

CURRICULUM VITAE

Eugene A. Bernstein, Ph.D., Lic. Ac.

Northeastern University
School of Pharmacy and Pharmaceutical Sciences
Department of Pharmaceutical Sciences

Education:

Teaching Professor
140 The Fenway Boston, MA 02115

1966-1971 M.S. in Biophysics. Alma-Ata State University, Moscow State University. Department of Biology (Russia)

1974 Ph.D. in Physiology. Ivanovo Medical Institute (Russia)

1996-1999 M.Ac. (Acupuncture), Licensed Acupuncturist. New England School of Acupuncture, Watertown, MA

Teaching experience:

2023 - Present Teaching Professor: Physiology, Anatomy, Pharmacology, Alternative Medicine, Cellular Physiology, and Nanotoxicity

2016-2023 Associate Teaching Professor: Physiology, Anatomy, Physics of Anesthesia, Pharmacology, Alternative Medicine, Cellular Physiology, and Nanotoxicity

1994 - 2016 Full-Time Lecturer: Physiology, Anatomy, Physics of Anesthesia, Advanced Cardiopulmonary Physiology, Pharmacology, Alternative Medicine, and Cellular Physiology

1988-2012 Adjunct Assistant Professor: Pathophysiology. Massachusetts College of Pharmacy and Allied Health Science, Boston, MA

Typical course load:

Fall:

	Course Credit	Course Fraction
Human Physiology I	3	100
Human Anatomy Laboratory	1	100
Nanotoxicity	3	100

Spring:

Human Physiology II	3	100
Physiology Laboratory-Seminar	1	100
Cellular Physiology (Graduate)	2	100
Pharmacology II (Graduate)	3	25

Summer:

Pharm. Med. Chemistry (Graduate)	5	20
Alternative Medicine (On-line)	3	100

Teaching Awards: Northeastern University. Teaching Excellence Award 2010
 Northeastern University. Teaching Excellence Award 2017
 Northeastern University. Teaching Excellence Award 2022

Research experience:

2007-2009	Consultant: Gwathmey Inc. Cambridge, MA. Developed Langendorff model to study the comparative effects of pharmacological agents upon the isolated myocardium. Provided training, established protocols, and directed studies of novel agents during both normoxia and ischemia.
1999-2009	Northeastern University. Developed Langendorff isolated heart model to study the effects of Chinese herbal preparations upon myocardium during ischemia and reperfusion. Provided training and established protocols to study the effects of drugs delivered with liposomes.
1990-1995	Postdoctoral Research Fellow. Boston University School of Medicine, Cardiac Muscle Research Laboratory. Developed Langendorff model to study the effects of beta-adrenergic agonists and calcium channel blockers in non-infarcted area of myocardium.
1989-1990	Postdoctoral Research Associate. New England Medical Center, Department of Surgery. Conducted studies with the isolated heart-lung model.
1987-1989	Boston: Research Assistant. Beth Israel Hospital. Pulmonary Department. Physiology and pharmacology of bronchospasm.
1979-1987	Moscow: Independent analytical work in biology. Prepared critical reviews in physiology of circulation, respiration, and microcirculation.
1977-1979	Moscow: Staff Scientist. Sklifosovsky Research Institute of Emergency Medicine. Department of Pathophysiology. Microcirculation research.
1975-1977	Moscow: Staff Scientist. Moscow Scientific Clinical Institute. Department of Surgery. Investigation of regional pulmonary ventilation-perfusion abnormalities in cardiac patients.
1972-1975	Moscow: Research Assistant. Scientific Institute of Biosynthesis.

Membership: International Society of Heart Research (ISHR)
 National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM)

