NEUROPLASTIC RESPONSE TO NERVOUS SYSTEM DAMAGE

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Abstract: Brain is generally one of the organs difficult to repair. Neuroplasticity, or brain plasticity, is capability of nervous system to modify and renew structure and functions according to requirements of the inner and outer surrounding. The injury might be one of these outer signals. The restoration of brain structure and functions through process of neuroplasticity is founded on three processes: regrowth of axons from nerve cells whose peripherally projecting axons were damaged, restoration of damaged nerve cells, and production of new neurons which replace the lost ones. This paper summarized basic molecular and cellular mechanisms involved in the process of neuroplastic response to the brain damage.

Keywords: nervous system, brain, neuroplasticity