

**BIOGRAPHICAL SKETCH**

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| NAME<br>Nena Matijevic (Aleksic)  |                                  | POSITION TITLE<br>Associate Professor, University of Texas Health Science Center, Medical School, Division of Hematology |                    |
|---|----------------------------------|--|--------------------|
| EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i> |                                  |  |                    |
| INSTITUTION AND LOCATION  | DEGREE<br><i>(if applicable)</i> | YEAR(s)  | FIELD OF STUDY     |
| Faculty of Pharmacy, University of Belgrade, Belgrade, Yugoslavia   | Pharm. D.                        | 1974   | Pharmacy           |
| Medical School, University of Belgrade, Belgrade, Yugoslavia  | M.S.                             | 1986   | Hematology         |
| Faculty of Pharmacy, University of Belgrade, Belgrade, Yugoslavia   | M.S.                             | 1988   | Clinical Chemistry |
| Medical School, University of Belgrade, Belgrade, Yugoslavia  | Ph.D.                            | 1998   | Hematology         |

**A. Positions and Honors**

1974-1975 Central Clinical Chemistry Lab, City Clinical Hospital, Belgrade, Yugoslavia  
 1975-1988 Hemostasis Laboratory supervisor/manager, City Clinical Hospital, Belgrade, Yugoslavia  
 1988-1992 Hemostasis Lab director, Institute of Hematology, University Clinical Center, Belgrade, Yugoslavia  
 1992-present University of Texas Health Science Center in Houston, Medical School, Department of Internal Medicine, Division of Hematology. 1992-2000: Research Instructor. 1996-2006: ARIC Central Hemostasis Laboratory supervisor. 2000-2007: Assistant Professor. 2002-present: Flow cytometry lab manager. 2007-present: Associate Professor

**Experience:** Extensive experience in hemostasis, vascular biology and hematology, including method development and validation for lab diagnostics of hemorrhagic and thromboembolic disorders, platelet functions, laboratory control of anticoagulant and antiplatelet therapy, enzymes involved in thrombosis and atherosclerosis in different cells and tissues, characterization of molecular defects of hemostatic and vascular proteins, quality control protocols, surface and intracellular antigens of blood cells, endothelial cells, different cell lines, cell cycle and DNA ploidy, expertise in numerous methodologies: flow cytometry, microscopy, HPLC, fluorometry, nephelometry, turbidimetry, electrophoresis, electrochemistry, immunochemistry.

**Memberships:** National: American Society of Hematology (ASH); International: International Society for Thrombosis and Hemostasis (ISTH), Clinical Cytometry Society (CCS), The Mediterranean League Against Thromboembolic Diseases (MLTD)

**B. Selected peer-reviewed publications (in chronological order).**

1. Matijevic-Aleksic, N., Sanduja, S.K., Wang, L.-H. and Wu, K.K. (1995) Differential expression of thromboxane A synthase and prostaglandin H synthase in megakaryocytic cell line. *Biochim. Biophys. Acta.* 1269: 167-175.
2. Matijevic-Aleksic, N., McPhedran, P. and Wu, K.K. (1996) Bleeding disorder due to platelet prostaglandin H synthase-1 (PGHS-1) deficiency. *Br. J. Haematol.* 92: 212-217.
3. Wang, L.-H., Matijevic-Aleksic, N., Hsu, P.-Y., Ruan, K.-H., Wu, K.K. and Kulmacz, R.J. (1996) Identification of thromboxane A2 synthase active site residues by molecular modeling-guided site-directed mutagenesis. *J. Biol. Chem.* 271: 19970-19975.
4. Ghaddar, H.M., Folsom, A.R., Aleksic, N., Hearne, L.B., Chambless, L.E., Morrissey, J.H. and Wu, K.K. (1998) Correlation of factor VIIa values with factor VII gene polymorphism, fasting and postprandial triglyceride levels, and subclinical carotid atherosclerosis. *Circulation* 98: 2815-2821.

