Downloaded from orbit.dtu.dk on: Nov 12, 2019

DTU Library

Regulation of annexins following infection like tissue damage – investigated by 2-dimensional gel electrophoresis.

Wulff, Tune; Nielsen, Michael Engelbrecht

Publication date:
2011

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

Link back to DTU Orbit

Citation (APA):
Wulff, T., & Nielsen, M. E. (2011). *Regulation of annexins following infection like tissue damage – investigated by 2-dimensional gel electrophoresis.*. Poster session presented at 15th International Conference on Diseases of Fish and Shellfish, Split, Croatia.

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

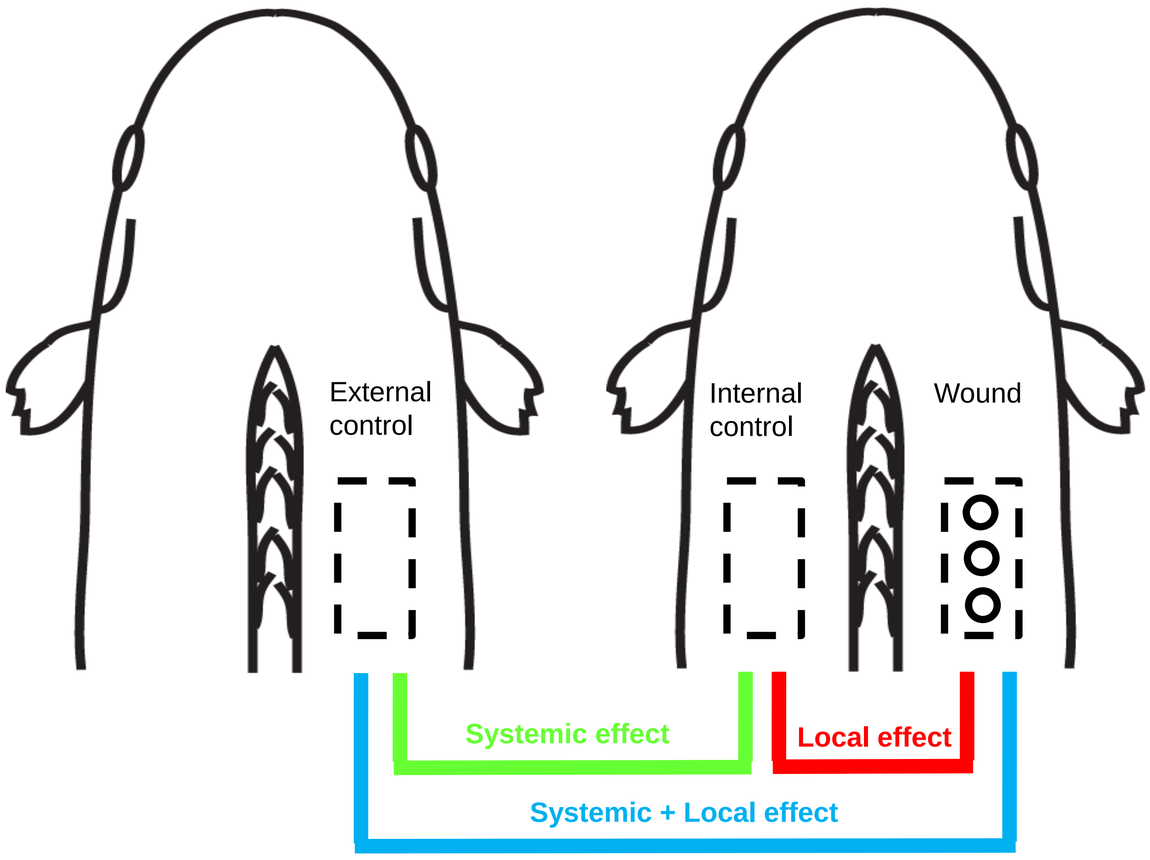
- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Regulation of annexins following infection like tissue damage – investigated by 2-dimensional gel electrophoresis

