

Curriculum Vitae

Jozef BORVAK, PhD

Professor, Chemistry/Biochemistry

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Education

Ph.D. in Biochemistry

Dissertation: "Human hemopexin. Preparation and covalent structure of the heme-rich protein."

Institute of Organic Chemistry and Biochemistry

Czechoslovak Academy of Sciences, Prague,

Czechoslovakia

M.S. in Chemistry

Thesis: "Isolation and properties of lactate dehydrogenase from germinating pea plants."

Charles University, Prague

Czechoslovakia

Teaching Experience (Excluding laboratory practices)

Course and Number	Course Title	Semester Taught	Where
CHEM 1411	General Chemistry I	Fall 2002	ECC
CHEM 1412	General Chemistry II	Spring 2003	ECC
CHEM 1411	General Chemistry I	Fall 2003	ECC
CHEM 1412	General Chemistry II	Spring 2004	ECC
CHEM 1411	General Chemistry I	Fall 2004	ECC
CHEM 1412	General Chemistry II	Spring 2005	ECC
CHEM 1411	General Chemistry I	Fall 2005	ECC
CHEM 4311	Biochemistry I	Fall 2005	UTA
CHEM 1451	General & Biological Chemistry	Fall 2005	UTA

CHEM 1445	Chem. I for Non-science Majors	Fall 2005	UTA
CHEM 1412	General Chemistry II	Spring 2006	ECC
CHEM 1442	General Chemistry II	Spring 2006	UTA
CHEM1441	General Chemistry I	Summer II 2006	UTA
CHEM 1451	General & Biological Chemistry	Summer II 2006	UTA
CHEM 351A	Introduction to Biochemistry	Fall 2006	Austin College
CHEM 111A	Introduction to Chemistry	Fall 2006	Austin College
CHEM 100B	G.A.S. Spells Stress	January 2007	Austin College
CHEM 352A	Biochemical Metabolism	Spring 2007	Austin College
CHEM 112A	Chemical Equilibria	Spring 2007	Austin College
CHEM 351A	Introduction to Biochemistry	Fall 2007	Austin College
CHEM 111A	Introduction to Chemistry	Fall 2007	Austin College
CHEM 100B	G.A.S. Spells Stress	January 2008	Austin College
CHEM 352A	Biochemical Metabolism	Spring 2008	Austin College
CHEM 112A	Chemical Equilibria	Spring 2008	Austin College
CHEM 100B	G.A.S. Spells Stress	January 2008	Austin College
CHEM 352A	Biochemical Metabolism	Spring 2008	Austin College
CHEM 112A	Chemical Equilibria	Spring 2008	Austin College
CHEM 1442	General Chemistry II	Spring 2011	UTA
CHEM 1446	Chem. II for Non-science Majors	Spring 2011	UTA
CHEM 1412	General Chemistry II	Spring 2011	TCC
CHEM1441	General Chemistry I	Summer 2011	UTA
CHEM 1412	General Chemistry II	Summer 2011	NLC
CHEM 1412	General Chemistry II	Fall 2011	ECC

CHEM 2423	Organic Chemistry I	Fall 2011	ECC
CHEM 1411	General Chemistry I	Fall 2011	TCC
CHEM 1412	General Chemistry II	Spring 2012	TCC
CHEM 2425	Organic Chemistry II	Spring 2012	NLC
CHEM 2423	Organic Chemistry I	Spring 2012	ECC
CHEM 1411	General Chemistry I	Spring 2012	ECC
CHEM 2423	Organic Chemistry I	Summer I 2012	NLC
CHEM 2425	Organic Chemistry II	Summer II 2012	NLC
CHEM 1411	General Chemistry I	Fall 2012	ECC
CHEM 1412	General Chemistry II	Fall 2012	ECC
CHEM 1411	General Chemistry I	Fall 2012	TCC
CHEM 1445	Chem. I for Non-science Majors	Fall 2012	UTA
CHEM 1411	General Chemistry I (53501)	Spring 2013	ECC
CHEM 1411	General Chemistry I (53112)	Spring 2013	ECC
CHEM 1411	General Chemistry I ONLINE	Spring 2013	ECC
CHEM 1412	General Chemistry II	Spring 2013	TCC
CHEM 1411	General Chemistry I	Summer 2013	TCC

Other Courses Taught:

General Chemistry I and II (Lecture & Lab), 2005 DeVry University, Irving, TX
 General Chemistry I and II (Lab), 2002 – 2013, El Centro College, DCCCD, Dallas, TX
 General Chemistry I (Lecture & Lab), 2005 – 2006 & 2011-2013 SU-I, TCCD, NE Campus, Hurst, TX
 Organic Chemistry I (Lab), 2011 Fall, El Centro College, DCCCD, Dallas, TX
 General Chemistry II (Lab), 2011 Fall, El Centro College, DCCCD, Dallas, TX

Publications and Papers

1. Barthova, J., J. Borvak, and S. Leblova. Isolation and properties of lactate dehydrogenase from germinating pea plants. *Phytochemistry* **15**: 75-77, 1976.

