

## CURRICULUM VITAE

**RAZAFINDRAZAKA Harilanto Liantsoa**



Surname : **RAZAFINDRAZAKA**

First names : Harilanto Liantsoa

Date and place of birth : 26th December 1978, Antananarivo – Madagascar

Nationality : Malagasy

Languages :

Malagasy (native language), Malagasy (southwest dialect of Madagascar),  
French (fluent), English (fluent), German (basic)

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### **POST-DOCTORAL FELLOWSHIP IN FRANCE AND MADAGASCAR (*JOINT POSITION*)**

2015 - 2016 : Post-Doctoral Fellowship

**University of Toulouse 3**, UMR 5288 Laboratoire AMIS 5288, 37 Allées Jules Guesde, 31073 Toulouse  
01/02/2015 – 31/01/2016 (1 yr)  
Director : Dr Denis Pierron (CR1 CNRS)  
Transmission of food practices and cultures: genotype/phenotype studies  
**Funding : Nestlé Foundation**

**2013 - 2015 :** **Post-Doctoral Fellowship**  
**University of Toulouse 3**, UMR 5288 Laboratoire AMIS 5288, 37 Allées Jules Guesde, 31073 Toulouse  
01/02/2013 – 31/01/2015 (2 yrs)  
Director: Dr Denis Pierron (CR1 CNRS)

**Axis 1** : Functional admixture : genetic and phenotype diversity due to inbreeding in populations.  
Director : Dr Denis Pierron (CR1 CNRS)  
**Funding : ANR Geno-mix RPDOC**  
Co-director: Dr Chantal Radimilahy (Lecturer - University of Antananarivo)

**Axis 2** : Genomic diversity, phenotypic variation and food practices  
**Funding : ICMAA**

**2011 – 2012 :** **Post-Doctoral Fellowship**  
**INSERM – University of Bordeaux Segalen II / Unité INSERM 1034**  
01/10/2011 - 30/09/2012 (1 yr)  
Director : Dr Thierry Letellier (CR1 INSERM)  
**Project : MAGE “Madagascar Genetics Ethnolinguistics II”**: *Genetic diversity and migratory histories of paternal lineages. Molecular Technology: Biomark Fluidigm- SNP genotyping.*  
**Funding : Aquitaine region**  
Co-director: Chantal Radimilahy (Lecturer - University of Antananarivo)  
**Funding : ICMAA**

## POST-DOCTORAL FELLOWSHIPS IN FRANCE

**September 2011 : Post-Doctoral Fellowship. CombYplex Project.**  
**University of Toulouse 3**, UMR 5288 Laboratoire AMIS 5288, 37 Allées Jules Guesde, 31073 Toulouse  
01/09/2011 – 30/09/2011 (1 month)  
Director : Dr Patricia Balaesque (CR1 CNRS)  
Project : Development of a global database for Y-chromosomes with the aim to create a broad-spectrum kit for the identification of individuals (Patent in progress).  
**Funding : Midi-Pyrénées region**

**2010 - 2011 :** **ATER at the Collège de France (full time position)**  
**Collège de France**  
Professor of human paleontology under the supervision of Prof. Michel Brunet  
01/09/2010 – 31/08/2011 (1 yr)  
Director : Prof. Michel Brunet

Research programme : Settlement of the Indian Ocean; Madagascar's relations with Austronesian and African populations.

Funding : Collège de France

- 2009 – 2010 : **ATER in Anthropobiology (part time position 80%) (Attaché Temporaire d'Enseignement et de Recherche ; Temporary lecturer and researcher)**  
**University of Toulouse 3**, 118 route de Narbonne, 31062 Toulouse  
01/09/2009 – 31/08/2010 (1 yr)  
Funding : **University of Toulouse 3**

## UNIVERSITY EDUCATION

**Ph.D. Thesis in Biotechnology – Anthro-biology**

Co-supervised between the **University of Toulouse 3** and the **University of Toliara**

- 2006-2010 : Thesis title : ***Le Peuplement humain de Madagascar : Anthropologie génétique de trois groupes traditionnels.***  
**Laboratoire AMIS – UMR 5288**  
Co-supervisors : E.Crubézy, C. Sambo, B. Ludes, L-P Randriamarolaza  
Funding  
2006-2009 : Ministère de l'Enseignement Supérieur et de la Recherche  
2009-2010 : ATER (part time) University Toulouse 3.