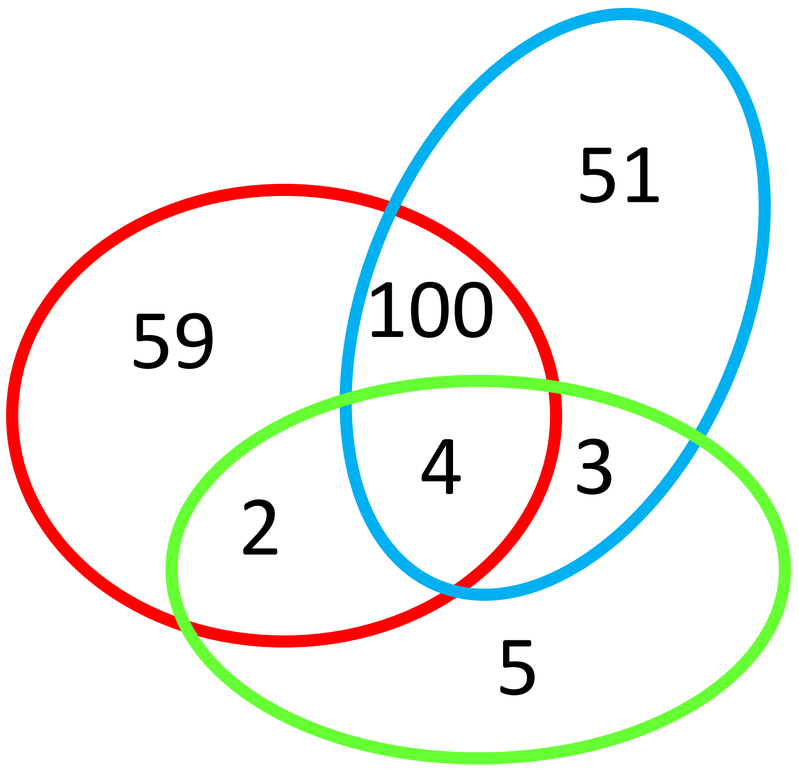
Tune Wulff and Michael Engelbrecht Nielsen
National Food Institute, Technical University of Denmark

