

DAMIR SAPUNAR

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Birth date: 27. May 1962.

Birthplace: Split, Croatia



Education / Training

1989 MD University of Zagreb, School of Medicine
1992 MSc University of Zagreb, Faculty of Science
1996 PhD University of Zagreb, School of Medicine
1996 Honorary Visiting Fellow University of Leicester, School of Medicine, Leicester, UK
2001-02 Postdoctoral training Medical College of Wisconsin, WI, USA

Positions and Honors

1992-1998 Instructor, Department of Anatomy, Histology and Embryology, University of Split School of Medicine
1998-2003 Assistant Professor, Department of Anatomy, Histology and Embryology, University of Split School of Medicine
2000-2001 Vice-dean for Education, University of Split School of Medicine
2003-2006 Associate Professor of Histology and Embryology, University of Split School of Medicine
2006-2009 President of Managing Council, National, and University Library Zagreb
1995-2011 Executive Editor - Online Edition, Croatian Medical Journal
2003-2013 Head, Department of Histology and Embryology, University of Split School of Medicine
2002-today Head, Laboratory for Pain Research, University of Split School of Medicine
2006-today Full Professor, Department of Anatomy, Histology, and Embryology
2008-2012 Head, Laboratory for Microscopy, University of Split School of Medicine.
2010-today PhD Program director Translation Research in Biomedicine – TRIBE, University of Split School of Medicine.

Membership and activities in professional associations

Croatian Association of Anatomists and Histologists; Croatian Association of Medical Doctors; Croatian Association for Medical Education; International Society for Medical Informatics, International Federation of Associations of Anatomists – IFAA, European Federation of Experimental Morphology -EFEM, Society for Neuroscience, International Association for the Study of Pain, Orpheus.

Research experience

Effect of hyperbaric oxygen on rat embryos (1990–1996).

Investigation in the field of normal and abnormal human development with special emphasis on the formation of axial structures and cell death, morphological diversity of dying cells, apoptosis, and programmed cell death (1990–2001).

Investigation in the field of chronic pain, more specifically, research on peripheral mechanisms of neuropathic pain, the effect of nerve injury on behavioral and electrophysiological properties of the dorsal root ganglion (DRG) neurons, the effect of NPY and neuropathic pain, the methodology of targeted delivery of drugs to the DRG and the inflammatory consequences of drug application into the DRG (2001 - today).

Fellowships

- 1996 The fellowship of the International Society of Differentiation.
- 1996 Honorary Visiting Fellow - Department of Pre-Clinical Sciences, Medical School, University of Leicester.
- 2001-2002 Postdoctoral fellowship – Department of Anesthesiology, Medical College of Wisconsin.

Research grants

- Participation in the project "Formation of the head, axial and urogenital structures in the human embryos" supported by the Croatian Ministry of Science No. 3-01-069 (1992-1997).
- Main coordinator of ALIS project CRO19 "Programmed cell death in the axial structures of the human embryo" (1995-1998).
- Participation in the project "Development of the human central nervous system and spinal cord" No. 108194 (1997-2002).
- Main coordinator of CARNET project "Virtual Medical School".
- Main coordinator "Virtual Medical School" supported by Croatian Ministry of Science and Technology No. 00-100.
- Principal Investigator "Morphological diversity of the dying cells during human development" supported by the Croatian Ministry of Science and Technology No. 108510 (2002-2006).
- Principal Investigator "Functional analysis of injured primary afferent neurons" supported by the Croatian Ministry of Science, Education and Sports No. 216-2160528-0522 (2007-2010).
- Project Coordinator, Unity Through Knowledge 2A (UKF) (2011).
- Participation in "Initiative for Improving Pain Education Grant" (IASP) (2009–2010).
- Main Coordinator "Nerve Injury and Neuropathic Pain" Program Project Grant supported by the Croatian Ministry of Science, Education and Sports No. 2160528 (2007-2013).
- Consultant in "DRG engraftment of transduced mesenchymal stem cells to treat neuropathic pain" NIH grant 5R01NS079626-02.
- Participation in "Molecular Memory in Diabetic Neuropathy" (HRZZ) (2010-2013).
- Participation in "Auditory neuro-electronic interfaces" BICRO PoC (2012-today).
- Principal investigator in "Effect of electrical stimulation on analgesia", Croatian – Slovenian bilateral project, MZOS (2016).
- Principal investigator in "Treating neuropathic pain with dorsal root ganglion stimulation – NeuroMod" HRZZ (2014-2020).
- Main initiator of the "Giving Voice" project aimed at helping Ukrainian authors to publish war-related experiences.

