

Information and Communication Technologies Institute **Carnegie Mellon | PORTUGAL**

A N I N T E R N A T I O N A L P A R T N E R S H I P

UNDERGRADUATE INTERNSHIP PROGRAM – WINTER 2016

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This report provides a short summary of my work during the UIP in Carnegie Mellon University (CMU) hosted by Professor Ziv Bar-Joseph in the Department of Computational Biology from November 28th, 2016 to February 28th, 2017.

During my stay, my main goal was to essentially expand a method developed by my CMU host, Siddhartha Jain, his PhD student, and Joel Arrais, my host at the University of Coimbra, for dynamic model reconstruction of host immune response through the integration of time series and static datasets named TimePath. My main goal consisted of integrating time-based phosphoproteomic series into the methodology to provide more accurate reconstructions of known signaling and regulatory pathways, together with improving how the reconstructed models are visualized. Even though I finished my stay at CMU, we are in the process of obtaining experimental validation of the obtained results, which will be essential in publishing a paper describing the method and the changes introduced.

Adding to this, the whole experience was amazing. The CMU environment is perfect for either work or leisure purposes, seen as how it encourages the constant establishment of fun and interesting activities and groups with these goals in mind. The people with which I ended up interacting were from many different backgrounds and had many different ideals, which led to many enriching exchanges and new friends which I'll cherish for the rest of my life. Even the city of Pittsburgh is wonderful, full of constant activities and events, which helped expose me to many different types of lifestyles and mentalities.

However, none of this would have been possible without the support of both FCT (Fundação para a Ciência e Tecnologia) and the CMU Portugal Program, to which I direct my utmost thanks. I also would like to direct a special thank you to both my CMU and Portugal hosts' whose assistance was essential for the success of this internship and helped make my stay an even more memorable one. I can certainly say that this experience was one of the best of my life, with both my skills as my understanding of different cultures being significantly enriched thanks to the time I spent at CMU. I strongly recommend it to anyone and everyone.