

Francesca De Petrillo, PhD

Institute for Advanced Study in Toulouse
 Université Toulouse 1 Capitole
 1, esplanade de l'Université
 31080 Toulouse Cedex 06
 France

E-mail: francesca.de-petrillo@iast.fr

Webpage: www.francescadepetrillo.com

Google Scholar profile: http://bit.ly/FdP_goo_sch

Nationality: Italian
 Languages: Italian, English, French

Research Interests

Primate cognition, cognitive evolution, decision-making, comparative development, executive functions, comparative behavioural economics

Academic Employments

2018 – Present	Research Fellow , UT1 Capitole and Institute for Advanced Study in Toulouse, France
2017 – 2018	Postdoctoral researcher , Dept. of Psychology, University of Michigan (July 2017)
2017	Postdoctoral researcher , Dept. of Human Evolutionary Biology, Harvard University
2016 – 2017	Visiting postdoctoral fellow , Dept. of Human Evolutionary Biology, Harvard University Scholarship program “visiting period to a foreign institution” sponsored by Sapienza University of Rome

Additional Affiliations

2018- Present	Affiliate Postdoctoral Researcher , Cognitive Evolution group, Dept. Psychology, University of Michigan
2018- Present	Associated Research Scientist , Unit of Cognitive Primatology, Institute of Cognitive Sciences and Technologies, CNR, Rome

Education

2016	Ph.D, Environmental and Evolutionary Biology, curriculum Anthropology Sapienza University of Rome
2012	M.Sc Ecobiology (<i>summa cum laude</i>) Sapienza University of Rome
2010	B.A. in Natural Sciences Sapienza University of Rome

Publications

Papers in peer-reviewed international journals

- 2021 **De Petrillo F.** & Rosati A.G. Variation in primate decision-making under uncertainty and the roots of human economic behaviour. *Philosophical Transactions of the Royal Society B*, 376, 20190671
- 2021 Addressi E., Quintiero E., Gastaldi S., **De Petrillo F.**, Bourgeois-Gironde S. Quality-quantity trade-off in the acquisition of token preference by capuchin monkeys (*Sapajus* spp.). *Philosophical Transactions of the Royal Society B*, 376, 20190662
- 2021 Addressi E., Tierno V., Focaroli V., Rossi F., Gastaldi S., **De Petrillo F.**, Paglieri F., Stevens, J.R. Are capuchin monkeys (*Sapajus* spp.) sensitive to lost opportunities? The role of opportunity costs in intertemporal choice. *Philosophical Transactions of the Royal Society B*, 376, 20190674
- 2020 **De Petrillo F.**, Paoletti M., Bellagamba F., Manzi G., Paglieri F., Addressi E. Contextual factors modulate risk preferences in adult humans. *Behavioural Processes*, 104137
- 2020 **De Petrillo F.** & Rosati A.G. Logical inferences from visual and auditory information in ruffed lemurs and sifakas. *Animal Behaviour*, 164, 193-204
- 2019 **De Petrillo F.** & Rosati A.G. Rhesus macaques (*Macaca mulatta*) use probabilities to predict future events. *Evolution and Human Behavior*, 40, 436-446
- 2019 **De Petrillo F.** & Rosati A.G. Ecological rationality: convergent decision-making in apes and capuchins. Invited paper, Society for the Quantitative Analysis of Behavior Special Issue in *Behavioural Processes*, 164, 201-213
- 2019 **De Petrillo F.**, Caroli M., Gori E., Micucci A., Gastaldi S., Bourgeois-Gironde S., Addressi E. Evolutionary origins of money categorization and exchange: an experimental investigation in tufted capuchin monkeys (*Sapajus* spp.). *Animal cognition*, 1-18
- 2018 Zoratto F., Oddi G., Gori E., Micucci A., **De Petrillo F.**, Paglieri F., ... & Addressi E. Social modulation of risky decision-making in rats (*Rattus norvegicus*) and tufted capuchin monkeys (*Sapajus* spp.). *Behavioural Brain Research*, 347, 37-48
- 2017 **De Petrillo F.**, Tonachella G., Addressi E. Emotional correlates of probabilistic decision making in tufted capuchin monkeys (*Sapajus* spp.). *Animal Behaviour*, 129, 249-256
- 2015 **De Petrillo F.**, Micucci A., Gori E., Truppa V., Ariely D., Addressi E. Self-control depletion in tufted capuchin monkeys (*Sapajus* spp.): does delay of gratification rely on a limited resource? *Frontiers in Psychology*, section comparative psychology, 6, 1-12
- 2015 **De Petrillo F.**, Gori E., Micucci A., Ponsi G., Paglieri F., Addressi E. When is it worth waiting for? Food quantity, but not food quality, affects delay tolerance in tufted capuchin monkeys. *Animal Cognition*, 18, 1019-1029