Teaching activities

Graduate education in Histology and Embryology; Elective subjects "Development and congenital kidney diseases", "Fertilization" and "The puzzle of Pain".

Postgraduate teaching – Postgraduate study Translational Research in Biomedicine-TRIBE, Medical School Split; CME Course "The Puzzle of Pain".

Visiting professor on postgraduate studies at the University of Nova Gorica, Medical School Rijeka, and Mostar.

Other activities

1992-1995 Editorial Council of Science Communication 1991-1997 Editorial Council of Croatian Medical Annals

1996-2011 Executive editor – Electronic Publishing - Croatian Medical Journal

Reviews and evaluations:

Peer-reviewer for scholarly journals: Anesthesia & Analgesia, Neurological Sciences, Cellular and Molecular Neurobiology, Croatian Medical Journal, Journal of Pain Research, European Journal of Pain, Journal of Clinical Anesthesia, Journal of Advanced Nursing, SpringerPlus, Clinical and Experimental Pharmacology and Physiology, Neuromodulation: Technology at the Neural Interface, granting agencies.

Reviewer of research projects: COST, FP7, Horizon 2020, Croatian Science Foundation (HRZZ), AZVO, Hamag-BICRO, La Caixa Foundation, Dutch Research Council (NWO), ERA PerMed Personalised Medicine, EU4Health, UKRI_ORG, MSCA4Ukraine.

Scientometric data:

Number of peer-reviewed articles: **112**; Number of citations according to the Web of Science: **1969** (without self-citations: **1821**); H-index (Web of Science): **23**

PUBLICATIONS (Chronological order)