Experimental model system

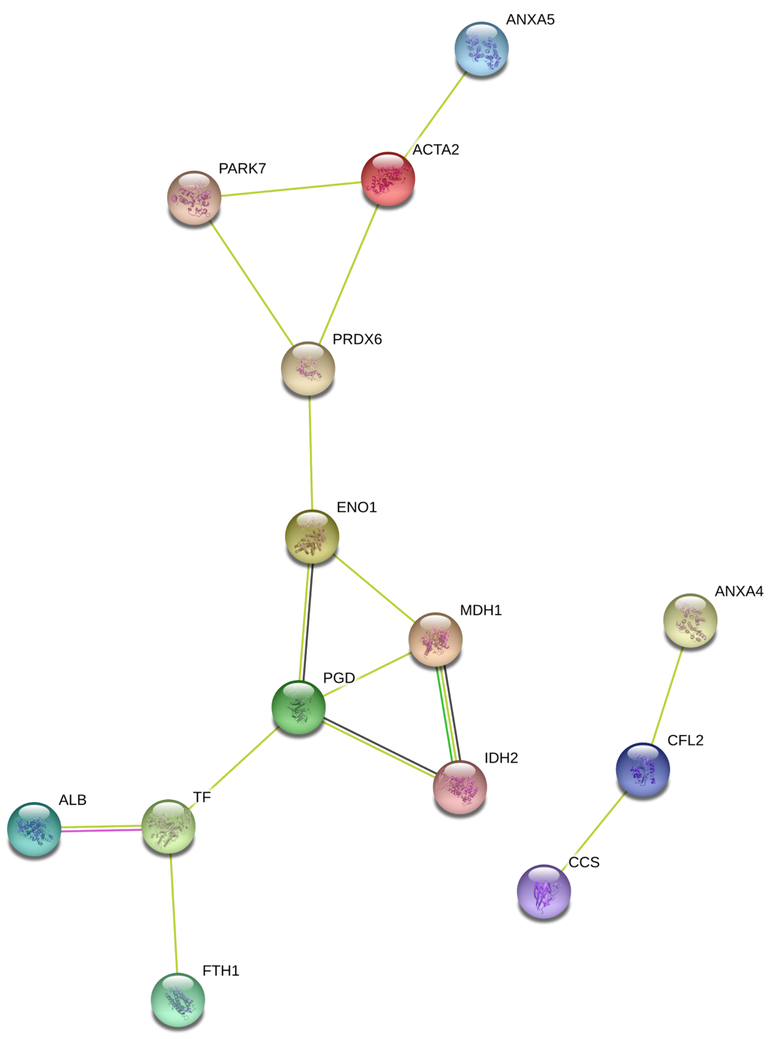


Design: 14 rainbow trouts (640 g, 34 cm) were used for the experiment. Seven fish were injured and seven fish were uninjured followed by sampling at day 7. Samples were taken from the muscle tissue above the lateral line anterior to the dorsal fin. The colours indicate the different comparisons made within the experimental setup: Internal control v. wounding, External control v. wounding and Internal control v. external control

Result overview

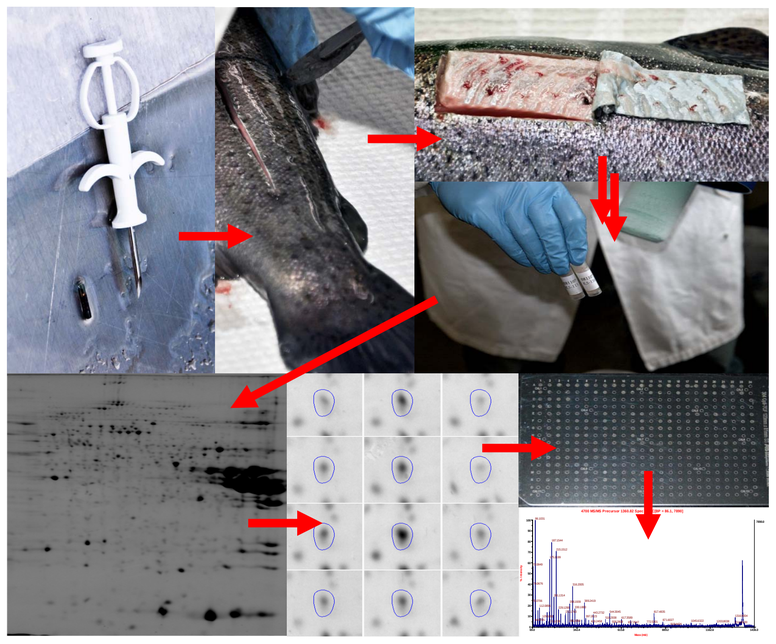


Number of proteins changing between the three comparisons presented in the experimental design. Differences are established based on a paired T-test (Internal control v. wounding) and a unaired T-test (External control v. wounding and internal control v. external control)



Identified proteins which are regulated by wounding in rainbow trout. Their individual connection are assigned using "STRING – known and predicted Protein-Protein interactions" (http://string-db.org). Annotation : Annexin 4 (ANAX4) Annexin 5 (ANXA5), Actin (ACTA2), Peroxiredoxin 6 (prdx6), α Enolase (ENO1),Malate dehydrogenase (MDH1), 6-phosphogluconate dehydrogenase (PGD), Isocitrate dehydrogenase 3 (NAD+) (IDH2), Transferrin (TF), Serum Albumin (ALB). Ferritin (FTH1), Cofilin 2 (CFL2) and Superoxide dismutase (CCS).

Methods



Conclusion

- **Annexin-4 and -5 are regulated by wounding**
- **Based on the interaction assigned in STRING following wounding Annexin-4 and 5- involved in regulating:**
  - **Muscle structure**
  - **Iron metabolism**
  - **Energy metabolism**