

## Rafaela Sayuri Cicalise Takeshita

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PhD student

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## Research Interests

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I am interested in behavioral and physiological responses to social and environmental changes in nonhuman primates. My research involves non-invasive hormonal analysis and behavioral observation to:

- Investigate the impact of environment on primate welfare and reproductive fitness
- Monitor reproductive state and stress-related responses in captive and wild populations
- Associate hormonal secretion pattern with the evolution of social systems in different primate species

## Education

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| 2013 – current | D.Sc. Primatology, Graduate School of Science, Kyoto University.                                                                                                                                                                                                                 |
| 2011 – 2013    | M.Sc. Primatology, Graduate School of Science, Kyoto University. Thesis: “Non-invasive analysis of adrenal hormones in female japanese macaques ( <i>Macaca fuscata</i> )”                                                                                                       |
| 2006 – 2011    | B.Sc. Veterinary Medicine, Instituto da Saúde e Produção Animal, Universidade Federal Rural da Amazônia. Thesis: “Avaliação hematológica, hepática e renal em <i>Aotus azarai infulatus</i> ” ( <i>Hematological, hepatic, and renal evaluation in Aotus azarai infulatus</i> ). |

## Technical experience

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| 2013 | Training on non-invasive hormonal analysis at the endocrine laboratory of the Smithsonian Conservation Biology Institute, Virginia, USA (3 months). |
| 2008 | Training on animal bioanalysis at the animal pathology laboratory of the Instituto da Saúde e Produção Animal, UFRA, Belém, Brazil (5 months).      |
| 2007 | Training on small animals practice at the Saúde Animal Clinic, Belém, Brazil (1 year).                                                              |

## Fieldwork experience

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- 2012 Ecology Field practice, Koshima, Japan
  - 2012 Field Science Course in Yakushima and Genome Science Course in Kyoto, Japan.
  - 2012 Field trip to the Amazon forest, Manaus, Brazil
  - 2014 Research study at Jigokudani, Nagano, Japan (4 months)
  - 2014 Research study at Born Free USA Primate Sanctuary, Dilley, Texas, USA (1 month)
  - 2014 Field trip to Danum Valley Conservation Center, Borneo, Malaysia
  - 2014 Field trip to Gombe, Tanzania

## Language skills

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Portuguese (native)  
English  
Japanese  
Spanish

## Awards

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- 2016 Award for best oral presentation at the 5<sup>th</sup> Annual symposium of Leading Graduate Program in Primatology and Wildlife Science, Inuyama, Japan.
- 2007 Award for outstanding curriculum progress in course of Veterinary Medicine from Federal Rural University of Amazon (UFRA), Rotary Club Belém-North

## Grants & Scholarships

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- 2016 JSPS Grant-in-aid for Young Scientists (JPN 2,300,000)
- 2014 Leading Graduate Program in Primatology and Wildlife Science (3 years)
- 2013 ITP-HOPE overseas research and training grant, Japan (JPN 799,700)
- 2012 AS-HOPE overseas research and training grant, Japan (JPN 376,390)
- 2011 Scholarship from the Nippon Zaidan, Japan (JPN 130,000/month - 5 years)
- 2010 Scholarship from PIBIC/FAPESPA, Brazil (BRL 360.00/month - 1 year)
- 2008 Scholarship from PIBIC/CNPq, Brazil (BRL 360.00/month - 2 years)

## Invited lectures & Seminars

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- 2014 “Pós-graduação em primatologia no Japão: aplicações locais e globais”. (*Graduate studies on primatology in Japan: local and global applications*). Centro Nacional de Primatas, Ananindeua, Pará, Brazil. (in Portuguese)
- 2013 “Environmental, biological, and social factors influencing fecal adrenal steroid concentrations in female Japanese macaques (*Macaca fuscata*)”. Stirling University, Stirling, Scotland. (in English)
- 2013 “The influence of age and season on fecal dehydroepiandrosterone-sulfate (DHEAS) concentrations in Japanese macaques (*Macaca fuscata*)”. The 13th annual Japanese macaques seminar, Kyoto University, Primate Research Institute, Inuyama, Aichi, Japan.