5. Salomaa, V., Matei, C., Aleksic, N., Sansores, L., Folsom, A.R., Juneja, H., Chambless, L.E., Wu, K.K. (1999) Soluble thrombomodulin as a predictor of incident coronary heart disease: The ARIC Study. *Lancet*. 353: 1729-1734.
6. Xu, X-M., Sansores-Garcia, L., Chen, X-M., Matijevic-Aleksic, N., Du, M., Wu, K.K. (1999) Suppression of inducible cyclooxygenase-2 gene transcription by aspirin and sodium salicylate. *Proc. Natl. Acad. Sci. USA*. 96: 5292-5297.
7. Wu, K.K., Aleksic, N. (1999) Platelet glycoprotein polymorphism and risk for coronary heart disease. *Blood Coagul Fibrinolysis*. 10 (Suppl.1): S63-S65.
8. Aleksic, N., Juneja, H., Folsom, A.R., Ahn, C., Boerwinkle, E., Chambless, L.E., Wu, K.K. (2000) Platelet PL<sup>A2</sup> allele and incidence of coronary heart disease: results from the Atherosclerosis Risk In Communities (ARIC) Study. *Circulation*. 102: 1901-1905.
9. Wu, K.K., Matijevic-Aleksic, N. (2000) Thrombomodulin: A linker of coagulation and fibrinolysis and predictor of risk of arterial thrombosis. *Ann. Med.* 32; Suppl 1: 73-77.
10. Folsom, A.R., Aleksic, N., Park, E., Salomaa, V., Juneja, H., Wu, K.K. (2001) Prospective study of fibrinolytic factors and incident coronary heart disease: the Atherosclerosis Risk in Communities (ARIC) Study. *Arterioscler. Thromb. Vasc. Biol.* 21: 611-617.
11. Wu, K.K., Aleksic, N., Ahn, C., Boerwinkle, E., Folsom, A.R., Juneja, H.S. (2001) Thrombomodulin ALA 455 VAL polymorphism and risk of coronary heart disease. *Circulation*. 103: 1386-1389.
12. Gilroy, D.W., Saunders, M.A., Sansores-Garcia, L., Matijevic-Aleksic, N., Wu, K.K. (2001) Cell cycle-dependent expression of cyclooxygenase-2 in human fibroblasts. *FASEB J.* 15: 288-290.
13. Aleksic N, Ahn C, Wang Y-W, Juneja H, Folsom AR, Boerwinkle E, Wu KK. (2002) Factor XIII Val34Leu polymorphism does not predict risk of and the risk of coronary heart disease. The ARIC Study. *Arterioscler. Thromb. Vasc. Biol.* 22:348-352.
14. Matijevic N, Wu KK. (2002) Biochemical characterization of platelet-monocyte interactions by flow cytometry. *New Trends in Hematology II*. 231-240.
15. Folsom AR, Cushman M, Tsai MY, Aleksic N, Heckbert SR, Boland LL, Tsai AW, Yanez ND, Rosamond WD. (2002) A prospective study of venous thromboembolism in relation to factor V Leiden and related factors. *Blood*. 99: 2720-2725.
16. Folsom AR, Aleksic N, Catellier D, Juneja H, Wu KK. (2002) C-reactive protein and incident coronary heart disease in the Atherosclerosis Risk In Communities (ARIC) study. *Am. Heart. J.* 144: 233-8.
17. Wu KK, Aleksic N, Ballantyne CM, Ahn C, Juneja H, Boerwinkle E. Interaction between soluble thrombomodulin and intercellular adhesion molecule-1 in predicting risk of coronary heart disease. *Circulation*. 2003; 107(13):1729-32.
18. Afshar-Kharghan V, Matijevic-Aleksic N, Ahn C, Boerwinkle E, Wu KK, Lopez JA. The variable number of tandem repeat polymorphism of platelet glycoprotein Ib alpha and risk of coronary heart disease. *Blood*. 2004;103(3):963-5.
19. Delgado RM 3rd, Nawar MA, Zewail AM, Kar B, Vaughn WK, Wu KK, Aleksic N, Sivasubramanian N, McKay K, Mann DL, Willerson JT. Cyclooxygenase-2 inhibitor treatment improves left ventricular function and mortality in a murine model of doxorubicin-induced heart failure. *Circulation*. 2004;109(11):1428-33.
20. Huang JC, Wun WS, Goldsby JS, Matijevic-Aleksic N, Wu KK. Cyclooxygenase-2-derived endogenous prostacyclin enhances mouse embryo hatching. *Hum Reprod*. 2004 19: 2900-2906.
21. Liou JY, Aleksic N, Chen SF, Han TJ, Shyue SK, Wu KK. Mitochondrial localization of cyclooxygenase-2 and calcium-independent phospholipase A(2) in human cancer cells: Implication in apoptosis resistance. *Exp Cell Res*. 2005 May 15;306(1):75-84.
22. Wu KK, Matijevic-Aleksic N. Molecular aspects of thrombosis and antithrombotic drugs. *Crit Rev Clin Lab Sci*. 2005;42(3):249-77. Review.
23. Matijevic N, Wu KK. Hypercoagulable states and strokes. *Curr Atheroscler Rep*. 2006 8:324-9. Review.
24. Liou, J. Y., Lee, S., Ghelani, D., Matijevic-Aleksic, N. and Wu, K. K.: Protection of endothelial survival by peroxisome proliferator-activated receptor-delta mediated 14-3-3 upregulation. *Arterioscler Thromb Vasc Biol*. 26: 1481-7, 2006
25. Liou, J.Y., Ellent, D.P., Lee, S., Goldsby, J., Matijevic, N., Huang, J-C., Wu, K.K. Cyclooxygenase-2 derived PGE<sub>2</sub> protects mouse embryonic stem cells from apoptosis via EP2 and AKT. *Stem Cells*. 25:1096-103, 2007.
26. Liou JY, Matijevic-Aleksic N, Lee S, Wu KK. Prostacyclin inhibits endothelial cell XIAP ubiquitination and

