CURRICULUM VITAE
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EDUCATION

1977-1983	Medical Faculty, Kursk Medical University, M.D. (Honor Diploma)
1983-1988	Department of Pharmacology, Kursk Medical University, Ph.D.

ACADEMIC EXPERIENCE

1988-1989	Teaching Assistant, Department of Pharmacology, Kursk Medical University, Kursk, Russia
1989-1991	Research Scientist, Laboratory of Cardiac Bioenergetics, Cardiology Research Center, Moscow, Russia
1991-1994	Research Associate, Department of Biophysics, Medical College of Wisconsin, Milwaukee, WI, USA
1994-2002	Research Scientist, Department of Biophysics, Medical College of Wisconsin, Milwaukee, WI, USA
2002-2007	Assistant Professor, Department of Biophysics, Member of Free Radical Research Center, Medical College of Wisconsin, Milwaukee, WI, USA
Aug 2007-Dec 2007	Adjunct Professor, Department of Biomedical Sciences, Marquette University, Milwaukee, WI, USA
Jan 2008-April 2008	Visiting Professor, Department of Basic Sciences, Saint James School of Medicine, Kralendijk, Bonaire, Netherlands Antilles

2008-2013 Assistant Professor, Department of Pharmaceutical Sciences, University of Hawaii-Hilo College of Pharmacy, Hilo, HI, USA

2013-present Associate Professor, Department of Pharmacology and Microbiology, Kansas City University of Medicine and Biosciences, Kansas City, MO, USA

PROFESSIONAL SOCIETY MEMBERSHIPS

1996-present Basic Cardiovascular Sciences Scientific Council, American Heart Association (BCVS AHA)

2009-present American Society for Pharmacology and Experimental Therapeutics (ASPET)

***AD HOC* JOURNAL REVIEWING RESPONSIBILITIES**

Free Radical Biology and Medicine
American Journal of Physiology
European Journal of Pharmacology
Cardiovascular Toxicology
Pharmacology & Therapeutics
Pharmaceutical Biology
Biochemical Pharmacology

AWARDS AND HONOR RECOGNITIONS

1. Honor Student, Kursk Medical University, 1983

2. Winner of Young Investigator Award, USSR Congress of Internists, Tashkent, 1988

3. Winner of the Travel Award for Young Investigators, XIV World Congress of International Society for Heart Research, Kobe, Japan, 1992

4. Winner of the Travel Award from the Research Corporation of University of Hawaii to attend Experimental Biology 2010 Meeting

5. Winner of the Excellence in Teaching Award in Pharmaceutical Sciences for 2009/2010 academic year

INVITED LECTURES AND PRESENTATIONS AT SYMPOSIA, MEETINGS, AND SEMINARS

1. 3rd Symposium of the International Society for Heart Research (ISHR) (Soviet Section), Baku, USSR, 1986.

2. Department of Surgery, Division of Cardiothoracic Surgery, Medical College of Wisconsin, 1991.

3. XIV World Congress of the International Society for Heart Research (ISHR), Kobe, Japan, 1992.

4. Biophysics Research Institute, Medical College of Wisconsin, 1992.
5. 66th Scientific Sessions of American Heart Association, Atlanta, GA, USA, 1993 (moderated poster presentation).

6. Biophysics Research Institute, Medical College of Wisconsin, 1994.

7. Biophysics Research Institute, Medical College of Wisconsin, 1996.

8. 70th Scientific Sessions of American Heart Association, Orlando, FL, USA, 1997.

9. Biophysics Research Institute, Medical College of Wisconsin, 1998.

10. Scientific Sessions 2001 of American Heart Association, Anaheim, CA, USA, 2001.

11. Department of Medicine, Division of Nephrology, Medical College of Wisconsin, 2003.

12. Cell and Molecular Biology Graduate Program, University of Hawaii John A. Burns School of Medicine, 2008.

TEACHING EXPERIENCE

Professional Programs

1. *Pharmacology* course for pharmacy students, Department of Pharmacology, Kursk Medical University, 1986-1989.