(in Japanese)

- 2012 "Endocrinologia em primatas não-humanos e perspectivas para realizar pós-graduação no Japão". (*Endocrinology in nonhuman primates and prospects for graduate studies in Japan*). Universidade Federal Rural da Amazônia, Belém, Pará, Brazil. (in Portuguese)

## Publications

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### Journal articles

1. Takeshita RSC, Huffman MA, Mouri K, Shimizu K, Bercovitch FB (2016). Dead or alive? Predicting fetal loss in Japanese macaques (*Macaca fuscata*) by fecal metabolites. *Animal Reproduction Science* (Online version doi: 10.1016/j.anireprosci.2016.10.006.).
2. Mendonça RS, Takeshita RSC, Kanamori T, Kuze N, Hayashi M, Kinoshita K, Bernard H, Matsuzawa T. Behavioral and physiological changes in a juvenile Bornean orangutan after a wildlife rescue. *Global Ecology and Conservation* 8: 116–122 (doi: 10.1016/j.gecco.2016.08.004)
3. Mayor P, Takeshita RSC, Coutinho LN, Sánchez N, Gálvez H, Ique C and Monteiro FOB (2015). Ovarian function in captive owl monkeys (*Aotus nancymae* and *A. vociferans*). *Journal of Medical Primatology* 44(4):187-93 (doi: 10.1111/jmp.12181)
4. Mayor P, Takeshita RSC, Coutinho LN, Sánchez N, Gálvez H, Ique C, Ruiz JC and Monteiro FOB (2015). Functional morphology of the tubular genital organs in the female owl monkey (*Aotus* spp.). *Journal of Medical Primatology* 44(3):158-67 (doi: 10.1111/jmp.12169)
5. Takeshita RSC, Bercovitch FB, Huffman MA, Mouri K, Garcia C, Rigaiil L, Shimizu K (2014). Environmental, biological, and social factors influencing fecal adrenal steroid concentrations in female Japanese macaques (*Macaca fuscata*). *American Journal of Primatology* 76 (11):1084-1093.
6. Takeshita RSC, Huffman MA, Bercovitch FB, Mouri K, Shimizu K (2013). The influence of age and season on fecal dehydroepiandrosterone-sulfate (DHEAS) concentrations in Japanese macaques (*Macaca fuscata*). *General and Comparative Endocrinology* 191: 39-43.
7. Silva GA, Monteiro FOB, Dias HLT, Cavalcante RO, Sampaio AIF, Conceição MEBAM, Takeshita RSC, Castro PHG, Feijó FMC, Rahal SC (2013). Qualitative analysis of preputial and vaginal bacterial microbiota in owl monkeys (*Aotus azarai infulatus*) raised in captivity. *Journal of Medical Primatology* 42: 71 – 78.
8. Lins FLML, Monteiro FOB, Takeshita RSC, Silva GA, Faturi C, Palha MDC, Monteiro MVB, Coutinho LN, Kugelmeier T, Castro PHG (2012). Renal Evaluation of *Aotus azarai infulatus* by Ultrasonography and Serum Chemistry Profile. *American Journal of Primatology* 74: 482 - 490.
9. Monteiro FOB, Coutinho LN, Takeshita RSC, Silva GA, Silva KSM, Whiteman CW, Castro, PHG, Muniz JAPC, Vicente WRR (2011). A protocol for gynecological and obstetric examination of owl monkeys using ultrasound. *Revista de Ciências Agrárias (Belém)* 54: 7 – 13.
10. Coutinho LN, Monteiro FOB, Takeshita RSC, Lins FLML, Silva GA, Faturi C, Castro

- PHG, Muniz JAPC, Kugelmeier T, Whiteman CW, Vicente WRR (2011). Effect of age and number of parturitions on uterine and ovarian variables in owl monkeys. *Journal of Medical Primatology* 40: 310 – 316.
11. Takeshita RSC, Monteiro FOB, Lins FLML, Silva GA, Faturi C, Coutinho LN, Monteiro MVB, Kugelmeier T, Castro PHG, Muniz JAPC (2011). Hematological, hepatic, and renal evaluation in *Aotus azarai infulatus*. *Journal of Medical Primatology* 40: 104 – 110.

### Books

1. Takeshita RSC, Huffman MA, Bercovitch FB (2015). Non-invasive analysis of adrenal hormones in Japanese macaques. Saarbrücken, Germany: LAP Lambert Academic. 83p.

