Curriculum Vitae

Name: Tetyana Voloshenyuk, Ph.D.

Business Address: Department of Physiology
1901 Perdido St., New Orleans, LA 70112

Business telephone and fax: (504) 568- 3385, (504)-568-6158 (fax)
Business e-mail Address: tvolos@lsuhsc.edu

USA Permanent Resident: until 06/04/22

Education:

Undergraduate: B.S. Biology and Chemistry, National Taras Shevchenko University of Kiev, Ukraine, 1977-1980

Graduate: M.S. Geneticist, Biologist, Teacher of Biology and Chemistry**.**
National Taras Shevchenko University of Kiev, Ukraine 1980-1982

Ph.D. Biological Science (Biochemistry), Ukrainian Institute of Pharmacology and Toxicology under the Academy of Medical Sciences of Ukraine, Kiev, Ukraine 1989-1992

Post-Doctoral 2005-2008 Dr. JS Janicki, Ph.D. Laboratory, USC, Columbia, SC
2008-2012 Dr. J. Gardner, Ph.D. Laboratory, LSUHSC, New Orleans, LA

Certification: Clinical Laboratory Scientist
Dnepropetrovsk State Medical University, Dnepropetrovsk, Ukraine 1984

Clinical Laboratory Scientist**,** Moscow State Institute Advanced Training Courses for Doctors of Clinical Medicine, Moscow, Russia 1986

Academic, Professional, and Research Appointments

2012- present	Instructor Dr. PE Molina laboratory, LSUHSC, New Orleans, LA
2008 -2012	Post-Doctoral Fellow, LSU Health, New Orleans, LA
2005 - 2008	Post- Doctoral Fellow, University of South Carolina, Columbia, SC
2003 - 2005	Post- Doctoral Fellow, Auburn University, Alabama
1996 - 2003	Chief Scientist, J.S. “Pharma” (Industry), Kiev, Ukraine
1992 - 1996	Scientist, Institute Pharmacology and Toxicology under Ukrainian Academy of Medical Science, Kiev, Ukraine
1983 -1989	Head of Emergency Clinical Laboratory, Department of Anesthesiology and Resuscitation, Emergency Hospital N3, Cherkassy, Ukraine

Awards and Honors

Designated as an Honorary Member of the Board at the Hospital N3, Cherkassy, Ukraine, 1987, 1988, 1989

Travel Award of Institute Pharmacology and Toxicology under Ukrainian Academy of Medical Sciences, Kiev, Ukraine, 1990

Monetary Prizes for Achieving Annual Goals, Kiev Research Institute of Pharmacology and Toxicology under Ukrainian Academy of Medical Science, Kiev, Ukraine, 1991, 1992

Annual Monetary Award for Labor Achievements, J.S. "Pharma", Kiev, Ukraine, 1997 - 2003

Membership and Professional Organizations

American Heart Association	2006 -present
American Physiological Society	2008 -present
ToastMaster	2011 -present

Peer-reviewed Publications

1. **Voloshenyuk TG,** Khoutorova E, Hart AD , El hajj MC , Molina PE and Gardner JD Alcohol modulation of MMP and TIMP expression in cardiac fibroblasts favors collagen accumulation. (Submitted)

2. **Voloshenyuk TG**, Hart AD, Khoutorova E, Gardner JD. TNF-α increases cardiac fibroblast lysyl oxidase expression through TGF-β and PI3Kinase signaling pathways. Biochem Biophysical Res Communication, 2011 Sep 23; 413 (2):370-5. Epub 2011 Aug 27.

3. **Voloshenyuk TG**, Landesman ES, Khoutorova E, Hart AD, Gardner JD Induction of cardiac fibroblast lysyl oxidase by TGF-β1 requires PI3K/Akt, Smad3, and MAPK signaling. Cytokine. 2011 Jul;55(1):90-7. Epub 2011 Apr 17.

4. **Voloshenyuk TG**, Gardner JD. Estrogen improves TIMP-MMP balance and collagen distribution in volume overloaded hearts of ovariectomized females. Am J Regul Integr Comp Physiol. 2010 Aug; 299(2):R683-93. Epub 2010 May 26.

