

### **Prof. Ernest Gutmann – Most cited papers according to WOS (All Databases)**

1. Gutmann E (ed.) *The Denervated Muscle*. Academia, Prague, 1962. **472x**
2. Gutmann E, Sanders FK. Recovery of fibre numbers and diameters in the regeneration of peripheral nerves. *J Physiol*. 1943;101(4):489-518. **429x**
3. Gutmann E, Young JZ. The re-innervation of muscle after various periods of atrophy. *J Anat*. 1944;78(Pt 1-2):15-43. **373x**
4. Gutmann E, Guttmann L, Medawar PB, Young JZ. The rate of regeneration of nerve. *J Exp Biol* 1942;19(1):14-44. **346x**
5. Gutmann E. Neurotrophic relations. *Annu Rev Physiol*. 1976;38:177-216. **312x**
6. Čihák R, Gutmann E, Hanzlíková V. Involution and hormone-induced persistence of the m. sphincter (levator) ani in female rats. *J Anat*. 1970;106(Pt 1):93-110. **219x**
7. Weddell G, Guttmann L, Gutmann E. The local extension of nerve fibres into denervated areas of skin. *J Neurol Psychiatry*. 1941;4(3-4):206-225. **197x**
7. Gutmann E (ed.) *The Effect of Use and Disuse on Neuromuscular Functions*. Elsevier, Amsterdam, 1963. **194x**
9. Zelená J, Lubińska L, Gutmann E. Accumulation of organelles at the ends of interrupted axons. *Z Zellforsch Mikrosk Anat*. 1968;91(2):200-219. **180x**
10. Gutmann E, Schiaffino S, Hanzlíková V. Mechanism of compensatory hypertrophy in skeletal muscle of the rat. *Exp Neurol*. 1971;31(3):451-464. **159x**
11. Carlson BM, Gutmann E. Regeneration in free grafts of normal and denervated muscles in the rat: morphology and histochemistry. *Anat Rec*. 1975;183(1):47-62. **144x**
12. Gutmann E, Hanzlíková V. Motor unit in old age. *Nature*. 1966;209(5026):921-922. **125x**
13. Gutmann E, Hanzlíková V, Vyskočil F. Age changes in cross striated muscle of the rat. *J Physiol*. 1971;216(2):331-43. **114x**
14. Gutmann E. Factors affecting recovery of motor function after nerve lesions. *J Neurol Psychiatry*. 1942;5(3-4):81-95. **116x**
15. Bowden RE, Gutmann E. Denervation and re-innervation of human voluntary muscle. *Brain* 1944;67(4):273-313. **107x**
16. Bass A, Gutmann E, Hanzlíková V. Biochemical and histochemical changes in energy supply enzyme pattern of muscles of the rat during old age. *Gerontologia*. 1975;21(1):31-45. **105x**
17. Carlson BM, Gutmann E. Development of contractile properties of minced muscle regenerates in the rat. *Exp Neurol*. 1972;36(2):239-249. **97x**

18. Gutmann E, Holubář J. The degeneration of peripheral nerve fibers. *J Neurol Neurosurg Psychiatry*. 1950;13(2):89-105. **93x**
19. Gutmann E, Hanzlíková V. *Age Changes in the Neuromuscular System*. Scientechica, Bristol, 1972 **92x**
20. Gutmann E, Sandow A. Caffeine-induced contracture and potentiation of contraction in normal and denervated rat muscle. *Life Sci*. 1965;4(11):1149-1156. **84x**
21. Gutmann E, Hanzlíková V. Fast and slow motor units in ageing. *Gerontology*. 1976;22(4):280-300. **83x**
22. Hájek I, Gutmann E, Syrový I. Proteolytic activity in denervated and reinnervated muscle. *Physiol Bohemoslov*. 1964;13(1):32-38. **75x**
23. Gutmann E. The reinnervation of muscle by sensory nerve fibres. *J Anat*. 1945;79(Part1):1-8. **74x**
24. Carlson BM, Gutmann E. Regeneration in grafts of normal and denervated rat muscles. Contractile properties. *Pflugers Arch*. 1975;353(3):215-225. **73x**
25. Gutmann E, Melichna J, Syrový I. Contraction properties and ATPase activity in fast and slow muscle of the rat during denervation. *Exp Neurol*. 1972;36(3):488-497. **67x**
26. Gutmann E, Guttman L. The effect of galvanic exercise on denervated and re-innervated muscles in the rabbit. *J Neurol Psychiatry*. 1944;7(1-2):7-17. **65x**
27. Syrový I, Gutmann E. Differentiation of myosin in soleus and extensor digitorum longus muscle in different animal species during development. *Pflugers Arch*. 1977;369(1):85-89. **64x**
28. Gutmann E. Effect of delay of innervation on recovery of muscle after nerve lesions. *J Neurophysiol*. 1948;11(4):279-294. **63x**
29. Gutmann E, Hájek I. Differential reaction of muscle to excessive use in compensatory hypertrophy and increased phasic activity. *Physiol Bohemoslov*. 1971;20(3):205-212. **62x**
30. Drahotka Z, Gutmann E. Long-term regulatory influence of the nervous system on some metabolic differences in muscles of different function. *Physiol Bohemoslov*. 1963;12(4):339-348. **60x**
31. Gutmann E, Melichna J, Syrový I. Developmental changes in contraction time, myosin properties and fibre pattern of fast and slow skeletal muscles. *Physiol Bohemoslov*. 1974;23(1):19-27. **59x**
32. Gutmann E, Hanzlíková V, Lojda Z. Effect of androgens on histochemical fibre type. Differentiation in the temporal muscle of the guinea pig. *Histochemie*. 1970;24(4):287-291. **59x**

