

Molecular dissection of the dysferlin protein complex in skeletal muscle

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Statements with the thesis

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- 1. The variable domain of the camelid heavy chain antibodies, VHH, is comprised of a single immunoglobulin domain and represents the smallest, naturally occurring, antigen-binding molecule known to date (Muvldermans, S. *et al.* 1999).
- 2. High-affinity VHH can be selected from a nonimmune llama-derived phage display library, which is functional in Western blotting, immunofluorescence microscopy and immunoprecipitation (this thesis and Verheesen P. *et al.*, 2006).
- 3. Calpain 3, which shows a secondary reduction in the dysferlinopathies, is in complex with dysferlin in skeletal muscle (this thesis).
- 4. Identical dysferlin mutations cause a variable phenotype within a family while a similar clinical presentation can be caused by different mutations (Weiler, T. et al., 1999; Argov, Z. et al., 2000).
- 5. The clinical heterogeneity in patients with a muscular dystrophy may be explained by natural variation in proteins that are associated with the defective protein (Angelini C. 1999; Weiler T. *et al.*, 1999).
- 6. AHNAK interacts with dysferlin and myoferlin and a secondary reduction of AHNAK proportional to the loss of dysferlin is observed in transverse muscle cryosections of dysferlinopathy patients by immunofluorescence microcopy (this thesis).
- 7. AHNAK interacts with calpain 3 and serves as a substrate for calpain 3 (this thesis).
- 8. Dysferlin is implicated in sarcolemmal resealing: it facilitates vesicle docking and fusion with the plasma membrane by interacting with other dysferlin molecules and unknown proteins at the plasma membrane (Bansal, D. *et al.*, 2004).
- 9. I know quite certainly that I myself have no special talent; curiosity, obsession and dogged endurance, combined with self-criticism have brought me to my ideas (Albert Einstein).
- 10. Work joyfully and peacefully, knowing that right thoughts and right efforts inevitably bring about right results (James Allen).
- 11. Science is a wonderful thing if one does not have to earn one's living at it (Albert Einstein).
- 12. Enjoy life. There's plenty of time to be dead (Hans Christian Andersen).