5. Mel éndez GC, **Voloshenyuk TG**, Mc.Larty JL, Levick SP, Brower GL. Oxidative stress-mediated cardiac mast cell degranulation, Toxicological & Environmental Chemistry, Volume 92, Issue 7 August 2010 , pages 1293 - 130.

6. Gardner JD, Murray DB, **Voloshenyuk TG,** Brower GL, Bradley JM, Janicki JS. Estrogen attenuates chronic volume overload induced structural and functional remodeling in male rat hearts. Am J Physiol Heart Circ Physiol. 2010 Feb; 298 (2):H497-504. Epub 2009 Nov 20.

7. Morgan LG, Levick SP, **Voloshenyuk TG**, Murray DB, Forman MF, Brower GL, Janicki JS. A novel technique for isolating functional mast cells from the heart. Inflamm Res. 2008 May; 57(5):241-6.

8. Gardner JD, Brower GL, **Voloshenyuk TG**, Janicki JS. Cardioprotection in female rats subjected to chronic volume overload: synergistic interaction of estrogen and phytoestrogens. Am J Physiol. Heart Circ Physiol. 2008 Jan; 294 (1):H198-204. E-pub 2007 Oct 26.

9. Brower GL, Gardner JD, Forman MF, Murray DB, **Voloshenyuk** T, Levick SP, Janicki JS. The relationship between myocardial extracellular matrix remodeling and ventricular function. Eur J Cardiothoracic Surg. 2006 Oct; 30(4):604-10. Epub 2006 Aug 28. Review

10. Gubskiĭ IuI, **Volosheniuk TG**, Primak RG, Krupskaya NM. Characterization of enzymatic activity and structure of vesicles of human erythrocyte membranes. Ukr Biokhim Zh. 1993 May-Jun;65(3):50-7.
11. Gubskiĭ IuI, Kuz'menko AI, **Volosheniuk TG.** Cu (2+) complexes as inhibitors of free radical oxidation of lipids. Ukr Biokhim Zh. 1993 Jan-Feb;65(1):83-8
12. Pas'ko SA, **Volosheniuk TG**. Correction of disorders of phosphorus metabolism after operations on the abdominal organs. Vestn Khir Im I I Grek. 1991 Feb; 146 (2):107-9.
13. Pas'ko SA, **Volosheniuk TG.** Disordered phosphorus metabolism and its correction in the acute period of severe craniocerebral trauma. Zh Vopr Neirokhir Im N N Burdenko. 1990 May-Jun ;(3):14-6.
14. Chepkiĭ LP, Pas'ko SA, **Volosheniuk TG**. The pharmacological correction of disorders of the oxygen transport function of the blood in peritonitis patients. Anesteziol Reanimatol. 1990 Jan-Feb ;(1):47-50.
15. Pas'ko SA, **Volosheniuk TG.** The correction of disorders of phosphorus and calcium metabolism in patients following surgery of the abdominal organs, Klin Khir. 1990 ;(12):7-9.
16. Pas'ko SA**, Volosheniuk TG**. Causes, sequelae and possible ways of preventing hypophosphatemia in patients with cerebral ischemia, Zh Nevropatol Psikhiatr Im S Korsakova. 1990; 90(10):25-7.
17. Chepkiĭ LP Pas'ko SA**, Volosheniuk TG**, Sofienko GI. Characteristics of phosphorus metabolism in patients with acute disorders of cerebral circulation, Vrach Delo. 1989 Dec ;(12):27-9.
18. Pas'ko SA, **Volosheniuk TG**, Sofienko GI. Hypophosphatemia (a review of the literature), Vrach Delo. 1989 Oct ;(10):11-5.

Patent for Invention

Declaration patent for invention N 58695 A, issued in accordance with Law of Ukraine “about protection of right to an invention and useful models” on August 15, 2003

Declaration patent for invention N 66017 A, issued in accordance with Law of Ukraine “about protection of right to an invention and useful models” on April 15, 2004

Declaration patent for invention N 65169 A, issued in accordance with Law of Ukraine “about protection of right to an invention and useful models” on March 15, 2004

Declaration patent for useful model N 2539, issued in accordance with Law of Ukraine “about protection of right to an invention and useful models” on June 15, 2004

Declaration patent for useful model N 2540, issued in accordance with Law of Ukraine “about protection of right to an invention and useful models” on June 15, 2004

Patent for invention N 65169, registered in State Patent Register of Ukraine for the Invention on August 15, 2005.