2. Cort, J., V. Mares, J. Borvak, J. Novakova, and J. Mulder. Autoradiographic study of distribution of neurohypophysial peptides in kidney -multiplicity of binding sites. *Eur. J. Clin. Invest.* **6**: 334 (Abstract), 1976.
3. Strop, P., J. Borvak, V. Kasicka, Z. Prusik, and I. Moravek. Isolation of human hemopexin by bioaffinity chromatography on haeme-Sepharose. *J. Chromatogr.* **214**: 317-325, 1981.
4. Moravek, L., J. Borvak, J. Gruner, B. Meloun, P. Strop, Z. Hrkal, and M. Pokorny. Human hemopexin. Preparation of the heme-rich protein. *Collect. Czech. Chem. Commun.* **47**: 535-542, 1982.
5. Frantikova, V., J. Borvak, I. Kluh, and L. Moravek. Amino acid sequence of the N-terminal region of human hemopexin. *FEBS Lett.* **178**: 213-216, 1984.
6. Borvak, J., and V. Mayer. UV-absorbance profile of human leukocytic ultrafiltrate after affinity chromatography on immobilized m-aminophenyl boronic acid: Implication for transfer factor purification. *Acta Virol.* **29**: 119-128, 1985.
7. Borvak, J. Human leukocytic ultrafiltrate (transfer factor): Improved fractionation of some of its m-aminophenyl boronic acid related components. *Biologia (Bratislava)* **42**: 373-379, 1987.
8. Borvak, J., V. Mayer, and J. Kotuliak. Lysed human leukocyte ultrafiltrate: Analytical studies by chromatographic methods. **IN: Leukocyte Dialysates and Transfer Factor - Biological Studies and Clinical Investigations** (V. Mayer and J. Borvak, Eds.), Institute of Virology, Slovak Academy of Sciences, Bratislava, pp. 64, 1987.
9. Borvak, J., and J. Kovac. Investigations of lysed leukocyte dialysate/ultrafiltrate components by electromigration methods. **IN: Leukocyte Dialysates and Transfer Factor - Biological Studies and Clinical Investigations** (V. Mayer and J. Borvak, Eds.), Institute of Virology, Slovak Academy of Sciences, Bratislava, pp. 98, 1987.
10. Mayer, V., S. Necas, J. Kotuliak, J. Borvak, V. Zachar, and J. Hruzik. Gel-filtered ethanol-precipitated material from human leukocyte ultrafiltrate in patients with herpes zoster. **IN: Leukocyte Dialysates and Transfer Factor - Biological Studies and Clinical Investigations** (V. Mayer and J. Borvak, Eds.), Institute of Virology, Slovak Academy of Sciences, Bratislava, pp. 390, 1987.
11. Mayer, V., J. Borvak, and E. Gajdosova. Permeation chromatography and ethanol precipitation of splenic dialysates from mice immunized with a live flavivirus (tick-borne encephalitis complex): Removal of inhibitory and increase of an inducing activity. **IN: Leukocyte Dialysates and Transfer Factor - Biological Studies and Clinical Investigations** (V. Mayer and J. Borvak, Eds.), Institute of Virology, Slovak Academy of Sciences, Bratislava, pp. 45, 1987.
12. Borvak, J., V. Mayer, and J. Kotulink. Semipurified human leukocyte ultrafiltrate in herpes zoster. I. Large-scale preparation and biochemical analysis. *Acta Virol.* **33**: 417-427, 1989.
13. Borvak, J., and V. Mayer. Amino acid analysis of the best segregated reversed-phase HPLC peaks of crude and partially purified lysed human leukocyte ultrafiltrates. **IN: Research and Application of Transfer Factor and DLE: Proceedings of the Sixth International Workshop on Transfer Factor** (H. Bao-lai, W. Ru-zhang, and Z. Shao-fen, Eds.), Xue Yuan Press, Beijing, China, pp. 549, 1989.
14. Borvak, J., V. Mayer, and L. Moravek. Amino acid analysis of selected reversed-phase high performance liquid chromatographic peaks of crude and partially purified lysed human leukocyte ultrafiltrate. *Acta Virol.* **34**: 11-18, 1990.
15. Borvak, J. and H. Schmidtmayerova. Inhibition of HIV-1 reverse transcriptase activity by HPLC fractions of lysed leukocyte ultrafiltrate. *Proceedings of the Seventh International Workshop on Transfer Factor*, Tokyo, Japan, 1991.