1. Saraga-Babić M, Stefanović V, Sapunar D. Relationship between embryonic notochord and chordoma. *Med An* 1992; 18: 205-212. (*Chemical Abstracts*)
2. Pintarić I, Sapunar D, Gudelj I, Anđelinović Š, Kuzmić I. Remember they are humans. *Croat Med J* 1992; 33 Suppl 2: 34-35. (*EMBASE*)
3. Kraljević LJ, Boshi S, Sapunar D. Contribution to the health services in Split. *Croat Med J* 1993; 34: 153-162. (*EMBASE*)
4. Sapunar D, Saraga-Babić M, Peruzović M, Marušić M. The effect of hyperbaric oxygen on rat embryos. *Biol Neonate* 1993; 63: 360-369. (*CC*)
5. Saraga-Babić M, Sapunar D, Stefanović V. Histological features of axial structures during embryonic and fetal stages of human craniorachischisis. *Acta Neuropath* 1993; 86: 289-294. (*CC*)
6. Vrdoljak E, Miše K, Sapunar D, Rozga A, Marušić M. Survival Analysis of Untreated Patients With Non-Small Cell Lung Cancer. *Chest* 1994; 106: 1797-1800. (*CC*)
7. Sapunar D, Bego K, Pintarić I, Markotić A, Radić S. Effect of maternal oxygen inhalation on the experimentally produced uteroplacental insufficiency. *Period Biol* 1994; 96: 47-48. (*Conference paper cited in Scopus*)
8. Radonić V, Barić D, Petričević A, Kovačević H, Sapunar D, Glavina-Durdov M. War Injuries of the Crural Arteries. *Br J Surg* 1995; 82: 777-783. (*CC*)
9. Sapunar D. Presentation Software in Teaching Practice: Do you Need Any Help Mr. Chips? *MD Comp* 1995; 12: 306-310. (*CC*)
10. Saraga-Babić M, Sapunar D, Wartiovaara J. Variations in the Formation of the Human Caudal Spinal Cord. *J Brain Res* 1995; 36: 341-347. (*SCIE*)
11. Petričević A, Bačić A, Ilić Nenad, Giunio L, Matić D, Sapunar D. Tupe ozljede srca i dijagnostičke teškoće. *Liječ Vjesn* 1995; 117: 227-231. (*Medline*)
12. Petričević A, Radonić V, Ilić N, Petričević M, Zelić Z, Ferenc J, Sapunar D. Surgical experience at the Rama war hospital in Bosnia and Herzegovina. *Isr J Med Sci* 1995; 31: 630-634. (*CC*)
13. Saraga-Babić M, Stefanović V, Lehtonen E, Sapunar D, Saraga M, Wartiovaara J. Neurulation mechanisms in the human development. *Croat Med J* 1996; 37: 7-14. (*EMBASE*)
14. Saraga-Babić M, Krolo M, Sapunar D, Terzić J, Biočić M. Differences in origin and fate between the cranial and caudal spinal cord during normal and disturbed human development. *Acta Neuropathol* 1996; 91: 194-199. (*CC*)
15. Sapunar D, Vilović K, Pintarić I, Vrdoljak E, Petri N, Saraga-Babić M. Effect of Maternal Hyperoxygenation on the Experimentally Produced Uteroplacental Insufficiency in Rat. *Reprod Fertil Dev* 1996; 8: 379-381. (*CC*)
16. Marušić M, Sapunar D. Obrazloženje potrebe osnivanja Medicinskog fakulteta Sveučilišta u Splitu. *Liječ Vjesn* 1996; 118: 133-138. (*Medline*)
17. Sapunar D, Sapunar-Cambj L. Internet u medicini. *Liječ Vjesn* 1996; 118: 165-171. (*Medline*)
18. Sapunar D. Trenutno stanje biomedicinske znanosti u Splitu. *Med An* 1996; 20: 59-60.
19. Janković S, Sapunar D, Jurišić Z, Majić V. Medical support to a nonprofessional brigade during the Croatian Operation Storm. *Milit Med* 1997; 162: 37-40. (*CC*)
20. Radonić V, Barić D, Giunio L, Bill B, Kovačević H, Sapunar D. War injuries of the femoral artery and vein: a report on 67 cases. *Cardiovasc Surg* 1997; 5: 641-647. (*Medline*)
21. Radonić V, Budimir D, Bradarić N, Luksić B, Sapunar D. Envenomation by the Horned Viper - *Vipera ammodytes* Linnaeus. *Milit Med* 1997; 162: 179-182. (*CC*)
22. Janković S, Jurišić Z, Majić V, Mulić R, Bradarić N, Sapunar D, Smoljanović M, Gotovac P. Organization and implementation of the preventive medicine measures on the southern Croatian battleground: the experience of the home defense brigade. *International Review of the Armed Forces Medical Services* 1998; 71: 44-49.
23. Krolo M, Vilović K, Sapunar D, Vrdoljak E, Saraga-Babić M. Fibronectin expression in the developing human spinal cord, nerves, and ganglia. *Croat Med J* 1998; 39(4):386-91. (*Medline*)
24. Janković S, Žuljan I, Sapunar D, Buća A, Pleština-Borjan I. Clinical and Radiological Management of Wartime Eye and Orbit Injuries. *Milit Med* 1998; 163: 423-426. (*CC*)

