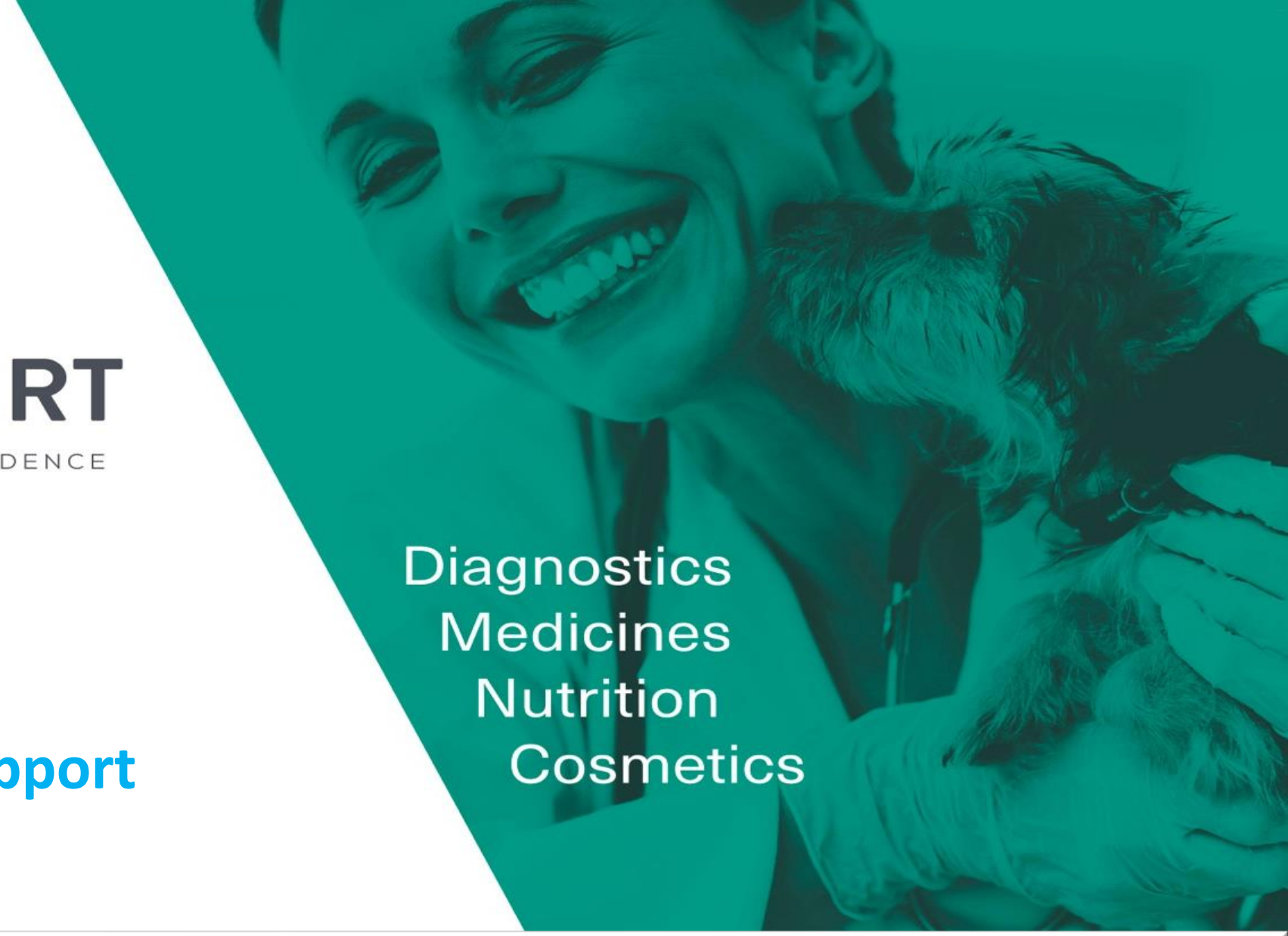
VET EXPERT

BASED ON EVIDENCE



NeuroSupport