Patent for invention N 66017, registered in State Patent Register of Ukraine for the Invention on December 15, 2006.

Patent for invention N 78517, registered in State Patent Register of Ukraine for the Invention on April 10, 2007

Invited Presentations

Voloshenyuk TG. PI3K/Akt signaling mediates increase BMP-1 expression in response to TNF-α and TGF-β in cardiac fibroblasts. Experimental Biology, Washington, April 9-13, 2011.

Voloshenyuk TG*.* Improved TIMP-1/MMP-9 and TIMP-2/MMP-2 balance in volume overloaded hearts of ovariectomized rats after volume overload creation. Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology, Broomfield, Colorado, July 15-18, 2009.

Voloshenyuk T.G., Brower G.L., Janicki J.S**.** Mast cell mediated Myocardial Remodeling induced by chronic volume overload in rats**.** Annual Meeting: From experimental biology to preventive and integrative medicine. September 21-22, 2006, Sudak Crimea, Ukraine

Volosheniuk T.G. and Pasko S.A. Use of canticalmodulin drug trifluoperazine (TP) for treatment of intensive care unit patients. 8-th European Congress of Anesthesiologists, September 9-15, 1990, Warsaw, Poland.

Pasko S.A. and **Volosheniuk T.G**. Phosphorus deficit, its consequences and treatment in patients with traumatic head injury (THI). 8-th European Congress of Anesthesiologists, September 9-15, 1990, Warsaw, Poland.

Abstracts and International presentations

Walker MK, **Voloshenyuk T**. Chronic ∆9-tetrahydrocannabinol differently up regulates gene expression of myosin light chain kinase, interferon-induced GTP-binding protein MX-1, and heat shock-related 70 kDa protein 2 in duodenum of Siminian immunodeficiency virus Infected macaques. Summer Research Internship Program, Abstract Book, July 30, 2012

Robichaux J, **Voloshenyuk T**. Chronic ∆9-tetrahydrocannabinol differently down –regulates genes expression of immunoglobulin J chain, DBMT1, and cell-division cycle 20 in duodenum of simian immunodeficiency virus infected macaques. Summer Research Internship Program, Abstract Book, July 30, 2012

Voloshenyuk TG, Fournett A, Gardner JD. Estrogen receptor dependence of lysyl oxidase expression and activity in cardiac fibroblasts. EB 2012, San Diego, California.

Voloshenyuk TG. PI3K/Akt signaling mediates increase BMP-1 expression in response to TNF-α and TGF-β in cardiac fibroblasts. Experimental Biology 2011, April 9-13, Washington, p110**.**

Voloshenyuk TG, Fournett A. and Jason D. Gardner. Inhibition of TGF RI (ALK5), Smad 3, or PI3K pathways attenuates TNF-α dependent increase of Lysyl Oxidase Expression in Cardiac Fibroblasts. Jackson, Mississippi, 2011.

Voloshenyuk TG, Fournett A, Gardner JD**.** PI3K/Akt signaling mediates increase BMP-1 expression in response to TNF-α and TGF-β in cardiac fibroblasts. Experimental Biology 2011, April 9-13, Washington, p110.

Gardner J., **Voloshenyuk TG.,** Bradley J. Estrogen modulates myocardial collagen cross-linking and attenuates volume overload induced ventricular dilatation. Experimental Biology 2011, April 9-13**,** Washington, p19.

Voloshenyuk TG*.* Improved TIMP-1/MMP-9 and TIMP-2/MMP-2 balance in volume overloaded hearts of ovariectomized rats after volume overload creation. Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology, Broomfield, Colorado, July 15-18, 2009, p.28.

Gardner JD, **Voloshenyuk TG,** Claudino MA**,** Bradley JM. Compensatory response of cardiac lysyl oxidase to chronic volume overload. Experimental Biology, 2010, April 24-28, Anaheim, California, p. 168

Voloshenyuk TG, Khoutorova E, Hart A. and J. Gardner. Regulation of cardiac fibroblast lysyl oxidase by TGF-β and TNF-α requires PI3Kinase signaling. Symposia Extracellular Matrix and Cardiovascular Remodeling, January 23 - 28**,** 2011, Tahoe City, California, p.88.