2. *Medical Pharmacology* course for medical students, Department of Pharmacology, Kursk Medical University, 1986-1989.

3. *Pharmacology* course for dental students, Department of Biomedical Sciences, Marquette University, Fall 2007.

4. *Medical Pharmacology* course for physician assistant students, Department of Biomedical Sciences, Marquette University, Fall 2007.

5. Director of *Medical Pharmacology* course for medical students, Department of Basic Sciences, Saint James School of Medicine, Spring 2008.

6. I*ntroduction to Pharmaceutical Sciences* course (Introduction to Pharmacology component) for pharmacy students, Department of Pharmaceutical Sciences, University of Hawai'i-Hilo College of Pharmacy, 2008-12.

7. *Integrated Therapeutics I* course (Pharmacology component) for pharmacy students, Department of Pharmaceutical Sciences, University of Hawai'i-Hilo College of Pharmacy, 2008-12.

8. *Integrated Therapeutics II* course (Pharmacology component) for pharmacy students, Department of Pharmaceutical Sciences, University of Hawai'i-Hilo College of Pharmacy, 2009-12.

9. *Pathophysiology* course (Course Coordinator, teaching general pathology and pathophysiology of disease processes components), Department of Pharmaceutical Sciences, University of Hawaii-Hilo College of Pharmacy, 2009-12.

Graduate Programs

1. *Overview of Pharmaceutical Sciences* course (General Pharmacology component) in Pharmaceutical Sciences, 2011-2012.

DEFENSE COMMITTEE MEMBERSHIPS

December 2010 Appointed as a member of a Master Thesis defense Committee at the University of Hawaii John A. Burns School of Medicine

RESEARCH GRANT SUPPORT

Ongoing Research Support

2P20RR016467-09A1 INBRE II: HAWAII STATEWIDE RESEARCH & EDUCATION PARTNERSHIP (HSREP)
09/01/2010-05/31/2013
Funding available: $60,000/year
NIH/NCRR
Title: *Angiogenic Action of Natural Products*
Role: Principal Investigator
The goal of this proposal is to examine the effect of doxorubicin on the activity of hypoxia-inducible factor-1alpha-vascular endothelial growth factor in primary cardiomyocytes, endothelial cells and in hearts in vivo.

12ADVC-51363 HCF Medical Research Program Grant
5/16/2012-11/15/2013
Funding available: $49,993
Hawaii Community Foundation
Title: *Inhibition of Cardiac Vascular Network Formation by Targeted Anticancer Drug Sorafenib*
Role: Principal Investigator
The goal of this proposal is to evaluate effects of novel anticancer VEGF-targeted drug sorafenib on cardiac microvascular endothelial cells, on vascular network formation using in vitro and in vivo angiogenesis assays, and on cardiac microvascular network in mice.

Completed Research Support

Wisconsin Breast Cancer Showhouse Grant
01/01/2007-12/31/2008
Title: *Mito-Q Attenuates DOX-Induced Cardiotoxicity and Potentiates Antitumor Effects: MRI Imaging and Echocardiography Studies*
Role: Co-Investigator
The goal of this proposal was to evaluate the effect of mitochondrially-targeted antioxidant mito-Q on the development of doxorubicin cardiomyopathy in rats, and on the ability of doxorubicin to reduce tumor size in a rat tumor model.

RO1 CA77822 Kalyanaraman (PI)
01/01/99-08/31/07
NIH/NCI
Title: *eNOS and The Radical Mechanism of Antitumor Anthracyclines*
Role: Investigator
The long-term goal of this proposal was to unravel the free radical mechanisms by which doxorubicin, a cancer chemotherapeutic drug that is currently used in the clinic, induces cardiotoxicity in cancer patients.