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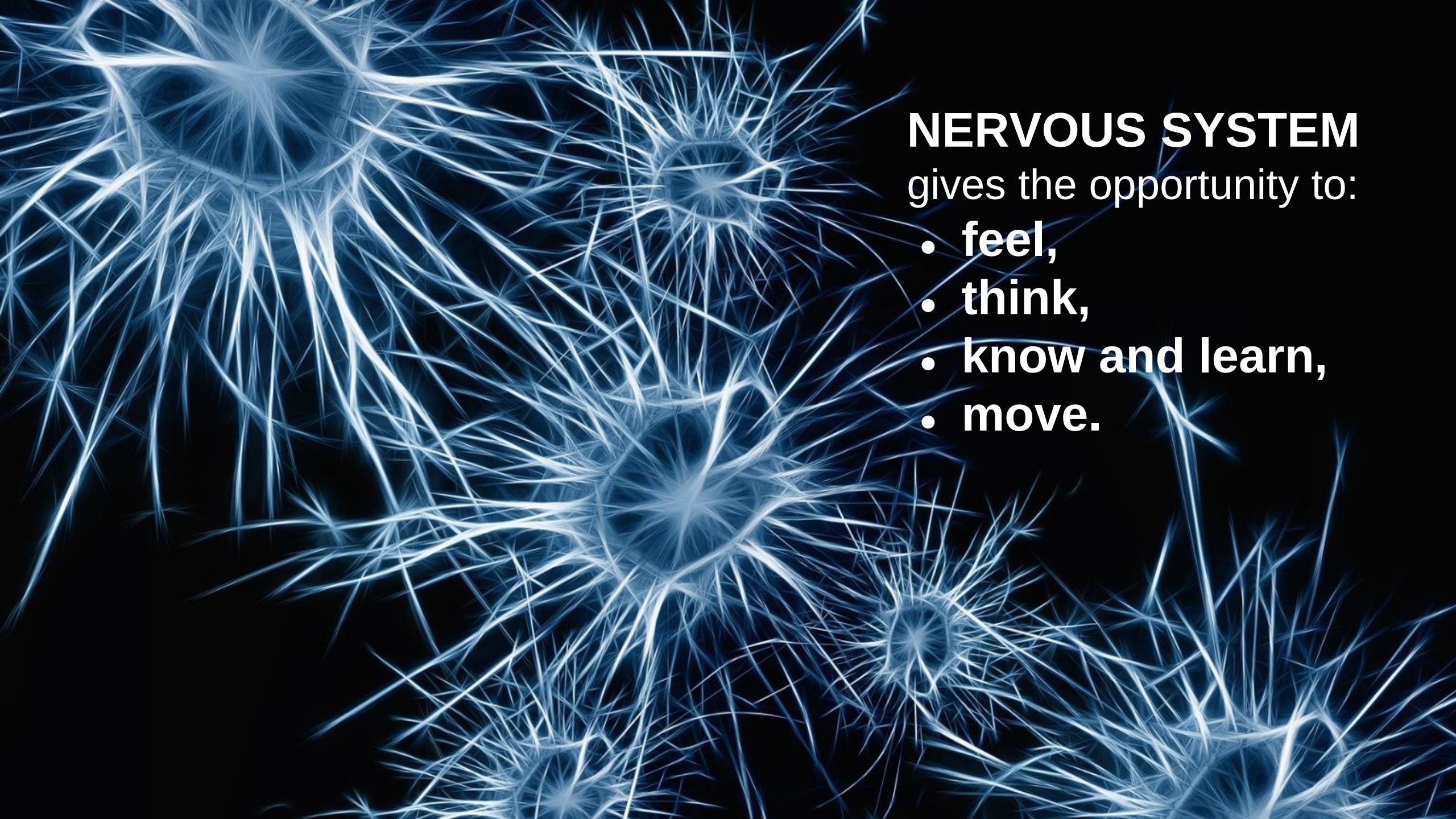


NERVOUS SYSTEM
gives the opportunity to:

