CURRICULUM VITAE

Dr. Marie MANCEAU
Born on June 5th, 1979
French Nationality

Center for Interdisciplinary Research in Biology (CIRB)
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Current Position

CNRS Research Director (DR2)
Group Leader at the CIRB, Collège de France, CNRS UMR 7241, INSERM U1050, Paris, France.

Education

2007 – 2013 **Postdoctoral fellow** in Evolution and Developmental Biology; Harvard University, USA.
Advisor: Dr. Hopi Hoekstra

2003 – 2007 **Ph.D.** in Developmental Biology; University Aix-Marseille II, France.
Advisor: Dr. Christophe Marcelle

2002 – 2003 **DEA** (Master II) in Developmental & Cellular Biology, University Aix-Marseille II, France.
Valedictorian; Advisors: Drs. C. Marcelle and D. Gros

2001 – 2002 **Maîtrise** (Master I) in Developmental Biology and Genetics, University Aix-Marseille II, France.

1998 – 2001 **License** in Cell Biology and Genetics; Louis Pasteur University, France.
Visiting Scholar, Molecular Oncology Institute INSERM U119, France.
Advisor: Dr. P. Pontarotti

Grants and Fellowships

2022	**ANR** Grant	**Coordinator**, funding started in 04/2022	700,000 €
	Labex Memolife PSL Grant	Collaborator, funding started in 03/2022	35,000 €
2020	**Bettencourt Schueller Foundation**	**Coordinator**, funding started in 01/2021	250,000 €
2019	**FSER** (Schlumberger Foundation) Grant	**Coordinator**, funding started in 01/2019	90,000 €
	HFSP (Human Frontiers Science Program)	Collaborator, funding started in 07/2019	300,000 €
2017	**Labex MemoLife** Grant	Collaborator, funding started in 02/2017	100,000 €
2015	**ERC (**European Research Council)	**Starting Grant**, funding started in 06/2015	1.5,000 000 €
2014	**IDEX-PSL** (Paris Science et Lettres) Grant	**Coordinator**, funding started in 01/2015	150,000 €
2012	**INSERM-CNRS ATIP / AVENIR** Grant	**Coordinator**, funding started in 08/2013	300,000 €
2012	**Putnam Expeditionary Grant**	**Coordinator**, funding started in 01/2012	10,000 USD
2008	**Barbour Expeditionary Grant**	**Coordinator**, funding started in 01/2011	8,000 USD
2007	**AFM** (French Association ag. Myopathy)	**PhD Fellowship**	
2003	**MNRT** (French Research Ministry)	**PhD Fellowship**	
	MNRT (French Research Ministry)	Teaching Assistant Fellowship	
2002	**MNRT** (French Research Ministry)	DEA Fellowship	
2001	**CROUS** (University Aix-Marseille II)	Master Fellowship	
		Total :	~4.2,000 000 €

Awards

2020 **Richard Lounsbery Prize** Laureate (Académie des Sciences and National Science Academy)
Bettencourt Schueller "Coups d'Elans pour la Recherche Française" Laureate

2019 **CNRS Bronze Medal** Laureate
Schlumberger Foundation (Cercle FSER) Laureate
Science Academy Prize « les grandes avancées françaises présentées par leurs auteurs»

Professional Service

2022 – present **Academic Editor** at *Developmental Biology*.

2008 – present **Reviewer** for *Science, Current Biology, PNAS, Genes, Journal of Heredity*, *Journal of Zoology, Genetics, PloS Genetics, Evolution, Molecular and developmental Evolution, Development.*

Field Work

2016 – present The Falkland Islands, UK: collection of penguin embryonic specimens (permit handling, fieldwork organization, on-site collection; 3 missions).

2013 – present France, Australia, Ireland, the UK, Germany, and Italy: collection of avian specimens and fertilized eggs (permit handling for natural populations, zoos, museums, and local suppliers, fieldwork organization, on-site collection; ~30 missions).

2008 – 2012 Massachusetts, Nebraska, New Mexico, Florida, and Switzerland: rodent trapping and embryonic

specimen collection (fieldwork organization; ~20 missions).