RO1 HL073056 Kalyanaraman (PI)
03/17/03-02/29/08
NIH/NHLBI
Title: *Peroxide, NO and Iron Signaling in Endothelial Damage*
Role: Investigator
The long-term goal of this proposal was to unravel the role of oxidant-induced iron signaling mechanism in endothelial cell apoptosis.

PO1 HL68769 Harder (PD); Kalyanaraman (Core B PI)
04/01/02-03/31/07
NIH/NHLBI
Title: *Vascular Signaling by Free Radicals*
Role: Investigator
This program was focused on defining the actions of reactive oxygen species on vascular signaling.

COMMITTEE SERVICE

<u>2008/2009 Academic Year</u>

1) Awards and Scholarship Committee
Member of the Committee
The Committee was evaluating students' scholarship applications, with the purpose of identifying the most deserving applicants to receive the monetary awards. In addition, the Committee was charged with the developing and implementing procedures to identify the recipients of the Teacher of the Year Awards.

2) Director of Student Services Search Committee

Member of the Committee
The Committee was charged with identifying and recommending top candidates for the position of the Director of Student Services to the Dean of the College of Pharmacy.

3) Fiscal Officer Search Committee
Member of the Committee
The committee was charged with identifying and recommending top candidates for the position of Fiscal Officer to the Dean of the College of Pharmacy.

4) Pharmaceutical Sciences Faculty Search Committee
Member of the Committee
The Committee launched the search for three faculty members in the Department of Pharmaceutical Sciences (Immunology, Pharmacology, and Medicinal Chemistry positions), interviewed applicants, organized campus visits for the top candidates, and made recommendations to the Dean of the College of Pharmacy. All three recommended candidates have been hired as faculty members of the Department of Pharmaceutical Sciences.

5) Pre-Pharmacy Faculty Search Committee
Member of the Committee
The Committee launched the search for two Pre-Pharmacy faculty positions in the Department of Pharmaceutical Sciences, interviewed applicants, organized campus visits for the top candidates, and made recommendations to the Dean of the College of Pharmacy. Two recommended candidates have been hired as faculty members of the Department of Pharmaceutical Sciences.

<u>2009/2010 Academic Year</u>
1) Pharmaceutical Sciences Faculty Search Committee, position 73383
Chair of the Committee
As a Chair of the Search Committee, I was responsible for the organizing of the national search for a faculty member in the Department of Pharmaceutical Sciences, ensuring that all federal, state, and University policies were followed, and that all applications for the position were fully considered. The Committee advertised the open position in local and national publications, evaluated applications, and recommended the top candidate to the Dean of the College of Pharmacy. The recommended candidate has been hired as a member of the Department of Pharmaceutical Sciences.

2) Awards Committee
Member of the Committee
The Committee has been evaluating students' scholarship applications, with the purpose of identifying the most deserving applicants to receive the monetary awards.

3) Pharmaceutical Sciences Faculty Search Committee, position 73382
Member of the Committee
The Committee was charged with the launching the search for a senior faculty member and a Chair of the Department of Pharmaceutical Sciences, interviewing applicants,

organizing campus visits for the top candidate(s), and making recommendations to the Dean of the College of Pharmacy. The recommended candidate for the position was hired as a Chair of the Department of Pharmaceutical Sciences.

4) College of Pharmacy Library Committee
Member of the Committee
The Committee determined the way library funds were used for the purchase of textbooks, monographs, and scientific pharmacy journals, and ensured that all available library resources were accessible to the College of Pharmacy faculty, staff, and students.

2010/2011 Academic Year
1) Awards Committee
Member of the Committee
The Committee has been evaluating students' scholarship applications, with the purpose of identifying the most deserving applicants to receive the monetary awards.

2) Bylaws Committee
Member of the Committee
The Committee considered and approved changes to the College of Pharmacy bylaws that were suggested by the accrediting agency (ACPE), College administration, and faculty members.

