

Professor Željko Dujic, MD, PhD

University of Split School of Medicine

phone: 00385 21 557 906

Department of integrative physiology

Fax: 00385 21 557 951

Šoltanska 2, 21000 Split, Croatia

E-mail: zeljko.dujic@mefst.hr

Date and place of birth: September 29th 1959, Split

Home address: Makarska 6, 21000 Split

Academic Degrees:

1983: M.D., University of Zagreb School of Medicine, Croatia

1986: Ph.D. in physiology, Medical College of Wisconsin, Wisconsin, USA

Positions Held:

1983-1986: Ph.D. student Medical College of Wisconsin, Wisconsin, USA

1988-1991: assistant professor, Department of Physiology

1991-1996: associate professor, Department of Physiology

1996-1999: professor, Department of Physiology

1999-present: full professor of physiology.

2000-2006: Vice-rector for science and international affairs at University of Split

2005-2009: Member of the Board of the National Science Foundation

Marital Status: Married, two children (Goran and Andrea).

Scientific activities

PhD thesis: The effect of morphine on acetylcholine release and ganglionic sympathetic transmission, Medical College of Wisconsin, Milwaukee, SAD, 1986.

CC/SCI publications: 115

a) Manuscripts published in Current Contents (CC):

1. Stowe DF, **Dujić Ž**, Bosnjak ZJ, Kalbfleisch JH, Kampine JP. Volatile anesthetics attenuate sympathomimetic actions on the guinea pig SA node. *Anesthesiology* 68:887-894, 1988.
2. Bosnjak ZJ, **Dujić Ž**, Roerig DL, Kampine JP. Effects of halothane on acetylcholine release and sympathetic ganglionic transmission. *Anesthesiology* 69:500-506, 1988.
3. Polic S, Rumboldt Z, **Dujić Ž**, Bagatin J, Deletis O, Rozga A. Right ventricular failure due to chronic cor pulmonale and digoxin. *Int J Clin Pharm Res* 11:153-162, 1990.
4. **Dujić Ž**, Roerig DL, Schedewie HK, Kampine JP, Bosnjak ZJ. Presynaptic modulation of ganglionic ACh release by muscarinic and nicotinic receptors. *Am J Physiol* 259:R288-R293, 1990.
5. **Dujić Ž**, Tocilj J, Slavković V. Effects of nifedipine on diffusing lung capacity and pulmonary capillary blood volume in chronic obstructive lung disease. *Respiration* 58:186-191, 1991.
6. **Dujić Ž**, Tocilj J, Ljutić D, Eterović D. Effects of hemodialysis and anemia on pulmonary diffusing capacity, membrane diffusing capacity and capillary blood volume in uremic patients. *Respiration* 1991; 58:277-281.
7. **Dujić Ž**, Tocilj J, Šarić M. Early detection of interstitial lung disease in asbestos exposed non-smoking workers by mid-expiratory flow rate and high-resolution computed tomography. *Brit J Ind Med* 48:663-664, 1991.
8. Andelinovic S, Bakotin J, **Dujić Ž**, Andelinovic D, Stojan R. Carcinoembryonic antigen immunoreactivity in colorectal cancer: correlation with morphologic parameters. *An Saudi Med* 11:524-529, 1991.
9. Eterović D, **Dujić Ž**. Recirculation subtraction and left-to-right shunt quantification (letter). *J Nucl Med* 33:2057, 1992.
10. Eterović D, **Dujić Ž**. First-pass versus gated equilibrium radioangiography (letter). *J Nucl Med* 33:2056-2058, 1992.
11. **Dujić Ž**, Eterović D. Pulmonary function in chronic renal failure (letter). *Thorax* 47:763, 1992.
12. **Dujić Ž**, Eterović D, Denoble P, Krstačić G, Tocilj J. Lung diffusing capacity in a hyperbaric environment: assessment by a rebreathing technique. *Brit J Ind Med* 1992; 49:254-259.
13. **Dujić Ž**, Tocilj J, Boschi S, Šarić M, Eterović D. Biphasic lung diffusing capacity: detection of early asbestos induced changes in lung function. *Brit J Ind Med* 49:260-267, 1992.
14. **Dujić Ž**, Eterović D, Denoble P, Krstačić G, Tocilj J, Gošović S. The effect of a single air-dive on pulmonary diffusing capacity in professional divers. *J Appl Physiol* 74:55-62, 1993.
15. **Dujić Ž**, Eterović D, Tocilj J. Association between asbestos-related pleural plaques and resting hyperventilation. *Scan J Work Environ Health* 19:346-351, 1993.
16. Eterović D, **Dujić Ž**, Tocilj J, Čapkun V. High resolution pulmonary computed tomography scans quantified by analysis of density distributions: application to asbestosis. *Brit J Ind Med* 50:514-519, 1993.
17. **Dujić Ž**, Eterović D, Tocilj J, Kusić Z, Čapkun V. About mechanisms of prostaglandin E1 induced deterioration of pulmonary gas exchange in COPD patients. *Clin Physiol* 13:497-506, 1993.