Guiding Activity

2014 – present **IAATO Certified Expedition Guide** in the Antarctic Peninsula (~30 missions), South Georgia (5 missions), the Falkland Islands (3 missions), and the South Orkneys (2 missions) for *Ponant* (France), and *Oceanwide Expeditions* (The Netherlands).

2013 – present **AECO Certified Expedition Guide** in Svalbard (Spitzbergen; ~20 missions), Greenland (3 missions), Iceland (2 missions), The Lofoten Islands (1 mission), and the North Shetlands (1 mission) for *Grand Nord Grand Large* (France), *Ponant* (France), and *Oceanwide Expeditions* (The Netherlands).

Holder of zodiac driving and small boat driving licenses (permis cotier)
Holder of Firearm training certificates (Spitzbergen)
Holder of First Aid (PSC1) and Extreme Conditions First Aid certificates

Memberships and Advisory Boards

2022	ANR selection board	Committee Member
2019 – present	Member of the "Cercle FSER"	Committee Member
2017 – present	Polar World Museum, Les Rousses, France	Scientific Advisory Board Member
2015 – present	French Society for Developmental Biology (SFBD)	Member
2017	ANR selection board	Committee Member
2016	GDR "Groupe Aviaire", Paris, France	Member
2015	Young Researchers in Life Sciences (Pasteur Institute)	Jury Member

Teaching

2013 – 2022 Lecturer, Colour Pattern Evolution and Genetics, Ecole Normale Supérieure of Paris, France (8 lectures).
Lecturer, Evo-Devo, Curie Institute Developmental Biology Course (2 lectures).
Lecturer, Evo-Devo, UPMC, Genetics Master Course (2 lectures).
2008 – 2011 Lecturer, Model Organisms, Dept. Molecular and Cellular Biology, Harvard University, USA (3 lectures).
2003 – 2006 Teaching Assistant, Molecular and Cellular Biology, University Aix-Marseille II, France (~30 lectures).

General public presentations

2014 – present **~80 Conferences onboard expeditions ships** on polar fauna and scientific research: *"Mathematics of the polar landscape", "Les stations françaises en Antarctique"*, *"The Polar Bear", "The Walrus", "The Polar Fox", "Penguins: the coolest birds on earth", "Babies and embryos of Antarctica", "Growing up in the Arctic", "Research in Antarctica"*, *"Colours of polar animals", "Hopeful monsters: evolution in Antarctica", etc.*
2022 **Conference "Birds and Antarctica"** for middle school children (2 sessions)
Sessions "Déclics" of the FSER with high school students
Conférence Grand Public, *"Mathématiques et Biologie"*, Institut Poincaré, France
2021 **Prix Richard Lounsbery Conference**, Académie des Sciences, France
2020 **Les savanturiers** (France Inter Radio)
2019 **Académie des Sciences** *"Les grandes avancées françaises présentées par leurs auteurs"*, France
Les 80 ans du CNRS *"La relève de l'excellence"*, Collège de France, France
La tête au carré, « à la une de la science » (France Inter Radio)
2016 **Mix-IT Conference** on Basic Science and Evo-Devo (Keynote Speaker), Lyon, France
2015 **Podcast Science** *"Research and Antarctica" Freestyle 14* (Keynote Speaker), Paris, France

