

Maria Nicole Nedwidek, Ph.D.

E-mail: mia@d-ned.com

web: <http://d-ned.com>

EDUCATION

City College of New York at the City University of New York New York, NY 10031

NYC Teaching Fellows: Master of Arts, Biology Science Education; GPA 3.97, w/honors: 6/2007.

Harvard University School of Medicine - Massachusetts General Hospital Boston, MA 02114

Research Fellowship in Cancer Biology-Dept. of Medicine: appointed to faculty September, 1999.

Princeton University

Princeton, NJ 08544

Doctor of Philosophy degree in Molecular Biology awarded January, 1999.

Princeton University

Princeton, NJ 08544

Master of Arts degree in Molecular Biology awarded June, 1994.

Massachusetts Institute of Technology

Cambridge, MA 02139

Bachelor of Science degree in Biology awarded June, 1992.

Grade Point Average: 4.4 out of 5.0

Stuyvesant High School

New York, NY 10009

High School Diploma awarded June, 1988.

Grade Point Average: 95.45%

PUBLICATIONS AND PRESENTATIONS

Nedwidek, M. N. and Hecht, M. H. (1997). Minimized protein structures: A little goes a long way.

Proceedings of the National Academy of Sciences USA **94** (19), 10010-10011.

Nedwidek, M. N. (1999). *Rational Combinatorial Design Suggests an Evolutionary Approach for*

Building Proteins. Ph.D. Dissertation, Department of Molecular Biology, Princeton University, Princeton, NJ, 08544.

Avruch, J. (presenter), Khokhlatchev, A., Nedwidek, M., Tzivion, G., Vavvas, D., Zhang, X-f. (2000)

Ras Regulation of Protein Kinases. *25th European Symposium on Hormones and Cell Regulation: Protein Kinase Cascades in Signal Transduction*; Nunez Lecture, September 2000, Alsace, France.

web: http://www.dcb-glostrup.dk/kinase/symposium_2000/abstr_4.htm

Ortiz-Vega, S., Khokhlatchev, A., Nedwidek, M., Zhang, X-f., Dammann, R., Pfeifer, G.P., and

Avruch, J. (2002). The putative tumor suppressor RASSF1A homodimerizes and heterodimerizes with the Ras-GTP binding protein Nore1. *Oncogene* **21**(9), 1381-1390.

Khokhlatchev, A., Rabizadeh, S., Xavier, R., Nedwidek, M., Chen, T., Zhang, X-f., Seed, B., and

Avruch, J. (2002). Identification of a Novel Ras-Regulated Proapoptotic Pathway. *Current Biology* **12**(4), 253-265.

Human Genome sequence entries to National Center for Biotechnology Information (NCBI): archived

2003 at National Institutes of Health (NIH): M. Nedwidek et al. discovered human sequence of Nima (Never In Mitosis gene A)-related Expressed Kinase (Nek8) that controls late stages of cell division:

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=nucleotide&list_uids=30026014&dopt=GenBank (DNA) ~&~ <http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?val=AAP04006.1> (protein)

Lenz, G, Rapley, J., Roig, J., Nedwidek, M., Rieder, C, Mikhailov, A. and Avruch, J. (submitted 2005).

Nek1 kinase is activated in mitosis, contributes to mitotic progression and localizes to cilia on quiescence.

Nedwidek, M.N. (2007). *Implications of Instructional Tracking for Student Understanding of*

Biological Science. Masters Project for Master of Science Education degree, Department of Science Education, City College of New York (CCNY), City University of New York (CUNY), 10031.

TEACHING EXPERIENCE AND MENTORSHIP

Full-time teaching Position: Biology Instructor, Stuyvesant High School, September 2005-present
NYC Dept. of Education employee: 2005-2006: Taught Regents Biology plus Living Environment (LE) to 9th and 11th graders in addition to an action and research-based Environmental Science elective to grades 10-12. Proposed a course on the “Molecular Basis of Cancer”. 2006-present: Honors Biology LE taught to 9th and 11th graders plus two research-based traditional Genetics courses to grades 10-12 (Genetics Research with advanced genome self-analysis in the fall, & Medical Human Genetics with hereditary disease cure proposals in the spring). Afterschool biology tutoring.