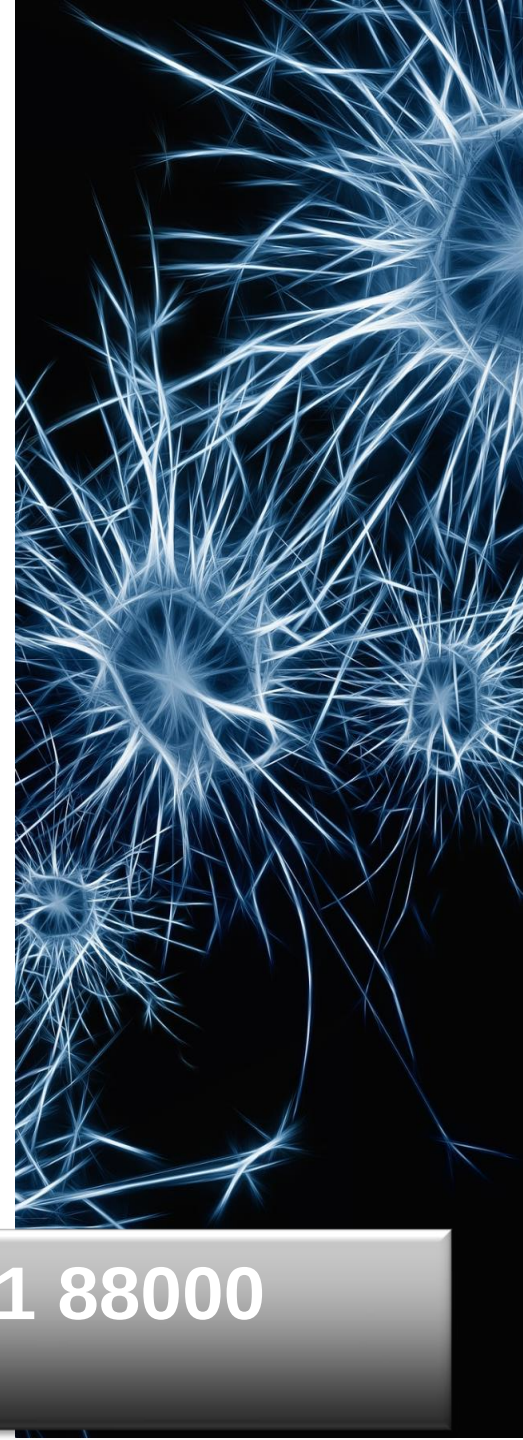
- **feel,**
- **think,**
- **know and learn,**
- **move.**

Basic cell - neuron

- Brain + spinal cord + peripheral nerves

Number of neurons dog: 430 million; cat 250 million

- Shark brain to body weight:1/2496
- Elephant brain to body weight:1/560
- Dog brain to body weight: 1/125
- Cat brain to body weight: 1/100
- Human brain to body weight: 1/40
- Mouse brain to body weight: 1/40

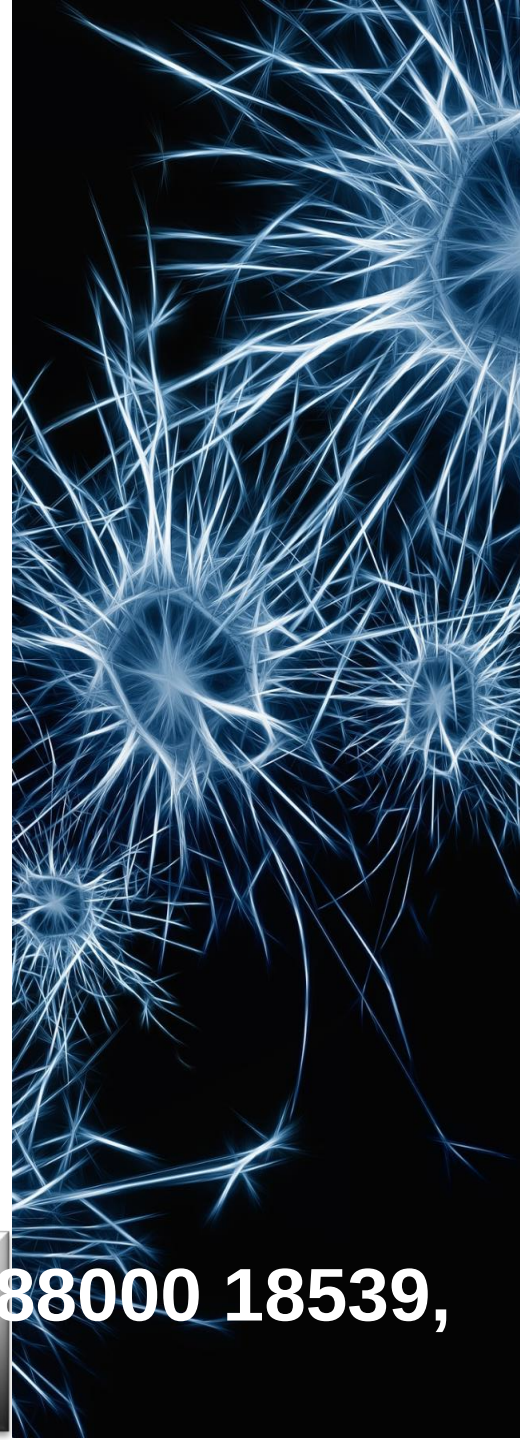


Neuron - damage

- Mechanical damage, injury, crushing, disruption, other
- Damage due to oxidation process and free radicals