- 2015 **De Petrillo F.**, Ventricelli M., Ponsi G., Addressi E. Do tufted capuchin monkeys play the odds? Flexible risk preferences in *Sapajus* spp. *Animal Cognition*, 18, 119-130
- 2014 Paglieri F., Addressi E., **De Petrillo F.**, Laviola G., Mirolli M., Parisi D., Petrosino G., Ventricelli M., Zoratto F., Adriani W. Nonhuman gamblers: Lessons from rodents, primates, and robots. *Frontiers in Behavioral Neuroscience*, 8, 1-17
- 2014 Addressi E., Bellagamba F., Delfino A., **De Petrillo F.**, Focaroli V., Macchitella L., Maggiorelli V., Pace B., Pecora G., Rossi S., Sbaffi A., Tasselli M.I., Paglieri F. Waiting by mistake: Symbolic representation of rewards modulate intertemporal choice in capuchin monkeys (*Cebus apella*), preschool children and adult humans. *Cognition*, 130, 428-441.
- 2013 Addressi E., Paglieri F., Beran M.J., Evans T.A., Macchitella L., **De Petrillo F.**, Focaroli V. Delay Choice Versus Delay Maintenance: Different Measures of Delayed Gratification in Capuchin Monkeys (*Cebus apella*). *Journal of Comparative Psychology*, 127(4), 2-8
Featured in APA's Particularly Exciting Experiments In Psychology
- 2013 Ventricelli M., Focaroli V., **De Petrillo F.**, Macchitella L., Paglieri F., Addressi E. How capuchin monkeys (*Cebus apella*) behaviorally cope with increasing delay in a self-control task. *Behavioural Processes*, 100, 146-152

Chapters in Edited Volumes

- In press* **De Petrillo, F.** & Rosati, A.G. Decision-making in animals: rational choices and adaptive strategies. To appear in: Cambridge Handbook of Animal Cognition (A. Kaufman, J. Call & J. Kaufman, eds.) Cambridge: Cambridge University Press
- 2018 **De Petrillo, F.**, & Di Vincenzo F. An evolutionary perspective on primate social cognition. In: *Evolution of Primate Social Cognition* (Di Paolo, L.D; Di Vincenzo, F & De Petrillo, F. eds). Springer, Interdisciplinary Evolutionary Research, Number 4

Books

- 2018 Di Paolo L., Di Vincenzo F., **De Petrillo F.** (Eds.) Evolution of Primate Social Cognition. Springer, Interdisciplinary Evolutionary Research, Number 4

Papers under review and in preparation

- Under review **De Petrillo F.**, Cantwell A., Krishna P., Rosati A. The evolution of cognitive control in lemurs. *Nature Ecology & Evolution*
- In prep Cantwell A., Krishna P., **De Petrillo F.**, Rosati A. Personality and cognitive flexibility in 7 lemur species
- In prep Paoletti M., Bellagamba F., Gagliardi R..., **De Petrillo F.**, Addressi E. Decision-making under risk and experienced regret in preschoolers and school-aged children.
- In prep Rossi F., Gastaldi S., **De Petrillo F.**, Addressi E. Decision-making under risk and regret-like emotions in tufted capuchin monkeys (*Sapajus spp.*).

