

Marc Choisy

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Education and Qualifications

2005-2006 Post-Doc in *Disease Ecology*. University of Georgia, USA.
2001-2004 PhD in *Integrative Biology*. University of Montpellier, France.
2000-2001 MSc in *Biostatistics*. University of Montpellier, France.
1999-2000 MSc in *Evolutionary Biology and Ecology*. University of Montpellier, France.
1998-1999 Credits in *Quantitative Ecology*. University of Wisconsin, USA.
1998-1999 Credits in *Wildlife Population Dynamics*. University of Wisconsin, USA.
1996-1998 Engineer in *Agronomy*. Montpellier-SupAgro, France.
1994-1996 Two-year intensive preparation to enter Montpellier-SupAgro.
1993-1994 High School Diploma. Honours, Science Major. Valence, France.

Grants and Awards

2016-2018 IRD-JEAI (50,000 €)
2016-2017 BioAsia (Campus France) (42,000 €)
2015 "ACIP" from Réseau International des Instituts Pasteur (3,400 €).
2012 "Action incitative" from IRD (2,000 €).
2011-2014 Dengue dynamics in Vietnam section of the Vaccine Modeling Initiative project (regional PI). Bill & Melinda Gates project (90,000 US\$) sub-project of VMI (www.vaccinemodeling.org).
2011-2013 Alternatives methods to fight against Triatoma, vectors of the Chagas disease: PI of task 2 (71,760 €) of ARN project #21655 (PI: Frédéric Lardeux, 260,936 €).
2009-2012 Scientific excellence award from IRD.
2005-2006 Lavoisier Fellowship from the French Minister of Foreign Affairs.
2001-2004 PhD grant, co-funded by CNRS and Région Languedoc-Roussillon.
1999-2000 MSc grant from the French Minister of Agriculture.
1998-1999 Graduate Studentship, University of Wisconsin, McIntire-Stennis Pjt #3885.

Post-doctorates supervision

2013-2014 Guilhem Rascalou: "Control of Chagas disease vectors" (Funding: ANR).
Co-direction with Frédéric Lardeux.

- 2013** Soudeh Ehsani: “Emergence of antibiotic resistance in hospitals” (Funding: Pasteur Institute).
Co-direction with Heiman Wertheim.
- 2012** Étienne Kouokam: “Age-structured models of infectious diseases” (Funding: AUF).
Co-direction with Jean-Daniel Zucker.

PhD students supervision

- 2017-2020** Gonché Danesh, PhD in Integrative Biology, University of Montpellier.
“Phylogenetic analysis of transmission and virulence of HIV and coinfecting viruses”.
Co-supervision with Samuel Alizon.
- 2016-2020** Nguyen Van Cuong, PhD in Epidemiology, Open University.
“Antimicrobial Reduction in Chicken Production in Vietnam”. Co-supervision with Juan J. Carrique-Mas.
- 2016-2019** Vu Tien Viet Dung, PhD in Ecology & Evolution, University of Montpellier.
“Optimizing surveillance network for efficiently monitor and control antibiotic resistance in Vietnam”. Co-supervision with Marisa Peyre.
- 2015-2018** Hannah E. Brindle, PhD in Medical Sciences, University of Liverpool.
“Encephalitis in Northern Vietnam: aetiology and epidemiology”. Co-supervision with Behzad Nadjm and Rob Christley.
- 2015-2018** Nguyen Hoang Pham, PhD in Computer Sciences, University of Paris 6.
“Causality in epidemiological time series”. Co-supervision with Jean-Daniel Zucker.
- 2012-2016** Tran Thi Cam Giang, PhD in Computer Sciences, University of Paris 6.
“Optimisation of vaccine policies”. Co-supervision with Jean-Daniel Zucker.
- 2012-2015** Lê Việt Thanh, PhD in Ecology & Evolution, University of Montpellier 2.
“Phylodynamics of dengue viruses in Hanoi”.
Co-supervision with Heiman F. L. Wertheim.
- 2010-2013** Pham Quang Thai, PhD in Epidemiology, Open University, UK.
“Spatial dynamics of seasonal human influenza in Vietnam”. Co-supervision with Peter Horby.