### Book chapters

1. Takeshita RSC, Monteiro FOB, Lins FLML, Andrade RS, Silva GA, Cardoso AMC, Pereira WLA, Rahal SC (2014). Aspectos histológicos dos ovários e testículos de macacos-da-noite (*Aotus azarai infulatus* - Kuhl, 1820). (Histology of the ovary and testis of owl monkeys (*Aotus azarai infulatus* - Kuhl, 1820)). In: *A Primatologia no Brasil*. Curitiba: UFPR/SBPr, v.13, p. 303-314.
2. Lins FLML, Monteiro FOB, Takeshita RSC, Coutinho LN, Faturi C, Silva GA, Castro PHG, Muniz JAPC (2011). Avaliação renal de macacos-da-noite, *Aotus azarai infulatus* (Kuhl 1820) por ultrassom. (Renal evaluation in owl monkeys, *Aotus azarai infulatus* (Kuhl 1820) by ultrasound). In: *A Primatologia no Brasil*. Curitiba: UFPR/SBPr, v.12, p. 257-266.
3. Takeshita RSC, Monteiro FOB, Lins FLML, Silva GA, Faturi C, Coutinho LN, Monteiro MVB, Kugelmeier T, Castro PHG, Muniz JAPC (2011). Ultrassonografia, hematologia e bioquímica hepática e renal de macacos-da-noite, *Aotus azarai infulatus* (Kuhl, 1820) criados em cativeiro (Ultrasonography, hematology, and hepatic and renal biochemistry in owl monkeys, *Aotus azarai infulatus* (Kuhl, 1820) bred in captivity). In: *A Primatologia no Brasil*. Curitiba: UFPR/SBPr, v.12, p. 236-249.

### Conference presentations

1. Takeshita RSC (2016). Behavioral influences on fecal steroids and the impact of ecotourism in male Japanese macaques. In: The 6<sup>th</sup> Annual symposium of Leading Graduate Program in Primatology and Wildlife Science, Kyoto, Japan.
2. Takeshita RSC, Huffman MA, Kinoshita K, Bercovitch FB (2016). The effect of castration and the environment on the relationship between dominance rank and fecal steroid concentrations in male Japanese macaques (*Macaca fuscata*). In: XXVI International Primatological Society Congress, Chicago, USA.
3. Takeshita RSC (2016). Factors regulating steroid hormones in Japanese macaques and orangutans. In: The 5<sup>th</sup> Annual symposium of Leading Graduate Program in Primatology and Wildlife Science, Inuyama, Japan.
4. Takeshita RSC, Huffman MA, Bercovitch FB, Mouri K, Shimizu K (2015). Factors Mediating Dehydroepiandrosterone concentrations in Japanese macaques. In: The 4th International Workshop on Tropical Biodiversity Conservation, Universiti Sains Malaysia, Penang, Malaysia.
5. Takeshita RSC (2015). Factors regulating steroid hormones in Japanese macaques

- (*Macaca fuscata*) and orangutans (*Pongo pygmaeus*). In: The 2<sup>nd</sup> interim symposium of Leading Graduate Program in Primatology and Wildlife Science, Kyoto, Japan.
6. Takeshita RSC, Huffman MA, Bercovitch FB, Mouri K, Shimizu K (2015). Factors Mediating Dehydroepiandrosterone concentrations in Japanese macaques. In: The 30th Congress of the Primate Society of Japan, Kyoto, Japan.
  7. Takeshita RSC, Huffman MA, Bercovitch FB, Mouri K, Shimizu K (2015). Non-invasive analysis of adrenal hormones in female Japanese macaques (*Macaca fuscata*). In: Zoo University, Noichi Zoo, Kochi, Japan.
  8. Takeshita RSC (2015). Field Report: Physiological Variations on Steroid Hormones in Non-human Primates. In: The 2<sup>nd</sup> Annual symposium of Leading Graduate Program in Primatology and Wildlife Science, Kyoto, Japan.
  9. Takeshita RSC, Huffman MA, Bercovitch FB (2015). Hormonal profile of free-ranging Japanese macaques: effects of environment, social behavior and reproductive state. In: The 59th Annual Meeting of Primates Studies, Japan Monkey Centre, Inuyama, Japan.
  10. Takeshita RSC, Huffman MA, Bercovitch FB, Mouri K, Shimizu K (2014). Non-invasive analysis of adrenal hormones in female Japanese macaques (*Macaca fuscata*) In: The 3rd International Workshop on Tropical Biodiversity Conservation, Arusha, Tanzania.
  11. Takeshita RSC, Bercovitch FB, Huffman MA, Mouri K, Garcia C, Rigail L, Shimizu K (2014). Environmental, biological, and social factors influencing fecal adrenal steroid concentrations in female Japanese macaques (*Macaca fuscata*). In: XXV International Primatological Society Congress, Hanoi, Vietnam.
  12. Takeshita RSC, Bercovitch FB, Huffman MA, Mouri K, Shimizu K (2014). Adrenal hormones in female Japanese macaques (*Macaca fuscata*): effects of environment and age. In: 4th International Congress on Asian Primates: Diversity and Conservation, Kyoto University and Bogor Agricultural University International Symposium, Bogor, Indonesia.
  13. Takeshita RSC, Huffman MA, Bercovitch FB (2014). How non-invasive hormone analysis promotes primate welfare and conservation. In: Origins of human mind symposium, Kyoto, Japan.
  14. Macintosh AJJ, Sarabian C, Thomas E, Suzumura T, Akihisa K, Takeshita RSC, Mouri K, Itoh M, Shimizu K, Okamoto M (2013). A field-experimental approach to primate-parasite interactions: filling in the knowledge-gaps. In: The 29th Congress of the Primate Society of Japan, Okayama, Japan.
  15. Silva GA, Monteiro FOB, Dias HLT, Cavalcante RO, Sampaio AIF, Conceicao MEBAM, Takeshita RSC, Castro PHG, Feijó FMC, Rahal SC (2013). Determinação qualitativa da microbiota bacteriana prepucial e vaginal em *Aotus azarai infulatus* (macacos-da-noite) criados em cativeiro. (*Qualitative analysis of preputial and vaginal bacterial microbiota in owl monkeys (Aotus azarai infulatus) raised in captivity*). In: II Congresso Latino Americano e XV Congresso Brasileiro de Primatologia, Recife, Brazil, p. 359. (abstract in Portuguese)
  16. Takeshita RSC, Lins FLML, Monteiro MVB, Coutinho LN, Silva GA, Castro PHG, Pereira WLA, Monteiro FOB (2013). Valores hematológicos e de bioquímica sérica em macacos-da-noite (*Aotus Azarai Infulatus*) diagnosticados com alterações hepáticas e parasitose (*Hematological and serum biochemistry in owl monkeys (Aotus azarai infulatus) diagnosed with hepatic diseases and parasites*). In: II Congresso Latino Americano e XV Congresso Brasileiro de Primatologia, Recife, Brazil, p. 360. (abstract in Portuguese)