18. **Dujić Ž**, Eterović D, Tocilj J, Andjelinović D. Increase of pulmonary diffusing capacity in systemic sclerosis. *Brit J Rheumatol* 33: 437-441, 1994.
19. Eterović D, Popović S, **Dujić Ž**. Non-stationary theory of blood-borne tracers. *Nucl Med Comm* 15:786-794, 1994.
20. Eterović D, **Dujić Ž**. Theoretical considerations on the validity of the Stewart-Hamilton principle in measuring cycle-averaged flows via histogram of indicator in the pulsating compartment. *Med Phys* 21:293-298, 1994.
21. Eterović D, **Dujić Ž**, Tocilj J, Popović S. Model for radionuclide quantification of left-to-right shunts. *Clin Physiol* 14:87-101, 1994.
22. Eterović D, **Dujić Ž**, Popović S. Deconvolving out indicator smearing in the right ventricle facilitates left-to-right shunt quantification. *Eur J Nucl Med* 21:525-530, 1994.
23. Eterović D, **Dujić Ž**, Popović S. Gated versus first-pass radioangiography in the evaluation of left-to-right shunts. *Clin Nucl Med* 20:534-537, 1995.
24. **Dujić Ž**, Tocilj J, Eterović D. Increase of lung transfer factor in early sarcoidosis. *Resp Med* 89:9-14, 1995.
25. Mirić D, Eterović D, Giunio L, **Dujić Ž**, Fabijanić D, Hozo I, Kuzmanić D, Božić I, Čulić V. Triggers of acute myocardial infarction regarding its site. *Int J Cardiol* 1997.
26. Strinić T, Eterović D, **Dujić Ž**, Marković V, Tocilj J. Spirometric disorders in women with genital descensus. *Acta Obstet Gynecol Scand* 76:979-983, 1997.
27. Eterović D, Juretić-Kuščić, Čapkun V, **Dujić Ž**. Pyelolithotomy improves while extracorporeal lithotripsy impairs kidney function. *J Urol* 161:39-44, 1999
28. Eterović D, Strinić T, **Dujić Ž**, Boban M. Blood gases and sex hormones in women with and without genital descensus. *Respiration* 66:400-406, 1999.
29. Janković S, Bešenski N, Bušić Ž, **Dujić Ž**, Buča A, Mašković J, Lušić I, Primorac D. Craniocerebral war missile injuries: clinical and radiological study. *Acta Neurochir (Wien)* 142:101-102, 2000.
30. Baković D, Valić Z, Eterović D, Vuković I, Obad A, Marinović-Terzić I, **Dujić Ž**. Spleen volume and blood flows response to repeated breath-hold apneas. *J Appl Physiol* 95:1460-1466, 2003.
31. **Dujić Ž**, Duplančić D, Marinović-Terzić I, Baković D, Ivančev V, Valic Z, Eterović D, Petri NM, Wisloff U, Brubakk AO. Aerobic exercise before diving reduces venous gas bubble formation in humans. *J Physiol* 555(3): 637-642, 2004.
32. Eterović D, Šitum M, Juretić-Kuščić L, **Dujić Ž**. A decrease in blood pressure following pyelolithotomy but not extracorporeal lithotripsy. *Urol Res* 33(2):93-8, 2005.
33. **Dujić Ž**, Baković D, Marinović-Terzić I, Eterović D. Acute effects of single open-sea air dive and post-dive posture on cardiac output and pulmonary gas exchange in recreational divers. *Brit J Sports Med* 39(5):e24, 2005.