Papers in peer-reviewed Italian journals

- 2017 Paoletti M., **De Petrillo F.**, Bellagamba F., Addessi, E. Emotional aspects of risky decision-making in a comparative perspective. *Sistemi Intelligenti*, 29, 249-270
- 2015 Addessi E., Albano M., **De Petrillo F.**, Laviola G., Mirolli M., Paglieri F., Parisi D., Petrosino G., Ventricelli M., Zoratto F., Adriani W. Basi neurobiologiche del gioco d'azzardo: il contributo integrato di psicobiologia, etologia cognitiva e robotica. *Sistemi Intelligenti*, 27, 561-614
- 2014 Addessi E., **De Petrillo F.** & Paglieri F. Which factors affect the evolution of delay tolerance in non-human primates? A critical review. Atti dell'XI Convegno dell'Associazione Italiana di Scienze Cognitive (M. Cruciani & A. Rega eds.). *Giornale italiano dineuroscienze psicologia e riabilitazione*, anno 1, vol. 5, 27-31
- 2014 **De Petrillo F.**, Gori E., Micucci A., Ponsi G., Paglieri F. & Addessi E. Quando vale la pena aspettare? Ruolo di quantità, qualità e novità del cibo sulla capacità di attesa nel cebo dai cornetti (*Sapajus* spp.), una scimmia sudamericana. Atti dell'XI Convegno dell'Associazione October 2017 Italiana di Scienze Cognitive (a cura di M. Cruciani & A. Rega). *Giornale italiano di neuroscienze psicologia e riabilitazione*, anno 1, vol. 5, 116-119
- 2014 Micucci A., Gori E., Truppa V., **De Petrillo F.**, Ariely D. & Addessi E. Ruolo del carico cognitivo e della sazietà sulla capacità di ritardare la gratificazione nel cebo dai cornetti (*Sapajus* spp.). Atti dell'XI Convegno dell'Associazione Italiana di Scienze Cognitive (M. Cruciani & A. Rega eds.). *Giornale italiano di neuroscienze psicologia e riabilitazione*, anno 1, vol. 5, 254-257

Other publications

- 2019 **De Petrillo F.**, Nicolini Y., Ventricelli, M. Il segreto nei primati. *Psiche*, Vol. 6, 477-488, Società editrice il Mulino

Grants, Fellowships and Awards

Grants

- 2020 TEAM-3PP – Testing Evolutionary Alternative Models of Third-party Punishment: A multidisciplinary approach, IAST multidisciplinary prize (Co-PI), € 27,200
- 2015 Relationship between the capacity of inhibition and risk propensity in preschool children, Sapienza University of Rome (Collaborator; PI: F. Bellagamba) € 3,000
- 2013-2014 Biodiversity Common Good (communication science project, PI), founded by Italian Ministry of University and Research, € 15,000
- 2013 Travel grant from the Italian Association of Primatology (API) to attend the V Conference of the European Federation of Primatologists (EFP), Antwerpen.

Fellowships

- 2016-2017 University scholarship “Scholarship for a visiting period to a foreign institution” Sapienza University of Rome. € 15,480
- 2012-2015 Collaboration with Prof. Dan Ariely on research studies regarding development and evolution of self-control in the course of primate evolution, Duke University, Durham, NC, \$50,000
- 2011-2012 University scholarship “Lazioadisu” Sapienza University of Rome, € 2,600

Awards

- 2015 Best oral communication at the VI Conference of the European Federation of Primatologists (EFP), Rome (Italy) 25-28/8/2015 € 300,00
- 2013 Best oral communication at XXI API Conference (Asti April 17-19, 2013) Andrea Marconato award for outstanding master graduates in Biology. Istituto Veneto di Scienze Lettere e Arti. € 1,000

Conference presentations

- 2020 **De Petrillo F.** & Rosati A.G. Inferential reasoning from visual and auditory information in two species of lemur. Accepted as a talk at The Joint Meeting of IPS and SLAPrim in Quito, Ecuador, 16-22 August 2020, postponed in January 2022
- 2019 Rossi F., Gastaldi S., **De Petrillo F.**, Addressi E. Decision-Making under risk and regret-like emotions in tufted capuchin monkeys (*Sapajus* spp.) Talk at the European Federation of Primatology and the Primate Society of Great Britain 2019 International Conference, Oxford, UK.
- 2019 Ciaccia B., Gastaldi S., Brosnan S., **De Petrillo F.**, Addressi E. Does energy budget manipulation affect risk preferences in tufted capuchin monkeys (*Sapajus* spp.)? Poster at the European Federation of Primatology and the Primate Society of Great Britain 2019 International Conference, Oxford, UK.
- 2019 **De Petrillo F.** Rhesus macaques (*Macaca mulatta*) use probabilities to predict future events. Talk at the 14th Annual Conference of the European Human Behaviour and Evolution Association, Toulouse, France.
- 2018 **De Petrillo F.** & Rosati A. Rhesus macaques (*Macaca mulatta*) use probabilities to predict future events. Talk at the International Primatological Society, Nairobi, Kenya.
- 2018 **De Petrillo F.** & Addressi E. Beat the dealer: decision-making under risk in brown tufted capuchin monkeys (*Sapajus* spp.). Talk at the International Primatological Society, Nairobi, Kenya.