17. Takeshita RSC, Huffman MA, Bercovitch FB, Shimizu K (2012). Dehydroepiandrosterone-sulfate concentrations in Japanese macaques (*Macaca Fuscata*): the influence of age and season. In: International Network Workshop on Tropical Biodiversity Conservation, Manaus, Brazil.
18. Takeshita RSC, Huffman MA, Bercovitch FB, Shimizu K (2012). Dehydroepiandrosterone-sulfate concentrations in Japanese macaques (*Macaca Fuscata*): the influence of age and season. In: The 1st International Seminar on Biodiversity and Evolution, Kyoto, Japan.
19. Takeshita RSC, Huffman MA, Bercovitch FB, Shimizu K (2012). Dehydroepiandrosterone-sulfate concentrations in Japanese macaques (*Macaca Fuscata*): the influence of age and season. In: XXIV International Primatological Society Congress, Cancun, Mexico.
20. Lins FLML, Takeshita RSC, Pereira WLA, Cardoso AMC, Monteiro FOB (2011). Aspectos histológicos ovariano, testicular e epididimário de macacos-da-noite (*Aotus Azarai Infulatus* - Kuhl, 1820). In: XIV Congresso Brasileiro de Primatologia: do científico ao popular, Curitiba, Brazil, p. 53. (abstract in Portuguese)
21. Coutinho LN, Monteiro FOB, Takeshita RSC, Lins FLML, Lacreata ACC, Castro PHG, Muniz JAPC, Brito MBS, Vicente WRR (2011). Efeito da idade e do número de partos nas variáveis uterinas e ovarianas em macacos-da-noite. In: XIX Congresso Brasileiro de Reprodução Animal, Recife, Brazil, p.28. (abstract in Portuguese)
22. Takeshita RSC, Monteiro FOB, Pereira WLA, Cardoso AMC (2010). Avaliação histológica do ovário de macacos-da-noite (*Aotus azarai infulatus* KUHL, 1820) (*Histological evaluation of ovarian tissue in owl monkeys (Aotus azarai infulatus KUHL, 1820)*). In: VIII Seminário de Iniciação Científica e o II Seminário de Pesquisa da UFRA, 2010, Belem, Para, Brazil. (Expanded abstract in Portuguese)
23. Lins FLML, Takeshita RSC, Monteiro FOB, Lacreata ACC, Branco ER, Coutinho LN, Castro PHG, Imbeloni AA, Silva GA, Muniz JAPC (2009). Avaliação Renal De Macacos-Da-Noite Por Ultrassom (*Renal Evaluation in owl monkeys, Aotus azarai infulatus (Kuhl 1820) by ultrasound*). In: XIII Congresso Brasileiro de Primatologia, Blumenau, Brazil. (abstract in Portuguese)
24. Takeshita RSC, Lins FLML, Monteiro FOB, Lacreata ACC, Monteiro MVB, Meneses AMC, Castro PHG, Imbeloni AA, Silva GA, Muniz JAPC (2009). Hematologia e bioquímica hepática e renal em macacos-da-noite criados em cativeiro (*Ultrasonography, hematology, and hepatic and renal biochemistry in owl monkeys, Aotus azarai infulatus (Kuhl, 1820) bred in captivity*). In: XIII Congresso Brasileiro de Primatologia, Blumenau, Brazil. (abstract in Portuguese)
25. Oliveira EW, Silva JS, Souza NCMM, Takeshita RSC, Marques TB, Souza NF (2009). Mastite infecciosa canina. Simpósio paraense de medicina veterinária, Belem, Para, Brazil. (abstract in Portuguese)
26. Takeshita RSC, Monteiro FOB, Muniz JAPC (2009). Avaliação hepática de macacos-da-noite (*Aotus azarai infulatus*) por ultrassom e exames laboratoriais (*Hepatic evaluation of owl monkeys (Aotus azarai infulatus) by ultrasound and laboratorial exams*). In: VII Seminário de Iniciação Científica da UFRA, XIII Seminário de Iniciação Científica da EMBRAPA, Belem, Para, Brazil. (expanded abstract in Portuguese)