16. Mayer, V., S. Necas, M. Lackovicova, E. Mitrova, and J. Borvak. Marked therapeutic effect of human leukocyte ultrafiltrate in herpes zoster: Strong association with cell-mediated immune response. Proceedings of the Seventh International Workshop on Transfer Factor, Tokyo, Japan, 1991.
17. Borvak, J., J. Kasanická, and V. Mayer. HPLC-monitoring of AZT in HIV infected patient's plasma: A critical study. *Acta Virol.* **36**: 428-434, 1992.
18. Borvak, J., and V. Mayer. Experimentalna terapia infekcie HIV. *Biologické Listy* **58**: 133-147, 1993.
19. Borvak, J., C.-S. Chou, K. Bell, G. Van Dyke, H. Zola, O. Ramilo, and E. S. Vitetta. Expression of CD25 Defines PBMCs with Productive vs Latent HIV Infection. *J. Immunol.* **155**: 3196-3204, 1995.
20. Ramilo, O., P.J. Hicks, J. Borvak, L.M. Gross, D. Zhong, J.E. Squires, and E.S. Vitetta. T cell activation and human immunodeficiency virus replication after influenza immunization of infected children. *Pediatr. Infect. Dis. J.* **15(3)**: 197-203, 1996.
21. Borvak, J., C.-S. Chou, G. Van Dyke, B. Rosenwirth, E.S. Vitetta, and O. Ramilo. The use of cyclosporine, FK506, and SDZ NIM811 to prevent CD25- quiescent peripheral blood mononuclear cells from producing human immunodeficiency virus. *J. Infect. Dis.* **174(4)**: 850-853, 1996.
22. Ghetie, V., S. Popov, J. Borvak, C. Radu, D. Matesoi, C. Medesan, R.J. Ober, and E.S. Ward. Increasing the serum persistence of an IgG fragment by random mutagenesis. *Nat. Biotechnol.* **15(7)**: 637-640, 1997.
23. Borvak, J., J. Richardson, C. Medesan, F. Antohl, C. Radu, M. Simionescu, V. Ghetie, and E.S. Ward. Functional expression of the MHC class-I related receptor, FcRn, in endothelial cells of mice. *Int. Immunol.* **10(9)**:1289-1298, 1998.
24. Zou, W., J. Borvak, F. Marches, S. Wei, P. Galanaud, D. Emilie, and T.J. Curiel. Macrophage-derived dendritic cells have strong Th1-polarizing potential mediated by beta-chemokines rather than IL-12. *J. Immunol.* **165(8)**: 4388-4396, 2000.
25. Zou, W., J. Borvak, F. Marches, S. Wei, T. Isaeva, and T.J. Curiel. A guide to isolation, culture and propagation of dendritic cells. *IN: Dendritic Cells: Biologie and Clinical applications. Second Edition.* M.T. Lotze and A.W. Thomson, eds. Academic Press. London. 2001.
26. Zou, W., J. Borvak, S. Wei, F. Marches, T. Isaeva, D.T. Curiel, J. Crippin, A.N. Gordon, and T.J. Curiel. Reciprocal regulation of human plasmacytoid dendritic cells and monocytes during viral infection. *Eur. J. Immunol.* **31(12)**:3833-3839, 2001.
27. Zou, W., V. Machelon, A. Coulomb-L'Hermin, J. Borvak, F. Nome, T. Isaeva, S. Wei, R. Krzysiek, I. Durand-Gasselien, A. Gordon, T. Pustilnik, D.T. Curiel, P. Galanaud, F. Capron, D. Emilie, and T.J. Curiel. Stromal-derived factor-1 in human tumors recruits and alters the function of plasmacytoid precursor dendritic cells. *Nat. Med.* **7(12)**: 1339-1346, 2001.
28. Wei, S., F. Marches, J. Borvak, W. Zou, C. Branson, J. Channon, M. White, J. Radke, M. Cesbron-Delauw, and T.J. Curiel. *Toxoplasma gondii* infected human myeloid dendritic cells inhibit T lymphocyte activation by inducing contact-dependent apoptosis. *Infect. Immun.* **70(4)**: 1750-1760, 2002.
29. Bennet, L., A. K. Palucka, E. Arce, V. Cantrell, J. Borvak, J. Banchereau, and V. Pascual. Interferon and Granulopoiesis Signature in Systemic Lupus Erythematosus Blood. *J. Exp. Med.* **197(6)**: 711-723, 2003.
30. Singhal, S. S., S. Yadav, R. Vatsyayan, P. Chaudhary, J. Borvak, J. Singhal, and S. Awasthi. Increased expression of cdc2 inhibits transport function of RLIP76 and promotes apoptosis. *Cancer Lett.* **283(2)**:152-8, 2009.

31. Borvak, J., J. Singhal, S. Singhal, S. Yadav, M. Sahu, Y. Awasthi, and S. Awasthi. The Role of RLIP76 in Dendritic Cell-Based Immunotherapies. *Blood (ASH Annual Meeting Abstracts)*, **114**: 3689, 2009.
32. Awasthi, S., S. S. Singhal, S. Yadav, J. Singhal, R. Vatsyayan, E. Zajac, R. Luchowski, J. Borvak, K. Gryczynski, and Y. C. Awasthi. A central role of RLIP76 in regulation of glycemic control. *Diabetes*. **59(3)**:714-25, 2010.
33. Borvak, J., M. Sahu, J. Singhal, S. Yadav, L. X. Oakford, S. Bae, P. C. R. Lelsani, V. Joy, A. Nanrani, S.S. Singhal, Y.C. Awasthi, and S. Awasthi. RLIP76 is required for the maturation and function of dendritic cells. *Am. J. Immunol.*, **6(3)**: 2010.