BRAIN high susceptibility to damage results from:

1. High content of unsaturated fatty acids
2. Intensive aerobic metabolism
3. Relatively low activity of antioxidant enzymes
4. Neural structure - disadvantageous surface to volume ratio

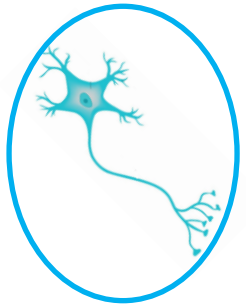


Damage consequences

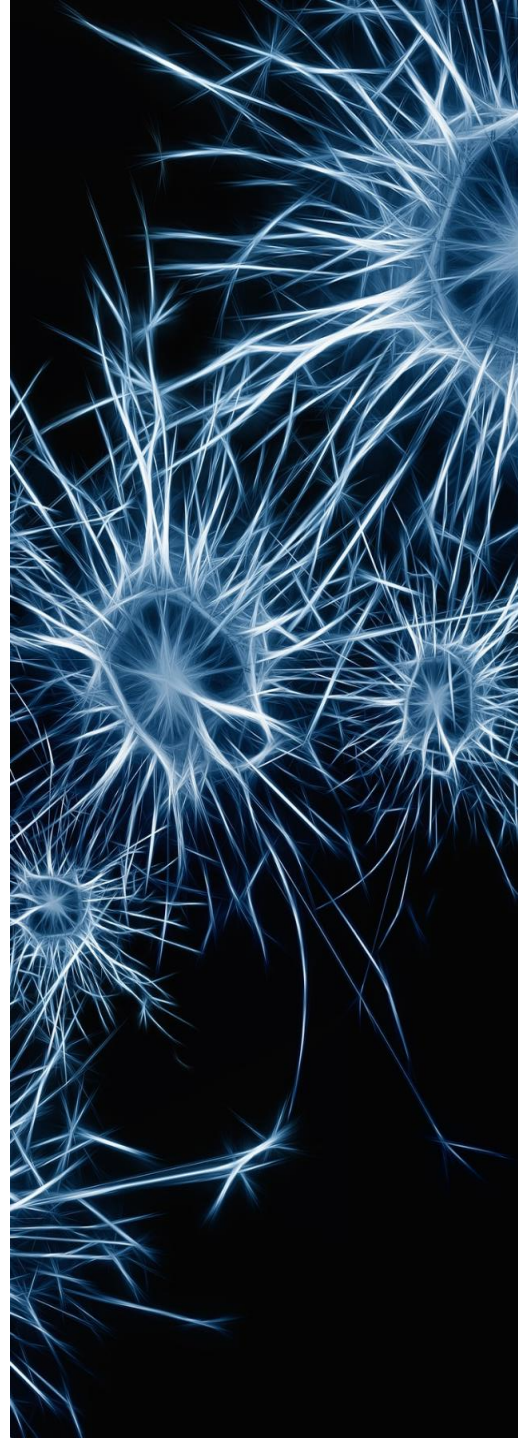
- Impairment, paresis, sensory disturbances and their consequences
- Cognitive disorders, behavioural changes, sleep and daytime activity disorders, other than those resulting from dementia and/or neurodegenerative changes

Dietary support proposal

- Natural antioxidants in the form of plant extracts
- Natural substances with anti-inflammatory and regenerative effects
- Natural substances stimulating regeneration and supporting cognitive processes (DHA acid)
- Rich vitamin composition (B-complex, A,C, E)
- Minerals and amino acid with antioxidant potential: Se, Zn, Taurine