Academic presentations

2022 Session speaker, "Non-Linearity Meeting", **Paris University**, France.
2021 External seminar series, Department of Zoology, **Oxford University**, UK.
Session speaker, 23rd EMBL PhD Symposium, **EMBL**, Germany.
Keynote speaker, **Jose Luis Gomez Skarmeta Zoominar Series** (visioconference).
External seminar series, Morphogenesis symposium, **Cambridge University**, UK.
Session speaker, Journées François Jacob, **Collège de France**, France.
Session speaker, "Constraints and Plasticity during Development" Symposium, **Collège de France**, France.
Session speaker, Journées Q-bio, **Ecole Normale Supérieure de Paris**, France.
2020 Session speaker: "From Cells to Embryo" symposium, **Aviesan ITMO**, Paris, France.
Session speaker: "Physics of Living Matter", **Centuri Turing Center for Living Systems**, Marseille, France.
Session speaker, "Evolutionary Systems Biology Conference", **Welcome Genome Center**, UK.
Session speaker, "Center for Genomics and Systems Biology X Symposium", **NYU Abu Dhabi**, United Emirates.
2019 Session speaker, "10 years of the ATIP-Avenir", **College de France**, France.
Session speaker, "Biodiversity, Epigenetics and Evolution" symposium, **Collège de France**, France.
External Seminar series, Department of Zoology, **Basel University**, Switzerland
2018 Session speaker, 10th Avian Model System conference, **Pasteur Institute**, Paris, France.
Session speaker, "Morphogens on the move" symposium, **Collège de France**, Paris, France.
2017 External Seminar series, **Oceanographic observatory**, Banuyls-sur-Mer, France.

2016 Session speaker, Journées ATIP/Avenir, **Gif-sur-Yvette,** France.
Session speaker, School of Life and Env. Science, **Deakin University**, Australia.
External Seminar series, Department of Zoology, **Basel University**, Switzerland.
2015 External Seminar Series, Department of Developmental Biology, **Jussieu University**, France.
Session speaker, "Mechanisms of Evolutionary Changes" Meeting, **Les Treilles**, France.
External Seminar series, Department of Ecology, **Paul Sabatier University**, Toulouse, France.
2014 External Seminar series, Department of Zoology, **Oxford University**, UK.
External seminar series, **Paris Museum of Natural History** (MNHN), France.
External Seminar series, **Australian Regenerative Medecine Institute**, Melbourne, Australia.
Session speaker, Evolution and Development Club, **Jacques Monod Institute**, Paris, France
Session speaker, Journées PSL, **Ecole Normale Supérieure**, Paris, France.
2013 Session speaker, Journées du CIRB, **Collège de France**, Paris, France.
2012 External Seminar series, Institute of Developmental Biology, **Marseille University**, France.
Internal Seminar series, **Collège de France**, Paris, France.
External Seminar series, **Jacques Monod Institute**, Paris, France.
External Seminar series, **Institute of Functional Genomics of Lyon** (IGFL), France.
External seminar series, **The Rockefeller University**, New York, USA.
2011 External Seminar series, **Jacques Monod Institute**, Paris, France.
External Seminar series, **Pasteur Institute**, Paris, France.
External Seminar series, **Max Planck Institute (Mol. Cell Biol. and Gen.**), Dresden, Germany.
External Seminar series, **Max Planck Institute (Dev. Biology)**, Tuebingen, Germany.
External Seminar series, **Max Planck Institute (Mol. Genetics)**, Berlin, Germany.
2010 Session speaker, **European Evo-Devo Conference**, Paris, France.
Session speaker, Evolution and Genetics of Pigmentation Symposium, **Radcliffe Institute**, USA.
External Seminar series, Cutaneous Biology Research Center, **Mass. General Hospital**, USA.
Internal Seminar series, Evo-Devo Club, **Harvard University**, USA.
2009 Session speaker, **Experimental Biology 2009 Conference**, New Orleans, USA.
Internal Seminar speaker, Evo-Devo Club, **Harvard University**, USA.
2007 External Seminar series, Dept. of Organismic and Evol. Biology, **Harvard University**, USA.
2006 Session speaker, **Myogenesis Meeting**, Paris, France.

General public articles

"Cap sur les Pôles", **Elle** (magazine)
"Quand les plumes font des maths", **Pour la Science** (magazine ; France and Germany)
"Symmetry breaking in the embryonic skin", **The Node** (website)

Publications

2022 Hidalgo, M., Curantz, C., Quenech'Du, N., Gluckman, T.L, Neguer, J., Beck, S., Mohammad, A. and Manceau, M. A conserved paint box underlies colour pattern diversity in Estrildid finches. **Science Advances**. ***In press***

Curantz, C., Bailleul, R., Hidalgo, M., Durande, M., Graner, F., Manceau, M. Cell shape anisotropy and motility constrain self-organised feather pattern fidelity in birds. bioRxiv 2021.01.22.427778. doi: https://doi.org/10.1101/2021.01.22.427778, **PLoS Biology**. ***In review***

2021 D'Alba L., Meadows, M., Maia, R., Yeo, J.S., Manceau M., and Shawkey, M.D. Morphogenesis of iridescent feathers in Anna's hummingbird Calypte anna. **Integrative and Comparative Biology**. doi: 10.1093/icb/icab123

Curantz, C. and Manceau, M. Trends and variation in vertebrate patterns as outcomes of self-organization. **Current Opinion in Genetics and Development** 69, 147–153.