34. **Dujić Ž**, Palada I, Obad A, Duplančić D, Brubakk AO, Valic Z. Exercise-induced intrapulmonary shunting of venous gas emboli does not occur after open sea diving. *J Appl Physiol* 99: 944-949, 2005.
35. **Dujić Ž**, Palada I, Obad A, Duplančić D, Baković D, Valic Z. Exercise during three minute decompression stop reduces postdive venous gas bubbles in the field diving. *Med Sci Sports Exerc* 37(8):1319-1323, 2005.
36. Brubakk AO, Duplančić D, Valic Z, Palada I, Obad A, Baković D, Wisloff U, **Dujić Ž**. A single air dive reduces arterial endothelial function in man. *J Physiol* 566:901-6, 2005.
37. Bakovic D, Eterovic D, Saratlija-Novakovic A, Palada I, Valic Z, Bilopavlovic N, **Dujić Ž**. Effect of human splenic contraction on variation in circulating blood cell counts. *Clin Exp Physiol Pharmacol* 32:944-51, 2005.
38. Valic Z, Duplančić D, Baković D, Ivančev V, Eterović D, Wisløff U, Brubakk AO, **Dujić Ž**. Diving-induced venous gas emboli do not change pulmonary artery pressure. *Int J Sports Med*, 26(8):626-31, 2005.
39. **Dujić Ž**, Ivančev V, Valic Z, Baković D, Marinović-Terzić I, Eterović D, Wisløff U. Postexercise hypotension in moderately trained athletes after maximal exercise. *Med Sci Sports Exerc* 38(2):318-322, 2006.
40. Modun D, Music I, Katalinic V, **Dujic Z**, Boban M. Glycerol and ethanol in red wine are responsible for urate-related increases in plasma antioxidant capacity. *Clin Chem* 52(4):785-7, 2006.
41. **Dujić Ž**, Obad A, Palada I, Ivancev V, Valic Z. Venous bubble count declines during strenuous exercise after an open sea dive to 30 m. *Aviat Space Environ Med* 77:592-596, 2006.
42. **Dujić Ž**, Palada I, Valic Z, Duplancic D, Obad A, Wisloff U, Brubakk AO. Exogenous nitric oxide and bubble formation in divers. *Med Sci Sports Exerc* 38(8):1432-5, 2006.
43. **Dujić Ž.**, Obad A, Palada I, Valic Z, Brubakk AO. A single open sea air dive increases pulmonary artery pressure and reduces right ventricular function in professional divers. *Eur J Appl Physiol* 97(4):478-85, 2006.
44. Boban M, Modun D, Music I, Vukovic J, Brizic I, Salamunic I, Obad A, Palada A, **Dujić Ž**. Red wine induced modulation of vascular function: separating the role of polyphenols, ethanol and urates. *J Cardiovasc Pharmacol* 47:695-71, 2006.
45. **Dujić Ž**, Valic Z. Pulmonary artery pressure and right-to-left shunting through foramen ovale. *Int J Sports Med* 27(6):509, 2006.
46. Bakovic D, Eterovic D, Valic Z, Saratlija-Novakovic Z, Palada I, Obad A, **Dujic Z**. Increased pulmonary vascular resistance and reduced stroke volume, in association with CO₂ retention and inferior vena cava dilatation. *J Appl Physiol* 101(3):866-72, 2006.

47. Valic Z, Palada I, Bakovic D, Valic M, Mardesic-Brakus S, **Dujic Z**. Muscle oxygen supply during cold face immersion in breath-hold divers and controls. *Aviat Space Environ Med* 77:1224-29, 2006.
48. Obad A, Palada I, Valic Z, Ivancev V, Bakovic D, Wisloff U, Brubakk AO, **Dujic Z**. The effects of acute oral antioxidants on diving-induced alterations in cardiovascular function. *J Physiol* 578:859-70, 2007.
49. Obad A, Palada I, Valic Z, Ivancev V, Lojpur M, Brubakk AO, **Dujic Z**. Detection of intra-pulmonary shunting of venous gas bubbles by sonography during exercise after diving in a professional diver. *J Clin Ultrasound* 35:473-476, 2007.
50. Palada I, Obad A, Bakovic D, Valic Z, Ivancev V, **Dujic Z**. Cerebral and peripheral hemodynamics and oxygenation during maximal dry breath-holds. *Respir Physiol Neurobiol* 157:374-81, 2007.
51. Ivancev V, Palada I, Valic Z, Obad A, Bakovic D, Dietz NM, Joyner MJ, **Dujic Z**. Cerebrovascular reactivity to hypercapnia is unimpaired in breath-hold divers. *J Physiol* 582:723-30, 2007.
52. Valic Z, Palada I, **Dujic Z**. Short-acting NO donor and decompression sickness in humans (letter). *J Appl Physiol* 102(4):1725, 2007.
53. Obad A, Valic Z, **Dujic Z**. The replay to the Editor (letter). *J Physiol* 583:407, 2007.
54. Obad A, Valic Z, Palada I, Brubakk AO, Modun D, **Dujic Z**. Antioxidant pre-treatment and reduced arterial endothelial dysfunction after diving. *Aviat Space Environ Med*, 78:1114-1120, 2007.
55. Palada I, Eterovic D, Obad A, Bakovic D, Valic Z, Ivancev V, Lojpur M, Shoemaker JK, **Dujic Z**. Spleen and cardiovascular function during short apneas in divers. *J Appl Physiol* 103(6):1958-63, 2007.
56. **Dujic Z**, Ivancev V, Heusser K, Dzamonja G, Palada I, Valic Z, Tank J, Obad A, Bakovic D, Diedrich A, Joyner MJ, Jordan J. Central chemoreflex sensitivity and sympathetic neural outflow responses to hypercapnia in elite divers and healthy men. *J Appl Physiol* 104:205-211, 2008.
57. Modun D, Music I, Vukovic J, Brizic I, Katalinic V, Obad A, Palada I, **Dujic Z**, Boban M. The increase in human plasma antioxidant capacity after red wine consumption is due to both plasma urate and wine polyphenols. *Atherosclerosis* 197:250-256, 2008.
58. Palada I, Bakovic D, Valic Z, Obad S, Ivancev V, Eterovic D, Shoemaker JK, **Dujic Z**. Restoration of hemodynamics in apnea struggle phase in association with involuntary breathing movements. *Respir Physiol Neurobiol* 161:174-181, 2008.