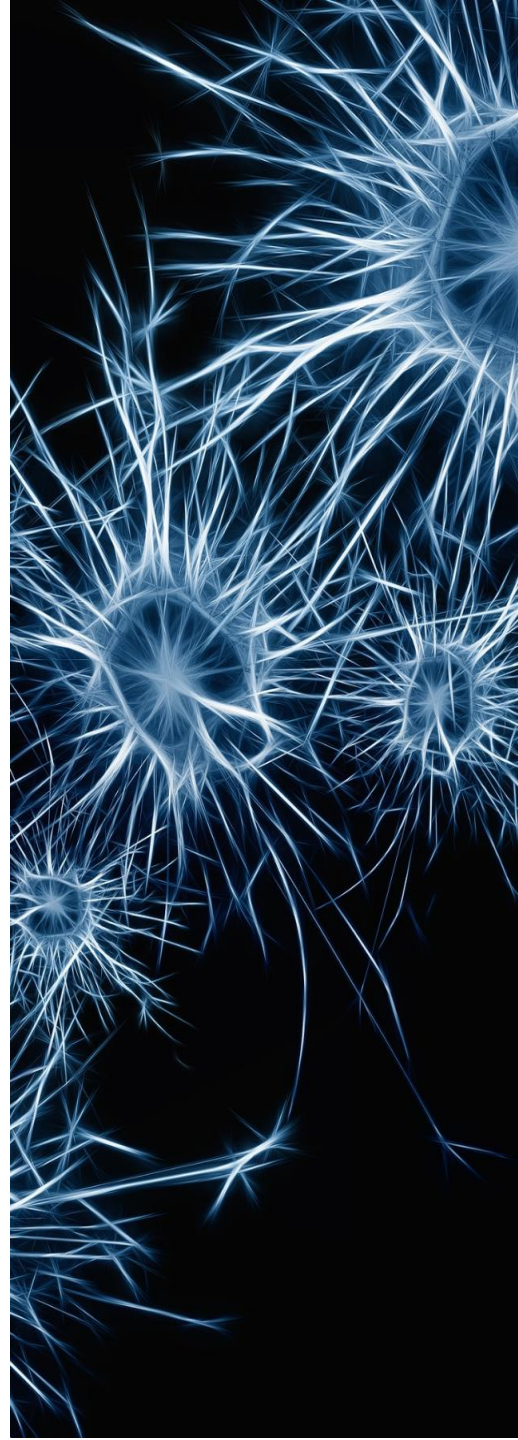


Protected NEURON



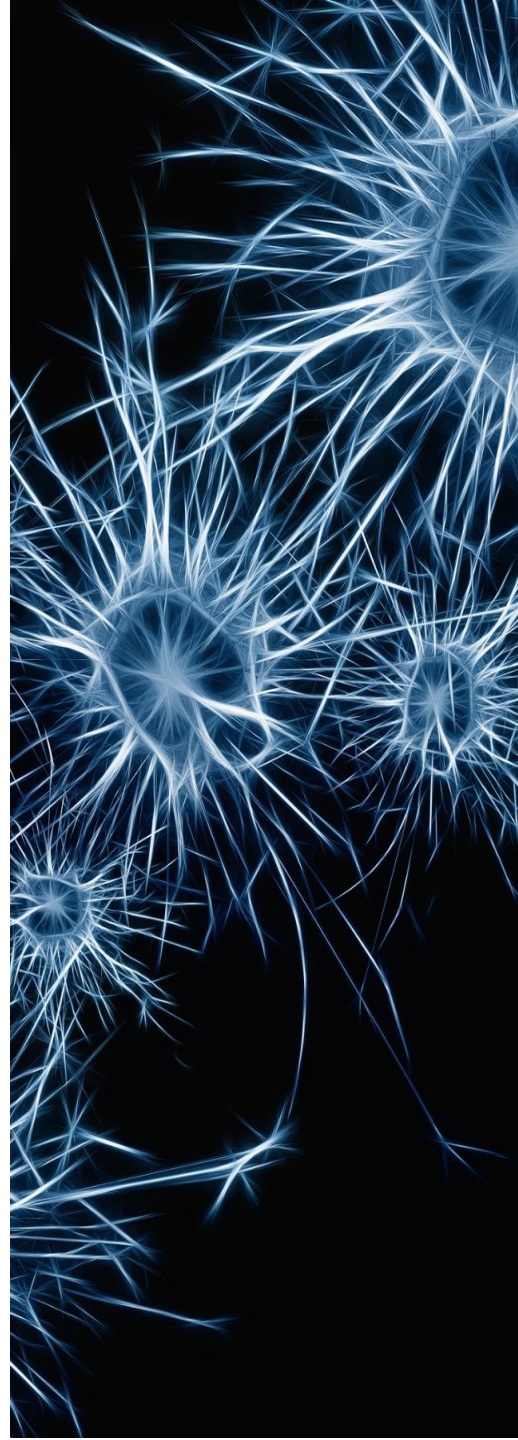
NeuroSupport – protection and regeneration