PUBLICATIONS

1. Levchenko T.S., Hartner W.C., Verma D.D., Bernstein E.A., Torchilin V.P. ATP-loaded liposomes for targeted treatment in models of myocardial ischemia. *Methods Mol. Biol.* 605: 361-375, 2009
2. Hartner W.C., Verma D.D., Levchenko T.S., Bernstein E.A., Torchilin V.P. ATP-loaded liposomes for treatment of myocardial ischemia. *Wiley Interdiscip. Rev. Nanomed. Nanotechnol. Sep*;1(15):530-539, 2009 Review
3. Verma D.D., Levchenko T.S., Bernstein E.A., Mongayt D., Torchilin V.P. ATP-loaded immunoliposomes specific for cardiac myosin provide improved protection of the mechanical functions of myocardium from global ischemia in an isolated rat heart model. *J. Drug Target*, 14, 5, 273-280, 2006
4. Verma D.D., Hartner W.C., Levchenko T.S., Bernstein E.A., Torchilin V.P. ATP-loaded liposomes effectively protect the myocardium in rabbits with an acute experimental myocardial infarction. *Pharm. Res.*, 22, 12, 2115-2120, 2005
5. Verma D.D., Levchenko T.S., Bernstein E.A., Torchilin V.P. ATP-loaded liposomes effectively protect mechanical functions of the myocardium from global ischemia in an isolated rat heart model. *J. Controlled Release*, 108, 460-471, 2005
6. Levchenko T.S., Verma D.D., Bernstein E.A., Torchilin V.P. ATP-loaded liposomes protected mechanical functions of myocardium during and after global ischemia in isolated rat heart. XXVI Annual Meeting of the International Society for Heart Research, North American Section, Cancun (Mexico), May 1-5, 2004
7. Verma D.D., Levchenko T.S., Liang W., Bernstein E.A., Torchilin V.P. Liposomal ATP effectively protects myocardium from global ischemia in Langendorff isolated rat heart. Sixth International Conference: Liposomal Advances (Progress in Drug and Vaccine Delivery). School of Pharmacy, University of London. London. 2003.
8. Aljohi M., Bernstein E.A., Lu W., Khaw B.A. Traditional Chinese antianginal herb Dan Shen protects myocardium against ischemia-reperfusion injury. *Alternative Therap.*, 7, 3, S2, 2001
9. Lin Y. P., Bernstein E.A., Lu W., Khaw B.A. Inotropic effects and pharmacological efficacy of Chinese herbs are affected by methods of preparation and osmolarity. *Alternative Therap.*, 7, 3, S21, 2001
10. Lin Y. P., Bernstein E.A., Khaw B.A. Osmotic regulation of the myocardium. *J. Mol. Cell Card.*, 32, 5, A35, 2000
11. Lin Y. P., Bernstein E.A., Lu W., Khaw B.A. Negative inotropic but not coronary effects of Chinese antianginal herbs Chuanxiong and San Qi. *Am. Ass. Adv. Sci.* 19,1, 53, 2000

12. Bernstein E.A., Eberli F.R., Silverman A.M., Horowitz G.L., Apstein C.S. Beneficial effects of felodipine on myocardial and coronary function during low-flow ischemia and reperfusion. *Card. Drugs Ther.* 10, 2, 167-178, 1996
13. Bernstein E.A., Eberli F.R., Horowitz G.L., Apstein C.S. Importance of glycolytic substrate for energy preservation during inotropic stimulation of ischemic myocardium *J. Am. Coll. Cardiol.* 27, 2, 295, 1996
14. Bernstein E.A., Eberli F.R., Horowitz G.L., Libonati J.R., Apstein C.S. Functional and metabolic reserves of hypoperfused myocardium. *J. Am. Coll. Cardiol.* 27, 2, 365, 1996
15. Bernstein E.A., Eberli F.R., Libonati J.R., Horowitz G.L., Apstein C.S. Can dobutamine stimulate ischemic and stressed heart without increasing injury? *J. Mol. Cell Card.* 27, 5, A4, 1995
16. Bernstein E.A., Eberli F.R., Silverman A.M., Horowitz G.L., Apstein C.S. Coronary vascular selectivity and inotropic effects of felodipine. *J. Mol. Cell Card.* 26, 7, XCCI, 1994
17. Bernstein E.A., Eberli F.R., Silverman A.M., Apstein C.S. Inotropic and coronary vasodilating responses to dobutamine in hypoperfused (shock state) myocardium. *J. Mol. Cell Card.* 26, 7, CLXXIII, 1994
18. Bernstein E.A., Eberli F.R., Silverman A.M., Horowitz G.L., Apstein C.S. The calcium channel blocker felodipine protects against ischemia-reperfusion injury by a mechanism other than reducing O₂ demand. *J. Am. Coll. Cardiol.* 199A, 1994
19. Bernstein E.A., Apstein C.S. Effect of dobutamine on coronary arterial and myocardial function in non-infarct region in simulated cardiogenic shock. *J. Mol. Cell Card.* 24 (Suppl.III) S.13, 1992
20. Bernstein E.A., Apstein C.S. Role of coronary vascular dysfunction in non-infarcted region in simulated cardiogenic shock. *J. Mol. Cell Card.* 24 (Suppl.III) S.14, 1992
21. Bernstein E.A., Apstein C.S. The effect of a high concentration bolus calcium infusion on RBC perfused rabbit hearts during early ischemia. *J. Mol. Cell Card.* 24 (Suppl.III) S.15, 1992
22. Eberli F.R., Ngoy S., Bernstein E.A., Apstein C.S. More evidence against myocyte calcium overload as the direct cause of ischemic diastolic dysfunction. *Circulation*, 86 (Suppl.I), I-480, 1992
23. Genco C.M., Connolly R., Peterson M., Bernstein E.A., Ramberg K., Xi Zhang, Cleveland R., Diehl J. Granulocyte sequestration and early failure in autoperfused heart-lung preparation. *Ann. Thorac. Surg.* 53, 217-226, 1992

