

Press Release



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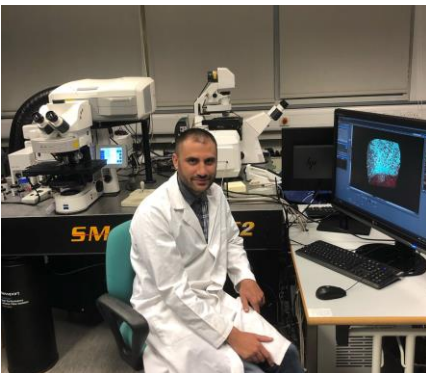
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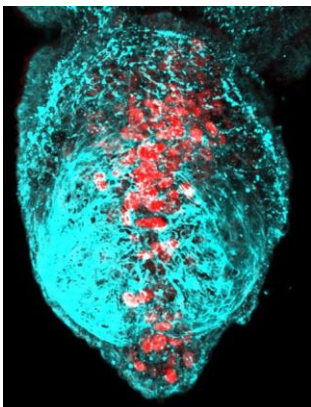
23 June 2020

Important findings in the field of embryology by a graduate of the Department of Biological Sciences of the University of Cyprus They were published in Nature



The graduate of the Department of Biological Sciences of the University of Cyprus Dr. Neophytos Christodoulou and currently a postdoctoral researcher in the same Department recently published important findings that contribute substantially to the understanding of mammalian embryonic development. The publication was made in the prestigious journal Nature and concerns the postdoctoral work of Dr. Christodoulou at Cambridge University after graduating from the department's doctoral program. The publication in Nature, entitled "[Basement membrane remodelling regulates mouse embryogenesis](#)", is an honorary distinction as this journal is considered the world's leading scientific journal in the field of positive sciences.

During development the mammalian embryo implants in the mother's uterus and undergoes dramatic transformation. Specifically, during early post-implantation development the mammalian embryos increase in size and undergo gastrulation, a developmental process which is responsible for the formation of the three germ layers; ectoderm, mesoderm and endoderm. Gastrulation is indispensable for embryo development as it sets the building blocks for subsequent organ formation.



In mice, at this developmental stage the embryos grow while being surrounded by a continuous extracellular matrix scaffold, the basement membrane. Only, during initiation of gastrulation the basement membrane is breached at the embryo's posterior side. The recently published study revealed how the embryos grow while being surrounded by a continuous layer of basement membrane and how they can achieve local breaching of the basement membrane during gastrulation. Importantly the findings of the study are likely to have implications beyond embryonic development, especially in cancer and metastasis.

Dr Christodoulou currently studies the molecular and cellular events controlling central nervous system morphogenesis at the [Cell Biology and Molecular Embryology Laboratory](#) of the Department of Biological Sciences at the University of Cyprus (<http://xeno.biol.ucy.ac.cy/index.htm> , <https://www.facebook.com/SkouridesLabUCY/>).



Publication

Kyprianou, C., Christodoulou, N., Hamilton, R.S. et al. Basement membrane remodelling regulates mouse embryogenesis. *Nature* (2020). <https://doi.org/10.1038/s41586-020-2264-2>

End of announcement
