

Curriculum Vitae

George Pieczenik

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Education:

1965 Harvard University, A.B. Cambridge, MA
 1967 University of Miami, M.S. Jackson Memorial Hospital (Radiation Physics) Miami, FL
 1972 New York University, Ph.D. New York, NY and Mt. Sinai Hospital (Advisor: Professor L. Ornstein) New York, NY

Postdoctoral Training:

1972-75 Research Associate Rockefeller University, New York, NY (N. Zinder, R. Hotchkiss and H. Robertson)
 1970-2 Visiting Scientist Medical Research Council Laboratory of Molecular Biology Visiting Scientist (F. Sanger Lab:1970-2)
 Cambridge University Postgraduate Medical School, Cambridge, England Imperial Cancer Research Fund Laboratory
 1974 Visiting Scientist - Summer 1974 Lincolns Inn Field, London England
 Medical Research Council Laboratory of Molecular Biology

Visiting Scientist:

1975-76 F. Sanger Lab: Summers
 1977 F.H.C. Crick & S. Brenner Lab: Summer
 1978-82 F. Sanger & S. Brenner Lab: Summer 2 1985,87, 88,90 Summer 1985, 1987 1988-January 1990
 Cambridge University Postgraduate Medical School Cambridge, England

Academic Appointments:

1982 – present (Tenured) Associate Professor of Biochemistry
 Rutgers University, Dept. of Biochemistry and Microbiology New Brunswick, NJ 08903
 1999 – 2018 Adjunct Faculty, Rockefeller University
 1230 York Avenue, New York, New York, 10021
 1976- 1980 Adjunct Faculty, Mt. Sinai Medical School , Fifth Avenue, New York, N.Y.

Honors:

1964-5 Harvard University Scholar 1964-5
 1965-7 Public Health Service Fellow 1965 -7
 1967-79 New York University Fellow 1967-72
 New York University, Founders Day Award Dissertation Awarded with Highest Distinction
 Biotech consultant to adventure film "Split Second" Rockefeller University, Scheppe

- Foundation Fellow
- 1977 Rutgers University, Best Course and Best Teacher, 1977
- 1978 Rutgers University, Faculty Merit Award, 1978
Phillips Academy, Andover, M A - Claude Fuess Award
(Shared with Drs. Benjamin Spock and Franz Ingelfinger, 1980)
- 1977-83 National Institute of Health General Medical Sciences Research Career Development Award

Publications:

Pieczenik, G (2021)" The First Identification of the Unique Epitope induced by COVID-19 Vaccines"
Medical Clinical Case Reports , 1(1):1-2

Pieczenik, G (2020) "A strategy for rapidly making a DNA vaccine and treatment for disease caused by COVID19-Part three" Med. Case Rep. Rev Vol 3:1-2.

Pieczenik, G (2020) "A strategy for rapidly making a vaccine and treatment for the disease caused by the Wuhan-Corona Virus 2019 (COVID19)-Part two" Med. Case Rep. Rev Vol 3:1-3

Pieczenik, G., Qi, T., and Zylstra, G., (2020) "A strategy for rapidly making a vaccine and treatment for the disease caused by the Wuhan-Corona Virus (WCV)" Med. Case Rep. Rev Vol 3:1-1

Pieczenik G and Pieczenik SD. Electron tunneling in microtubules: A model explaining both mendelian genetics and quantum computing memory Clin Obstet Gynecol Reprod Med, 2016 Volume 2(4): 211-212.

Pieczenik G. The US patent system is broken. Reprod Biomed Online. 2013 May 30. doi:pii: S1472-6483(13)00295-2. 10.1016

Enciso M, Pieczenik G, Cohen J, Wells D. Development of a novel synthetic oligopeptide for the detection of DNA damage in human spermatozoa. Hum Reprod. 2012 Aug;27(8):2254-66. doi: 10.1093/humrep/des201. Epub 2012 Jun 12.

Pieczenik G. Why do white horses eat more than black horses?
Biopolymers. 2008;90(3):240. doi: 10.1002/bip.20940.

Pieczenik G, Garrisi J, Cohen J. Inhibition of human spermatozoa-zona pellucida binding by a combinatorially derived peptide from a synthetic target. Reprod Biomed Online. 2006 Sep;13(3):361-7.

Pieczenik G. A positive-selection function for microRNA: an adaptor hypothesis revisited. Reprod Biomed Online. 2006 Mar;12(3):292-7.

