
CURRICULUM VITAE
MARIE CHARPENTIER, PhD

Professional Address:

Institut des Sciences de l'Evolution-Montpellier
UMR 5554
Place Eugène Bataillon cc 065
34095 Montpellier cedex 05, France

French Nationality

Born June 10, 1977

1 child (born Sept 26, 2010)

Phone: (+33) 467143253

E-mail: mariecharp@yahoo.fr
marie.charpentier@umontpellier.fr

PROFESSION AND EDUCATION

- 2016-** **Director of Researches in Evolutionary Biology (DR2);** ISEM UMR 5554, Montpellier, France
- 2014-2016** Director of Researches in Evolutionary Biology (DR2); CEFE UMR 5175, Montpellier, France
- Nov 2013** French 'Habilitation to manage researches' ('HDR'), University of Montpellier II, France
- 2009-2014** Researcher of First Class (CR1). CEFE-CNRS, Montpellier, France
- Dec 2004** PhD, University of Montpellier II, France
- 2001** MSc, University of Montpellier II, France

CURRENT RESPONSIBILITIES

- 2016-2020** **Member of the 'Comité National' (CoCNRS) Section 29 - CNRS**
- 2012-...** **Coordinator of the 'Mandrillus Project'**
<http://www.projetmandrillus.com>
- 2012-2019** **Coordinator of a 'Global Ecology Field Station' (SEEG, INEE-CNRS)**
- 2010-2017** **Coordinator of a LIA (International Associated Laboratories), CNRS-CIRMF (Gabon)**

RESEARCH EXPERIENCES

- 09/05-12/08** **Postdoctoral position** at Duke University (supervisor: Dr C. Drea): '*Odour profiles and genetic features in Lemur catta: relatedness and genetic quality*'.
- 09/05-12/08** **Postdoctoral position** at Duke University (supervisor: Dr S. Alberts): '*Genetic background and relatedness effects on life history traits in a wild primate species, Papio cynocephalus, in Amboseli, Kenya*'.
- Since 11/05** **Collaboration** with Dr A. Widdig (Caribbean Primate Research Center) '*The influence of genetic features on social behaviour in free-ranging macaques, Macaca mulatta*'.
- 08/05-12/05** **Collaboration** with Dr C. Drea (Duke University, Primate Centre): '*Ontogeny and behavioural development of female dominance in Lemur catta*'.
- 10/01-12/04** **PhD thesis** with distinction (supervisors: Dr M. Hossaert-McKey, Dr E.J. Wickings, Dr P. Peignot). '*Mating system, kin relationships and social structure in Mandrillus sphinx: an approach integrating*

behavioural ecology and genetics'. CEFE-CNRS, University of Montpellier II, France. Collaboration with the International Centre for Medical Research, Franceville, Gabon (CIRMF).

01/03-06/03 **Additional work:** Collaboration with Dr P. Peignot (CIRMF): '*Pedigree analysis of a semi-free ranging colony of Cercopithecus solatus: consequences of a harem reproductive system and inbreeding on fitness traits*'.

10/02-03/04 (18mo) **Additional work:** Collaboration with Dr P. Peignot (CIRMF): '*Rehabilitation of a semi-captive group of mandrills in the wild (Lékédi Park, Bakoumba, Gabon)*'.

01/00-09/00 **Graduate training** with distinction (supervisors: Dr M. Hossaert-McKey, Dr E.J. Wickings, Dr P. Peignot): '*Study of the processes of social integration of adolescent male mandrills in the hierarchy of adult male*', CEFE-CNRS, University Montpellier II, France, and CIRMF, Gabon.

PUBLICATION LIST

METRICS

Since 2004, 46 articles in peer-reviewed journals, 2 book chapters. H-factor: 22 with 1797 citations (Google scholar).