25. Radonić V, Barić D, Giunio L, Buća A, Sapunar D, Marović A. Surgical treatment of kinked carotid artery. *J Cardiovasc Surg* 1998; 39: 557-563. (CC)
26. Sapunar D. Computing for the next millennium. *Croat Med J* 1999; 40: 319-320. (CC)
27. Sapunar D, Marušić M. The curriculum plan for the Split University Medical School--a modern concept for a new school. *Liječ Vjesn* 1999; 121: 208-212. (Medline)
28. Vrdoljak E, Mise K, Sapunar D, Rozga A, Marusic M. Staging in untreated patients with small cell lung cancer. *Neoplasma*. 2001; 48(2):154-6, 2001. (CC)
29. Sapunar D. The Medical School of Split - overview of its activity from independence until today. *Liječ Vjesn* 2001; 123: 221-230. (Medline)
30. Sapunar D, Vilović K, England M, Saraga-Babić M. Morphological diversity of dying cells during regression of the human tail. *Ann Anat* 2001; 183: 217-222. (CC)
31. Vilović K, Sapunar D, Ilijić E, Mimica MD, England MA, Saraga-Babić M. Morphological characteristic of dying cells in axial structures of developing human embryos. *Cell Tissues Organs* 2001; 169(4): 347-54. (CC)
32. Sarantopoulos C, McCallum B, Sapunar D, Kwok WM, Hogan Q. ATP-sensitive potassium channels in rat primary afferent neurons: the effect of neuropathic injury and gabapentin. *Neurosci Lett* 2003;343(3):185-9.
33. Hogan Q, Sapunar D, Modric-Jednacak K, McCallum JB. Detection of neuropathic pain in a rat model of peripheral nerve injury. *Anesthesiology* 2004;101(2):476-87.
34. Vilovic K, Ilijic E, Glamoclija V, Kolic K, Bocina I, Sapunar D. Cell death in developing human spinal cord. *Anat Embryol* 2006;211(1):1-9.
35. Glamoclija V, Vilovic K, Saraga-Babic M, Baranovic A, Sapunar D. Apoptosis and active caspase-3 expression in human granulosa cells. *Fertil Steril* 2005;83(2):426-31.
36. Sapunar D, Ljubković M, Lirk P, McCallum JB, Hogan QH. Distinct membrane effects of spinal nerve ligation on injured and adjacent dorsal root ganglion neurons. *Anesthesiology* 2005;103:360-76.
37. Sapunar D, Modric-Jednacak K, Grkovic I, Michalkiewicz M, Hogan Q. Effect of peripheral axotomy on pain-related behavior and dorsal root ganglion neurons excitability in NPY transgenic rats. *Brain Res* 2005;1063(1):48-58.
38. Ivanisevic R, Sapunar D. Multiple authorship in a small medical journal - A case study: Croatian Medical Journal. *JASIST* 2006;57(8):1073-1078. (CC)
39. Carev D, Krnić D, Saraga M, Sapunar D, Saraga-Babić M. Role of mitotic, pro-apoptotic and antiapoptotic factors in human mesonephric and metanephric development. *Pediatric Nephrology* 2006;21:627-36.