Malter HE, Cohen J, Pieczenik G. Combinatorial peptide library binding of mammalian spermatozoa identifies a ligand (HIPRT) in the axin protein: putative identification of a sperm surface axin binding protein and intriguing developmental implications.
Reprod Biomed Online. 2005 Mar;10(3):355-62.

Sankoff D on Pieczenik G. "The Early Introduction of Dynamic Programming into Computational Biology" (2000) Bioinformatics Vol. 16, No. 1 p.41-47

Pieczenik G. "The theory of genotypic selection: predicting the direction of evolution as a consequence of G:U base pairing and the existence of non-pathogenic strains of HIV-1." Biochem Mol Biol Int, 32(5):879-87 1994.

M. Scolaro, R. Durham and G. Pieczenik (1991) "Potential Molecular Competitor for HIV". *The Lancet*, Vol. 337:731.

R. Nussinov and G. Pieczenik (1984) "Structural and Combinatorial Constraints on Base Pairing in Large Nucleotide Sequences" *Journal Theoretical Biology*. Vol. 106:261-273.

R. Nussinov and G. Pieczenik (1984) "Folding and Two Large Nucleotide Chains", *Journal of Theoretical*

Biology. Vol. 106:245-59..

R. Poretz and G. Pieczenik (1981) "Structural Analysis of Glycopeptides by Polyacrylamide Gel Electrophoresis". *Analytical Biochemistry*. Vol. 115:170-176.

G. Pieczenik (1980) "Predicting Coding Function from Nucleotide Sequence, or Survival of 'Fitness' of tRNA". *Proceedings of the National Academy of Science, U.S.A.* Vol. 77:3539-43.

G. Pieczenik (1980) "Multimers of a Suppressor Transfer RNA: Supporting Evidence for Alternate Conformations of the Anticodon Loop Region", *Journal of Molecular Biology*. Vol. 138: 879-884.

R. Nussinov, G. Pieczenik, J. Griggs and D. Kleitman (1978) "Algorithms for Loop Matchings" *Journal of Applied Mathematics, Society for Industrial and Applied Mathematics*. Vol. 35 1: 68-82.

F.H.C. Crick, S. Brenner, A. Klug and G. Pieczenik (1976) "A Speculation on the Origin of Protein Synthesis". *Origin of Life*. Vol. 7: 389-97.

G. Pieczenik, K. Horiuchi, P. Model, C. McGill, B. Mazur, G. Vovis, and N. Zinder. (1975) "In mRNA Transcribed from the Strand Complementary to it in a DNA Duplex?" *Nature*, Vol. 253: 131-2.

G. Pieczenik, P. Model, and H. Robertson (1974) "Sequence and Symmetry in Ribosome Binding Sites of Bacteriophage f1 RNA". *Journal of Molecular Biology*. Vol. 90: 191-214.

G. Pieczenik, B.G. Barrell and M. Geftner (1972) "Bacteriophage phi-80 Induced Low Molecular Weight RNA". *Archives of Biochemistry and Biophysics*. Vol. 152: 152-165.

G. Pieczenik (1973) "The Genetic Code Constraints on Amino Acid and Nucleotide Sequences". Ph.D. Dissertation, New York University, 1972. (Xerox University Microfilms, Ann Arbor, Michigan, Order No. 79-19, 955): 1-272.

G. Pieczenik et. al. (1969) "Molecular Biology at Spetsei", *Nature* Vol. 223, p.1186.

G. Pieczenik (1967) "A Study of the Radiation Sensitivity of the First Cell Cycle of the *Lytechinus Variegatus* Embryo". M.S. Dissertation, University of Miami, Coral Gables, Florida.

G. Pieczenik (1965) "A Study into the Alkylation of Thiol Compounds by Nor HN 2". Senior Dissertation, Harvard University and Collaborative research, Cambridge, MA.

Book Chapters:

Pieczenik, G. (2021) *New Frontiers in Medicine and Medical Research* Vol. 12, Chapter 7; "Covid Epitope is MAGIC"

Pieczenik, G. and Pieczenik, S.D. (2021) *New Frontiers in Medicine and Medical Research* Vol. 17, Chapter 6 "Study on Electron Tunneling in Microtubules: A Model Explaining Both ZMendelian Genetics and Quantum Computing Memory".

Conferences:

1993 Pieczenik, G. "Epidemiological phenotype of non-pathogenic strains of HIV-1" *National Conference on Human Retroviruses and Related Infection* Vol.1 p.181.