59. Bakovic D, Glavas D, Palada I, Breskovic T, Fabijanic D, Obad A, Valic Z, Brubakk AO, **Dujić Z**. First maximal venous gas bubble grade in the right heart after diving in man. *Aviat Space Environ Med* 79:626-628, 2008.
60. Bakovic D, Eterovic D, Palada I, Valic Z, **Dujic Z**. Does breath-holding increase the risk of thrombotic event? (letter). *Platelets* 19:314-315, 2008.
61. Breskovic T, Denoble P, Valic Z, Palada I, Obad A, Glavas D, Bakovic D, **Dujic Z**. Venous gas bubble formation and decompression risk after scuba diving in persons with chronic spinal cord injury and able-bodied controls *Spinal Cord* 46:743-7, 2008.
62. Glavas D, Markotic A, Valic Z, Kovacic N, Palada I, Martinic R, Breskovic T, Bakovic D, Brubakk AO, **Dujic Z**. Expression of endothelial selectin ligands on human leukocytes following dive. *Exp Biol Med* 233: 1181-1188, 2008.
63. Frances M, **Dujic Z**, Shoemaker JK. Splenic constriction during isometric handgrip exercise in humans. *Appl Physiol Nutrition Metabolism* 33:990-6, 2008.
64. Bakovic D, Pivac N, Eterovic D, Palada I, Valic Z, Paukovic-Sekulic B, **Dujic Z**. Changes in platelet size and spleen volume in response to selective and non-selective beta-receptor blockade in hypertensive patients. *Clin Exp Physiol Pharmacol* 36:441-446, 2009.
65. Glavas D, Bakovic D, Obad A, Palada I, Breskovic T, Valic Z, Brubakk AO, **Dujic Z**. Effects of tetrahydrobiopterin on venous bubble grade and acute diving-induced changes in cardiovascular function in man. *Clin Physiol Funct Imaging* 29:101-107, 2009.
66. Heusser K, Dzamonja G, Tank J, Palada I, Valic Z, Bakovic D, Obad A, Ivancev V, Diedrich A, Joyner MJ, Jordan J, **Dujic Z**. Sympathetic activation with voluntary apnea in elite divers. *Hypertension* 53:719-24, 2009.
67. Ivancev V, Bakovic D, Obad A, Breskovic T, Palada I, Joyner MJ, **Dujic Z**. Effects of indomethacin on cerebrovascular response to hypercapnea and hypocapnea in breath-hold diving and obstructive sleep apnea. *Respir Physiol Neurobiol* 166:152-158, 2009.
68. Marinovic J, Ljubkovic, M, Obad A, Bakovic D, Breskovic T, **Dujic Z**. The effects of successive air and trimix dives on human cardiovascular function. *Med Sci Sports Exer* 41(12):2207-12, 2009.
69. Breskovic T, Valic Z, Lipp A, Heusser K, Ivancev V, Tank J, Dzamonja G, Jordan J, Shoemaker KJ, Eterovic D, **Dujic Z**. Peripheral chemoreflex regulation of sympathetic vasomotor tone in apnea divers. *Clin Auton Res* 20:57-63, 2010.
70. **Dujic Z**, Uglesic L, Breskovic T, Valic Z, Heusser K, Marinovic J, Ljubkovic M, Palada I. Involuntary breathing movements improve cerebral oxygenation during apnea struggle phase in elite divers. *J Appl Physiol* 107(6):1840-6, 2009.

71. Marinovic J, Ljubkovic M, Obad A, Breskovic T, Salamunic I, Denoble PJ, **Dujic Z**. Assessment of extravascular lung water and cardiac function in trimix SCUBA diving. *Med Sci Sports Exer* 42:1054-61, 2010.
72. Breskovic T, Ivancev V, Banic I, Jordan J, **Dujic Z**. Peripheral chemoreflex sensitivity and sympathetic nerve activity are normal in apnea divers during training season. *Auton Neurosci* 154:42-7, 2010.
73. Obad A, Marinovic J, Ljubkovic M, Breskovic T, Modun D, Boban M, **Dujic Z**. Successive deep dives impair endothelial function and enhance oxidative stress in man. *Clin Physiol Funct Imaging* 30:432-8, 2010.
74. Ljubkovic M, Gaustad SE, Marinovic J, Obad A, Ivancev V, Bilopavlovic N, Breskovic T, Wisloff U, Brubakk AO, **Dujic Z**. Ultrasonic evidence of acute interstitial lung edema after SCUBA diving is resolved within 2-3 hours. *Respir Physiol Neurobiol* 171:165-170, 2010.
75. Gutvik CR, Dunford RG, **Dujic Z**, Brubakk AO. Parameter estimation of the Copernicus decompression model using non-linear optimization. *Medical & Biological Engineering & Computing* 48:625-36, 2010.
76. Ljubkovic M, Marinovic J, Obad A, Breskovic T, Gaustad SE, **Dujic Z**. High incidence of venous and arterial gas emboli at rest after trimix diving without protocol violations. *J Appl Physiol* 109(6):1670-4, 2010.
77. Steinback C, Breskovic T, Banic I, **Dujic Z**, Shoemaker K. Autonomic and cardiovascular responses to chemoreflex stress in apnoea divers. *Auton Neurosci* 156:138-43, 2010.
78. Dzamonja G, Tank J, Heusser K, Palada I, Valic Z, Bakovic D, Obad A, Ivancev V, Breskovic T, Diedrich A, Luft FC, **Dujic Z**, Jordan J. Glossopharyngeal insufflation induces cardioinhibitory syncope in apnea divers. *Clin Auton Res* 20(6):381-4, 2010.
79. Gaustad SE, Brubakk AO, Hoydal M, Catalucci D, Condorelli G, **Dujic Z**, Marinovic J, Ljubkovic M, Mollerlokken A, Wisloff U. Immersion prior to dry simulated dive reduces cardiomyocyte function and increases mortality after decompression. *J Appl Physiol* 109:752-7, 2010.
80. Heusser K, Dzamonja G, Breskovic T, Steinback CD, Diedrich A, Tank J, Jordan, **Dujic Z**. Sympathetic and cardiovascular responses to glossopharyngeal insufflation in trained apnea divers. *J Appl Physiol* 109(6):1728-35, 2010.
81. Steinback CD, Salmanpour A, Breskovic T, **Dujic Z**, Shoemaker JK. Sympathetic neural activation: an ordered affair. *J Physiol* 588(Pt 23):4825-36, 2010.
82. Steinback CD, Breskovic T, Frances M, **Dujic Z**, Shoemaker JK. Ventilatory restraint of sympathetic activity during chemoreflex stress. *Am J Physiol Regul Integr Comp Physiol* 299(5):R1407-14, 2010.