40. Vilovic K, Jurcevic S, Ivanisevic R, Sapunar D. Clinical skills teaching – Survey at medical school in Split and Zagreb. *Medicina* 2006;42:26-30.
41. McCallum JB, Kwok WM, Sapunar D, Fuchs A, Hogan Q. Painful peripheral nerve injury decreases calcium current in axotomized sensory neurons. *Anesthesiology* 2006 Jul;105(1):160-8.
42. Znaor L, Lovric S, Hogan Q, Sapunar, D. Association of neural inflammation with hyperalgesia following spinal nerve ligation, *Croat Med J*, 48 (2007) 35-42.
43. Vukojević K, Lovrić-Kojundžić S, Sapunar D. Hyperalgesia-type response reveals no difference in pain-related behavior between Wistar and Sprague-Dawley rats. *Bosn J Basic Med Sci* 2007 May;7(2):121-6.
44. Vukojević K, Carev D, Sapunar D, Popovic D, Saraga-Babic M. Developmental patterns of caspase-3, bax and bcl-2 proteins expression in the human spinal ganglia. *J Mol Histol* 2008; 39: 339-349.
45. Puljak L, Brnjas Kraljevic J, Barac Latas Vesna, Sapunar D. Demographics and motives of medical school applicants in Croatia. *Med Teach*. 2007 Oct;29(8):e227-34. (CC).
46. Simunovic VJ, Petkovic M, Miscia S, Petrovic M, Stallaerts R, Busselmaier W, Hebgen M, Horsch A, Horsch S, Krzan M, Svab I, Ribaric S, Zeleznik D, Santa Barbara J, Arapovic D, Bozic T, Duzel G, Ljubic F, Ostojic M, Skocibusic S, Spasojevic N, Zalihic A, Radic R, Mehic B, Nakas-Icindic E, Kordic D, Sapunar D, Tomic S, Ljuca F, Pranjić N, Seleskovic H, Tahirovic H, Tihic N, Bosnjak ZJ, Gamulin S, Kuzman I, Mandic Z, Kamberovic S, Hiljadnikova M, Tanović H. Short history of just mentorship and support. *Croat Med J*. 2008 Feb;49(1):18-21.
47. Puljak L, Sapunar D. Turning Croatian Science Into Policy. *Croat Med J* 2008; 49:155-7. (CC).
48. Puljak L, Vukojevic K, Lovric Kojundzic S, Sapunar D. Assessing clinical and life sciences performance of research institutions in Split, Croatia: 2000-2006. *Croat Med J* 2008; 49:164-74. (CC).
49. Puljak L, Lovric Kojundzic S, Sapunar D. Gender and academic medicine: a good pipeline of women graduates is not advancing. *Teach Learn Med*. 2008; 20(3):273-8. (CC).
50. Puizina-Ivić N, Sapunar D, Marasović D, Mirić L. An overview of Bcl-2 expression in histopathological variants of basal cell carcinoma, squamous cell carcinoma, actinic keratosis, and seborrheic keratosis. *Coll Antropol*. 2008 Oct;32 Suppl 2:61-5.
51. Lirk P, Poroli M, Rigaud M, Fuchs A, Phillip P, Huang C-Y, Ljubkovic M, Sapunar D, Hogan Q. Modulators of calcium influx regulate membrane excitability in rat dorsal root ganglion neurons. *Anesth Analg*. 2008 Aug;107(2):673-85. (CC).