1994 Pieczenik, G. "Pathogeny recapitulates epidemogeny" International Conference on AIDS,
Vol.10,1:p147.

Research Grants:

Principal Investigator: Public Health Service Grant GM 23550 National Institute of General Medical Sciences,
Genotypic Selection 1977-85
Public Health Service Grant GM 00281
National Institute of General Medical Sciences: Career Development Award, 1977-82
Rutgers University Computer Grant: 1975-88 Janowska Research Fund: 1988-present
Snyder Farms- Genotypic Pedology –Byrne Seminar Funds 2016-17.

Patents, Disclosure Documents and Legal Briefs:

Pieczenik, G. The US patent system is broken. *Reprod Biomed Online*. 2013 May 30. doi:pii: S1472-6483(13)00295-2. 10.1016/j.rbmo.2013.05.012.

Enciso M, Pieczenik G, Cohen J, Wells D. Development of a novel synthetic oligopeptide for the detection of DNA damage in human spermatozoa. *Hum Reprod*. 2012 Aug;27(8):2254-66. doi: 10.1093/humrep/des201. Epub 2012 Jun 12. PMID: 22693169

Pieczenik G. Why do white horses eat more than black horses? *Biopolymers*. 2008;90(3):240. doi: 10.1002/bip.20940.

Pieczenik, G., Continuation-in-Part "Method and means for sorting and identifying biological information", December 25th, 2001, Board of Patent Appeals and Interferences, United States Patent and Trademark Office, Washington, D.C. 20231

Pieczenik v. Dyax , Pro Se, Oral Argument, September 17, 2001, United States Court of Appeals for the Federal Circuit, 00-1519, Washington, D.C.

Pieczenik, G., "Method and means for sorting and identifying biological information", U.S. Patent 5,866,363, Feb. 2, 1999, General Information Services Division, United States Patent and Trademark Office, Crystal Plaza 3 Room 2C02, Washington, D.C. 20231

Pieczenik, G., "Method and Means for Sorting and Identifying Biological Information; Verfahren Und Mittel Zur Sortierung Und Bestimmung Biologischer Informationen; Procédé et Moyen de Triage et D'identification D'informations Biologiques" European Patent Specification EP 0 241 487 B1, April 22, 1998 (Original Publication Date- WO 87/01374(12.03.1987 Gazette 1987/06) European Patent Office

Pieczenik, G. "Procédé et Moyen de Triage et D'identification D'informations Biologiques" European Patent Specification " April 22, 1998, French Patent Office Number 86905604, Institut National de la Propriété Industrielle, 26 bis, rue de St. Petersburg, F-7500 Paris, France.

Pieczenik, G. "Verfahren Und Mittel Zur Sortierung Und Bestimmung Biologischer Informationen" April 22, 1998, Austrian Patent Office Number E 165363, Österreichisches Patentamt, Kohlmarkt 8-10, A-1014 Wien, Austria.

Pieczenik, G. "Procédé et Moyen de Triage et D'identification D'informations Biologiques" April 22, 1998, Belgian Patent Office Number 0 241 467, Office de la Propriété Industrielle auprès du Ministère des Affaires Economiques, Boulevard du Roi Albert II, B-1000 Bruxelles, Belgium.

Pieczenik, G. "Verfahren Und Mittel Zur Sortierung Und Bestimmung Biologischer Informationen" April 22, 1998, German Patent Office Number P 36 50 676.1-08, German Patent Office, Deutsches Patent-und Markenamt, D-80297, Munchen Germany.

Pieczenik, G. "Method and Means for Sorting and Identifying Biological Information" April 22, 1998, British Patent Office Number 0 241 487, The Patent Office, London Branch Office, Harmsworth House, 13-15 Bouverie Street, London EC4Y 8DP, Great Britain.

Pieczenik, G. "Procedimento e mezzi per selezionare e identificare informazioni biologiche", April 22, 1998, Italian Patent Office Number 68471/BE/98, Ministero Industria, Commercio Artigianato, Ufficio Italiano Brevetti e Marchi, Via Molise 19, I-00187 Roma, Italy.

Pieczenik, G. "Procède et Moyen de Triage et D'identification D'informations Biologiques" April 22, 1998, Luxembourg Patent Office Number LU-86 905 804, Service de la Propriété Intellectuelle, L-2914 Luxembourg.

Pieczenik, G. "Werkwijze en middelen voor het sorteren en identificeren van biologische informatie" April 22, 1998, Netherlands Patent Office Number 0 241 487 (NL), Netherlands Industrial Property Office, Postbus 5820, NL-2280 HV Rijswijk, Netherlands.