ALL PUBLICATIONS

2016-2017

1. **Charpentier MJE**, Harté M, Ngoubangoye B, Herbert A, Kappeler PM. 2016. Visual discrimination of kin in mandrills. **Ethology**. In press.
2. Poirotte C, Massol F, Herbert A, Willaume E, Bomo PM, Kappeler PM, **Charpentier MJE**. 2016. Mandrills use olfaction to socially avoid parasitized conspecifics. **Science Advances**. In press.
3. Poirotte C, Kappeler PM, Ngoubangoye B, Bourgeois S, Moussodji M, **Charpentier MJE**. 2016. Morbid attraction to leopard urine in *Toxoplasma*-infected chimpanzees. **Current Biology** 26: 98-99.
4. **Charpentier MJE**, Odonne G, Schaal B. 2016. Odors in the social life of human and non-human primate societies. In: Chemical Ecology: New advances (eds: Bagnères AG, Hossaert-McKey M). Wiley. *Book chapter*.

2015

5. Poirotte C, Basset D, Willaume E, Makaba F, Kappeler PM, **Charpentier MJE**. 2015. Environmental and individual determinants of parasite richness across seasons in a wild population of mandrills (*Mandrillus sphinx*). **American Journal of Physical Anthropology** 159: 442-456.
6. Levréro F, Carrete-Vega G, Herbert A, Lawabi I, Courtiol A, Willaume E, Kappeler PM, **Charpentier MJE**. 2015. Social shaping of voices does not impair phenotype matching of kinship in mandrills. **Nature Communications** 6: 7609.
7. Brockmeyer T, Kappeler PM, Willaume E, Benoit L, Mboumba S, **Charpentier MJE**. 2015. Social organization and space use of a wild mandrill (*Mandrillus sphinx*) group. **American Journal of Primatology** 77:1036-1048.

2014

8. Benoit L, Mboumba S, Willaume S, Kappeler PM, **Charpentier MJE**. 2014. Using next-generation sequencing methods to isolate and characterize 24 simple sequence repeat loci in mandrills (*Mandrillus sphinx*). **Conservation Genetics Resources** 6: 903-905.
9. Beaulieu M, Mboumba S, Willaume E, Kappeler PM, **Charpentier MJE**. 2014. The oxidative cost of unstable social dominance. **Journal of Experimental Biology** 217: 2629-2632.
10. Galbany J, Romero A, Mayo-Alesón M, Itsoma F, Gamarra B, Pérez-Pérez A, Willaume E, Kappeler PM, **Charpentier MJE**. 2014. Age-related tooth wear differs between forest and savanna primates. **PlosOne** 9: e94938.

2013

11. **Charpentier MJE**, Drea CM. 2013. Victims of infanticide and conspecific bite wounding in a female-dominant primate: a long-term study. **PlosOne** 8: e82830.
12. **Charpentier MJE**, Mboumba S, Ditsoga C, Drea C. 2013. Nasopalatine ducts and flehmen behavior in the mandrill: Reevaluating olfactory communication in Old World Primates. **American Journal of Primatology** 75: 703-714.

13. Huchard E, **Charpentier MJE**, Marshall H, King A, Knapp L, Cowlshaw G. **2013**. Paternal effects on access to resources in a promiscuous primate society. **Behavioral Ecology** 24: 229-236.

2012

14. **Charpentier MJE**, Huchard E, Widdig A, Gimenez O, Sallé B, Kappeler P, Renoult JP. **2012**. Distribution of affiliative behavior across kin classes and their fitness consequences in mandrills. **Ethology** 118: 1198-1207.
15. **Charpentier MJE**, Barthes N, Proffit M, Bessièrè J-M, Grison C. **2012**. Critical thinking in the chemical ecology of mammalian communication: Roadmap for future studies. **Functional Ecology** 26: 769-774.
16. Tung J*, **Charpentier MJE***, Mukherjee S, Altmann J, Alberts SC. **2012**. Genetic effects on mating success and partner choice in a social mammal. **The American Naturalist** 180: 113-129. *equal contributions.
17. **Charpentier MJE**, Fontaine MC, Chérel E, Renoult JP, Jenkins T, Benoit L, Barthès N, Alberts SC, Tung J. **2012**. Genetic structure in a dynamic baboon hybrid zone corroborates behavioral observations in a hybrid population. **Molecular Ecology** 21: 715-731.
18. Lucas C, **Charpentier MJE**. **2012**. Odeurs en sociétés. In: Ecologie chimique. Le langage de la nature. Recherche-Midi, Paris. p73-85. *Book chapter.*