MSc Students supervision

- 2018** Dang Duy Hoang Giang, MSc, University College London, London, UK.
- 2017** James Mbinta Fenibe, MPH, Hanoi Medical University, Hanoi, Vietnam.
- 2017** Tatiana Ngassa Tchoudjeuh, MSc in Computer Sciences, IFI, Hanoi, Vietnam.
- 2016** Jakub Voznica, MSc in Ecology and Evolution, ENS, Cachan, France.
- 2016** Sara Bosshardt, MSc in Ecology and Evolution, ENS, Paris, France.
- 2015** Lionel Jaderne Houssou, MSc in Computer Sciences, IFI, Hanoi, Vietnam.
- 2015** Damien Philippon, MSc in Computer Sciences, IFI, Hanoi, Vietnam.
- 2014** Progress Udoh, MSc in Computer Sciences, USTH, Hanoi, Vietnam.
- 2014** Nguyen Ngoc Anh, MSc in Pharmacology/Biotechnology, USTH, Hanoi, Vietnam.
- 2013** Noy Souliyaseng, MSc in Tropical Medicine, IFMT, Vientiane, Laos.
- 2013** Selain Kasereka, MSc in Computer Sciences, IFI, Hanoi, Vietnam.
- 2012** Philavanh Sitboulang, MSc in Tropical Medicine, IFMT, Vientiane, Laos.
- 2012** Malyvanh Vongpanhya, MSc in Tropical Medicine, IFMT, Vientiane, Laos.
- 2011** Tran Thi Cam Giang, MSc in Computer Sciences, IFI, Hanoi, Vietnam.
- 2011** Fanny Gascuel, MSc in Ecology and Evolution, ENS, Lyon, France.
- 2009** Ségolène Charaudeau, MSc in Biomathematics, Supélec, Paris, France.
- 2009** Fred Andayi, MPH, French School of Public Health, Paris, France.
- 2009** Étienne Gignoux, MPH, French School of Public Health, Paris, France.

- 2008** Mohamed Rafik, MSc in Applied Mathematics, University of Toulouse, France.
2007 Lamine Condet, MSc in Applied Mathematics, University of Toulouse, France.
2004 Benjamin Roche, MSc in Biomathematics, University of Paris, France.

Research assistant supervision

- 2017** Lucie Contamin, VI-IRD (French ministry of Foreign Affairs).
2016 Anagha Prasanna, Princeton University, USA (OUCRU-Princeton exchange program).
2016 Maria Malik, Princeton University, USA (OUCRU-Princeton exchange program).
2012-2013 Mai Ngoc Khuong, Hanoi School of Public Health, Vietnam (VMI project).
2012-2013 Raaka Kumbhakar, Columbia University, USA (Fulbright fellowship).

PhD Advising Committees

- 2013-2016** Malyna Suong, RPB, Montpellier / Hanoi.
2009-2012 Ève Miguel, CIRAD, Montpellier.
2009-2012 Marion Vittecoq, GEMI, Montpellier.

Teaching Responsibilities

- 2014:** Molecular Phylogenetics for Epidemiology, Hanoi, 15-18 December 2014.
2008-2012 “Global Environmental Changes and Health”, Master of Public Health, French School of Public Health, Paris, 30 hours.
2007-2012 “Épidémiologie Quantitative” (co-responsible), Master of Science, “Biology of Parasites”, University of Montpellier, 30 hours.

Teaching

- 2016** (3 hours) *Modeling of vector-borne infectious diseases*, Introduction to Modeling of Infectious Diseases, 30 Oct.-4 Nov. 2016, Pasteur Institute, Ho Chi Minh city.
- Since 2012** (3 hours) Epidemiology of arboviroses, IFMT, Vientiane, Laos.
Since 2011 (3 hours) Modeling for the study of infectious diseases, USTH, Hanoi, Vietnam.
2008-2012 (6 h/yr). *Global Environmental Changes and Health*.
Master Level. French School of Public Health, Paris, France.
- 2006-2012** (7 h/yr). *Modelling in epidemiology*.
Master Level. University of Montpellier, France.
- 2011** (3 hours) Modeling for the study of infectious diseases, USTH, Hanoi, Vietnam.
2011 (30 hours). *The R software and basic statistics*
Training to the NIHE staff, Hanoi, Vietnam.
- 2010** (30 hours). *The R software and basic statistics*
Training to the NIHE staff, Hanoi, Vietnam.
- 2008** (3 hours). *The HIV story*.
Master Level. University of Orsay, France.
- 2004** (3.5 hours). *Dynamic aspects of vaccination*.
Master Level. University of Montpellier, France.
- 2004** (3.5 hours). *Modelling in epidemiology*.
Bachelor Level. University of Montpellier, France.
- 2003** (3.5 hours). *Modelling in epidemiology*.
Bachelor Level. University of Montpellier, France.
- 1999** (2 hours). *The exponential law in biology*.