Pieczenik, G. "Förfarande och medel för att sortera och identifiera biologisk information", April 22, 1998, Swedish Patent Office Number 0 241 487 (SE), Patent - Och registreringsverket, Box 5055, S-10242, Stockholm, Sweden.

Pieczenik, G. "Procède et Moyen de Triage et D'identification D'informations Biologiques", April 22, 1998, Swiss Patent Office Number 0 241 287, Eidgenössisches Institut für Geistiges Eigentum, Einsteinstrasse 2, CH-3003, Bern, Switzerland

Pieczenik, G., "Dental Paper Pick and Flosser", Filed Pro Se, United States Patent Number 5,560,379, October 1, 1996, General Information Services Division, United States Patent and Trademark Office, Crystal Plaza 3 Room 2C02, Washington, D.C. 20231

Pieczenik, G. (1995) "Continuous Flow Thermal Cycler and DNA Computer Chip," Disclosure Document, Numbers 375,631; 375,641; 375,709 May 9, 1995 U.S. Patent Office, Washington D.C. 20231 and Rutgers Docket No. No.95-0313-1 Office of Corporate Liaison and Technology Transfer, Rutgers University, Piscataway, N.J. 08854

Pieczenik, G. (1995) "Luminous Display Bacteriophage (Glow Phage)-First Conception of Recombinant GFP Expression," Disclosure Document, May 9, 1995, U.S. Patent Office, Washington D.C. 20231 Rutgers Docket Number No.95-0508-1 Office of Corporate Liaison and Technology Transfer, Rutgers University, Piscataway, N.J. 08854

Pieczenik, G. (1995) "Dual Phage Libraries," Disclosure Document, May 9, 1995, Number 375629, U.S. Patent Office, Washington, D. C. 20231 and Rutgers Docket Number No.95-0510 -1, Office of Corporate Liaison and Technology Transfer, Rutgers University, Piscataway, N.J. 08854

Pieczenik, G. (1992) "Method and Means for Sorting and Identifying Biological Information (SIBI)," Patent Office, Commonwealth of Australia, Patent No.626252, Document No. AU-B-63380/86, July 30, 1992. Australian Patent Office

Pieczenik, G. (1985) "Method of Inserting Unique DNA Sequence into DNA Vectors" United States Patent Number 4, 528, 266, July 9, 1985, General Information Services Division, United States Patent and Trademark Office, Crystal Plaza 3 Room 2C02, Washington, DC 20231

Pieczenik, G. (1983) "DNA Sequencing Method where Oligonucleotides are Stacked Rather than Fractionated in Linear and Cross-Linked Acrylamide-Sequencing Greater than 1000 nucleotides/gel" Disclosure Document 118,832 July 11, 1983 U.S. Patent Office, Washington DC 20231

Pieczenik, G. (1983) "Combinatorial Libraries of Antigens Expressed on Phage Binding to Naive Libraries of Antibodies as a Method for Identifying Biological Information" Disclosure Document 118,831, July 11, 1983 U.S. Patent Office, Washington D.C 20231

Pieczenik, G. (1985) "Autonomously replicating DNA containing inserted DNA sequences" November 16, 1982, United States Patent Number 4, 359,535, November 16, 1982, General Information Services Division, United States Patent and Trademark Office, Crystal Plaza 3 Room 2C02, Washington, DC 20231

G. Pieczenik (1977) "Theory of Genotypic Selection". Congressional Record, Committee on Science and Technology, U.S. House of Representatives, 95th Congress, No. 24: 323-340.

G. Pieczenik (1980) "Brief of Dr. George Pieczenik as Amicus Curiae". In the Supreme Court of the United States, October term, 1979 No. 79-136: 1-15. S.A. Diamond, Commissioner of Patents and Trademarks versus A.M. Chakrabarty.