83. Ljubkovic M, **Dujic Z**, Mollerlokken A, Bakovic D, Obad A, Breskovic T, Brubakk AO. Venous and arterial bubbles at rest after no-decompression air dives. *Med Sci Sports Exerc* 43(6):990-5, 2011.
84. **Dujic Z**, Dujic Z, Marinovic J, Obad A, Ivancev V, Breskovic T, Jovovic P, Ljubkovic M. No-decompression air dive and ultrasound lung comets. *Aviat Space Environ Med* 82(1):40-3, 2011.
85. **Dujic Z**, Breskovic T, Ljubkovic M. Breath hold diving: in vivo model of the brain survival response in man? *Med Hypotheses* 76(5):737-40, 2011.
86. Novak K, Polic S, Capkun V, Fabijanic D, Lukin A, **Dujic Z**, Rumboldt Z. Free wall rupture (FWR) in patients with acute ST-elevation myocardial infarction (STEMI) receiving fibrinolytic therapy (FT): A 7-year prospective study. *Arch Gerontol Geriatr* 54(1):266-70, 2012.
87. Batinic T, Utz W, Breskovic T, Jordan J, Schulz-Menger J, Jankovic S, **Dujic Z**, Tank J. Cardiac Magnetic Resonance Imaging during Pulmonary Hyperinflation in Apnea Divers. *Med Sci Sports Exerc* 43(11):2095-101, 2011.
88. Breskovic T, Steinback CD, Salmanpour A, Shoemaker JK, **Dujic Z**. Recruitment pattern of sympathetic neurons during breath-holding at different lung volumes in apnea divers and controls. *Auton Neurosci* 164(1-2):74-81, 2011.
89. Breskovic T, Uglesic L, Zubin P, Kuch B, Kraljevic J, Zanchi J, Ljubkovic M, Sieber A, **Dujic Z**. Cardiovascular changes during underwater static and dynamic breath-hold dives in trained divers. *J Appl Physiol* 111(3):673-8, 2011.
90. Marinovic J, Ljubkovic M, Breskovic T, Gunjaca G, Obad A, Modun D, Bilopavlovic N, Tsikas D, **Dujic Z**. Effects of successive air and nitrox dives on human vascular function. *Eur J Appl Physiol* 112(6):2131-7, 2012.
91. Ljubkovic M, Zanchi J, Breskovic T, Marinovic J, Lojpur M, **Dujic Z**. Determinants of arterial gas embolism after SCUBA diving. *J Appl Physiol* 112:91-5, 2012.
92. **Dujic Z**, Breskovic T. Impact of breath-holding on cardiovascular respiratory and cerebrovascular health. *Sports Med* 42(6): 1-14, 2012.
93. Thom SR, Milovanova TN, Bogush M, Bhopale VM, Yang M, Bushmann K, Pollock NW, Ljubkovic M, Denoble P, **Dujic Z**. Microparticle production, neutrophil activation and intravascular bubbles following open-water SCUBA diving. *J Appl Physiol* 112(8):1268-78, 2012.
94. Modun D, Krnic M, Vukovic J, Kokic V, Kukoc-Modun L, Tsikkas D, **Dujic Z**. Plasma nitrite concentration decrease after hyperoxia-induced oxidative stress in healthy humans. *Clin Physiol Funct Imaging* 32(5):404-8, 2012.
95. Breskovic T, Lojpur M, Zubin P, Cross TJ, Kraljevic J, Ljubkovic M, Marinovic J, Ivancev V, Johnson BD, **Dujic Z**. The influence of varying inspired fractions of O₂ and CO₂ on the development of involuntary breathing movements during maximal apnoea. *Respir Physiol Neurobiol* 181(2):228-233, 2012.