Bachelor Level. University of Wisconsin, Stevens Point, USA.

Research Groups

- 2016-2018** IRD/LMI “résistance” Leader: Anne-Laure Bañuls, IRD, Hanoi, Vietnam.
- Since 2012** “Tropical Diseases Modelling Network” (TMod.Net). Leader: Lisa J White, Oxford Tropical Medicine Research Unit, Mahidol University, Bangkok, Thailand.
- 2013-2017** GDRI “Biodiversity and Infectious Diseases in Vietnam, Cambodia and Laos”. Funded by CNRS. Leader: Dr. Anne-Laure Banuls (IRD Montpellier, France) & Dr. Nguyen Thi Van Anh (NIHE, Hanoi, Vietnam).
- 2010-2011** “Zoonotic Diseases and the Risk for Agronomic Stock”. Funded by NIH and the US Department of Homeland Security. Leader: Prof Leslie A Real, Emory University, USA
- 2009-2012** GDRI “Biodiversity and Infectious Diseases in Vietnam”. Funded by CNRS. Leader: Dr. Anne-Laure Banuls (IRD Montpellier, France) & Dr. Nguyen Thi Van Anh (NIHE, Hanoi, Vietnam).
- 2004** “Cultural diversity, economic development and societal instability”. Funded NFS, Santa-Barbara, USA. Leader: Dr. Michael Hochberg, CNRS Montpellier, France.

Employments and Visits

- 2012-2017** National Institute of Hygiene & Epidemiology (NIHE), Hanoi, Vietnam.
- 2012-2017** Oxford University Clinical Research Unit (OUCRU, www.oucru.org), Hanoi, Vietnam.
- 2012** (3 months) National Institute of Hygiene & Epidemiology, Hanoi, Vietnam.
Topic: Modeling epidemiology of infectious diseases.
- 2011** (3 months) National Institute of Hygiene & Epidemiology, Hanoi, Vietnam.
Topic: Modeling epidemiology of infectious diseases.
- 2010** (3 months) National Institute of Hygiene & Epidemiology, Hanoi, Vietnam.
Topic: Modeling epidemiology of infectious diseases.
- 2005** (2 years) Odum School of Ecology, University of Georgia, Athens, USA.
Advisor: Dr. Pejman Rohani.
Topic: Ecological disease dynamics interference and vaccination.
- 2002** (2 weeks) Department of Biology, Moscow State University, Russia.
Advisor: Prof. Anatoli T. Teriokhin.
Topic: Global study of repartition, prevalence and virulence of HIV strains.
- 2001** (1 month) Department of Zoology, University of Oxford, UK.
Advisor: Dr. David L. Robertson.
Topic: Maximum likelihood analysis of adaptive evolution in HIVs and SIVs.
- 2001** (4 months) CEPM, UMR CNRS-IRD, Montpellier, France.
Advisors: Drs. Jean-François Guégan & Eric Elguero.
Topic: Modelling human retroviruses virulence evolution.
- 2000** (8 months) CBGP, UMR INRA-ENSAM-IRD-CIRAD, Montpellier, France.
Advisor: Dr. Jean-Marie Cornuet.
Topic: Comparing methods of estimating genetic introgressive rate.
- 2000** (1 month) MERC, University of Hanoi, Vietnam.
Advisors: Drs. Ester Serraõ & Claire Billot.
Topic: Population dynamics of *Avicennia marina* mangrove trees.
- 1999** (10 months) Department of Forest Ecology, University of Wisconsin, USA.
Advisor: Prof. Mark S. Boyce.
Topic: Population dynamics of Jack Pine budworm (*Choristoneura p. pinus*).
- 1999** (1 month) College of Natural Resources, University of Wisconsin, USA.
Advisor: Dr. Evelyn H. Merrill.
Topic: Courtship behaviour of the Greater Prairie Chicken (*T. c. pinnatus*).