52. Hogan Q, Lirk P, Poroli M, Rigaud M, Fuchs A, Fillip P, Ljubkovic M, [Sapunar D](#). Restoration of calcium influx correct membrane hyperexcitability in injured rat dorsal root ganglion neurons. *Anesth Analg*. 2008 Sep;107(3):1045-51. (CC).
53. Lovric Kojundzic S, Dujmovic I, Grkovic I, [Sapunar D](#). Regional differences in epidermal thickness and behavioral response following partial denervation of the rat paw. *Int J Neurosci*. 2008 Dec;118(12):1748-62. (CC).
54. Puljak L, Lovric Kojundzic S, Hogan QH, [Sapunar D](#). Targeted delivery of pharmacological agents into rat dorsal root ganglion. *J Neurosci Methods*. 2009 Mar 15;177(2):397-402.
55. Kosta V, Lovric Kojundzic S, Cambj Sapunar L, [Sapunar D](#). The extent of laminectomy affects pain-related behavior in a rat model of neuropathic pain. *Eur J Pain*. 2009 Mar;13(3):243-8.
56. [Sapunar D](#), Puljak L. What can rats tell us about neuropathic pain? Critical evaluation of behavioral tests used in rodent pain models. *Periodicum biologorum* 2009; 111(2): 155-160.
57. Puljak L, Lovric Kojundzic S, Hogan Q, [Sapunar D](#). Lidocaine injection into the rat dorsal root ganglion causes neuroinflammation and pain-related behavior. *Anesth Analg*. 2009 Mar 108;(3):1021-6.
58. Lovric Kojundzic S, Puljak L, Hogan Q, [Sapunar D](#). Depression of Ca²⁺/Calmodulin-Dependent Protein Kinase II in Dorsal Root Ganglion Neurons after Spinal Nerve Ligation. *J Comp Neurol* 2010 Jan1;518(1):64-74.
59. Koceic A, Mestrovic A, Vrdoljak L, Vukojevic K, Barac-Latas V, Drenjancevic-Peric I, Biocina-Lukenda D, [Sapunar D](#), Puljak L. Analysis of the elective curriculum in undergraduate medical education in Croatia. *Medical education* 2010;44(4):387-95
60. Guić MM, Košta V, Aljinović J, [Sapunar D](#), Grković I. Characterization of spinal afferent neurons projecting to different chambers of the rat heart. *Neurosci Lett*. 2010 Jan 29;469(3):314-8.
61. Košta V, Guić MM, Aljinović J, [Sapunar D](#), Grković I. Immunohistochemical characteristics of neurons in nodose ganglia projecting to the different chambers of the rat heart. *Auton Neurosci*. 2010; 155(1-2):33-8.
62. [Sapunar D](#), Vukojevic K, Kostic S, Puljak L. Attenuation of pain-related behavior evoked by injury through blockade of neuropeptide Y Y2 receptor. *PAIN*. 2011;152:1173-1181.
63. [Sapunar D](#), Kostic S, Banozic A, Ferhatovic L, Puljak L. Pain research in Croatia: Analysis of bibliometric trends. *Periodicum biologorum*. 2011;113(2):137-140.
64. Maric A, Banozic A, Cosic A, Kraljevic S, [Sapunar D](#), Puljak L. Validation of the Croatian Pain Catastrophizing Scale through a study on the influence of medical education on pain catastrophizing. *Periodicum biologorum*. 2011;113(2):171-175.
65. Kraljevic S, Banozic A, Maric A, Cosic A, [Sapunar D](#), Puljak L. Parents' pain catastrophizing is related to pain catastrophizing of their adult children. *International Journal of Behavioral Medicine*. 2012 Mar;19(1):115-9.
66. Puljak L, [Sapunar D](#). Web-based elective courses for medical students: an example in Pain. *Pain Medicine*. 2011;12(6):854-63.
67. Fischer G, Kostic S, Nakai H, Park F, [Sapunar D](#), Yu H, Hogan Q. Direct injection into the dorsal root ganglion: technical, behavioral, and histological observations. *J Neurosci Methods*. 2011 Jul 15;199(1):43-55. Epub 2011 Apr 21.
68. [Sapunar D](#), Kostic S, Banozic A, Puljak L. Dorsal root ganglion – a potential new target for neuropathic pain. *J Pain Res* 2012;5:31-8.
69. Grkovic I, [Sapunar D](#), Marusic M. Ways to address challenges of a modern medical curriculum: living academic medicine at the University of Split School of Medicine. *Acta Medica Academica* 2012;41(1):7-17.
70. Ferhatovic L, Banozic A, Kostic S, [Sapunar D](#), Puljak L. Sex differences in pain-related behavior and expression of calcium/calmodulin-dependent protein kinase II in dorsal root ganglia of rats with diabetes type 1 and type 2. *Acta Histochem*. 2013 Jun;115(5):496-504.
71. Jukic M, Kardum G, [Sapunar D](#), Puljak L. Treatment of chronic musculoskeletal back pain in a tertiary care pain clinic. *Journal of Musculoskeletal Pain* 2012; 20(4): 277-283.
72. Klinar I, Ferhatovic L, Banozic A, Raguz M, Kostic S, [Sapunar D](#), Puljak L. Physicians' attitudes about interprofessional treatment of chronic pain: family physicians are considered the most important collaborators. *Scand J Caring Sci*. 2013;27(2):303-10.
73. Busic Z, Kostic S, Kosta V, Carija R, Puljak L, [Sapunar D](#). Postlaminectomy stabilization of the spine in a rat model of neuropathic pain reduces pain-related behavior. *Spine (Phila Pa 1976)*. 2012 Oct 15;37(22):1874-82.
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75. Maslov Kruzicevic S, Barisic KJ, Banozic A, Esteban CD, [Sapunar D](#), Puljak L. Predictors of attrition and academic success of medical students: a 30-year retrospective study. *PloS ONE* 2012;7(6):e39144. Epub 2012 Jun 18.
76. Ferhatovic L, Banozic A, Kostic S, Ticinovic Kurir T, Novak A, Vrdoljak L, Heffer M, [Sapunar D](#), Puljak L. Expression of calcium/calmodulin-dependent protein kinase II and pain-related behavior in rat models of type 1 and type 2 diabetes. *Anesthesia & Analgesia*. *Anesth Analg*. 2013; 116(3): 712-21.

