

Laboratory of Early Mammalian Developmental Biology (LEMDB)

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Ph.D. Supervisor's statement for the thesis defence of Pablo Bora M.Sc.

Pablo Bora is the third student under my supervision to defend his Ph.D. thesis. Pablo joined our lab (LEMDB) in January 2017 to continue work started by his predecessor Ph.D. student and countryman Vasanth Thamodaran; on the role of p38-MAPKs during mouse preimplantation development (specifically in the specification of the blastocyst inner-cell-mass/ICM lineages and the primitive endoderm/PrE in particular). It does not serve too much point to provide a detailed summary of this work here, as I am sure Pablo will do a more than creditable job of this during his thesis defence seminar. I would only state that having previously identified the involvement of p38-MAPKs during PrE specification and differentiation (during Vasanth's time in the lab), it was the task of Pablo to drill down on the underlying mechanisms, within the auspices of a three year GA CR grant I had acquired. Accordingly, he has uncovered a novel protein translational regulatory role of p38-MAPK that is required to promote blastocyst maturation and derivation of the PrE specifically. As part of this effort, Pablo has contributed three first authorship publications (that form the backbone of his thesis defence today) and has further contributed data that provide a number of potential research avenues for the future. Moreover, I agreed with him acting as joint corresponding author for two of these three publications, owing to his considerable intellectual input and on-going assistance during the development of the project. He has also presented his data, as flash talks and/or posters, at two international conferences (2017 Visegrad Group Society for Developmental Biology/V4SDB Inaugural Meeting – Brno, Czech Republic & 2019 European Developmental Biology Congress/EDBC – Alicante, Spain).

Regarding Pablo's approach to work, it is clear that he is serious and dedicated. He was always early to arrive in the laboratory and late to leave. He is technically very capable and able to pick up and perfect new techniques with relative ease. He also keeps good records and stores his data appropriately so that it can be recalled easily. This has been particularly evident when we have been writing up his work for publication; an endeavour in which he has been intimately involved (in keeping with my personal wider opinion/strategy of Ph.D. student career development and training). He is also both able to follow experimental instructions and to formulate his own ideas and appropriate experimental approaches to test them. This is undoubtedly aided by his diligent and regular survey of the literature (insights from which he has been happy to share with the wider group – *we often receive emails from Pablo entitled 'interesting paper/preprint'*). During the earlier part of his tenure in the lab, I was of the opinion that he preferred to work more independently, focussing on his own experiments and project. Indeed, I would certainly rate him as a very capable researcher who is able to work independently (both on the levels of theory and practice). However, towards the latter stages of his study I have also observed Pablo working more closely with colleagues. Indeed, in the last year or so he was working very closely with a Bachelors student, acting as *de facto* daily supervisor; a role that he seemed to grow into and excel in (incidentally the said student, Andrea Hauserova, is a contributor to the two latest of Pablo's first author papers and will continue her research studies in our lab under the Masters study programme – contributing to his legacy to the LEMDB). Additionally, Pablo has provided teaching assistance to me regarding the establishment within our Faculty of a preimplantation mouse embryo practical class for Bachelors



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students (courses KME614 & KMB61) that has been expanded and developed, with the assistance of his fellow students in the lab, for research level Masters and Ph.D. students (courses KMB603 & KMB603E). Hence, I anticipate he will be able to hone the teaching/supervisory skills he has developed during his time with us in his on-going future career. Overall, my collective assessment of Pablo is of a talented and able investigator who is maturing into highly professional scientific researcher. Notwithstanding my very high professional opinion of Pablo, it also true to say that at times our personal relationship has not always been easy and we have at times had heated disagreements. However, I do not wish, nor consider, this to detract from Pablo's considerable professional achievements, for which I express my personal gratitude.

In conclusion, I thoroughly recommend Pablo Bora's thesis for a successful defence. During his stay in my group, he has proved himself an extremely hardworking, diligent, intelligent and resilient research student. This has been rewarded by the completion of three published first author papers (all within respected journal titles with an average impact factors of 4.762) and a further contributing authorship to a fourth paper from the lab (not included in the official thesis). This is under normal circumstances a significant achievement that he should be justifiably proud and one made all the more remarkable due to the difficulties latterly presented by the COVID-19 pandemic. I know that Pablo is an ambitious person and I am pleased he has been able to secure a post-doctoral research position within the prestigious laboratory of Dr. Oliver J. Rando, at the University of Massachusetts Medical School in the U.S.A.; where I am sure he will successfully continue his career development. In fact, it was to this group Pablo was intending to spend a two- to three-month research stay (within the mandate of our Ph.D. research programme at this Faculty) that he had organised himself (with much effort to secure required funding and study visas *etc.*) but was unfortunately cancelled due to the pandemic. We here at the LEMDB, all wish Pablo well and look forward to reading about his new and exciting research in the Rando lab during the next few years.



doc. Alexander W. Bruce, Ph.D.,

29th June 2021 in České Budějovice



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