J. Hunkeler, A.T. Campagnoni, J.S. Sprague, and R.A. Lazzarini: The characterization of mouse myelin basic protein messenger RNAs using a myelin basic protein cDNA clone. *Proc. Natl. Acad. Sci. USA* 81, 18-22, 1984.
9. Zeller, N.K., T.N. Behar, M.E. Dubois-Dalcq, and R.A. Lazzarini: The timely expression of myelin basic protein gene in cultured rat brain oligodendrocytes is independent of continuous neuronal influences. *J. Neurosci.* 5 (11): 2955-2962, 1985.
10. Kristensson, K., N.K. Zeller, R.A. Lazzarini, and M. Dubois-Dalcq: Expression of myelin basic protein gene in the developing rat brain as detected by in situ hybridization. *J. Histochem. Cytochem.* 34(4): 467-473, 1986.
11. Kristensson, K., K.V. Holmes, C.S. Duchala, N.K. Zeller, R.A. Lazzarini, and M. Dubois-Dalcq: Increased levels of myelin basic protein transcripts in virus-induced demyelination. *Nature* 322: 544-547, 1986.
12. Keider, B., N.K. Zeller, R.A. Lazzarini, S. Shuman, F.A. McMorris, and D. Pleasure: Inverse effects of cyclic AMP on synthesis of a myelin glycoprotein and myelin glycoprotein and myelin glycolipid *J. Neurosci* 1988.
13. Zeller, N.K. *Experiments for General Biology*. Kendall/Hunt Publishing Co: Dubuque, 1996.
14. Zeller, N.K., and M.K. Schwartz. *General Biology Laboratories: Evolution and the Kingdoms*. Kendall/Hunt Publishing Co. Dubuque, 1996.
15. Nassif, Thomas H. and N. K. Zeller. *Astrobiology: Using Research To Invigorate Science Curricula*. *The American Biology Teacher.* 68(1): 7-12, 2006.