2020 Haupaix, N., Curantz, C. and Manceau, M. The embryonic origin of periodic colour patterns. **Comptes Rendus Biologies**, 343, 143–153.

Bailleul, R., Manceau, M., and Touboul, J. A "numerical evo-devo" synthesis for the identification of pattern-forming factors. **Cells** 9, 1840.

Haupaix, N and Manceau, M. The embryonic origin of periodic color patterns. **Developmental Biology** 460, 70–76.

2019 Bailleul, R., Desmarquet-Trin-Dinh, C., Hidalgo, M., Curantz, C., Touboul, J., and Manceau, M. Symmetry breaking in the embryonic skin triggers a directional and sequential front of competence during plumage patterning. **PLoS Biology** 17, e3000448

2018 Haupaix, N., Curantz, C., Bailleul, R., Beck, S., Robic, A. and Manceau, M. The periodic coloration in birds forms through a prepattern of somite origin. **Science** 361, 6408.

2017 Neguer, J. and Manceau, M. Embryonic Patterning of the Vertebrate Skin. **Reviews in Cell Biology and Molecular Medicine** 3, 1.

Friocourt, F., Lafont, A.G., Pain, B., Manceau, M., Dufour, S. and Chedotal, A. Recurrent Dcc gene losses during bird evolution. **Scientific Reports**, 37569.

2016 Mallarino, R., Hoekstra H.E. and Manceau M. Developmental genetics in emerging rodent models: case studies and perspectives. **Current Opinions in Genetics and Development**, 331, 182–186.

Mallarino, R., Henegar,C., Mirasierra, M., Manceau, M., Shradin, C., Vallejo, M., Beronja, S., Barsh, G.S., and Hoekstra, H.E. *Alx3* regulates the spatial differences in hair pigment underlying stripe patterns in rodents. **Nature** 539, 518–523.

2011 Manceau, M., Domingues, V., Mallarino, R. and Hoekstra, H.E. The developmental role of *Agouti* in the evolution of color pattern. **Science** 331, 1062–5.

Metz, H.C., Manceau, M. and Hoekstra H.E. Turing patterns: how the fish got its spots. **Pigment Cell and Melanoma Research** 24, 12–4.

2010 Manceau, M., Domingues, V., Linnen, C.R., Rosenblum E.B. and Hoekstra H.E. Convergence in pigmentation at multiple levels: mutations, genes and function. **Philosophical Transactions of the Royal Society B**, 365, 2439–50.

2009 Kingsley, E.P., Manceau, M., Wiley, C.D., and Hoekstra, H.E. Melanism in Peromyscus is caused by independent mutations in *Agouti*. **PLoS One** 4, e6435.

2008 Lagha, M., Kormish J.D., Rocancourt D., Manceau M., Epstein, J.A., Zaret, K.S., Relaix F., and Buckingham M.E. *Pax3* regulation of FGF signaling affects the progression of embryonic progenitor cells into the myogenic program. **Genes and Development** 22, 1828–37.

Manceau, M., Gros, J., Savage, K., Thomé, V., McPherron, A., Paterson, B. and Marcelle, C. Myostatin promotes the terminal differentiation of embryonic muscle progenitors. **Genes and Development** 22, 668–81.

2005 Gros, J., Manceau, M., Thomé, V. and Marcelle, C. A common somitic origin for embryonic muscle progenitors and satellite cells. **Nature** 435, 954–8.

Manceau, M., Marcelle, C. and Gros, J. A common somitic origin for embryonic muscle progenitors. **Med. Sciences** 21, 915–7.