3) Exam Policy Ad Hoc Committee
Member of the Committee
The Committee was created by the College of Pharmacy Associate Dean for Academic Affairs to develop the policy that would define the process of administering exams to pharmacy students at the College of Pharmacy. The draft of the exam policy developed by the Committee was approved by the faculty of the College of Pharmacy.

4) Master of Sciences Degree in Psychopharmacology Program Ad Hoc Committee
Member of the Committee
The Committee was charged with the developing of the new MS Degree in Psychopharmacology program proposal at the College of Pharmacy. The Committee defined the objectives and curricula of the new program. As a result of the Committee's work, College of Pharmacy MS in Psychopharmacology Degree program was approved by the UH Board of Regents.

2011/2012 Academic Year
1) Awards Committee
Member of the Committee
The Committee has been evaluating students' scholarship applications, with the purpose of identifying the most deserving applicants to receive the monetary awards and scholarships.

2) Bylaws Committee

Chair of the Committee
The Committee has been evaluating the changes to the College of Pharmacy bylaws that were suggested by the ACPE, faculty members and the College administration.

PUBLICATIONS
Peer-Reviewed Publications

1. **Konorev, E. A.**, Pichugin, V. V., Sharov, V. G., Tolokol'nikov, A. V., Sarcolemmal damage as a pathogenetic factor of pituitrin-isoprenaline-induced myocardial ischemia and its correction by an antioxidant (dibunol). *Bull. Exp. Biol. Med.* **102**, 1501-1504 (1986).

2. Golikov, A. P., Pichugin, V. V., **Konorev, E. A.**, Polumiskov, V. Yu., Sharov, V. G., Davidov, B. V., Konorev, L. A., Berestov, A. A., Avilova, O. A., Infarct size limitation in coronary artery reperfusion by dibunol alone or in combination with verapamil. *Kardiologia* **27**, 66-71 (1987).

3. **Konorev, E. A.**, Study of effects of dibunol, verapamil and their combination in the transient myocardial ischemia in conscious rabbits. *Pharmacol. Toxicol.* **50**, 61-64 (1987).

4. Golikov, A. P., Avilova, O. A., Polumiskov, V. Yu., Berestov, A. A., **Konorev, E. A.**, Smotrov, S. P. Sharipova, I. N., Effect of dibunol and verapamil on serum creatine kinase and myoglobin levels in dogs during postischemic coronary reperfusion. *Bull. Exp. Biol. Med.* **104**, 1361-1364 (1987).

5. Saks, V. A., Makhotina, L. A., Lakomkin, V. L., Steinshneider, A. Ya., Kapelko, V. I., Preobrazhensky, A. N., Medvedeva, N. V., Vititnova, M. B., Kacharava, V. P., Kryzhanovsky, S. A., **Konorev, E. A.**, Pichugin, V. V., Sharov, V. G., Kaverina, N. V. High specficity of the molecular mechanism of protective action of phosphocreatine on ischemic myocardium. *Bull. Vsesoyuzn. Kardiol. Nauchn. Tzentra AMN SSSR* **11**, 42-50 (1988).

6. Rudnev, D. V., Pichugin, V. V., **Konorev, E. A.**, Konorev, L. A., Polumiskov, V. Yu., Golikov, A. P., Diagnosis and prevention of myocardial reperfusion damage in experimental myocardial infarction. *Kardiologia* **28**, 94-97 (1988).

7. **Konorev, E. A.**, Saks, V. A. Sharov, V. G., Evstigneeva, R. P., Improving the contractility and metabolism of the isolated rat heart during post-ischemic reperfusion with phosphocreatine, tocopheryl phosphate and their combination. *Vestnik AMN SSSR* (12) 55-63 (1989).

8. **Konorev, E. A.**, Saks, V. A., Sharov, V. G., Makhotina, L. A., Oxidative myocardial damage: protective action of exogenous phosphocreatine. *Bull. Exp. Biol. Med.* **109**, 281-284 (1990).