33. Gutmann E. Neurotrophic relations in the regeneration process. *Prog Brain Res.* 1964;13: 72-114. **59x**
34. Syrový I, Gutmann E. Changes in speed of contraction and ATPase activity in striated muscle during old age. *Exp Gerontol.* 1970;5(1):31-35. **58x**
35. Gutmann E, Carlson BM. Contractile and histochemical properties of regenerating cross-transplanted fast and slow muscles in the rat. *Pflugers Arch.* 1975;353(3):227-239. **56x**
36. Gutmann E, Guttman L. Factors affecting recovery of sensory function after nerve lesions. *J Neurol Psychiatry.* 1942;5(3-4):117-129. **56x**
37. Gutmann E, Guttman L. Effect of electrotherapy on denervated and reinnervated muscles in rabbit. *Lancet* 1942;239(6180):169-170. **55x**
38. Drahota Z, Gutmann E. The influence of age on the course of reinnervation of muscle. *Gerontologia.* 1961;5(2):88-109. **52x**
39. Burešová M, Gutmann E. Effect of testosterone on protein synthesis and contractility of the levator ani muscle of the rat. *J Endocrinol.* 1971;50(4):643-651. **51x**
40. Gutmann E, Haníková M, Hájek I, Klicpera M, Syrový I. The postdenervation hypertrophy of the diaphragm. *Physiol Bohemoslov.* 1966;15(6):508-524. **51x**
41. Bass A, Gutmann E, Hanzlíková V, Hájek I, Syrový I. The effect of castration and denervation upon the contraction properties and metabolism of the levator ani muscle of the rat. *Physiol Bohemoslov.* 1969;18(3):177-94. **49x**
42. Syrový I, Gutmann E, Melichna J. Differential response of myosin-ATPase activity and contraction properties of fast and slow rabbit muscles following denervation. *Experientia.* 1971;27(12):1426-1427. **48x**
43. Gutmann E, Hanzlíková V. Age changes of motor endplates in muscle fibers of the rat. *Gerontologia* 1965;11(1-2): 12-24. **48x**
44. Gutmann E, Hanzlíková V. Basic mechanisms of aging in the neuromuscular system. *Mech Ageing Dev* 1(5): 327-349, 1973. **47x**
45. Gutmann E, Sanders FK. Functional recovery following nerve grafts and other types of nerve bridge. *Brain* 1942;65(4):373-407. **46x**
46. Gutmann E, Carlson BM. Regeneration and transplantation of muscles in old rats and between young and old rats. *Life Sci.* 1976;18(1):109-114. **45x**
47. Gutmann E, Hanzlíková V, Jakoubek B. Changes in the neuromuscular system during old age. *Exp Gerontol.* 1968;3(2):141-146. **45x**
48. Melichna J, Gutmann E. Stimulation and immobilization effects on contractile and histochemical properties of denervated muscle. *Pflugers Arch.* 1974;352(2):165-178. **45x**

49. Carlson BM, Gutmann E. Transplantation and 'gross-transplantation' of free muscle grafts in the rat. *Experientia*. 1974;30(11):1292-1294. **44x**
50. Gutmann E. Muscle. In "Handbook of the Biology of Aging", Finch CE, Hayflick L (eds), Van Nostrand Reinhold, New York, 1977, pp. 445-469 **44x**
51. Gutmann E, Syrový I. Metabolic differentiation of the anterior and posterior latissimus dorsi of the chicken during development. *Physiol Bohemoslov*. 1967;16(3):232-243. **42x**
52. Gutmann E, Jakoubek B. Effect of increased motor activity on regeneration of the peripheral nerve in young rats. *Physiol Bohemoslov*. 1963;12(5):463-468. **42x**
53. Carlson BM, Gutmann E. Free grafting of the extensor digitorum longus muscle in the rat after marcaine pretreatment. *Exp Neurol*. 1976;53(1):82-93. **41x**
54. Tuček S, Koštířová D, Gutmann E. Testosterone-induced changes of choline acetyltransferase and cholinesterase activities in rat levator ani muscle. *J Neurol Sci*. 1976;27(3): 353-362. **40x**
55. Burešová M, Gutmann E, Klicpera M. Effect of tension upon rate of incorporation of amino acids into proteins of cross-striated muscle. *Experientia*. 1969;25(2):144-145. **40x**
56. Carlson BM, Gutmann E. Contractile and histochemical properties of sliced muscle grafts regenerating in normal and denervated rat limbs. *Exp Neurol*. 1976;50(2):319-329. **39x**
57. Tuček S, Gutmann E. Choline acetyltransferase activity in muscles of old rats. *Exp Neurol*. 1973;38(3):349-360. **38x**
58. Gutmann E. The trophic function of the nerve cell. *Scientia* 1969;104(683): 122-141. **38x**