Voloshenyuk TG, Gardner JD. IL-1 and TNF-α differentially regulate lysyl oxidase expression and activity in adult cardiac fibroblasts. Experimental Biology, 2010, April 24-28, 2010, Anaheim, California, p. 168.

Voloshenyuk T.G., Hart A.D. and Gardner JD**.** Estrogen improves cardiac collagen distribution in volume overloaded ovariectomized rats by modulation of MMP/TIMP balance. Louisiana NCTT/Idea. Biomedical Research Symposium, January 22, 2010.

Gardner JG**., Voloshenyuk TG,** Murray DB. Estrogen receptor antagonism and ovariectomy exacerbate ventricular remodeling in female rats. Experimental Biology 2009, Today Research, Tomorrow Health, April 18-22, 2009, P 247.

Voloshenyuk T., Gardner JD. Estrogenic regulation of Lysyl oxidase in adult cardiac fibroblasts. Experimental Biology 2009, Today Research, Tomorrow Health, April 18-22, 2009, P 305.

Forman M**, Voloshenyuk T,** Quick A, Reisman D. Reactive Oxygen Species with Concurrent Matrix Metalloproteinase Activity in Human platelets Following Long-Term Storage. A Supplement to Transfusion. AABB Annual Meeting and TXPO, Montréal, Quebec, Canada October 4-7, 2008, A Supplement to Transfusion, vol 48, N 2S, September 2008.

Barnes A.F., **Voloshenyuk T.G**., Gardner J.D. Acute Increase in TNF –alpha expression in Heart Tissue of Ovariectomized Rats after Fistula Overload. International Workshop "New Technology in Medicine and Experimental Biology, Singapore-Bali, Indonesia. 07 - 19 March, 2008.

Voloshenyuk T.G., Mc.Larty JK., Chastain A.M., Brower G.L., Janicki J. Hydroperoxide stimulates different response in rats' male and female cardiac fibroblasts. International Workshop and Scientific Discussion Club "New Technology In Medicine and Experimental Biology" Pattaya-Bangkok, Thailand 26-February-08 March, 2007.

Melendez G.Z**., Voloshenyuk** T.G., Mc.Larty JL., Bradshaw JB, Morgan LG, Gardner JD, Brower GL. Sodium sulfite mediated oxidative stress triggers cardiac mast cells degranulation. Experimental biology 2007. Today's Research: Tomorrow's Health. The FASEB Journal 21(5):868.4, 2007.

Voloshenyuk T.G., Mc.Larty JL, Melendez G.Z, Brower GL. Oxidative stress mediated cardiac mast cells degranulation. The Role of Air pollutants in Cardiovascular Disease. US Environmental Protection Agency, Research Triangle Park, North Caroline, October 12-13, 2006.

Voloshenyuk T.G., Brower G.L., Janicki J.S**.** Mast cell mediated Myocardial Remodeling induced by chronic volume overload in rats**.** From experimental biology to preventive and integrative medicine. Crimea, Ukraine, 2006, September, p 18-19.

Voloshenyuk T.G, Murray DB, Brower GL. Contribution of collagen cross-linking to myocardial dysfunction in diabetic rats**.** Proceedings of International Scientific Interdisciplinary Workshop "New Technology In Integrative Medicine and Biology" "Stress and Extreme Conditions" Bangkok-Pattaya, Thailand, 1-13 March, 2006, p.18.

Voloshenyuk T.G, Murray DB, Brower GL. Temporal Alterations in Myocardial Collagen Induced by Extracellular matrix degradation in Rats with Sustained Volume Overload. Proceedings of International Scientific Interdisciplinary Workshop "New Technology In Integrative Medicine and Biology" "Stress and Extreme Conditions" Bangkok-Pattaya, Thailand, 1-13 March, 2006, p20.

Voloshenyuk T.G., Brower G.L., Janicki J.S**.** Mast cell mediated Myocardial Remodeling induced by chronic volume overload in rats**.** From experimental biology to preventive and integrative medicine. Crimea, Ukraine, 2006, September, p 18-19.