9. **Konorev, E. A.**, Polumiskov, V. Yu., Avilova, O. A., Golikov, A. P., Emoxypine during reperfusion of the ischemic dog myocardium: effect on infarct size and plasma creatine kinase activity. *Bull. Exp. Biol. Med.* **110**, 1182-1185 (1990).

10. **Konorev, E. A.**, Rudnev, D. V., Konorev, L. A., Polumiskov, V. Yu., and Golikov, A. P., Pharmacologic modifications of reperfusion arrhythmias in the dog *in vivo*: possible relation to limitation of the extent of infaction. *Int. J. Cardiol.* **28**, 309-316 (1990).

11. **Konorev, E. A.**, Saks, V. A., Rudnev, D. V., Konorev, L. A., Sharov, V. G., Kagan, V. E., Pichugin, V. V., Evstigneeva, R. P., Phosphacreatine, tocopheryl phosphate and their combination in acute myocardial ischemia-reperfusion in dogs: effects on rhythm disturbances, left ventricular contractility and infarct size. *Vestnik AMN SSSR* 35-39 (1991).

12. **Konorev, E. A.**, Medvedeva, N. V., Dzhaliashvili, I. V., Stepanov, V. A., Saks, V. A., Membranotropic effect of phosphocreatine and its structural analogs. *Biokhimiya* (Moscow) **56**, 1701-1709 (1991).

13. **Konorev, E. A.**, Sharov, V. G., Saks, V. A., Improvement of contractile recovery of isolated rat heart after cardioplegic ischemic arrest with exogenous phophocreatine: involvement of antiperoxidative effect? *Cardiovasc. Res.* **25**, 164-171 (1991).

14. **Konorev, E. A.**, Medvedeva, N. V., Jaliashvili, I. V., Lakomkin, V. L., Saks, V. A., Participation of calcium ions in the molecular mechanism of cardioprotective action of exogenous phosphocreatine. *Basic Res. Cardiol.* **86**, 327-339 (1991).

15. Jaliashvili, I. V., **Konorev, E. A.,** Medvedeva, N. V., Lakomkin, V. L., Saks, V. A., The role of calcium ions in molecular mechanism of the cardioprotective effect of exogenous phosphocreatine, *Biokhimiya* (Moscow) **57**, 191-200 (1992).

16. Saks, V. A., Dzhaliashvili, I. V., **Konorev, E. A.**, Strumia, E., Molecular and cellular aspects of the cardioprotective mechanism of phosphocreatine. *Biokhimiya* (Moscow) **57**, 1763-1784 (1992).

17. **Konorev, E. A.**, Baker, J. E., Joseph, J., Kalyanaraman, B., Vasodilatory and toxic effects of spin traps on aerobic cardiac function. *Free Rad. Biol. Med.* **14**, 127-137 (1993).

18. **Konorev, E. A.**, Struck, A. T., Baker, J. E., Ramanujam, S., Thomas, J. P., Radi, R., Kalyanaraman, B., Intracellular catalase inhibitiion does not predispose rat heart to ischemia-reperfusion and hydrogen peroxide-induced injuries. *Free Rad. Res. Commun.* **19**, 397-407 (1993).

19. Baker, J. E., **Konorev, E. A.**, Tse, S. Y. H., Joseph, J., Kalyanaraman, B., Lack

of protection of PBN in isolated heart during ischemia and reperfusion: Implications for radical scavenging mechanism. *Free Rad. Res.* **20**, 145-163 (1994).

20. **Konorev, E. A.**, Tarpey, M. M., Joseph, J., Baker, J. E., Kalyanaraman, B., S-nitrosoglutathione improves functional recovery in the isolated rat heart after cardioplegic ischemic arrest: Evidence for a cardioprotective effect of nitric oxide. *J. Pharmacol. Exp. Ther.* **274**, 200-206 (1995).

