

Facultad de Medicina y Ciencias de la Salud**CERTIFICACIÓN SUSTITUTORIA DEL TÍTULO**

Antonio de P. Trilla García, decano de la Facultad de Medicina y Ciencias de la Salud, por delegación del Rector de fecha 23 de marzo de 2018,

C E R T I F I C O : Que Harvie Potot Portugaliza, nacido el día 13 de diciembre de 1988 en Cabucgayan Leyte (Filipinas), de nacionalidad filipina, con documento identificativo nº EC6583219, ha superado en esta Universidad, con fecha 16 de diciembre de 2020, los estudios conducentes al título universitario oficial de

Doctor Erasmus Mundus en Soluciones Transdisciplinarias para la Salud Global

Organizado con las universidades:

- *VRIJE UNIVERSITEIT AMSTERDAM*
- *UNIVERSITEIT VAN AMSTERDAM*
- *UNIVERSITE VICTOR SEGALEN BORD*

y ha pagado, en fecha 18/12/2020, los derechos de expedición del título (número de registro nacional 2021373799).

Y, para que surta los mismos efectos del título, expido esta certificación a petición de la persona interesada, con carácter provisional, y con una validez de un año desde la fecha de su emisión.

Barcelona, 10 de enero de 2022



UNIVERSITAT DE
BARCELONA
Facultat de Medicina i Ciències
de la Salut
Secretaria d'Estudiants i Docència



UNIVERSITAT DE
BARCELONA

Translation

Faculty of Medicine and Health Sciences

CERTIFICATE ATTESTING TO THE SUCCESSFUL COMPLETION OF A DOCTORAL DEGREE

I, Antonio de P. Trilla García, dean of the Faculty of Medicine and Health Sciences, in accordance with the authority delegated by the Rector on 23 March 2018,

C E R T I F Y : That Harvie Potot Portugaliza, born 13 December 1988 in Cabucgayan Leyte (Philippines), of Philippine nationality, bearer of identity card number EC6583219, has in this university on 16 December 2020 successfully completed the studies leading to the award of the official university qualification of

Doctor by International Doctorate in Transdisciplinary Global Health Solutions

Organized in conjunction with:

- *VRIJE UNIVERSITEIT AMSTERDAM*
- *UNIVERSITEIT VAN AMSTERDAM*
- *UNIVERSITE VICTOR SEGALEN BORD*

and has paid, on 18/12/2020, the fee for the issuance of the certificate (national registration number 2021373799).

And to this effect and by request of the interested party, I hereby issue this provisional certificate, which is valid for a period of one year starting on the day it was issued.

Barcelona, 10 January 2022

***This translation of the original was made by the
Language Services of the University of Barcelona.***

Secretaria d'Estudants i Docència

Barcelona, 16 February 2022

To whom it may concern:

This letter is to certify that Harvie P. Portugaliza recently completed his PhD Thesis entitled “**Targeting malaria transmission: a transdisciplinary approach**” under my supervision. The main host institution was the Barcelona Institute for Global Health (ISGlobal)/ University of Barcelona. Funding for the PhD Thesis was provided by the TransGlobalHealth (TGH) grant (European Commission). Co-supervision was provided by Prof. Dr. Anna Rosanas-Urgell (Institute of Tropical Medicine (ITM), Belgium) and Dr. Christopher Pell (University of Amsterdam (UvA), The Netherlands). Harvie’s PhD Thesis achieved the best possible qualification (excellent *cum laude*), awarded by an international evaluation committee.

Harvie’s Research Progress was **periodically evaluated** (every academic year) by TGH (at the TGH annual meeting) and by the supervisors. All evaluations were satisfactory, based on the activities and achievements listed below. Altogether, Harvie’s PhD was extremely successful, with several publications as first author in high quality journals and successful completion of many high-level training activities.