2011

19. Renoult JP, Schaefer HM, Sallé B, **Charpentier MJE**. **2011**. The evolution of the multicoloured face of mandrills: insights from the perceptual space of colour vision. **PlosOne** 6: e29117.

2010

20. **Charpentier MJE**, Crawford JC, Boulet M, Drea CM. **2010**. Message 'scent': lemurs detect the genetic relatedness and quality of conspecifics via olfactory cues. **Animal Behaviour** 80: 101-108.
21. Boulet M, Crawford JC, **Charpentier MJE**, Drea CM. **2010**. Honest olfactory ornamentation in a female-dominant primate. **Journal of Evolutionary Biology** 23: 1558-1563.
22. Starling AP, **Charpentier MJE**, Fitzpatrick C, Scordato ES, Drea CM. **2010**. Seasonality, sociality, and reproduction: Long-term stressors of ring-tailed lemurs (*Lemur catta*). **Hormones and Behavior** 57: 76-85.
23. Setchell JM, **Charpentier MJE**, Abbott KM, Wickings EJ, Knapp LA. **2010**. Opposites attract: MHC-associated mate choice in a polygynous primate. **Journal of Evolutionary Biology** 23: 136-148.
24. Boulet M*, **Charpentier MJE***, Drea CM. **2009**. Decoding an olfactory mechanism of kin recognition and inbreeding avoidance in a primate. **BMC Evolutionary Biology** 9: 281. *equal contributions.

2009

25. Setchell JM, **Charpentier MJE**, Abbott KM, Wickings EJ, Knapp LA. **2009**. Is brightest best? Testing the Hamilton-Zuk hypothesis in mandrills. **International Journal of Primatology** 30: 825-844.
26. Huchard E, Benavides J, Setchell JM, **Charpentier MJE**, Alvergne A, King JA, Knapp LA, Cowlshaw G, Raymond M. **2009**. Studying shape in sexual signals: the case of primate sexual swellings. **Behavioral Ecology and Sociobiology** 63: 1231-1242.
27. Alvergne A, Huchard E, Caillaud D, **Charpentier MJE**, Setchell JM, Ruppli C, Féjan D, Martinez L, Cowlshaw G, Raymond M. **2009**. Human ability to visually recognize kin within primates. **International Journal of Primatology** 30: 199-210.

2008

28. **Charpentier MJE**, Boulet M, Drea CM. **2008**. Smelling right: the scent of male lemurs advertises genetic quality and relatedness. **Molecular Ecology** 17: 3225-3233.
29. Jones et al. 2008. Senescence patterns determined by species ranking on the fast-slow life-history continuum. **Ecology Letters** 11: 664-673.
30. **Charpentier MJE**, Van Horn RC, Altmann J, Alberts SC. **2008**. Paternal effects on offspring fitness in a multimale society. **Proceedings of the National Academy of Sciences USA** 105: 1988-1992.
31. **Charpentier MJE**, Williams CV, Drea CM. **2008**. Inbreeding depression in ring-tailed lemurs (*Lemur catta*): genetic diversity predicts parasitism, immunocompetence, and survivorship. **Conservation Genetics** 9: 1605-1615.