21. **Konorev, E. A.,** Tarpey, M.M., Joseph, J., Baker, J. E., Kalyanaraman, B., Nitronyl nitroxides as probes to study the mechanism of vasodilatory action of nitrovasodilators, nitrone spin traps, and nitroxides: role of nitric oxide. *Free Rad. Biol. Med.* **18**, 169-177 (1995).

22. **Konorev, E. A.,** Joseph, J, Kalyanaraman, B. S-Nitrosoglutathione induces formation of nitrosylmyoglobin in isolated hearts during cardioplegic ischemia: an electron spin resonance study. *FEBS Lett.* **378**, 111-114 (1996).

23. **Konorev, E. A.**, Joseph, J., Tarpey, M. M., Kalyanaraman, B., The mechanism of cardioprotection by S-nitrosoglutathione monoethyl ester in isolated rat heart during cardioplegic ischemic arrest. *Brit. J. Pharmacol.* **119**, 511-518 (1996).

24. Hogg, N., Singh, R.J., **Konorev, E.A.**, Joseph, J., Kalyanaraman, B. S-Nitrosoglutathione as a substrate for γ-glutamyl transpeptidase. *Biochem. J.* **323**, 477-481 (1997).

25. **Konorev, E. A.,** Hogg, N., Kalyanaraman, B. Rapid and irreversible inhibition of creatine kinase by peroxynitrite. *FEBS Lett.* **427**, 171-174 (1998).

26. Singh, R.J., Hogg, N., Joseph, J., **Konorev, E.A.**, Kalyanaraman, B. The peroxynitrite generator, SIN-1, becomes a nitric oxide donor in the presence of electron acceptors. *Arch. Biochem. Biophys.* **361**, 331-339 (1999).

27. **Konorev, E.A.**, Kennedy, M.C., Kalyanaraman, B. Cell-permeable superoxide dismutase and glutathione peroxidase mimetics afford superior protection against doxorubicin-induced cardiotoxicity: The role of reactive oxygen and nitrogen intermediates. *Arch. Biochem. Biophys.* **368**, 421-428 (1999).

28. Baker, J.E., **Konorev, E.A.**, Gross, G.J., Chilian, W.M., Jacob, H.J. Resistance to myocardial ischemia in five rat strains: Is there a genetic component of cardioprotection? *Am. J. Physiol. Heart Circ. Physiol.* **278**, H1395-H1400 (2000).

29. **Konorev, E.A.**, Kalyanaraman, B., Hogg, N. Modification of creatine kinase by S-nitrosothiols: S-nitrosation vs. S-thiolation. *Free Rad. Biol. Med.* **28**, 1671-1678 (2000).

30. Kotamraju, S., **Konorev, E.A.**, Joseph, J., Kalyanaraman, B. Doxorubicin-induced apoptosis in endothelial cells and cardiomyocytes is ameliorated by nitrone spin traps and ebselen. Role of reactive oxygen and nitrogen species. *J. Biol. Chem.* **275**, 33585-33592 (2000).

31. **Konorev, E.A.**, Zhang, H., Joseph, J., Kennedy, M.C., Kalyanaraman, B. Bicarbonate exacerbates oxidative injury induced by antitumor antibiotic doxorubicin in cardiomyocytes. *Am. J. Physiol. Heart Circ. Physiol.* **279**, H2424-H2430 (2000).

32. **Konorev, E.A.**, Kotamraju, S, Zhao, H., Kalivendi, S., Joseph, J., Kalyanaraman, B. Paradoxical effects of metalloporphyrins on doxorubicin-induced apoptosis: Scavenging of reactive oxygen species *versus* induction of heme oxygenase-1. *Free Rad. Biol. Med.* **33**, 988-997 (2002).

33. Wang, S., Kotamraju, S., **Konorev, E.A.**, Kalivendi, S., Joseph, J., Kalyanaraman, B. Activation of nuclear factor-κB during doxorubicin-induced apoptosis in endothelial cells and myocytes is pro-apoptotic: The role of hydrogen peroxide. *Biochem. J.* **367**, 729-740 (2002).