- 2016 **De Petrillo F.**, Micucci A., Gori E, Bourgeois-Gironde S., Addessi E. Evolutionary origins of money categorization: an experiment in capuchin monkeys (*Sapajus* spp.). Talk at the Primate Day (organized by the Italian Primatological Society), Florence (Italy).
- 2016 Oddi G., **De Petrillo F.**, Gori E, Micucci A, Paglieri F., Addessi E. Do social influences affect risk preferences in tufted capuchin monkeys (*Sapajus* spp.)? Talk at the Primate Day (organized by the Italian Primatological Society), Florence, Italy.
- 2015 **De Petrillo F.**, Gori E., Micucci A., Ponsi G., Paglieri F., Addessi E. Food quantity, but not food quality, affects temporal preferences of capuchin monkeys (*Sapajus* spp.) in a delay choice task. Talk at the VI Conference of the European Federation of Primatologists (EFP), Rome, Italy (**BEST PAPER PRIZE**).
- 2015 **De Petrillo F.**, Paoletti M., Paglieri F., Bellagamba F., Addessi E. Dealing with uncertainty: risk preferences in tufted capuchin monkeys and human children. Poster at the Workshop "The nature and Origins of Human Cognition" Berlin School of Mind and Brain, Berlin, Germany.
- 2015 **De Petrillo F.**, Paoletti M., Bellagamba F., Paglieri F., Addessi E. (2015) Comparative approach at the study of risk propensity in *Homo sapiens*. Talk at the XXVI Conference of the Italian Society of Ethology, Parma, Italy.
- 2014 **De Petrillo F.**, Gori E., Micucci A., Ponsi G., Paglieri F., Addessi E. When is it worth waiting for? Role of the quantity, quality and novelty of the reward on capuchin monkeys delay tolerance. Talk at the Conference of the Italian Society of Cognitive Science, Rome, Italy.
- 2014 Addessi E., **De Petrillo F.**, Paglieri F. Which factors affect the evolution of delay tolerance in non-human primates? A critical review. Talk at the Conference of the Italian Society of Cognitive Science, Rome, Italy.
- 2014 Micucci A., Gori E., Truppa V., **De Petrillo F.**, Ariely D., Addessi E. Role of cognitive and energy depletion on delay tolerance in tufted capuchin monkeys (*Sapajus* spp.). Talk at the Primate Day (organized by the Italian Primatological Society, API), Florence, Italy (**BEST PAPER PRIZE**).
- 2014 **De Petrillo F.**, Paoletti M., Ventricelli M., Castano M.L., Ponsi G., Paglieri F., Bellagamba F., Addessi E. Relation between delay of gratification and risk propensity in capuchin monkeys (*Sapajus* spp.) and preschool children. Invited talk at the Symposium "Introduction to an economic education" (organizer: A. Marchetti). XXVII Conference of the Italian Association of Psychology, Developmental Psychology section, Arcavacata di Rende (CS), Italy.
- 2014 **De Petrillo F.**, Ventricelli M., Ponsi G., Addessi E. Do capuchins play the lottery? Decision making under risk in *Sapajus* spp. Talk at the XXV Conference of the International Primatological Society, Hanoi, Vietnam.
- 2013 **De Petrillo F.**, Focaroli V., Macchitella L., Paglieri F., Addessi E. Self-control measurement: studies on capuchin monkeys. Invited talk at the Symposium "Make decision about future: interdisciplinary perspectives to the study of intertemporal choices" X Conference of the Italian Association of Cognitive Science, Naples, Italy.