- Fish oil - DHA acid source
- Grape extract - *Vitis vinifera* - source of polyphenols
- Acerola fruit extract - *Malpighia grabla* - source of vitamin C
- Extract from green tea leaves - *Camellia sinensis* - source of catechins
- Turmeric rhizome extract - *Curcuma Longa* - source of curcumin
- *Beta*-carotene
- Extract from the flowers of Mexican marigold - *Tagetes erecta* - source of zeaxanthin
- Group B vitamins: B1, B3, B5, B6, B12
- Vitamin A, E, biotin
- Taurine
- Folic acid
- Selenium and zinc
- Soya lecithin



NeuroSupport – protection and regeneration

- Support and protection of natural cellular mechanisms:
  - peroxide dismutase - SOD;
  - glutathione peroxidase - GPx;
  - catalases - CAT
- Neuron antioxidant support and protection
- Supporting the proper functioning of the neuron
- Support for neuron regeneration after damage
- Microcirculation support at the damage location



Mouse and rat tests - trauma

- neuroprotection and regeneration support after sciatic nerve damage (cutting; crushing) on the model of mouse and rat
- B group vitamins, Zn, Se, folic acid, curcumin, catechins (EGCG)

Curcumin/mouse results:

- in mice, stomach-feeding:

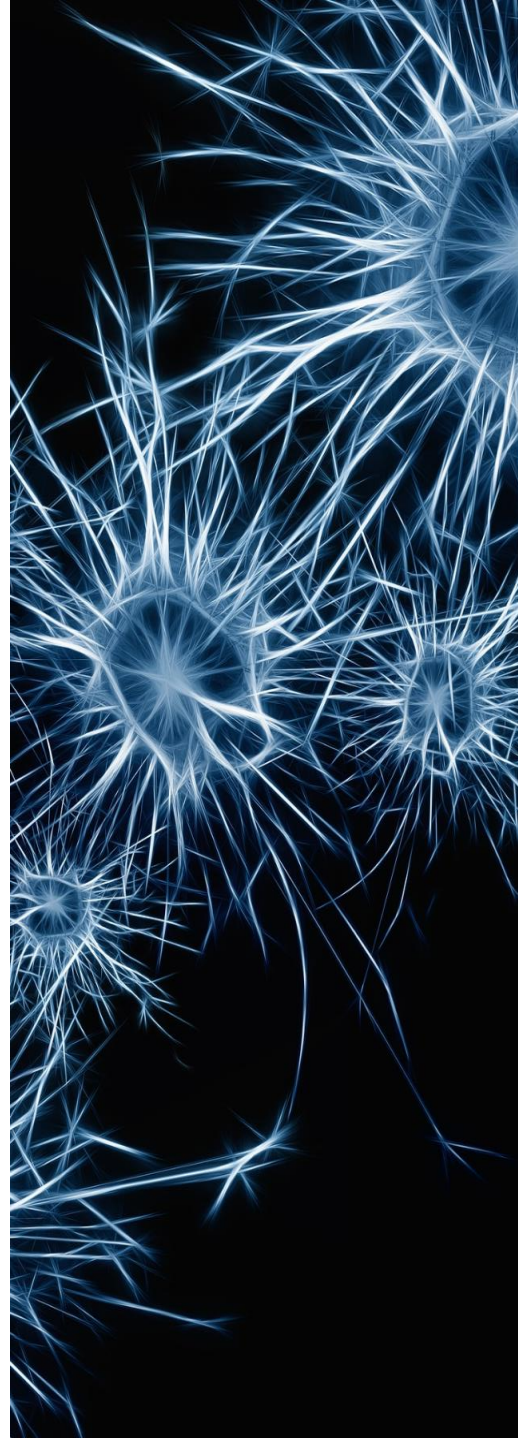
20 and 40mg/kg/day of turmeric ensured better regeneration of the sciatic nerve after the injury than the use of dose:10 mg/kg/day

Zhao L, Cui S. Curcumin improves sciatic nerve regeneration by up-regulating S100 expression in mice. Biomed Res. 2016;27(2):322–7.

