Jihočeská univerzita v Českých Budějovicích
Přírodovědecká fakulta
ŠKOLA DOKTORSKÝCH STUDIÍ V BIOLOGICKÝCH VĚDÁCH

PROTOKOL O OBHAJOBĚ DOKTORSKÉ DISERTAČNÍ PRÁCE

Doktorand: **Mgr. Michaela Procházková**

Školitel: **RNDr. Alena Zíková, Ph.D.**

Název disertační práce: **Mitochondrial gene expression in trypanosomatids**

Datum konání obhajoby: **19. června 2018**

Průběh obhajoby
CANDIDATE INTRODUCED THE TOPIC OF HER PHD, TRYPANOSOMA BRUCEI AND ITS MITOCHONDRIAL GENE EXPRESSION. SHE DESCRIBED THE PROCESS OF GENE TRANSCRIPTION AND MENTIONED HER AIM TO STUDY MT GENE TRANSLATION PROCESS. SINCE TRYPANOSOME EXPRESS ONLY TWO PROTEINS IN THE BLOODSTREAM STAGE, SHE DECIDED TO EXPLORE GENE EXPRESSION IN THIS PARTICULAR LIFE STAGE OF T. BRUCEI. SHE FOCUSED ON MRB1 GENE CODING FOR MITOCHONDRIAL RELEASE FACTOR, SHE PREPARED GENETIC KNOCK-OUT

Počet hlasovacích lístků

odevzdaných [5] platných [5] prospěl(a) [5] neprospěl(a) [0]

Hodnocení: PROSPĚLA

KOMISE PRO OBHAJOBU:

FUNKCE	JMÉNO	PODPIS
předseda komise	prof. Ing. Miroslav Oborník, Ph.D.	
člen komise	doc. Mgr. Hassan Hashimi, Ph.D.	
člen komise	doc. Vyacheslav Yurchenko, Ph.D.	
člen komise		
člen komise		
člen komise		
oponent + člen komise	Dr. Dave Speijer, Ph.D.	
oponent + člen komise	Mgr. Pavel Doležal, Ph.D.	

Českých Budějovicích dne 19. 6. 2018

OF THE TbMIA1, SHE SHOWED THAT BLOODSTREAM T. BRUCEII CELLS SURVIVED ME PERFORMED KNOCK-OUT AND WERE VIABLE. HOWEVER, DEFECTIVE TRANSLATION AFFECTED STABILITY OF MITORIBOSOMES AND F_oF_1 ATPase. THIS ATPase COMPLEX IS ESSENTIAL TO KEEP THE MITOCHONDRIAL MEMBRANE POTENTIAL. EXPERIMENTAL INFECTIONS SHOWED THAT MICE INFECTED BY DOUBLE KNOCK-OUT TRYPANOSOMES SURVIVED, BECAUSE THE PARASITE WAS NOT ABLE TO DEVELOP INFECTION IN THE HOST. SHE ALSO SHOWED THAT CODON-INDEPENDENT RELEASE FACTOR TbPtH4 WHICH CAN PARTIALLY SUBSTITUTE FOR TbMrf1. THE CANDIDATE ALSO BRIEFLY MENTIONED OTHER PROJECTS SHE PARTICIPATED ON DURIN HER PhD STUDIES. CANDIDATE ANSWERED ALL QUESTIONS OF REFEREES, MEMBERS OF THE COMMITEE, AND THE AUDIENCE.