Research Activities

Academic Year 2016-2017	Remarks
Laboratory training (parasite culture and molecular techniques)	Completed
Optimize techniques for culture-adapted parasites	Completed
Test different external stimuli to induce sexual conversion	Completed
Gene expression analysis for Vietnam samples	Completed
Academic Year 2017-2018	
Training on qualitative research	Completed
Qualitative research for Mozambique respondents	Completed
Training on flow cytometry	Completed
Generating <i>Plasmodium falciparum</i> gametocyte reporter lines	Completed

Processing of field samples for molecular analysis	Completed
Gene expression analysis for Vietnam and Burkina Faso samples	Completed
Research article preparations	
Academic Year 2018-2019	
Sexual conversion experiments (Drugs and Lipid Induction)	Completed
Processing of field samples for molecular analysis	Completed
Gene expression analysis for Vietnam, Burkina Faso, and Mozambique samples	Completed
Research article preparations	Completed
Academic Year 2019-2020	
Finalization of <i>in vitro</i> sexual conversion experiments	Completed
Sample processing for metabolomics study	Completed
Finalization of the gene expression analysis for field samples	Completed
Research article preparation	Completed
PhD thesis preparation and defense	Completed

List of Publications

H.P. Portugaliza, H.M. Natama, P. Guetens, E. Rovira-Vallbona, A.M. Somé, A. Millogo, D.F. Ouédraogo, I. Valéa, H. Sorgho, T. Halidou, N. van Hong, A. Siteo, R. Varo, Q. Bassat, A. Cortés* & A. Rosanas-Urgell*. Effect of artemisinin treatment on *Plasmodium falciparum* sexual conversion rates in naturally infected malaria patients. Under second review.

Portugaliza, H.P., Miyazaki, S., Geurten, F.J., Pell, C., Rosanas-Urgell, A., Janse, C.J. and Cortés, A., 2020. Artemisinin exposure at the ring or trophozoite stage impacts *Plasmodium falciparum* sexual conversion differently. *Elife*, 9, p.e60058.

Portugaliza, H.P., Llorà-Batlle, O., Rosanas-Urgell, A. and Cortés, A., 2019. Reporter lines based on the gexp02 promoter enable early quantification of sexual conversion rates in the malaria parasite *Plasmodium falciparum*. *Scientific reports*, 9(1), pp.1-12.

Portugaliza, H.P., Galatas, B., Nhantumbo, H., Djive, H., Murato, I., Saúte, F., Aide, P., Pell, C. and Munguambe, K., 2019. Examining community perceptions of malaria to inform elimination efforts in Southern Mozambique: a qualitative study. *Malaria journal*, 18(1), p.232.

Casas-Vila, N., Pickford, A.K., Portugaliza, H.P., Tintó-Font, E. and Cortés, A., 2021. Transcriptional analysis of tightly synchronized *Plasmodium falciparum* intraerythrocytic stages by RT-qPCR. In *Parasite Genomics* (pp. 165-185). Humana, New York, NY.

PhD Training Information

Conference and Symposium	Organizer	Venue	Date	Role	ECTS
68th Annual Meeting of the American Society for Tropical Medicine and Hygiene	American Society for Tropical Medicine and Hygiene	Gaylord National Resort and Convention Center in National Harbor, Maryland, USA	November 20 - 24, 2019	Oral presenter, "Effect of artemisinin on the sexual conversion of the malaria parasite <i>Plasmodium falciparum</i> "	2.5
6th ISGlobal Ph.D. Symposium	Barcelona Institute for Global Health (ISGlobal)	Faculty of Medicine, University of Barcelona	November 13, 2019	Oral presenter, "Effect of artemisinin on the sexual conversion of <i>Plasmodium falciparum</i> "	1.5
Ph.D. day IDIBAPS	Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS)	CEK, Hospital Clinic, University of Barcelona	June 28, 2019	5 minutes pitch presenter, "Effect of artemisinin on the sexual conversion of <i>Plasmodium falciparum</i> "	1.5
2018 Transdisciplinary Global Health annual meeting	Trans Global Health - Erasmus Mundus Joint Doctorate Program and ISGlobal-University of Barcelona	Faculty of Medicine, University of Barcelona	November 5, 2018	Presenter, update of the project Targeting malaria transmission: a transdisciplinary approach	1.5
EMBL Conference: BioMalPar XIV: Biology and Pathology of the Malaria Parasite	European Molecular Biology Laboratory (EMBL)	Meyerhofstraße 1, 69117 Heidelberg, Germany	May 23-25, 2018	Poster Presenter: Effect of antimalarial treatment on <i>pfcap2-g</i> activation: a pilot study in patients with uncomplicated falciparum malaria in Vietnam	1.5
VIII Annual Chromatin and Epigenetics symposium	Chromatin and Epigenetics section of the Catalan Society of Biology (SCB) and the Barcelona Chromatin Club (BCC)	Prat de La Riba hall, Carrer del Carme, 47, Barcelona, Spain	March 16, 2018	Participant	1
5th ISGlobal Ph.D. Symposium	Barcelona Institute for Global Health (ISGlobal)	Campus Mar, Barcelona Biomedical Research Park (PRBB) Doctor Aiguader, 88 Barcelona 08003, Spain	November 6, 2017	Poster presenter "Transmission Potential of Malaria Parasites Treated with Artemisinin"	1.5
4th ISGlobal Ph.D. Symposium	Barcelona Institute for Global Health (ISGlobal)	Campus Clinic, Carrer de Casanova, 143, Barcelona, Spain	November 28, 2017	Poster presenter "Targeting malaria transmission: a transdisciplinary approach"	1.5
2017 Transdisciplinary Global Health annual meeting	Trans Global Health - Erasmus Mundus Joint Doctorate Program and Amsterdam Institute for Global Health & Development (AIGHD)	AIGHD, Paasheuvelweg 25, 1105 BP Amsterdam-Zuidoost, Netherlands	September 21, 2017	Poster presenter "Targeting malaria transmission: a transdisciplinary approach"	1.5

