

Scientific interests of **Andrzej Ciereszko** concern biochemistry and physiology of animal spermatozoa and practical aspects of fish reproduction. Biochemical research focuses on the isolation and characterization of proteins and peptides of seminal plasma and spermatozoa. Among others, several serine protease inhibitors have been purified and identified in seminal plasma of salmonid, cyprinid and percid fish. Other proteins include proteolytic enzymes, lipocalin, transferrin, and parvalbumin. The latter is likely involved in sperm activation in cyprinid fish. Further research on seminal proteins will be based on proteomic approach. Research on sperm physiology involves studies of sperm motility with the use computer-assisted sperm analysis (CASA) and analysis of sperm DNA fragmentation using a comet assay. Applied research concerns the improvement of short and long-term (cryopreservation) storage of semen from numerous fish species and foundation of the Fish Sperm Bank in Olsztyn. Another areas of applied research concern characterization of sex-reversed male breeders, improvement of fertilization protocols, and evaluation egg quality of salmonid fish. Relationship between fish nutrition and reproduction have been studied as well.