

CURRICULUM VITAE

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

Northeastern University, Department of Pharmaceutical Sciences
Associate Teaching Professor
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Education:

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:

2016-Present 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
Chem. Physics Anesthesia (Graduate)	3	60
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., Connolly 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., Connolly 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.)