VII Annual Chromatin and Epigenetics symposium	Chromatin and Epigenetics section of the Catalan Society of Biology (SCB) and the Barcelona Chromatin Club (BCC)	Prat de La Riba hall, Carrer del Carme, 47, Barcelona, Spain	March 24, 2017	Participant	1
TGH Annual Meeting 2016 / Global Health Symposium	Trans Global Health - Erasmus Mundus Joint Doctorate Program and Amsterdam Institute for Global Health & Development (AIGHD)	Rosarium, Amstelpark 1, Europaboulevard, 1083HZ Amsterdam	September 23, 2016	Participant	0.5

Courses Completed	Organizer	Venue	Date	Grade	ECTS
Research Ethics Training Curriculum	FHI 360	On-line	September 5, 2019	93%	1
Course on Basic Flow Cytometry	La Plataforma de Citometria de IDIBAPS	CEK Building, Barcelona	June 4-8, 2018	Passed	1
STATA course	ISGlobal	C. Rosello 132, ISGlobal, Barcelona	June 7, 2018- June 22, 2018	Passed	1
Fundamentals of Qualitative Health Research	Barcelona Institute for Global Health – University of Barcelona	Faculty of Medicine, University of Barcelona	December 11-20, 2017	9/10	3
Development and Applications of Vaccines in Global Health	Barcelona Institute for Global Health – University of Barcelona	Faculty of Medicine, University of Barcelona	May 24- June 2, 2017	9.3/10	3
Infectious Diseases and Global Health	Barcelona Institute for Global Health – University of Barcelona	Faculty of Medicine, University of Barcelona	May 11-23, 2017	7.7/10	3
Inter- and Transdisciplinary Research for Global Health Research	Athena Institute, VU-University Amsterdam	VU-University Amsterdam	September 19-30, 2016	NA	6

Institutional Presentation	Organizer	Venue	Date	Presentation	ECTS
System Biology and Epidemiology Meeting	ITM	ITM, Antwerp, Belgium	November 21, 2017	Inducing <i>pfap2-g</i> expression and gametocytogenesis in <i>Plasmodium falciparum</i>	0.5
	ITM	On-line via ITM	May 10, 2020	Effect of artemisinin on the sexual conversion of <i>Plasmodium falciparum</i>	0.5
Malaria Coffee Talk	ISGlobal	CEK, Campus Clinic, Barcelona, Spain	Feb 5, 2018	Could antimalarial drugs induce gametocytogenesis in naturally infected malaria patients?	0.5

pfap2-g might know the answer				
ISGlobal	CEK, Campus Clinic, Barcelona, Spain	June 17, 2019	New reporter lines for accurate quantification of sexual conversion rates in the malaria parasite <i>Plasmodium falciparum</i>	0.5

Total ECTS: 35.5
TGH Required ECTS: 30

Please do not hesitate to contact me if you require any additional information.

Sincerely,



Alfred Cortés.



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