- 2013 **De Petrillo, F.**, Ventricelli, M., Ponsi, G., Paglieri, F., Addessi, E. Are capuchins gamblers? Decision-making under risk in *Sapajus* spp. Talk at the XXI Conference of the Italian Association of Primatology, Asti, Italy, 17-19/4/2013 (**BEST PAPER PRIZE**).
- 2013 **De Petrillo, F.**, Ventricelli, M., Ponsi, G., Paglieri, F., Addessi, E. Waiting for the larger amount: do capuchin monkeys (*Sapajus apella*) show a magnitude effect in a delay choice task? Talk at the V Conference of the European Federation of Primatologists (EFP), Antwerpen, Belgium.
- 2013 Ventricelli M., **De Petrillo F.**, Ponsi G., Paglieri F., Addessi E. Risk proneness in capuchin monkeys (*Sapajus apella*): does feeding ecology play a role? Talk at the V Conference of the European Federation of Primatologists (EFP), Antwerpen, Belgium.
- 2013 **De Petrillo F.**, Ponsi G., Delfino A., Addessi E. & Paglieri F. Intertemporal choice, risk preferences, and social dominance: an experimental investigation. Poster at the Workshop 'Context dependent consumer decision-making: An interdisciplinary inquiry'. Trento, Italy.
- 2012 **De Petrillo F.**, Ponsi G., Cianciullo S., Macchitella L., Paglieri F., Addessi E. Are capuchin monkeys tempted by delicacies? The role of food quality on performance in a delay choice task. Poster at the Rovereto Workshop on Cognition and Evolution, Rovereto, Italy.
- 2011 Focaroli V., **De Petrillo F.**, Paglieri F. & Addessi E. Why capuchins monkeys (*Cebus apella*) have the patience of a saint? A comparative analysis of five primate species' performance in the intertemporal choice task. Talk at the XX the Italian Association of Primatology, Parco Natura Viva, Bussolengo (VR), Italy.
- 2011 Ventricelli M., Focaroli V., **De Petrillo F.**, Macchitella L., Paglieri F. & Addessi E. Response latency and self-directed behaviours by capuchin monkeys in an intertemporal choice task. Talk at the XX Conference of the Italian Association of Primatology (API), Parco Natura Viva, Bussolengo (VR), Italy.
- 2011 **De Petrillo F.**, Focaroli V., Macchitella L., Rossi S., Paglieri F. & Addessi E. (2011). Delay discounting for primary and secondary rewards in capuchin monkeys. Talk at the XX Conference of the Italian Association of Primatology, Bussolengo (VR), Italy.
- 2011 Macchitella L., **De Petrillo F.**, Focaroli V., Evans T., Beran M., Paglieri F. & Addessi E. Does preference for a larger delayed reward necessarily indicate self-control? An evaluation of the validity of the intertemporal choice task in capuchin monkeys. Poster presented at the XX Conference of the Italian Association of Primatology, Parco Natura Viva, Bussolengo (VR), Italy (**POSTER PRIZE WINNER**)

Invited Talks

- 2021 European Federation of Primatology (EFP) and the German Primatological Society (GfP) seminar series
- 2021 Center for Behavioural Sciences and Mental Health, Italian National Institute of Health, Italy
- 2020 Human Evolutionary Biology Team, University of Montpellier, France

2020	Centre for Comparative and Evolutionary Psychology, University of Portsmouth, UK.
2020	Primate Centre of Strasbourg University, France.
2020	Tuesday Lunch seminar series at the Institute of Advanced Study in Toulouse, France.
2019	European Meeting of the Economic Science Association, Dijon, France.
2019	The 2019 North Carolina Cognition Conference - NC State University, USA.
2018	Villa Finaly Workshop organized by Université Paris II & Ecole Normale Supérieure, Florence. “Economic behaviour of non-human primates”
2018	Laboratoire Evolution & Diversité Biologique, Université Toulouse III, Paul Sabatier, Toulouse.
2017	Decision Consortium, Department of Psychology, University of Michigan, Ann Arbor, USA.
2015	Accademia Nazionale dei Lincei, Rome, Italy. Training course for teachers.
2014	Department of Anthropology, Museum of Natural History, Paris, France.