- 2005-2006 : **Master 2 in Research.** Functional analysis of the genome. Option in anthropobiology. Co-supervisors: Prof. Larrouy (Prof Emeritus UPS) and Prof. Dugoujon (DR1 CNRS). Team "Peuplement et évolution homme et milieu", AMIS laboratory, Toulouse.  
Dissertation title : "Diversité du système Gm des Aluku de la Guyane française. Comparaison avec des populations ouest africaines".

## PUBLICATIONS

### Articles:

- [Razafindrazaka H](#), Monnereau Aurore, Razafindrazaka Dina, Tonasso Laure, Stephanie Schiavinato, Jean-Aimé Rakotoarisoa, Radimilahy Chantal, Letellier Thierry, Pierron Denis. **Genetic admixture and flavor preferences: Androstenone sensitivity in Malagasy populations.** *Hum Biol.* 2015 Jan; 87(1):59-70.
- Camille, F; Roblin, S; Baldovini, N; [Razafindrazaka, H](#) ; Pierron, D; Bensafi, M **Sensitivity to human body odor compounds.** *Chemical senses.* Volume: 40 Issue: 3 Pages: 271-271. Published: Mars 2015

- Kusuma P, Cox M P., Pierron D, [Razafindrazaka H](#), Brucato N, Letellier T, Sudoyo H, Ricaut F-X. **MtDNA and Y Chromosome support the Settlement of Madagascar by Indonesian Sea Nomad Populations.** *BMC Genomics*. 2015 Mar 17;16:191. doi: 10.1186/s12864-015-1394-7.
- Karmin, Monika; Saag, Lauri; Vicente, Mario;(…) [Razafindrazaka H](#); (… ) Kivisild, T **A recent bottleneck of Y chromosome diversity coincides with a global change in culture.** *Genome Research*. Vol: 25 Issue: 4 Pages: 459-466 Published: APR 2015
- [Razafindrazaka H\\*](#), [Pierron D\\*](#), [Pagani L\\*](#), Ricaut FX, Antao T, Capredon M, Sambo C, Radimilahy C, Rakotoarisoa JA, Blench RM, Letellier T, Kivisild T. **Genome-wide evidence of Austronesian-Bantu admixture and cultural reversion in a hunter-gatherer group of Madagascar.** *Proc Natl Acad Sci (PNAS) U S A* . 2014 Jan 21;111(3):936-41
- Pierron D, [Razafindrazaka H](#), Rocher C, Letellier T, Grossman LI. **Human testis-specific genes are under relaxed negative selection.** *Mol Genet Genomics*. 2014 Feb;289(1):37-45
- Capredon M, Brucato N, Tonasso L, Choessel-Cadamuro V, Ricaut FX, [Razafindrazaka H](#), Rakotondrabe AB, Ratolojanahary MA, Randriamarolaza LP, Champion B, Dugoujon JM. **Tracing Arab-Islamic inheritance in Madagascar: study of the Y-chromosome and mitochondrial DNA in the Antemoro.** *PLoS One*. 2013 Nov 22;8(11)
- Grossman L.I, Pierron D., · Letellier T., Gutierrez Corts, N. [Razafindrazaka H.](#), Rocher C. **Genomic Approaches to Evolution and Adaptation of Modern Human Populations.** *Conference paper. 12 AIChE Annual Meeting. October 2012*
- Capredon M, Sanchez-Mazas A, Guitard E, [Razafindrazaka H](#), Chiaroni J, Champion B, Dugoujon JM. **The Arabo-Islamic migrations in Madagascar: first genetic study of the GM system in three Malagasy populations.** 2011 Dec *Int J Immunogenet*. 2011 Dec
- [Razafindrazaka H\\*](#), Ricaut FX\*, Cox MP, Mormina M, Dugoujon JM, Randriamarolaza LP, Guitard E, Tonasso L, Ludes B, Crubézy E. **Complete mitochondrial DNA sequences provide new insights into the Polynesian motif and the peopling of Madagascar.** *European Journal of Human Genetics*. 2009;18(5): 575-581.
- [Razafindrazaka H\\*](#), Ricaut FX\*, Cox MP, Dugoujon JM, Guitard E, Sambo C, Mormina M, Mirazon-Lahr M, Ludes B, Crubézy E. **A new deep branch of eurasian mtDNA macrohaplogroup M reveals additional complexity regarding the settlement of Madagascar,** *BMC Genomics*. 14; 10:605.