34. Pieper, G.M., Halligan, N.L.N., Hilton, G., **Konorev, E.A.**, Felix, C.C., Roza, A.M., Adams, M.B., Griffith, O.W. Non-heme iron protein: A potential target of nitric oxide in acute cardiac allograft rejection. *Proc. Natl. Acad. Sci. USA* **100**, 3125-3130 (2003).

35. Wang, S., **Konorev, E.A.**, Kotamraju, S., Joseph, J., Kalivendi, S., Kalyanaraman, B. Doxorubicin induces apoptosis in normal and tumor cells via distinctly different mechanisms: Intermediacy of H_2O_2- and p53-dependent pathways. *J. Biol. Chem.* **279**, 25535-25543 (2004).

36. Kalivendi, S., Hatakeyama, K., Whitsett, J., **Konorev, E.A.**, Kalyanaraman, B., Vasquez-Vivar, J. Divergent effect of LPS and hydrogen peroxide on tetrahydrobiopterin levels in endothelial cells and cardiomyocytes – The role of GFRP. *Free Rad. Biol. Med.* **38**, 481-491 (2005).

37. Kalivendi, S.V., **Konorev, E.A.**, Cunningham, S., Joseph, J., Kalyanaraman, B. Doxorubicin activates nuclear factor of activated T-lymphocytes and Fas ligand transcription: Role of mitochondrial reactive oxygen species and calcium. *Biochem. J.* **389**, 527-539 (2005).

38. Shi, Y., Jiang, M.T., Su, J., **Konorev, E.**, Hutchins, W., Baker, J.E. Mitochondrial big conductance KCa channel and cardioprotection in infant rabbit heart. *J. Cardiovasc. Pharmacol.* **50**, 497-502 (2007).

39. Migrino, R.Q., Aggarwal, D., **Konorev, E.**, Brahmbhatt, T., Bright, M., Kalyanaraman, B. Early detection of doxorubicin cardiomyopathy using 2-dimensional strain echocardiography. *Ultrasound Med. Biol.* **34**, 208-214 (2008).

40. Vasquez-Vivar, J., Whitsett, J., Ionova, I., **Konorev, E.**, Zielonka, J., Shi, Y., Pieper, G.M. Cytokines and lypopolysaccharides induce inducible nitric oxide synthase but not enzyme activity in adult rat cardiomyocytes. *Free Radic. Biol. Med.* **45**, 994-1001 (2008).

41. **Konorev, E.A.**, Vanamala, S., Kalyanaraman, B. Differences in doxorubicin-induced apoptotic signaling in adult and immature cardiomyocytes. *Free Rad Biol Med*. **45**, 1723-1728 (2008).

42. Chandran, K., Aggarwal, D., Migrino, R.Q., Joseph, J., McAllister, D., **Konorev, E.A.,** Antholine, W.E., Zielonka, J., Srinivasan, S., Avadhani, N.G., Kalyanaraman, B. Doxorubicin inactivates myocardial cytochrome *c* oxidase in rats: Cardioprotection by mitoQ. *Biophys J*. **96**, 1388-1398 (2009).

43. Kumar, SN, **Konorev, EA**, Aggarwa,l D, Kalyanaraman, B. Analysis of proteome changes in doxorubicin-treated adult cardiomyocyte. *J. Proteomics.* **74**, 683-697 (2011).

44. Leychenko, A, **Konorev, E**, Jijiwa, M, Matter, ML. Stretch-induced hypertrophy activates NFkB-mediated VEGF secretion in adult cardiomyocytes. *PLoS ONE.* **6**, e29055 (2011).

Book Chapters and Review Articles

1. Polumiskov V. Yu., Berestov, A. A., Golikov, A. P., **Konorev, E. A.**, Pichugin V. V., Sharov, V. G., Konorev, L. A., Correction of free radical and calcium mechanisms of myocardial injury in postischemic reperfusion. In: *Emergency States in Internal Medicine Clinic*, Moscow, 1986. p.26-34.