Teaching and Mentoring

Lectures

2021	<i>Guest lecture.</i> Department of Anthropology, University of Michigan. “Primate cognitive evolution” in Primate Behavioral Ecology (taught by Prof. Stacy Rosenbaum)
2019-2021	<i>Guest lectures.</i> Toulouse School of Economics, Toulouse, France. The evolutionary origins of trading: token economy in non-human primates” in The Evolution of Economic Behavior (taught by Prof. Paul Seabright)
2019-2020	<i>Guest lectures.</i> Toulouse School of Economics, Toulouse, France. “A comparative approach to human cognitive evolution” in The Evolution of Economic Behavior (taught by Prof. Paul Seabright)
2017	<i>Guest lecture.</i> Department of Psychology, University of Michigan, Ann Arbor, USA. “Decision-making in capuchin monkeys” in Human Cognitive Evolution (taught by Prof. Alexandra Rosati)
2015	<i>Guest lecture.</i> Department of Psychology, University Sapienza, Rome, Italy “Developmental Psychology: theories and methods” (taught by F. Bellagamba)

Mentorship

2019 - 2020	Parvathy Nair, honors thesis undergraduate, Department of Psychology, University of Michigan.
2017	Laura Lewis, graduate student, Department of Human Evolutionary Biology, Harvard University.
2017	Hayoung Chang, honors thesis undergraduate, Dept. of Organismal and Evolutionary Biology, Harvard.
2014 - 2015	Gabriele Oddi, master thesis, Department of Human and Animal Biology, University Sapienza of Rome.
2014	Giordana Tonachella. Internship Unit of Cognitive Primatology, Rome.
2013 - 2014	Emanuele Gori, master thesis, Department of Human and Animal Biology, University Sapienza of Rome.
2013 - 2014	Antonia Micucci, master thesis, Department of Biology, curriculum Animal Behaviour, University of Florence.

Seminar and Conference Organization

2019	Co-organizer. Toulouse Economics and Biology Workshop
2019	Co-organizer. Pyrenean Interdisciplinary Research Event, second edition
2018 - 2019	Co-organizer. IAST Tuesday Lunch seminar series

Professional Societies

2020-on	Evolutionary Human Sciences, Member
2014-on	IPS (International Primatological Society), Member
2013-on	AISC (Associazione Italiana di Scienze Cognitive), Member
2010-on	API (Italian Association of Primatology), Member

Media

2021	Featured research, RaiNews: “Economia..da primati: propensione al rischio e gioco d’azzardo in nuovo studio su scimmie”
2020	Featured research, APA Monitor: “What animal minds can tell us about our own”
2019	Featured research, Galileo: “I cebi danno lezione di economia”
2019	Featured research, Il Sole 24 ore: “I senso dei primati per il denaro: usano oggetti come monete”
2015	Featured research, Repubblica: “Alle scimmie piace il rischio. Ma non l’azzardo”

Ad-hoc Journal Reviewer

Animal Cognition, Animal Behaviour, Proceeding of the Royal Society, Journal of Comparative Psychology, Learning & Behaviour, Cognitive Science, Journal of Behavioral Decision Making, Behavioural Ecology and Sociobiology, Primates, American Journal of Primatology, Scientific Reports, Philosophical Transactions of the Royal Society B: Biological Sciences, Cognition

Science Outreach Activities

2019	Summer camp of the Duke Lemur Center, NC, USA (talk)
2017	FEMMES (Females Excelling More in Math, Engineering and Science), Ann Arbor, USA (talk)
2017 - 2018	Science Communication Fellow, Museum of Natural History, University of Michigan, Ann Arbor, USA
2016	La Scienza a Scuola (science in the school)”, Zanichelli. (lecturer)
2015 - 2016	Coordinator for the city of Rome of the “Pint of Science” festival.
2013 - 2014	Scientific manager of the project “Biodiversity for the Common Good”, funded by the Italian Ministry for Education (MIUR)
2014-2015	Scientific manager of the project “The reed queen: how plant and animals chase each other”, primary school “Bonghi” Rome, Italy (lecturer)
2013-2014	Scientific manager of the project “Observing and understanding animals’ behaviour”, primary school “Bonghi” Rome, Italy (lecturer)
2014	Editing of the scientific TV show “Nautilus Scienza” Rai Scuola, Italian National Television
2013	Winner of the regional competition of FameLab Italia
2013	Opening event of MUSE, Science Museum of Trento, Italy (talk)
2013	Light 2013-Turn on the light of science, Rome, Italy (talk)