IB Teaching Position: Head Biology Instructor, The Dwight School, NYC, August 2003-2005
Administered International Baccalaureate (IB) Diploma Program and IB Middle Years Program (MYP) courses in biology. 2003-04: Taught 9th Grade Honors Biology (MYP); Taught intensive 11th & 12th grade courses (240-hour curriculum) of IB Diploma Biology at the Higher Level: 60 hours of student practical (laboratory) investigations in addition to 180 hours of theoretical (concept & application) content. Conceived/supervised demonstrations, trips, and compulsory independent study.

Research Fellowship at Harvard Medical School, Mass General Hospital, Sept. 1999-June 2003

Post-Doctoral Cancer Research: oncogenes related to Ras: <http://d-ned.com/uploads/BeaconHillAboutNedwidek.pdf>

Mentorship/teaching: ‘Science in the Classroom’/Timilty Middle School, Boston, Nov’02-Apr.2003
Did interactive biology & weather lessons for grade 6; judged science fair; designed science curricula.

Teaching & Research Assistantship in Core Lab course at **Princeton U.**, Jan.1999-May 1999

Assisted Dr. Alison Gammie with advanced course in molecular biology research practices.

Mentoring of Princeton U. Ph.D. and undergraduate students, Jan. 1998-May 1999

Trained graduate & undergraduate students in molecular cloning and protein purification techniques.

Ph.D. Thesis biochemistry research under **Dr. Michael Hecht, Princeton U.**, June 1993-Jan. 1999

Masters project: new DNA binding proteins; Ph.D. dissertation: rational design of functional proteins.

Graduate bacteriology research under **Dr. Austin Newton, Princeton U.**, spring 1993

Graduate development research under *Nobel Laureate* **Dr. Eric Wieschaus, Princeton U.**, fall 1992

Graduate Teaching Assistantship (TA) in Undergrad Biochemistry, **Princeton U.**, fall 1994

Graduate TA in Undergraduate Molecular Biology Lecture and Lab, **Princeton U.**, spring 1993

Tutor, High School Mathematics for pre-Stuyvesant students under Dr. A. Lefkowitz, summer 1992

HONORS, DISTINCTIONS, TRAINING & PROFESSIONAL DEVELOPMENT ACTIVITIES

Stuyvesant Inquiry Team: Intervention for struggling students:1/13→present; UFT Consult. Committee: 2009-10
Cold Spring Harbor, DNA Learning Center (DOE/HHMI): Leadership training, Molecular Genetics: 60 h: 7/2010
Advanced Placement Biology Curriculum Training: 8 hrs. Professional Development; College Board: Nov. 2009
NYC Teaching Fellows: Full US Government Scholarship toward M.Sci.Ed.: 6/05-07; Americorps S.L. Grant: ‘07
IB Diploma Program Certification: 17-hr. Course in IB Biology Instruction: UWCAW, NM, USA: July, 2003
Kirschstein National Research Service Award: 2002-03; NIH training grant: 1993-96; Markey fellowship:1992-3
Genetics Instruction Under *Nobel Laureate* Dr. H. Robert Horvitz, MIT: Grade of A received in course: 1989
47th Westinghouse Science Talent Search, 1988: Honored Semifinalist (area, microbiology): Top 300 Nationally
National Merit Scholars Commended Student: Top 5%: 1987-88; Junior H.S. I.S. 227: Valedictorian: June 1984

FURTHER WORK EXPERIENCE

Undergraduate research under Dr. R. Karess, **NYU Medical Center, NYC**, summers 1991, 1990

Undergraduate research under Drs. H. Steller & D. Rio, ***Drosophila* Project Lab, MIT**, 1991

Undergraduate research under Dr. Terry Orr-Weaver, **Whitehead Institute, MIT**, 1990

Editor-in-Chief of **Stuyvesant High School** Biology Science Journal (*Bio-Med Times*), 1986-1988

High School research under Dr. Shirley Raps, Biology Chair, **Hunter College, CUNY**, 1986-1988

REFERENCES

*gladly provided upon request