96. Steinback C, Zubin-Maslov P, Breskovic T, Bakovic D, Pivac N, **Dujic Z**. Cerebral oxygenation following epinephrine infusion. *J Neurol Sci* 15;321(1-2):23-8, 2012.
97. Bakovic D, Pivac N, Eterovic D, Breskovic T, Zubin Maslov P, Obad A, **Dujic Z**. The effects of low-dose epinephrine infusion on spleen size, central and hepatic circulation and circulating platelets. *Clin Physiol Funct Imaging* 33(1):30-7, 2013.
98. Kiviniemi AM, Breskovic T, Uglesic L, Kuch B, Zubin-Maslov P, Sieber A, Tulppo MP, **Dujic Z**. Heart rate variability during static and dynamic breath-hold dives in elite divers. *Auton Neurosci* 169(2):95-101, 2012.
99. Cikes-Culic V, Martinic R, Markotic A, Ljubkovic M, Breškovic T, Marinovic J, **Dujic Z**. Expression of endothelial selectin ligands on leukocytes following repeated dives in SCUBA divers. *Period Biol* in press 2012.
100. Cross TJ, Breskovic T, Sabapathy S, Zubin Maslov P, Johnson BD, **Dujic Z**. Respiratory muscle pressure-development during breath holding in apnoea divers. *Med Sci Sports Exerc* 45(1):93-101, 2013.
101. Maslov PZ, Breskovic T, Brewer DN, Shoemaker JK, **Dujic Z**. Recruitment pattern of sympathetic muscle neurons during premature ventricular contractions in heart failure patients and controls. *Am J Physiol Regul Integr Comp Physiol* 303(11):R1157-64, 2012.
102. Zanchi J, Ljubkovic M, Denoble PJ, **Dujic Z**, Ranapurwala SI, Pollock NW. Influence of Repeated Daily Diving on Decompression Stress. *Int J Sports Med* in press.
103. Bilopavlovic N, Marinovic J, Ljubkovic M, Obad A, Zanchi J, Pollock NW, Denoble P, **Dujic Z**. Effect of repetitive SCUBA diving on humoral markers of endothelial and central nervous system integrity. *Eur J Appl Physiol* 113(7):1737-43, 2013.
104. Zubin Maslov P, Breskovic T, Shoemaker JK, Olson TP, Johnson BP, Eterovic D, **Dujic Z**. Firing strategies of muscle sympathetic neurons during short-term use of continuous positive airway pressure in healthy subjects and in chronic heart failure patients. *Respir Physiol Neurobiol* 187(2):149-56, 2013.
105. Thom SR, Milovanova TN, Bogush M, Yang M, Bhopale VM, Pollock NW, Ljubkovic M, Denoble PJ, Madden D, Lozo M, **Dujic Z**. Bubbles, microparticles and neutrophil activation: changes with exercise level and breathing gas during open-water SCUBA diving. *J Appl Physiol* 114(10):1396-405, 2013.
106. Madden D, Lozo M, **Dujic Z**, Ljubkovic M. Exercise after SCUBA diving increases the incidence of arterial gas embolism. *J Appl Physiol* in press.
107. Eftedal I, Ljubkovic M, Flatberg A, Jørgensen A, Brubakk AO, **Dujic Z**. Acute and potentially persistent effects of scuba diving on the blood transcriptome of experienced divers. *Physiol Genomics* in press.

108. Kraljevic J, Marinovic J, Pravdic D, Zubin P, **Dujic Z**, Wisloff U, Ljubkovic M. Aerobic interval training attenuates remodeling and mitochondrial dysfunction in post-infarction failing rat heart. *Cardiovasc Res* 99(1):55-64, 2013.

109. Bakovic D, Pivac N, Zubin Maslov P, Breskovic T, Dzamonja G, **Dujic Z**. Spleen volume changes during adrenergic stimulation with low doses of epinephrine. *J Physiol Pharmacol* in press.

110. Lozo M, Madden D, Gunjaca G, Ljubkovic M, Marinovic J, **Dujic Z**. The impact of consecutive freshwater trimix dives at altitude on human cardiovascular function. *Clin Physiol Funct Imaging* in press.

b) Manuscripts published in Science Citation Index (SCI):

1. **Dujic Z**, Valic Z, Brubakk AO. Beneficial role of exercise on SCUBA diving. *Exer Sports Sci Rev* 36:38-42, 2008.

2. Marušić J, Eterović D, Marinović-Terzić I, Baković D, **Dujić Ž**. Dry diving as a human model of pulmonary microembolization. *Med Glas* 6:42-52, 2009.

3. Kuch B, Koss B, **Dujic Z**, Buttazzo G, Sieber A. A novel wearable apnea dive computer for continuous plethysmographic monitoring of oxygen saturation and heart rate. *Diving Hyperb Med* 40(1):34-40, 2010.

4. Møllerløgken A, Breskovic T, Palada I, Valic Z, **Dujic Z**, Brubakk AO. Observation of increased venous gas emboli after wet dives compared to dry dives. *Diving Hyperb Med* 41(3):124-8, 2011.