- 1998** (6 months) Australian School of Env. Science, Griffith University, Australia.
Advisor: Dr. Ronda J. Green.
Topic: Foraging behaviour of frugivorous birds in tropical rainforest.
- 1997** (1 year) Chaire d'Ecologie Animale, ENSAM, Montpellier, France.
Advisors: Prof. Serge Kreiter & Dr. Marie-Jeanne Perrot-Minot.
Topic: Foraging behaviour of Lesser Kestrel (*Falco naumanni*).
- 1997** (2 months) Instituto de Ecología, UNAM, México DF, México.
Advisor: Dr. Rodrigo A. Medellín.
Topic: Seed dispersal by birds, bats and opossums in tropical rainforest.

Research Papers

Delabouglise A., **Choisy M.**, Phan D.T., Antoine-Moussiaux N., Peyre M., Vu D.T., Pfeiffer D.U. & Fournié G. (2017) Seasonality of demand for livestock products driving infectious diseases dynamics: the case of avian influenza in Vietnam *Scientific Reports* **7**(1): 5905.

Choisy M., Keomalaphet S., Xaydalasouk K., Quet F., Latthaphasavang V. & Buisson Y. (2017) Prevalence of hepatitis B virus (HBV) infection among pregnant women attending antenatal clinics in Vientiane, Laos, 2008-2014 *Hepatitis Research and Treatment* **2017**: 1284273.

Boithias L., **Choisy M.**, Souliyaseng N., Jourden M., Quet F., Buisson Y., Thammahacksa C., Silvera N., Sengtaheuanghoung O., Pierret A., Rochelle-Newall E., Becerra S. & Ribolzi O. (2016) Hydrological regime and water shortage as drivers of the seasonal incidence of diarrheal diseases in a tropical montane environment *PLoS Negl Trop Dis* **10**(12): e0005195.

Nguyen T.V.A., Bañuls A.-L., Tran T.H.T., Pham K.L.T., Nguyen T.S., Nguyen H.V., Nguyen N.L.T., Nguyen N.L.T., Dang D.A., Marks G.B. & **Choisy M.** (2016) *Mycobacterium tuberculosis* lineages and anti-tuberculosis drug resistance in reference hospitals across Vietnam *BMC Microbiology* **16**(1): 167.

Mai D.T., Peacock T.P., Bich V.T.N., Fabrizio T., Dang N.H., Tho N.D., Diep N.T., Minh N., Hoa L.N.M., Trang H.T.T., **Choisy M.**, Inui K., Newman S., Trung N.V., van Doorn F.R., To T.L., Iqbal M. & Bryant J.E. (2016) Prevalence and diversity of H9N2 avian influenza in chickens of Northern Vietnam, 2014 *Infect. Genet. Evol.* **44**: 530-540.

Chazel M., Marchandin H., Keck N., Terru D., Carrière C., Ponsada M., Jacomo V., Panteix G., Bouzinbi N., Bañuls A.-L., **Choisy M.**, Aubrey A. & Godreuil S. (2016) Evaluation of the SLOMYCO Sensititre® Panel for testing the antimicrobial susceptibility of *Mycobacterium marinum* isolates *Ann. Clin. Microbiol. Antimicrob.* **15**: 30.

Peyre M., **Choisy M.**, Sobhy H., Kilany W.H., Gély M., Tripodi A., Dauphin G., Saad M., Roger F., Lubroth J. & Jobre Y. (2016) Added value of avian influenza (H5) day old chick vaccination for disease control in Egypt *Avian Diseases* **60**(1 Suppl): 245-252.

van Panhuis W.G., **Choisy M.**, Xiong X., Chok N.S., Akarasewi P., Iamsirithaworn S., Lam S.K., Chong C.K., Lam F.C., Phommasak B., Vongphrachanh P., Bouaphanh K., Rekol H., Hien N.T., Duong T.N., Thai P.Q., Chuang J.-H., Liu Y.-L., Ng L.C., Shi Y., Tayag E.A., Roque V.G., Suy L.L.L., Jarman R.G., Gibbons R.V., Velasco J.M.S., Yoon I.-K., Burke D.S. & Cummings D.A.T. (2015) Region-wide synchrony and traveling waves of dengue across eight countries in Southeast Asia *Proc. Natl. Acad. Sci. USA* **112**(42): 13069-13074.

