

University of Groningen

## Defensive emotional reactions and stress

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*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2014

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Messanvi, K. (2014). *Defensive emotional reactions and stress: Neuromodulation, from anatomy to behavior*. [S.n.].

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# Stellingen

1. The distance that separates an organism from a threat, determines the neuroanatomical and neurochemical systems that will be engaged for its protection and defense.
2. Besides the well-known substantia nigra and ventral tegmental area, the brain contains other dopaminergic cell groups.
3. The hypothalamic dopaminergic cell groups may directly facilitate defensive reactions in the dorsolateral periaqueductal gray.
4. Acute elevation in stress hormones levels can have short-term effects, delayed effects and even the opposite effects than expected.
5. Since norepinephrine reaches amygdala neurons before glucocorticoids, it appears logical that modulation of the not yet activated glucocorticoid receptors by the activated noradrenergic receptors would constitute the first step of the interaction between the two stress hormones.
6. Glucocorticoids need norepinephrine to modulate anxiety.
7. Simultaneous reduction of anxiety levels and impairment of traumatic memory retrieval would be the main property of a good treatment against PTSD.
8. No one is so brave that he is not disturbed by something unexpected. (Julius Caesar)
9. Think of everything, expect everything. (Lucius Seneca)
10. When you have excluded the impossible, whatever remains, however improbable, must be the truth. (Sir Arthur Conan Doyle)
11. For truth is always strange, stranger than fiction. (Lord Byron)
12. There is now a date to celebrate Saint Glinglin.