5. Cross, TJ, Kavanagh J, Breskovic T, Zubin Maslov P, Lojpur M, Johnson BD, **Dujic Z**. The effects of involuntary respiratory contractions on cerebral blood flow during maximal apnoea in trained divers. *PLoS ONE* June 26;8(6):e66950, 2013.

c) Cumulative IF:

d) Reviewer for Journals in CC/SCI (N=22):

Journal of Physiology

Journal of Applied Physiology

American Journal of Physiology: Heart and Circulatory Physiology

Experimental Physiology

International Journal of Sports Medicine

British Journal of Sports Medicine

European Journal of Applied Physiology

Journal of Athletic Training

International Journal of Cardiology

Chest

Journal of Science, Medicine in Sport

Clinical Autonomic Research

Croatian Medical Journal

Acta Physiologica Scandinavica
Aviation, Space and Environmental Medicine
Scandinavian Journal of Sports Medicine
Undersea Hyperbaric Medicine
Journal of Cardiac Failure
Frontiers in Physiology
Applied Physiology Nutrition Metabolism
Eur J Pharmacol

e) **Broj citata u CC/SCI: 884.**

f) **H-index: 17.**

g) **Member of the Editorial Board:** 1992/93 - Medicinski anali KBC Split, 1996-2001 – Croatian Medical Journal, Frontiers in Physiology.

h) **Influence on the various scientific fields** (national and international):

1. *Applied physiology:* physiology of SCUBA and apnea diving, especially measurements of various cardiopulmonary parameters in simulated and field conditions, contribution of splenic contraction on the prolongations of subsequent apnea attempts, effects of exercise before, during and after simulated and field diving on inert gas bubble production.

2. *Clinical medicine:* influence of extracorporeal lithotripsy of urinary stones on irreversible kidney damage, changes in respiratory functional parameters (spirometry, diffusing lung capacity for carbon monoxide) during stages of asbestosis, sarcoidosis and sclerodermia.

i) **Establishment of the department and the research laboratory:**

Founder of the Department of integrative physiology at the University of Split School of Medicine and the Laboratory for clinical physiology, at the same institution. The Laboratory is equipped with modern, non-invasive instruments for evaluation of cardiopulmonary system at rest and during exercise such as laboratory and field spirometry, laboratory and field ultrasonic scanners with different tissue and vascular probes, respiratory mass spectrometer, transcranial Doppler, various ergometers (treadmill, bike and rowing) and different analytical instruments (lactate, blood gas machine, coximeter, blood count). Dr.sc. Dujić is leading research group composed of three assistant professors, four young researchers, and other collaborators from the Clinical hospital Split. Two young researchers have recently finished clinical residency in internal medicine (Darija Baković) and sports medicine (Vladimir Ivančev) due to close relationship between basic, preclinical and clinical research studies. Two PhDs in physiology (Marko Ljubković and Jasna Marinović-Ljubković) have finished their studies at the Medical College of Wisconsin, USA during March, 2007. and have joined Department in November 2007.

j) **Awards:**

Awarded the medallion of Danice Hrvatske with the figure of Ruđera Boškovića 1996., the annual scientific award of the Croatian Academy for Science and Arts for medical research for 2003. and the annual scientific award of the Ministry of Science, Education and Sports for 2006.

k) Opponent to Matt Richardson PhD thesis defended at Midsweden University at Ostersund, September 18th, 2008.

l) Primary investigator (PI) in national scientific projects:

Primary investigator of four national scientific projects since 1991., technological project since 2002, collaborative scientific project since 2003. (composed of 6 projects) and research programme since 2007. (4 projects). UKF 1B (2009-2011)

m) Primary investigator in International technological project

Primary investigator of the international technological project with Swiss company (Uwatec) and NTNU (2007 - two subprojects). Three projects with Norwegian Labour Directorate (2009-2011). US Navy 2011
FP7 MC ITN Phypode 2011-2015

n) Invited scientific lectures:

1. Trondheim, Norway March, 2004 Cardiopulmonary changes after SCUBA diving
2. San Diego, CA, USA April, 2005 Influence of apnea on cardiac output and venous return
3. Milwaukee, WI, USA April, 2005 Exercise and diving
4. Rochester, MN, USA April, 2005 Diving physiology (SCUBA and apnea)
5. Zrece, Slovenia January, 2006 Exercise and diving
6. Zadar, Croatia June, 2006 Cardiovascular function and apnea
7. Zrece, Slovenia February, 2007 Breath hold diving
8. Raleigh, Durham, USA May, 2007 Diving physiology – the effect of exercise
9. Osijek, Croatia September, 2007 Diving physiology
10. Zrece, Slovenia February, 2008 Breath hold diving
11. Ostersund, Sweden September, 2008 Diving physiology
12. Trondheim, Norway December, 2008 Underwater physiology, exercise and endothel
13. Zrece, Slovenia February, 2009 Update of breath-hold physiology
14. Buffalo, USA April, 2009 Exercise, endothelium and diving
15. Toulon, France November, 2009 Exercise, endothelium and diving
16. Seattle, USA August, 2010
17. Osijek, Croatia November, 2010
18. Trondheim, Norway December, 2010
19. Osijek, Croatia September, 2011
20. Zagreb, Croatia March, 2012 Cardiopulmonary effects of breath hold diving
21. Philadelphia, USA August, 2013
22. Zrece, Slovenia January, 2013 Breath hold diving as a brain survival model
23. Novi Sad, Serbia May 2013 SCUBA diving physiology