Trang N.V., **Choisy M.**, Nakagomi T., Chinh N.T.M., Doan Y.H., Yamashiro T., Bryant J.E., Nakagomi O. & Anh D.D. (2015) Determination of cut-off cycle threshold values in routine RT-PCR assays to assist differential diagnosis of norovirus in children hospitalized for acute gastroenteritis *Epidemiology & Infection* **143**(15): 3299-3299.

Le Viet T., **Choisy M.**, Bryant J.E., Vu T.D., Pham Q.T., Le Q.M., Horby P., Nguyen T.H. & Wertheim H.F.L. (2015) A dengue outbreak on a floating village at Cat Ba island in Vietnam *BMC Public Health* **15**: 940.

Thai P.Q., **Choisy M.**, Duong T.N., Thiem V.D., Yen N.T., Hien N.T., Weiss D.J., Boni M.F. & Horby P. (2015) Seasonality of absolute humidity explains seasonality of influenza-like illness in Vietnam *Epidemics* **13**: 65-73.

- Hoang L.N.M., Bryant J.E., **Choisy M.**, Nguyet L.A., Bao N.T., Trang N.H., Chuc N.T.K., Toan T.K., Saito T., Takemae N., Horby P.W., Wertheim H.F.L. & Fox A. (2015) Population susceptibility to a variant swine-origin influenza virus A/H3N2 in Vietnam, 2011-2012 *Epidemiology & Infection* **143**(14): 2959-2964.
- Do T.T.T., Martens P., Luu N.H., Wright P. & **Choisy M.** (2014) Climatic-driven seasonality of emerging dengue fever in Hanoi, Vietnam *BMC Public Health* **14**: 1078.
- Choisy M.** & de Roode J.C. (2014) The ecology and evolution of animal medication: genetically fixed response versus phenotypic plasticity. *The American Naturalist* **184** (Suppl. 1): S31-46.
- Roche B., Broutin H., **Choisy M.**, Godreuil S., Constantin de Magny G., Chevalyre Y., Zucker J.-D., Breban R., Cazelles B. & Simard F. (2014) The niche reduction approach: an opportunity for optimal control of infectious diseases in low-income countries? *BMC Public Health* **14**: 753-761.
- Gascuel F., **Choisy M.**, Duplantier J.-M., Débarre F. & Brouat C. (2013) Host resistance, population structure and the long-term persistence of bubonic plague: contributions of a modelling approach in the Malagasy focus. *PLoS Comput Biol* **9**(5): e1003039.
- Berngruber W.T., Froissart R., **Choisy M.** & Gandon S. (2013) Evolution of virulence in emerging epidemics. *PLoS Pathog* **9**(3): e1003209.
- Vale P.F., **Choisy M.** & Little T.J. (2013) Host nutrition alters the variance in parasite transmission potential. *Biology Letters* **9**(2): 20121145.
- Kouokam E., Zucker J.-D., Fondjo F. & **Choisy M.** (2013) Disease control in an age-structured population. *ISRN Epidemiology* **2013**: 703230.
- Vale P.F., **Choisy M.**, Froissart R., Sanjuan R. & Gandon S. (2012) The distribution of mutational fitness effects of phage Φ X174 on different hosts. *Evolution* **66**(11): 3495-3507. **Faculty of 1000**
- Nguyễn T.V.A., **Choisy M.**, Nguyễn D.H., Trần T.H.T., Phạm K.L.T., Đinh P.T.T., Philippe J., Nguyễn T.S., Hồ M.L., Trần S.V., Bañuls A.L. & Đăng D.A. (2012) High prevalence of Beijing and EAI4-VNM genotypes among *M. tuberculosis* isolates in northern Vietnam: sampling effect, rural and urban disparities. *PLoS ONE* **7**(9): e45553.
- Choisy M.** & Rohani P. (2012) Changing spatial epidemiology of pertussis in continental USA. *Proc. R. Soc. B* **279**(1747): 4574-4581.
- Broutin V., Bañuls A.L., Aubry A., Keck N., **Choisy M.**, Bernadet J.-F., Michel C., Raymond J.-C., Libert C., Barnaud A., Stragier P., Portaels F., Terru D., Belon C., Dereure O., Gutierrez C., Boschioli M.-L., Van de Perre P., Cambau E. & Godreuil S. (2012) Genetic diversity and population structure of *Mycobacterium marinum*: New insights into host and environmental specificities. *Journal of Clinical Microbiology* **50**(11): 3627-3634.
- Gimonneau G., Pombi M., **Choisy M.**, Morand S., Dabire R. & Simard F. (2012) Larval habitat segregation between the molecular forms of the mosquito *Anopheles gambiae* in a rice field area of Burkina Faso, West Africa. *Medical and Veterinary Entomology*. **26**(1): 9-17.
- Faye B., Bañuls A.L., Bucheton B., Diome M.M., Bassanganam O., Hide M., Dereure J., **Choisy M.**, Ndiaye J.L., Konaté O., Claire M., Senghor M.W., Faye M.N., Sy I., Niang A.A., Molez J.F., Victoir K., Marty P., Delaunay P., Knecht R., Mellul S., Diedhiou S. & Gaye O. (2010) Canine visceral leishmaniasis caused by *Leishmania infantum* in Senegal: risk of emergence in humans? *Microbes and Infection* **12**(14-15): 1219-1225.
- Choisy M.** & de Roode J.C. (2010) Mixed infections and the evolution of virulence: effects of resource competition, parasite plasticity and impaired host immunity. *The American Naturalist* **175**(5): E105-E118. **Faculty of 1000**
- Godreuil S., Renaud, F., **Choisy M.**, Depina J., Garnotel E., Morillon M., de Perre P.V. & Bañuls A.L. (2010) Highly structured genetic diversity of *Mycobacterium tuberculosis* population in Djibouti. *Clinical Microbiology and Infection* **16**: 1023-1026.
- Prugnolle F., **Choisy M.** & de Meeûs T. (2008) Clonality v0.4: a randomization-based program to test for heterozygosity-genet size relationship in clonal organisms. *Molecular Ecology Resources* **8**(5) : 954-956.
- Neettle D., Grace J.B., **Choisy M.**, Cornell H.V., Guégan J.-F & Hochberg M.E. (2007) Cultural diversity, economic development and societal instability. *PLoS ONE* **2**(9): e929.