EGCG/rat results :

- 4 weeks after surgery and administration of 50mg/kg; *ip*: significant increase in SOD, CAT in treated rats;
- increased nerve survival after severing;
- effective protection against retrograde apoptosis;
- at crushing - reduction of peripheral nerve degeneration by neurotrophic effects

Kian K. I WSP.: Neuroprotective effects of (−)-epigallocatechin-3-gallate (EGCG) against peripheral nerve transection-induced apoptosis. Nutr Neurosci. 2017:1–9.
Renno WM i sp.: (−)-Epigallocatechin-3-gallate (EGCG) attenuates peripheral nerve degeneration in rat sciatic nerve crush injury. Neurochem Int. 2013;62(3):221–31.



Dog studies > 7 y. – neuroprotection/Brain

- Antioxidant complex: vitamin E, vitamin C, DHA, EPA, lipoic acid, L-carnitine and dried fruit and vegetables used for 2 months.
- Results: IMPROVEMENTS in terms of

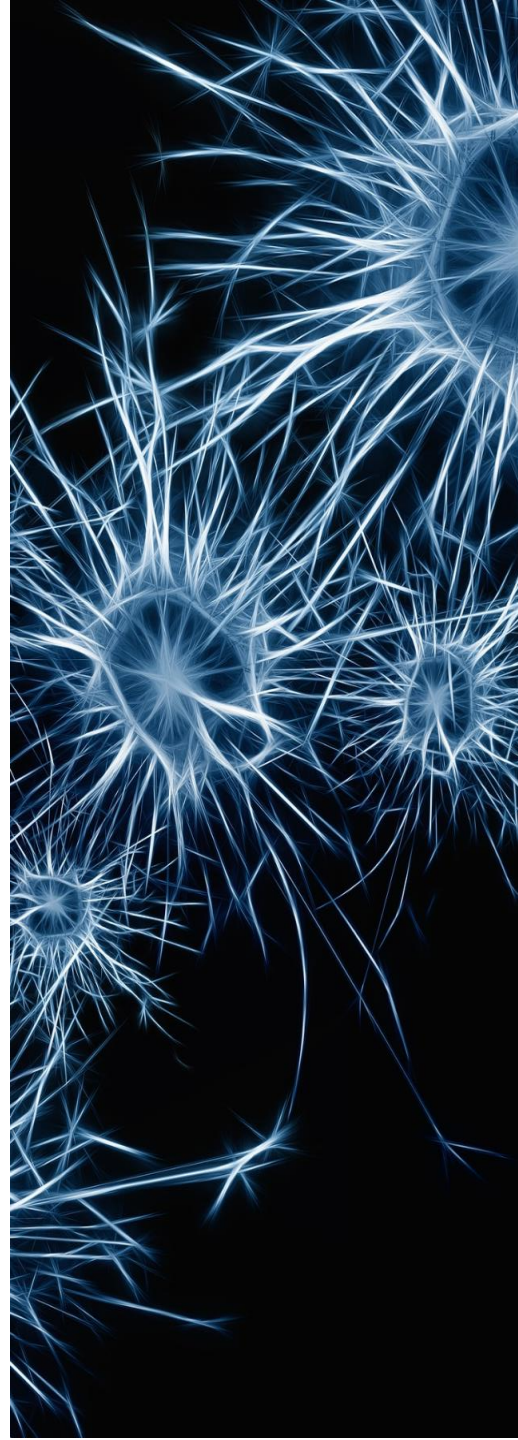
1. disorientation,
2. sleep disorders,
3. daily activity disorder,
4. disorders of relations with humans
5. active training at home

Dodd C, Zicker SC, Jewell DE, et al. Effects of an investigational food on age related behavioral changes in dogs. Paper presented at the Hill's European Symposium on Canine Brain Ageing. Barcelona: Spain; 2002

- Antioxidant complex used for 6 months.
- The result:

1. increased antioxidant activity,
2. reduction of protein damage due to free radicals
3. amyloid deposition reduction

Pop V, Head E, Nistor M, et al. Reduced Ab deposition with long-term antioxidant diet treatment in aged canines. Program No. 525.4. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience; 20



VET EXPERT

NeuroSupport -CONCLUSION

RICHEST COMPOSITION

19 active substances

Wide spectrum of protection and regeneration

TWIST OFF • EASY TO USE

Easy and convenient administration