32. **Charpentier MJE**, Tung J, Altmann J, Alberts SC. **2008**. Age at maturity in wild baboons: genetic, environmental and demographic influences. **Molecular Ecology** 17: 2026-2040.
33. Tung J, **Charpentier MJE**, Garfield DA, Alberts SC. **2008**. Genetic evidence reveals temporal change in hybridization patterns in a wild baboon population. **Molecular Ecology** 17: 1998-2011.
34. **Charpentier MJE**, Prugnolle F, Gimenez O, Widdig A. **2008**. Genetic heterozygosity and sociality in a primate species. **Behavior Genetics** 38: 151-158.
35. **Charpentier MJE**, Deubel D, Peignot P. **2008**. Relatedness and social behaviors in *Cercopithecus solatus*. **International Journal of Primatology** 29: 487-495.
36. Leigh SR, Setchell JM, **Charpentier MJE**, Knapp LA & Wickings EJ. **2008**. Fitness and canine size in male mandrills (*Mandrillus sphinx*). **Journal of Human Evolution** 55: 75-85.
37. Peignot P*, **Charpentier MJE***, Bout N, Bourry O, Massima U, Dosimont O, Terramorsi R, Wickings EJ. **2008**. The first release project of captive-bred mandrills, *Mandrillus sphinx*: Results of two-years' monitoring. **Oryx** 42: 122-131. *equal contributions.

2007

38. **Charpentier MJE**, Widdig A, Alberts SC. **2007**. Inbreeding depression in primates: An historical review of methods used and empirical data. **American Journal of Primatology** 69: 1370-1386.
39. **Charpentier MJE**, Peignot P, Hossaert-McKey M, Wickings EJ. **2007**. Kin discrimination in juvenile mandrills (*Mandrillus sphinx*). **Animal Behaviour** 73: 37-45.

2006

40. Setchell JM, **Charpentier MJE**, Bedjabaga IB, Reed P, Wickings EJ, Knapp LA. **2006**. Secondary sexual characters and female quality in primates. **Behavioral Ecology and Sociobiology** 61: 305-315.
41. **Charpentier M**, Setchell JM, Prugnolle F, Wickings EJ, Peignot P, Balloux F, Hossaert-McKey M. **2006**. Life-history correlates of inbreeding depression in mandrills (*Mandrillus sphinx*). **Molecular Ecology** 15: 21-28.

2005

42. **Charpentier M**, Setchell JM, Prugnolle F, Knapp L, Wickings EJ, Peignot P, Hossaert-McKey M. **2005**. Genetic diversity and reproductive success and in mandrills (*Mandrillus sphinx*). **Proceedings of the National Academy of Sciences USA** 102: 16723-16728.
43. **Charpentier M**, Peignot P, Hossaert-McKey M, Gimenez O, Setchell JM, Wickings EJ. **2005**. Constraints on control: factors influencing reproductive success in male mandrills (*Mandrillus sphinx*). **Behavioral Ecology** 16: 614-623.
44. **Charpentier M**, Hossaert-McKey M, Wickings EJ, Peignot P. **2005**. Consequences of a one-male harem reproductive system and inbreeding in a captive group of *Cercopithecus solatus*. **International Journal of Primatology** 26: 695-708.
45. Setchell JM, **Charpentier M**, Wickings EJ. **2005**. Mate-guarding and paternity in mandrills (*Mandrillus sphinx*): factors influencing monopolisation of females by the alpha male. **Animal Behaviour** 70: 1105-1120.
46. Setchell JM, **Charpentier M**, Wickings EJ. **2005**. Sexual selection and reproductive careers in mandrills (*Mandrillus sphinx*). **Behavioral Ecology and Sociobiology** 58: 474-485.
47. Prugnolle F, Manica A, **Charpentier M**, Guégan JF, Guernier V, Balloux F. **2005**. Worldwide HLA diversity and pathogen-driven selection. **Current Biology** 15: 1022-1027.

2004

48. **Charpentier M**, Peignot P, Hossaert-McKey M, Wickings EJ. **2004**. Changes in social interactions during adolescence in male mandrills (*Mandrillus sphinx*). **American Journal of Primatology** 63: 63-73.

MEETING (ORAL) PARTICIPATIONS

1. **2016. Invited speaker** (national conference), Agropolis, Montpellier. Hybridation, traits d'histoire de vie et dynamique d'une zone hybride.