Voloshenyuk T.G., Murray D.B., Brower G.L. Contribution of Collagen Cross-linking to Myocardial Dysfunction in Diabetic Rats. International Workshop and Scientific Discussion Club "New technology in Integrative medicine and Biology", March 1-5, 2006.

Voloshenyuk T.G., Brower G.L. and J.S. Janicki. Temporal Alteration in Myocardial Collagen Induced by Extracellular Matrix degradation in rats with Sustained Volume Overload. International Workshop and Scientific Discussion Club "New technology in Integrative medicine and Biology" 2005, Sudak, Crimea, Ukraine, March 1-5, 2006, p.33

Voloshenyuk T.G., Murray D.B., Brower G.L Structural Modification of Rat's heart Collagen in Rats with Aorto-caval Fistula. Health of the Person- the Base of Progress of the society. From experimental Biology to Preventive and integrative medicine, International multidisciplinary Symposium, Sudak (Crimea, Ukraine) 24 September – 3 October, 2005, 34-35.

Voloshenyuk T.G., Murray D.B., Brower G.L. Biochemical Characteristics of collagen in the Diabetic Rat Heart. Health of the Person- the Base of Progress of the society. From experimental Biology to Preventive and integrative medicine, International multidisciplinary Symposium, Sudak (Crimea, Ukraine) 24 September – 3 October, 2005, 33-34.

Samoylova T., **Voloshenyuk T**., Krumnov A. Dehydration and Storage of Proteins in Natural Polymer; The Lypophilization, Conference, September 16-19,2003 in Chicago, IL USA:p.7-8

Samoylova T., Krumnov A., **Voloshenyuk T**. Protective medium for Dehydration and Preservation of Biological. The Lypophilization, Conference 2003, September 16-19, 2003 in Chicago, IL USA: p.5-7.

Volosheniuk T.G. and Pasko S.A. Use of anticalmodulin drug trifluoperazine (TP) for treatment of intensive care unit patients. 8-th European Congress of Anesthesiologists, September 9-15, 1990, Warsaw, Poland: p.11.

Pasko S.A. and **Volosheniuk T.G**. Phosphorus deficit, its consequences and treatment in patients with traumatic head injury (THI). 8-th European Congress of Anesthesiologists, September 9-15, 1990, Warsaw, Poland: p.10.

Volosheniuk T.G. and Pasko S.A. Erythrocyte Ca2+-ATPase membrane activity in patients in intensive care unit.8th European Congress of Anesthesiologists. September 9-15, 1990, Warsaw, Poland: p.18.

Volosheniuk T.G., Pasko S.A. Phosphorus deficit and its correction in-patient with craniocerebral injury in critical state.4-th Congress of Anesthesiologists and Intensive Care Specialists. December 13-16, 1989, Odessa, Ukraine: 458-459

Volosheniuk T.G. and Pasko S.A. Optimization of erythrocyte membrane transport: ATPase activity in patients in intensive care unit.4-th Congress of Anesthesiologists and Intensive Care Specialists. December 13-16, 1989, Odessa, Ukraine: 458-459.

Teaching experience:

Lecture "Atherosclerosis" for the students of Nursing School September 2012

"Nucleic Acids, DNA, RNA. Protein synthesis" course for first year medical students of Kiev Medical University, Kiev, Ukraine 1998-2000

Undergraduate and Graduate Student Trained

Summer 2012

Walter M.	LSU medical student, New Orleans
Khoutorova E.	LSU medical student, New Orleans
Hart A.D.	LSU medical student, New Orleans
Robichaux J.	LSU undergraduate student, New Orleans

Summer 2011

Khoutorova E.	LSU undergraduate student, New Orleans
Hart A.D.	LSU undergraduate student, New Orleans
Shrestha S.	Tulane University undergraduate student, New Orleans
Larkin K	Tulane University undergraduate student, New Orleans

Summer 2010

Landesman E.S. LSU medical student, New Orleans

Khoutorova E.	LSU undergraduate student, New Orleans
Hart A.D.	LSU undergraduate student, New Orleans

Summer 2009

Fournett A.	LSU undergraduate student, New Orleans