G. Pieczenik (1974) "To Insure Continuity in Government". New York Times, August 11, 1974.

Certificates, Licenses and Certifications:

US Registered Patent Agent 58,458

Certificate of Completion, Robert Chamber Laboratory for Cellular Micromanipulation, 4/2000

National Association of Securities Dealers Series 7, 55, 63 Exams and Licenses-Specialty Biotechnology Analyst and Education

Certificate, September 9-11, 2001, Serono Symposia USA, Third Biennial Alpha Conference (IVF and Embryology), New York, NY

Academic Committees, Teaching:

Byrne Seminars 2014 – present

Ethics in Biochemistry, Fall, Spring 2014 – present

Individual lectures in Contemporary Issues 2015 to present

Senator (2002)- Cook College Representative to Faculty Senate Introductory Biochemistry :01&11:115:301 (1975-6, 1991)

Graduate/Undergraduate Course in Biochemistry 16:115:503,504/01&11:115:403,404 Seminar in Biochemistry 01&11:115:491,492 (1984-1990)

Biochemistry of Organized Systems 01&11:115:405, Coordinator & Participant (1984-1990) Advanced Biochemistry 16:115:507 (1986-1991)

Nucleic Acids 16:115:518 (1975-1991) Coordinator and participant Chairman for two Doctoral Candidates (16:115:701,702)

Henry Rutgers Honors undergraduates (01&11:115:497,498)
Chairman, Graduate Admissions Committee, Biochemistry Program 1985-Present Chairman, Grievance Committee, 1985
Chairman, Curriculum Committee Biochemistry Program 1982-4 Faculty Search Committees, 1975 – Present
Fellow, Paul Robeson Center, Rutgers University, 1987-91 Faculty Representative, Board of Trustees, Rutgers University Legislative Affairs Council, 1991 - Present\

Web Sites Produced and On-line Courses Developed – Research and Teaching:

<http://clubs.yahoo.com/clubs/biochemseminar2001>
<http://www.geocities.com/gpieczenik/BiochemSeminarFall2001.html>
<http://www.geocities.com/biochemsem/>
<http://members.tripod.com/seminar492/> <http://www.geocities.com/gpieczenik/ProSeLegal.html>
<http://www.geocities.com/gpieczenik/BiochemSeminar2002Spring.html>

Members of Laboratory

Visiting Scientists:

Dr. Albert Schatz- Discoverer of Streptomycin with Selman Waksman, Researching History of Discovery of Streptomycin
Dr. Jacques Cohen- Inventor of IVF Methods, Director of St. Barnabas Hospital Embryology Clinic Dr. Henry Malter- Embryologist, St Barnabas Hospital, Embryology Clinic
Dr. Kenji Adzuma- Molecular Biologist
Dr. Steve Mason, D.V.M- Cancer vaccine development, angiogenesis epitope analysis.

Students:

Aaron Franklin- AIDS research
David Verrill 2014-16 combinatorial libraries

Collaborations with Colleagues at Rockefeller University (until 2014):

Prof. Norton Zinder- Genetics Laboratory- Bacteriophage Combinatorial Libraries and Genome Analysis.
Prof. Bruce Merrifield (Nobel)- Combinatorial Peptide Library Synthesis
Prof. Paul Greengard (Nobel)- Peptide Ligand design

Professional Societies:

American Association for the Advancement of Science, 1965-Present New York Academy of Science, 1972-Present
American Society for Microbiology, 1985-Present Harvard Club of New York, 1984-Present
Cambridge University Association of New York, 1985 -6 Harvard Faculty Club, 1991-present
International Society of Molecular Evolution, 1993-present

Scientific Advisory Committees:

Advisor to Committee on Science and Technology
U.S. House of Representatives, Ninety-Fifth Congress:
First Session: Hearings before the Subcommittee on Science, Research, and Technology on Science Policy Implications of DNA Recombinant Molecule Research.

Amicus Curiae to the Supreme Court of the United States, October Term, 1979, Patenting Life.
Advisor to NSF Sponsors Workshop on Computer Facilities
for Analysis of Protein and Nucleic Acid Sequence Information. Rockefeller University, March 1-3, 1979.
Reviewer: Special Study Section, National Institute of Health. Reviewer: Journal of Molecular Biology,
Nature (Biotech), Journal of Theoretical Biology
Reviewer: Journal of Immunological Methods (1999 to Present)
Invited Speaker-"Is Jewish Genetic" James Shasha Institute for International Seminars at the Hebrew
University of Jerusalem, 46 Jabotinsky St., 91046, Israel 1997

Public Service/Recognition:

Erdos 2- Published with someone who published with Paul Erdos (Kleitman is Erdos 1)
New York Times, February 25, 1990 - "Anti-Semitic Incidents Continues in Middlesex County, NJ"
Time Magazine, April 4, 1977, "A New Vision of Evolution"
Time Magazine, August 1, 1977, "Why Do You Do What You Do"
Encyclopedia Britannica Yearbook, 1978: 506 - G. Pieczenik
Spin, May 1992, "AIDS: Words from the Front" p. 65-7.