Choisy M., Guégan J.-F & Rohani P. (2006) Dynamics of infectious diseases and pulse vaccination. *Physica D* **223**(1): 26-35.

Choisy M. & Rohani P. (2006) Harvesting can increase severity of wildlife disease epidemics. *Proc R. Soc B* **273**(1597): 2025-2034. **Faculty of 1000**

Choisy M., Hide M., Bañuls A.-L. & Guégan J.-F. (2004) Rocking the curve. *Trends in Microbiology* **12**(12): 534-536.

Prugnolle F., **Choisy M.**, Théron A., Durand P., de Meeûs T. (2004) Sex-specific correlation between heterozygosity and clone size in the trematode *Schistosoma mansoni*. *Molecular Ecology* **13** : 2859-2864.

Fargette D., Pinel A., Abubakar Z., Traoré O., Brugidou C., Fatogoma S., Hébrard H., **Choisy M.**, Yacouba S., Fauquet C. & Konaté G. (2004) Inferring the evolutionary history of Rice Yellow Mottle Virus from genomic, phylogenetic, and phylogeographic studies. *Journal of Virology* **78** (7): 3253-3261.

Choisy M., Franck P. & Cornuet J.-M. (2004) Estimating admixture proportions with microsatellites: comparison of methods based on simulated data. *Molecular Ecology* **13** : 955-968.

Choisy M., Woelk C.H., Guégan J.-F. & Robertson D.L. (2004) Comparative study of adaptive molecular evolution in different human immunodeficiency virus groups and subtypes. *Journal of Virology* **78** (4): 1962-1970.

Choisy M., Brown S.P., Lafferty K.D. & Thomas F. (2003) Evolution of trophic transmission in parasites: Why add intermediate hosts? *The American Naturalist* **162** (2): 172-181.

Book Chapters

Choisy M. (2016) The control of infectious diseases in a regional context. In *Shared Challenges for Development within ASEAN – Applied and Analytical Methods*. (Lagrée S. ed), Knowledge Publishing House.

Choisy M., Sitboulang P., Vongpanhya M., Saiyavong C., Khamphongphanh B., Phommasack B., Quet F., Buisson Y., Zucker J.-D. & van Pahuiss W. G. (2015) Rescuing public health data. In *Environmental Changes and Infectious Diseases in Asia*. (Morand S., Dujardin J.-P., Lefait-Robin R., Apiwathnasorn C. eds), Springer-Verlag, Singapore.