Teaching activities

1. Graduate obligatory courses (School of Medicine, School of Pharmacy, School of Nursing, School of radiological medical engineer, all at the University of Split): physiology and neuroscience.
2. Graduate elective courses (School of Medicine): large elective course in sports medicine since 1999. and presently submitted four elective courses in exercise and SCUBA diving, apnea diving, sport physiology and regulation of blood flow.
3. Post-graduate courses (University of Split School of Medicine, University of Rijeka School of Medicine, University of Zagreb School of Medicine). Coordinator of the PhD programme in basic and clinical medical sciences at the University of Split School of Medicine since 1999. with three tracks in Clinical physiology, Sports medicine and Clinical medicine.
4. Post-graduate courses (University of Split School of Medicine and University of Trondheim School of Medicine). Coordinator of the International doctoral programme in Applied Physiology as a joint PhD study between University of Split School of Medicine and University of Trondheim School of Medicine. Part of the first year PhD education will be conducted at the Mayo Clinic College of Medicine, Rochester, Minnesota, USA and the Medical College of Wisconsin, Milwaukee, Wisconsin, USA. This current PhD programme is funded partially by the funds from the National Foundation for Science and Technological Development of the Republic of Croatia (2005).
5. Post-graduate doctoral programme in Evidence-based medicine at the University of Split School of Medicine (coordinator together with professor Stjepko Gamulin), 2008-present.

Books

Teaching

In the physiology teaching dr Dujić introduced computer stimulations of the various fields such as neurophysiology, cardiovascular system and integrated, human physiology. Coauthor of the manual for laboratory exercises in physiology, participated in the translation of different physiology textbooks: Berne and Levy (two editions), Guyton (four editions), Guyton and Hall (two editions) and Harrison's Internal Medicine.

Coauthor of the chapter in the book „Doctoral studies“ published by the National Science Foundation in 2006.

Professional

National coordinator and the coauthor of the book OECD Thematic Review of Tertiary Education Country Background Report for Croatia, published for the OECD Tertiary Education Comparative Project in 2007, Ministry of Science, Education and Sports.

Science

Author of the chapter entitled: „Endothelium, exercise and diving“ in „The future of diving: 100 years of Haldane and beyond“, eds Michael A Land and Alf O Brubakk, Smithsonian Institution Scholarly Press, Washington DC, USA, 2009, pages 71-76.

Coauthor of the chapter entitled „Apnea diving“ in „Exercise physiology: from a cellular to an integrative approach“, eds Phillipe Combes, Olivier Hue and Stephane Perrey, IOS Press, 2010, pages 431-444.

Professional activities

Member of different committees at **the University of Zagreb School of Medicine, Study in Split:**

1. International collaboration 1990-1991 (Zagreb),
2. Committee for diploma thesis 1992-1997 (Split),
3. Faculty council 1993-1995 (Zagreb) and
4. Advisor for science 1991-1995.

Member of different committees at **the University of Split School of Medicine, Split, Croatia:**

1. Vice dean for science and postgraduate studies 1997-2001,
2. Coordinator of the committee for science 1997-2001,
3. Coordinator of the PhD programme in basic and clinical medical sciences since 1999-2007 with three tracks in Clinical physiology, Sports medicine and Clinical medicine,
4. Coordinator of International PhD programme in Applied Physiology 2005-present,
5. Coordinator of Evidence-based Clinical Medicine PhD programme 2008-present and
6. Coordinator of Clinical Epidemiology, master programme 2009-present.

The University of Split, Split, Croatia

1. Vice rector for science and international affairs 2000 – 2006,
2. Committee for diploma nostrification 2000-2004,
3. Committee for University books and manuals 2000 – 2007,
4. Committee for postgraduate studies 2005-2008,
5. Committee for emeritus professors 2008-present,
5. Research committee 2007-present.

Ministry of Science, Education and Sports, Zagreb, Croatia

1. Committee for equipment 2000 - 2005, president
2. Committee for legislation 2003 and
3. Committee for OECD report 2005-8, national coordinator.

National foundation for science, Zagreb, Croatia

1. Board member, 2005-2009
2. Evaluator.

Croatian Physiological Society

1. President 2009-2013.
2. Member of the board 2004-present.

Agency for science and higher education

1. Evaluator.

Other activities

1. Nostrification of the medical degree for the practical work in USA in 1994 (USMLE exam).
2. Member of committees for professorship in physiology at the Medical College of Wisconsin, Milwaukee, USA and Medical School, University of Trondheim, Norway (2003).
3. Visiting professor, University of Novi Sad, Faculty of Medicine, Serbia, December 2012-present.