

<b>Title</b>	Gene technology: transgenic animals		
<b>Code</b>	3MN24NAK17M		
<b>Prerequisites</b>	BSc diploma		
<b>Description</b>	The course gives a historical overview of livestock animal transgenesis, provides a fundamental knowledge of the methods currently in use to create transgenic farm animals: pronuclear microinjection with special concern on artificial chromosome transgenesis, lentiviral transgenesis, sperm mediated transgenesis, somatic cell cloning, and targeted gene modifications with the novel "DNA scissors" technologies. It describes the main fields of applications: improved breeding value, production of high value functional products and therapeutic proteins, xenotransplantation and transgenic farm animals as models of human diseases.		
<b>Lecturer</b>	Zsuzsanna Bősze Phd,Dsc.; Lilla Bodrogi PhD., Andrea Kerekes Msc.		
<b>Semester</b>	2nd	<b>Contact hours/week</b>	1+2 (block)
<b>Level</b>	MSc	<b>ECTS</b>	
<b>Teaching and Learning Methods:</b>			
<b>Reading:</b>	<p><b>Compulsory literature:</b></p> <p>Bősze Zs., Baranyi M., Whitelaw C.B.A. Producing recombinant human proteins in the milk of livestock species. Pp 357-394. In „Bioactive components of milk” ed. Zsuzsanna Bősze Springer New York 2008. ISBN:978-0-387-74086-7 Advances in Experimental Medicine and Biology Volume 606.</p> <p><b>Recommended literature:</b></p> <p>Bősze Zs., Hiripi L., Plain facts about GMOs /Hungarian White Paper/</p> <p>Eds Balázs E., Dudits D., Sági L. Barabás Zoltán Federation of Biotechnology, ISBN 978-963-08-1066-1 2011.</p> <p>Bősze Z., Hiripi L. Recombinant protein expression in milk of livestock species. Pp 629-642. In: Recombinant gene expression: reviews and protocols (ed. A. Lorence) Springer 3rd edition ISBN # 978-1-61779-432-2 (2012).</p>		
<b>Assessment:</b>	Exam, written		