27. Takeshita RSC, Monteiro FOB (2008). Avaliação hepática de macacos-da-noite (*Aotus azaraï infulatus*) por ultra-som e exames laboratoriais. In: VI Seminário de Iniciação Científica da UFRA, XII Seminário de Iniciação Científica da Embrapa Amazônia Oriental, Belem, Para, Brazil.
28. Souza AC, Almeida VT, Ferreira GS, Meneses AMC, Souza NF, Moraes CCG, Dias Neto RN, Andrade RF, Lima DJS, Cardoso ACF, Seixas LS, Andrade ENL, Bastos RKG, Pereira LHC, Luz MA, Oliveira FCM, Pereira ACA, Lins FLML, Takeshita RSC, Langoni H, Silva RC (2008). Avaliação sorológica de *Leptospira* spp (LARREY 1800) em onças pintadas (*Panthera onca*) mantidas em cativeiro no estado do Pará. In: VIII Congresso Internacional sobre Manejo de Fauna Silvestre na Amazônia e América Latina, Rio Branco, Brazil, p. 53 (abstract in Portuguese)
29. Ferreira GS, Rosa MFD, Meneses AMC, Souza NF, Moraes CCG, Dias Neto RN, Andrade RF, Lima DJS, Cardoso ACF, Seixas LS, Andrade ENL, Bastos RKG, Pereira LHC, Luz MA, Santos MJT, Almeida VT, Oliveira FCM, Pereira ACA, Lins FLML, Takeshita RSC (2008). Ocorrência de *Cystoisospora felis* em onças-pintadas (*Panthera onca*) mantidas em cativeiro no estado do Pará. In: VIII Congresso Internacional sobre Manejo de Fauna Silvestre na Amazônia e América Latina, Rio Branco, Brazil, p. 46. (abstract in Portuguese)
30. Ferreira GS, Meneses AMC, Souza NF, Moraes CCG, Dias Neto RN, Andrade RF, Lima DJS, Cardoso ACF, Seixas LS, Andrade ENL, Bastos RKG, Pereira LHC, Luz MA, Santos MJT, Almeida VT, Oliveira FCM, Pereira ACA, Lins FLML, Takeshita RSC, Langoni H, Silva RC (2008). Pesquisa de anticorpos anti-*Toxoplasma gondii* (NICOLLE & MANCEAUX, 1909) pela técnica de aglutinação direta modificada (MAT) em onças pintadas (*Panthera onca*) mantidas em cativeiro no estado do Pará. In: VIII Congresso Internacional sobre Manejo de Fauna Silvestre na Amazônia e América Latina, Rio Branco, Brazil, p. 45. (abstract in Portuguese)
31. Souza AC, Dias Neto RN, Meneses AMC, Souza NF, Moraes CCG, Andrade RF, Lima DJS, Cardoso ACF, Seixas LS, Andrade ENL, Almeida VT, Ferreira GS, Bastos RKG, Pereira LHC, Luz MA, Santos MJT, Oliveira FCM, Pereira ACA, Lins FLML, Takeshita RSC (2008). Valores hematológicos de onças pintadas (*Panthera onca*) mantidas em cativeiro no estado do Pará. In: VIII Congresso Internacional sobre Manejo de Fauna Silvestre na Amazônia e América Latina, Rio Branco, Brazil, p. 54. (abstract in Portuguese)