degradation. J Cell Physiol. 2007. 212(3):840-8.

27. Aleksic N, Wang Y-W W, Ahn C, Juneja HS, Folsom AR, Wu KK. Assessment of coronary heart disease risk by combined analysis of coagulation factors. Atherosclerosis. 2008 Mar 13; [Epub ahead of print]

### **Current Research Support**

U01HL075572, NIH/NHLBI (E.Boerwinkle), "Atherosclerosis, Plaque and CVD in Communities", 9/2004 – 6/2008. Role: PI for the cellular studies (Flow cytometry and hemostasis). The aim of the project is to identify and correlate cellular and inflammatory processes contributing to atherosclerotic plaque development and changes in the vascular wall, and therefore potential modifying mechanisms

### **Pending:**

"Significance of multicellular interactions in predicting risk of thrombosis or restenosis following stent implantation". AHA Grant-in-Aid: 07/01/2008-06/30/2010. Role: PI.

### **Past Research Support**

N01-HC55022, NIH/NHLBI (Wu KK), "Atherosclerosis Risk in Communities (ARIC) Study: Morbidity/Mortality Follow-up": Central Hemostasis Laboratory, 2/1999 - 2/2006. Role: Co-Investigator. The overall goal was to identify hemostatic factors and their genetic polymorphisms that predict risk for atherosclerosis progression and development of coronary heart disease and ischemic stroke.

P 50 NS-23327, NIH/NHLBI (Wu KK), "Prostaglandins in Cerebral Vascular Thrombosis", 04/1999 – 3/30/2004. Role: Core Lab Co-investigator.

R01 HL59367 SPH (Folsom AR) "Epidemiology of Venous Thrombosis and Pulmonary Embolism" 02/01/98 – 01/31/02. University of Minnesota Role: Co-Investigator