77. Gemes G, Koopmeiners A, Rigaud M, Lirk P, [Sapunar D](#), Bangaru ML, Vilceanu D, Garrison SR, Ljubkovic M, Mueller SJ, Stucky CL, Hogan QH. Failure of Action Potential Propagation in Sensory Neurons: Mechanisms and Loss of Afferent Filtering in C-type Units after Painful Nerve Injury. *J Physiol* 2013;591(Pt4):111-31.
78. Markotic F, Cerni Obrdalj E, Zalihic A, Pehar R, Hadziosmanovic Z, Pivic G, Durasovic S, Grgic V, Banozic A, [Sapunar D](#), Puljak L. Adherence to pharmacological treatment of chronic non-malignant pain in individuals aged 65 and older. *Pain Medicine* 2013;14(2):247-56.
79. Cosic A, Ferhatovic L, Banozic A, Kraljevic S, Maric A, [Sapunar D](#), Puljak L. Pain catastrophizing changes during menstrual cycle. *Psychology, Health & Medicine*. 2013;18(6):735-41.
80. Tesija RA, Maslov Kruzicevic S, Banozic A, Esteban CD, [Sapunar D](#), Puljak L. Extension of the course duration and stricter study organization have positive impact on attrition and academic performance of medical students. *Croatian Medical Journal*. 2013;54:192-7.
81. Vrdoljak L, Mijacika T, Milicevic T, [Sapunar D](#), Puljak L. Impact of a recruitment campaign on students' applications to medical school. *Acta Medica Academica*. 2013;42(1):32-40.
82. Jelcic Kadic A, Boric M, Ferhatovic L, Banozic A, [Sapunar D](#), Puljak L. Intrathecal inhibition of calcium/calmodulin-dependent protein kinase II in diabetic neuropathy adversely affects pain-related behavior. *Neurosci Lett*. 2013;554:126-30.
83. Yu H, Fischer G, Ferhatovic L, Fan F, Light AR, Weihrach D, [Sapunar D](#), Nakai H, Park F, Hogan QH. Intraganglionic AAV6 results in efficient and long-term gene transfer to peripheral sensory nervous system in adult rats. *PLoS One*. 2013;8(4):e61266.
84. Kadic AJ, Boric M, Kostic S, [Sapunar D](#), Puljak L. The effects of intraganglionic injection of calcium/calmodulin-dependent protein kinase II inhibitors on pain-related behavior in diabetic neuropathy. *Neuroscience*. 2013;256:302-8.
85. Borić M, Jelcic Kadic A, Ferhatović L, Sapunar D, Puljak L. Calcium/calmodulin-dependent protein kinase II in dorsal horn neurons in long-term diabetes. *Neuroreport* 2013;24(17):992-6.
86. Banozic A, Grkovic I, Puljak L, [Sapunar D](#). Behavioral changes following experimentally induced acute myocardial infarction in rats. *Int. Heart J*. 2014;55(2):169-77.
87. Kostic S, Pan B, Guo Y, Yu H, [Sapunar D](#), Kwok WM, Hudmon A, Wu HE, Hogan QH. Regulation of voltage-gated Ca(2+) currents by Ca(2+)/calmodulin-dependent protein kinase II in resting sensory neurons. *Mol Cell Neurosci* 2014;62:10-8.
88. Chen Y, Chalmers I; TTI Editorial Alliance. Testing treatments interactive (TTi): helping to equip the public to promote better research for better health care. *J Evid Based Med*. 2015 May;8(2):98-102.
89. Fidahić M, Dogan K, [Sapunar D](#), Puljak L. National survey of pain clinics in Croatia: Organization and services. *Acta Med Acad*. 2015;44(1):18-30.
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91. Jelcic Kadic A, Vucic K, Dosenovic S, [Sapunar D](#), Puljak L. Extracting data from figures with software was faster, with higher interrater reliability than manual extraction. *J Clin Epidemiol*. 2016 Jun;74:119-23.
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