Choisy M. (2015) Origine et évolution du VIH. In *Santé, Médecine et Sciences de l'Évolution : les Maladies Infectieuses*. (Vittecoq M., Prugnolle F., Roche B., Renaud F., Thomas F. eds), de Boeck-Solal, Bruxelles, Belgique. Pp. 35-46.

Choisy M. (2010) Modélisation mathématique en épidémiologie. In *Écologie de la santé et conservation*. (Gauthier-Clerc M., Thomas F. eds), de Boeck Université, Bruxelles, Belgique. Pp. 159-182.

Choisy M., Cazelles B. (2008) Conséquences des dynamiques épidémiques en santé publique : Rôle des modèles mathématiques. In *Introduction à l'Épidémiologie Intégrative des maladies infectieuses et parasitaires*. (Guégan J.F., **Choisy M.** eds), de Boeck Universités, Bruxelles, Belgique. Pp. 3-40.

Choisy M., Guégan J.F., Rohani P. (2007) Mathematical modeling of infectious disease dynamics. In *Encyclopedia of Infectious Diseases – Modern Methods* (Tibayrenc M. ed), John Wiley and Sons, Chichester, USA. Pp. 379-404.

de Meeûs T., Théron A., Prugnolle F., Durand P., Caillaud D., **Choisy M.**, Roze D., Jarne P., Jabbour-Zahad R., Alonso S., Pointier J.P. & Boissier J. (2006) Les co-structures génétiques d'un parasite (*Schistosoma mansoni*) et de ses hôtes (mammifères et mollusques) dans la mangrove dulçaquicole de Guadeloupe : échelles spatiale, fonctionnelle et coévolutive. In *Ecosystèmes tropicaux : actes du 2ème colloque de restitution du programme de recherche* (Bonhême I., Appora V., Atramentowicz M. & Gillon Y. eds), ECOFOR, Paris, France. Pp. 61-68.

Constantin de Magny G., **Choisy M.** (2004) Mathematical and technological tools: when cholera meets the satellite. In *Biodiversity and Global Change. Social Issues and Scientific Challenges* (Barbault R., Chevassus-au-Louis B. eds), ADPF, Paris, France. Pp. 123-125.

Book

Guégan J.F., **Choisy M.** (eds.) (2008) *Introduction à l'Épidémiologie Intégrative des maladies infectieuses et parasitaires*. de Boeck Universités.

Posters presented to congresses

Choisy M., Rohani P., Guégan J.-F. *Dynamics of infectious diseases and pulse vaccination: teasing apart the embedded resonance effects*. Gordon Research Conference (GRC) on the Metabolic Basis of Ecology, July 4th-9th 2004, Lewiston, USA (poster). Lodging and registration **Graduate Student Grant award** from the GRC to attend the congress.

Choisy M., Woelk C.H., Guégan J.-F., Robertson D.L. *Comparative study of adaptive molecular evolution in different HIV clades*. 11th Conference on Retroviruses and Opportunistic Infections (CROI), February 8th-11th 2004, San Francisco, USA (poster). Travel, lodging, and registration **Graduate Student Grant award** from the 11th CROI to attend the congress.

Speeches given to congresses

Choisy M. (invited) Modeling aspects related to biodiversity and health. Symposium on Biodiversity and Health, 17-19 November 2014, Phnom Penh, Cambodia.

Choisy M. (invited) Spatial dynamics of infectious diseases: mathematical models, statistical approaches and public health applications. Diseases Modeling Workshop, 5 September 2014, Kuching, Malaysia.

Choisy M. (invited) Spatial dynamics of infectious diseases: consequences for their control. Challenges in Asia: scientific research and policy making, 4-6 June 2014, Jakarta, Indonesia.

Choisy M. (invited) Latitudinal gradients and climate associations of influenza-like illness in Vietnam. Regional Symposium on Emerging Infectious Diseases in Southeast Asia, 11-12 March 2014, Phnom Penh, Cambodia.

Choisy M. & Zucker J.-D. Dengue spatial dynamics in Southeast Asia. ID-BIO: Infectious Diseases, Biodiversity and Health Risk in Southeast Asia, 26-28 November 2012, Hanoi, Vietnam.