2. **2016. Invited speaker (conference, general public), ‘European Exposcience’, Toulouse.** An international field research station in Tropical Ecology - Applications in Health Ecology..
3. **2016. Invited speaker (symposium), Max Planck Institute, Leipzig, Germany.** Social avoidance of contagious parasites is chemically-mediated in mandrills.
4. **2016. Seminar, Paris, France.** A long-term field project: applications for the study of health ecology in primate societies.
5. **2016. Seminar, ISEM, France.** The evolution of sociality.
6. **2015. Seminar, SODEPAL, Gabon.** An international field station for researches in tropical ecology.
7. **2015. International conference ‘Animal Behavior Society’, USA.** Parasitism and sociality in primates.
8. **2015. Invited speaker (seminar), Université des Sciences et Techniques de Masuku, Gabon.** An international field station in southern Gabon: Forests, primates and pathogens.
9. **2015. Invited speaker (seminar), CNRS, Paris.** An international field station in southern Gabon: Forests, primates and pathogens.
10. **2014. International conference ‘International Primatological Society’, Vietnam.** Parasitism and sociality in primates.
11. **2014. Invited speaker (seminar), Université des Sciences et Techniques de Masuku, Gabon.** Parasitism and sociality in primates.
12. **2013. Seminar, CEFE, Montpellier.** Long-term field projects.
13. **2013. Invited speaker (seminar), Jussieu, Paris.** Kin selection in primates.
14. **2013. Invited speaker (seminar), Université de St Etienne.** Kin selection in primates.
15. **2012. Seminar, CENAREST, Libreville, Gabon.** The ‘Mandrillus Project’ : a long-term field site in Gabon.
16. **2012. Invited speaker (seminar), Université des Sciences et Techniques de Masuku, Gabon.** Kin selection in primates.
17. **2011. National conference, GDR, Dijon.** Critical thinking in mammalian chemical ecology.
18. **2011. International conference ‘European Federation of Primatology’, Portugal.** Kin selection in non-human primates.
19. **2011. International conference ‘Human Behavior and Evolution Society’, Montpellier.** Some insights on kin selection in non-human primates.
20. **2011. Seminar, University of Freiburg, Germany.** Kin selection in primates.
21. **2010. Invited speaker (seminar), DPZ (Deutsches Primatenzentrum GmbH), Germany.** Discrimination and biased behaviors between kin: Existing evidences, proximate mechanisms and ultimate consequences.
22. **2009. National conference, GDR, Marseille.** Olfaction as a mechanism guiding kin recognition and mate choice in *Lemur catta*.
23. **2009. International conference ‘International Society of Chemical Ecology’, Switzerland.** Olfaction as a mechanism guiding kin recognition and mate choice in a primate species.
24. **2009. Invited speaker (conference, general public), ‘Cité des Sciences de la Villette’, Paris.** La sexualité des primates.
25. **2008. Invited speaker (symposium), University of Barcelona, Spain.** Kin selection and discrimination in primates: evidences, mechanisms and consequences.
26. **2008. International conference ‘International Primatological Society’, Scotland.** Temporal change in hybridization patterns and effects of hybridity on maturation in a wild baboon population.
27. **2007. Seminar, Duke University, USA.** Smelling right: The scent of male lemurs advertises genetic quality and relatedness.
28. **2007. International conference ‘American Society of Primatology’, USA.** Inbreeding depression in *Lemur catta*: genetic diversity predicts parasitism, immunocompetence, and survivorship.
29. **2007. Invited speaker (seminar), Max Planck Institute, Germany.** The use of genetic tools in the study of primate ecology and life-history traits.

30. **2006. International conference ‘International Primatological Society’, Uganda.** How inbreeding affect fitness traits in primates: growth, reproductive success and dominance in mandrills.
31. **2005. Seminar, Duke University, USA.** Mating system, kin relationships and social structure in *Mandrillus sphinx*: an approach integrating behavioral ecology and genetics.
32. **2005. Seminar, CEFE, Montpellier.** Constraints on control: factors influencing reproductive success in male mandrills (*Mandrillus sphinx*).
33. **2004. International conference ‘International Primatological Society’, Italie.** Reproductive success in alpha male mandrills.
34. **2001. International conference ‘Société Francophone De Primatologie’, Rennes.** Socio-sexual development of adolescent male mandrills (*Mandrillus sphinx*).
35. **2001. National conference, GDR, Montpellier.** Development of the dominance hierarchy in adolescent male mandrills (*Mandrillus sphinx*).

