

CONTENT

CHAPTER 1

7

General introduction

CHAPTER 2

19

Energy pathways associated with sustained spermatozoon motility in the endangered Siberian sturgeon *Acipenser baerii*

CHAPTER 3

31

Bioenergetic pathways in the sperm of an under-ice spawning fish, burbot (*Lota lota*): The role of mitochondrial respiration in a varying thermal environment

CHAPTER 4

51

Tale of motility exhausted sperm: bioenergetic pathways during non-activation, post-activation, and reactivation of sterlet (*Acipenser ruthenus*) spermatozoon

CHAPTER 5

73

General discussion

75

English summary

88

Czech summary

90

Acknowledgements

92

List of publications

93

Training and supervision plan during study

94

Curriculum vitae

95