Choisy M., Zucker J.-D., van Pahuus W., Vu D.T., Tran N.D & Nguyen T.H. Rescuing surveillance data for mathematical modeling, SEDID (Social and Ecological Dimensions of Infectious Diseases), 6-7 October 2011, Bangkok, Thailand.

Choisy M. (invited) Host demography and the spread of infectious diseases, RAPIDD workshop, 22-24 March 2010, Emory University, USA.

Choisy M. & de Roode J. Mixed-infections and the evolution of virulence: bridging the gap between experiments and theory. 93rd Meeting of the Ecological Society of America (ESA), 4-8 August 2008, Milwaukee, USA.

Choisy M., Guégan J.-F. & Rohani P. Dynamics of infectious diseases and pulse vaccination: teasing apart the embedded resonance effects. 92nd Meeting of the Ecological Society of America (ESA), 4-10 August 2007, San José, USA.

Choisy M. & Rohani P. Harvesting can increase severity of wildlife disease epidemics. 91st Meeting of the Ecological Society of America (ESA), 6-11 August 2006, Memphis, USA.

Choisy M., Woelk C.H., Guégan J.-F. & Robertson D.L. *A comparative study of adaptive molecular evolution in different HIV clades*. 9th Meeting of PhD Students in Evolutionary Biology, 11-16 September 2003, Fiesch, Switzerland.

Choisy M., Woelk C.H., Guégan J.-F. & Robertson D.L. Maximum likelihood analysis of adaptive evolution in primate lentiviruses. 8th Meeting of PhD Students in Evolutionary Biology, 28 August – 1 September 2002, Lohja, Finland.

Choisy M., Woelk C.H., Guégan J.-F. & Robertson D.L. Maximum likelihood analysis of adaptive evolution in primate lentiviruses. 6th International Meeting on Molecular Epidemiology and Evolutionary Genetics of Infectious Diseases (MEEGID), 24-27 July 2002, Institut Pasteur, Paris, France.

Services

Reviewer for *Infections, Genetics & Evolution, Parasitology, Trends in Parasitology, PloS NTD, Proceedings B* (named **Top-30 Referee in 2012**), *Evolution, The American Naturalist, Ecology Letters, Proceedings of the National Academy of Sciences of the USA, Methods in Ecology and Evolution,*

Theoretical Population Biology, Interface, Journal of Wildlife Diseases: between 1 and 2 manuscripts per month.

Since 2015: Jury member of PhD fellowship attribution, on behalf of the French Embassy in Vietnam.

Since 2012: Jury member of PhD fellowship attribution, “Pharma-Biotech” department, University of Science & Technology of Hanoi (USTH), Vietnam.

Since 2012: Jury member of Master-2 “Pharma-Biotech” of the University of Science & Technology of Hanoi (USTH), Vietnam.

2009-2012: Expert committee in the Training Department of IRD.

2008: Expert committee for hiring an associate professor at the University of Lyon, France.

Expert reviewer for grant applications:

2013: AIRD (International Agency of Research for Development): PEERS, BSTD, JEA

2012: MRC (Medical Research Council): Infections and Immunity – Viral Diseases”

2011: ANR (Agence National de la Recherche): “Retour Post-doctorants”

2008: NSF (National Science Foundation): “Population and Evolutionary Processes”

2007: ANR (Agence National de la Recherche): “Santé-Environnement et Santé-Travail”

Meeting Organisations

2016 Computational Biology for Infectious Diseases, September 18th-25th 2016, USTH, Hanoi, Vietnam (www.cbid.asia)

2014 Molecular phylogenetics training, December 15th-18th 2014, USTH, Hanoi, Vietnam.

2014 Population genetics training, December 1st-4th 2014, Press Club, Hanoi, Vietnam.

2013 Metarisk conference, November 6th-8th 2014, Press Club, Hanoi, Vietnam.

2012 ID-BIO conference, November 26th-28th 2012, Press Club, Hanoi, Vietnam (www.mivegec.ird.fr/id-bio).

2002 2nd Host-Parasite Evolutionary Dynamics Workshop, September 16th-20th 2002, Le Pous, Notre Dame de Londres, France.

2001 1st Host-Parasite Evolutionary Dynamics Workshop, September 25th-28th 2001, Agropolis International, Montpellier, France.

1997 Staff of the 7th International Theriological Congress (ITC), September 6th-12th 1997, Acapulco, México.