2. **Konorev, E. A.**, Pichugin, V. V., Sharov, V. G., Polumiskov, V. Yu., Berestov, A. A., Konorev, L. A., Reperfusion of ischemic myocardium: Infarct size limitation by dibunol and its combination with isoptine. In: *Thrombolytic Therapy in Acute Coronary Insufficiency and Myocardial Infarction*. (Moscow, 1986), pp.114-121.

3. Polumiskov, V. Yu, **Konorev, E. A.**, Konorev, L. A., Davidov, B. V., Rudnev, D. V., An outlook for application of antioxidants to prevent heart failure during myocardial infarction. In: *Heart Failure in Acute Myocardial Infarction*. (Moscow, 1987) pp.115-124.

4. Pichugin, V. V., **Konorev, E. A.**, Konorev, L. A., Najaryan, T. L., Mamaev, V. B., Dependence of anitarhythmic and anti-ischemic effects of some antioxidants upon age in animals. In: *Biological Problems of Aging and Longevity.* (Moscow, 1988) pp.78-85.

5. Saks, V. A., Kapelko, V. I., **Konorev, E. A.**, Kupriyanov, V. V., Lakomkin, V. L., Steinshneider, A. Ya., Novikova, N. A., Medvedeva, N. V., Makhotina, L. A., Further studies on the role of ATP and phosphocreatine in cardiac cells. Biochemical basis of pharmacological action of phosphocreatine, in *Cardioprotection with Phosphocreatine in Cardiology and Cardiac Surgery* (Pavia, 1989) pp.11-29.

6. **Konorev, E. A.**, Sharov, V. G., Saks, V. A., Protective effect of phosphocreatine against oxidative damage of myocardium and postischemic reperfusion injury in combination with antioxidants, in *Cardioprotection with Phosphocreatine in Cardiology and Cardiac Surgery* (Pavia, 1989) pp.247-259.

7. Saks, V. A. **Konorev, E. A.,** Grigoryants, R. A., Belenkov, Yu. N., Biochemistry of normal and ischemic cardiomyocytes: A current state of studies [Review]. *Kardiologia* **32**, 82-91 (1992).

8. Kalyanaraman, B., **Konorev, E. A.**, Joseph, J., Baker, J. E., Radical generation and detection in myocardial injury. In: *Free Radical Damage and Its Control* (C. Rice-Evans and R. H. Burdon, eds.) London: Elsevier Science, 1994, pp. 333-359.

9. Kalyanaraman, B., **Konorev, E. A.**, Joseph, J., and Baker, J. E., A critical review of myocardial protection by spin traps, In: *Free Radicals in the Environment, Medicine, and Toxicology*, H. Nohl, H Esterbauer, and C. Rice-Evans, eds. (Richelieu Press, London, 1994) pp.313-326.

10. Kalyanaraman, B, **Konorev, E. A**., Joseph, J., Baker, J. E., Is free radical generation an important component of ischemia/reperfusion injury? *Redox Rpt.* **1**, 181-184 (1995).

11. Saks, V. A., Stepanov, V., Jaliashvili, I. V., **Konorev, E.A.**, Kryzhanovsky, S. A., Strumia, E., Molecular and cellular mechanisms of action for the cardioprotective and therapeutic role of creatine phosphate. In: *Creatine and Creatine Phosphate. Scientific and Clinical Perspective,* Comway, M., Clark, J.F., Eds. (Academic Press Ltd., New York, 1996) pp.91-113.

12. Kalyanaraman, B., Joseph, J., Kalivendi, S., Wang, S., **Konorev, E.**, Kotamraju, S. Doxorubicin-induced apoptosis: Implications in cardiotoxicity. *Mol. Cell. Biochem.* **234-235**, 119-124 (2002).

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Abstracts and Scientific Meeting Presentations

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