### **Book chapters :**

- [Razafindrazaka H](#), Brucato N, Mazières S, 2008. *Les Noirs Marrons de Guyane Française* in *Abrégé d'Anthropobiologie*. 2<sup>ème</sup> édition. Ed Masson

- [Razafindrazaka H](#), Brucato N, Mazières S, 2008. *La traite des esclaves* in *Abrégé d'Anthropobiologie*. 2<sup>ème</sup> édition. Ed Masson
- [Razafindrazaka H](#), 2008. *Le peuplement humain de Madagascar* in *Abrégé d'Anthropobiologie*. 2<sup>ème</sup> édition. Ed Masson

\* authors contributed equally to the development and writing of the article.

## FIELDWORK EXPERIENCE

*During my post-doctoral fellowship (2013-2015), I led fieldwork missions with the aim to conduct psychophysical tests on the diversity of olfactory perceptions in Malagasy populations.*

- 2015 : Team leader: Conducting psychophysical tests on a cohort of 400 students at the University of Antananarivo.  
Objective : To study the genetic and phenotypic diversity of olfactory perception (Dec 2014- Feb 2015 )
- 2014 : Team leader: Selecting a cohort of 400 students at the University of Antananarivo.  
Objective : To study the genetic and phenotypic diversity of olfactory perception (June - Aug 2014 )
- 2013 : June – August : Study of four regions in Madagascar based on their geographic location. Belo sur Tsiribihina (southwest), Mahajanga (northwest), Sainte-Marie (east), Antananarivo (central).  
Fieldwork team leader: recruitment of participants, development of psychophysical test for olfaction, DNA sampling from saliva, administrative duties, contact with the National Ethics Committee (Ministry of Health).

*During my Ph.D., I organised and conducted anthropobiological fieldwork missions with the aim to determine populations involved in the human settlement history of Madagascar.*

- 2006 – 2007 : Dec 2006 – Jan 2007 : Andriana Merina group – Madagascar. Established relations with the community for integration purposes, determined geneologies, selected participants, conducted biological sampling, dealt with administrative and ethical processes.
- 2007 : June – Sept : The Vezo nomadic fishing group and the Mikea hunter-gatherers – southwest Madagascar. Three month fieldwork period in a tropical environment in order to identify and integrate into the last hunter-

gather population of Madagascar (Mikea), and also the nomadic fishing group, the Vezo (contact less restrictive). Determined genealogies, selected participants, conducted biological sampling, dealt with administrative and ethical processes.

**2007-2008 : Dec 2007- Jan 2008 :** A hunter-gatherer population, the Mikea, in the Mikea forests, southwest Madagascar. Second fieldwork period to define the information obtained during the summer 2007. Conducted blood sampling after permission from the Ministry of Health, and consent from each participant.

## INVOLVEMENT IN OTHER PROJECTS

### *Involvement and collaboration in ongoing projects with AMIS UMR 5288*

**Since 2015 :** Transmission of food practices and cultures: genetic studies

**Since 2013 :** **ANR GENOMIX**

**Functional admixture: genetic study of metabolic adaptations due to inbreeding in populations.**

Director : Dr Denis Pierron

Project objective: Genetic diversity and metabolic adaptations in admixed populations.

**Since 2011 :** **MAGE Project "Madagascar Genetics Ethnolinguistics "**

Project summary: History of human settlement in Madagascar; comparative analysis of genetic, linguistic and ethnological data; 3000 subjects from across Madagascar.

### *Scientific interests and areas of competence*

Molecular anthropology, population genetics, human evolution, biology-culture interaction, genotype-phenotype relations, genome wide association Study (GWAS), tastes, aromas, genetic evidence for olfactory perception, inter-individual and inter-cultural variation in olfactory and gustatory perceptions, food practices, eating behaviours, micro-evolution, genetic history of human settlement, migrations.

Populations : Madagascar, Indonesia, Africa, Indian Ocean