24. Genco C.M., Bernstein E.A, Connoly R., Peterson M.B., Sommerville K.H., Xi Zhang., Diehl J.T., Cleveland R.J. Leucocyte redistribution and eicosanoid changes during the autoperfused working heart-lung preparation. *J. Invest. Surg.* 4, 477-485, 1991
25. Bernstein E.A., Diehl J., Genco C.M., Peterson M.B., Sommerville K.H., Connoly R., Cleveland R.J. Leucocyte redistribution and prostaglandin changes during implementation of autoperfused heart-lung preparation. *J. Invest. Surg.* 3, 3, 307, 1990
26. Bernstein E.A., Ioffe-Uspenskiy I., Konnikov B., Marline E., Tarshis M., Uspenskiy I., Zaretsky I. Refusenics and UK/USSR medical cooperation. */letter/ Lancet* 1, 8526, 220, 1987
27. Bernstein E.A., Korshunova T.I. Dynamics of regional lung blood flow in patients suffering from mitral stenosis. *Proceedings of the Third Conference of Young Scientists of Moscow Clinical Institute* 7-8, Moscow 1977 (Russ.)
28. Bernstein E.A., Korshunova T.I. Dynamics of the ventilation-perfusion ratio in patients suffering from mitral stenosis. *Proceedings of the Third Conference of Young Scientists of Moscow Clinical Institute* 9-10, Moscow 1977 (Russ.)
29. Bernstein E.A. Dynamics of changes of oxygen pressure in brain tissues during total freezing and warming of organisms. *Proceedings of Symposium on Physiological and Clinical Problems of Adaptation to Hypothermia, Hypoxia and Hypodynamia* 201-202, Moscow 1975 (Russ.)
30. Bernstein E.A. Role of oxyhemoglobin in adaptation to altitude-induced hypoxia. *Proceedings of Mechanisms of Adaptation to Athletic Activity* 14-15, Moscow 1975 (Russ.)
31. Bernstein E.A. Factors determining the resistance of organism to hypoxia of middle altitudes. *Proceedings of the Use of Altitude Training for Elite Athletes* 13, Alma-Ata, 1974 (Russ.)
32. Bernstein E.A. Use of polarographic electrodes to measure consumption of oxygen by the skin. *Proceedings of Polarographic Determination of Oxygen in Biological Objects* 248-252, Kiev, 1974 (Russ.)
33. Bernstein E.A. Theoretical ramifications of induced apnea. *Proceedings of Medico-Biological Problems of Physical Activity and Sport* 103-107, Alma-Ata, 1973 (Russ.)
34. Bernstein E.A. Polarographic determination of oxygen in biological objects. *Proceedings of the Sixth Conference of Young Scientists of Institute of Biosynthesis* 99-100, Moscow, 1973 (Russ.)
35. Bernstein A.D., Bernstein E.A. Physiological regional hypoxias. *Proceedings of the Fourth Conference of Physiologists of Central Asia and Kazakhstan* 54-57, Alma-Ata, 1969 (Russ.)

36. Bernstein E.A. Factors limiting apnea. Proceedings of the 24th Scientific Conference of Kazakh State University 4-6, Alma-Ata, 1969 (Russ.)
37. Bernstein E.A. Oxygen pressure in brain tissues during hypoxia. Proceedings of the 10th Union Conference of Physiology and Biochemistry of Muscle Activity 56-57, Tbilissi, 1968 (Russ.)