GRANTS AND AWARDS

- **IMEA Consulting** (PI; 2016; 6000€).
- **PEPS** (PI; INEE-CNRS; 2014; 20000€)
- **LIA (International Associated Laboratories) CNRS-CIRMF** (PI; 2010-2017; ~125000€)
- **PROCOPE-DAAD** (PI; 2013-2014; 15000€)
- **PEPS** (PI; INEE-CNRS; 2012; 10000€)
- **DFG (German Research Foundation)**, DPZ (co-PI with P. Kappeler; 2012-2014; ~600000€)
- **SEEG** (Station d’Etude en Ecologie Globale), INEE-CNRS (PI; 2012-2015; ~20000€)
- **Marie Curie International Reintegration Grant** (PI; 2009-2011; 75000€)
- **National Science Foundation** (PI: CM Drea; 2007- 2010; ~450000€)
- **Marie Curie Outgoing fellowship** (PI; 2007-2009; ~250000€)
- **French Foreign Ministry**: Position of International Volunteer at CIRMF, Gabon (PI; 2002-2004; ~40000€)

- **Award 'Prix Paoletti'** (2008), CNRS, France
- **Award Royal Anthropological Institute of Great Britain and Ireland** (2001)

STUDENTS

Since 2012

3 master students

4 PhD students:

- Clémence Poirotte (SIBAGHE; 100% of involvement; 2014-2016)
- Gontran Nsi Akoué (USTM; 50% of involvement; 2013-2016)
- Serge Ely Dibakou (USTM; 50% of involvement; 2015-2017)
- Alice Percher (SIBAGHE; 70% of involvement; 2015-2017)

JURYS AND COMMITTEES

- **2017** Member of HCERES committee (IPHC, Strasbourg)
- **2016** Member of HCERES committee (IPHEP, Poitiers)
- **2016** ‘Examineur’ for PhD thesis (G. Thierry, Poitiers)
- **2016** ‘Rapporteur’ for French ‘Habilitation to lead researches’ (C. Gilbert, Paris)
- **2015** ‘Rapporteur’ for French ‘Habilitation to lead researches’ (G. Merceron, Poitiers)
- **2015** ‘Rapporteur’ of PhD thesis (M. Ferrandiz Rovira, Lyon)

- **2012-2014** Member of CNU (National Committee of the French Universities), section 67
- **2013** Member of the final admission section 29 of the CNRS committee for recruitments
- **2012** Member of the AERES committee (MECADEV, Paris)
- **2012** ‘Examineur’ for PhD thesis (S. Lardy, Lyon)
- **2008-2016** Member of 7 PhD committees
- **2011** Member of the recruitment board for an associate professor (St Etienne)
- **2010** Member of the recruitment board for an engineer (CNRS Marseille)

EDITORIAL WORK

2010-2013	Associate Editor	Behavioral Ecology and Sociobiology
2009-2013	Member of the Editorial Board	International Journal of Primatology

MISCELLANEOUS

Referee PNAS, Funct Ecol, Phil Trans R Soc B, Trends Parasitol, Mol Ecol, PlosOne, J Evol Biol, Heredity, Echography, Anim Behav, Behav Ecol Sociobiol, Behav Process, Ethology, Am J Primatol, Folia Primatol, Int J Primatol

Grant referee National Science Foundation, Leakey Foundation, Czech Scientific Foundation, National French Agency (‘Agence National pour la Recherche’), French Foundation for Biodiversity Research

2010-2015 **Guest Scientist at the DPZ** (Deutsches Primatenzentrum GmbH)