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Título Profesional o Grado Académico (incluya el año de obtención):

**LICENCIADO EN CIENCIAS C/M EN BIOLOGÍA, UNIVERSIDAD DE CHILE 1990.**

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Estudios de Postgrado o Especialización (institución donde lo obtuvo y año de obtención):

**MAGISTER EN CIENCIAS BIOLÓGICAS UNIVERSIDAD DE CHILE 1993.**

**DOCTOR EN CIENCIAS C/M EN BIOLOGÍA, UNIVERSIDAD DE CHILE 1998.**

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Actividad Actual e Institución en la cual trabaja:

**PROFESOR TITULAR DE LA UNIVERSIDAD DE CHILE. DEPARTAMENTO DE CIENCIAS ECOLÓGICAS, FACULTAD DE CIENCIAS. JEFE DE LA CARRERA BIÓLOGO C/M EN MEDIO AMBIENTE.**

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Reseña de su actividad laboral actual:

Área de Investigación: Ecofisiología Animal

He centrado mi investigación en el análisis de los mecanismos fisiológicos que determinan el patrón de distribución y la conducta de alimentación en vertebrados. Los estudios han sido centrados en las diferencias intra e inter específicas así como en los cambios ontogenéticos y estacionales. Los estudios han incluido aves, mamíferos, reptiles y anfibios. He focalizado mis estudios en las relaciones causales entre la

plasticidad fisiológica y la flexibilidad ecológica usando la fisiología osmorregulatoria y digestiva como restricciones fisiológicas potenciales. Para abordar estos problemas, en el laboratorio utilizamos diversas herramientas, desde el análisis de isótopos estables (e.g.,  $\delta^{13}\text{C}$ ,  $\delta^{15}\text{N}$ ), hasta determinación de capacidades bioquímicas (e.g., enzimas digestivas y metabólicas), sistémicas (e.g., función renal) y organismicas (e.g., metabolismo energético).

**PUBLICACIONES INDEXADAS:** (últimos 10 años).

REVISTAS ISI

1. Sabat P , Nespolo R & Bozinovic F. (2004). Water economy of *Cinclodes* (Furnariidae) inhabiting marine and freshwater ecosystems *Revista Chilena de Historia Natural*. 76: 219-225
2. Sabat P , Maldonado K Rivera-Hutinel A & Farfan G (2004). Coping with salt without salt glands: osmoregulatory plasticity in three species of coastal songbirds of genus *Cinclodes* (Passeriformes: Furnariidae). *Journal of Comparative Physiology B*: 174: 415-420.
3. Naya DE, G Farfán, P Sabat , M Méndez & F Bozinovic. (2005) Digestive performance in the andean toad *Bufo spinulosus*: hard-wired or flexible physiology? *Comparative Biochemistry and Physiology A* 140: 165-170.
4. Sabat P , J M Riveros & C López-Pinto (2005) Phenotypic flexibility in the intestinal enzymes of the African clawed frog *Xenopus laevis*. *Comparative Biochemistry and Physiology A* 140: 135-139
5. Guerrero-Bosagna C, P Sabat & L Valladares. (2005) Environmental signalling and evolutionary change: can exposure of pregnant mammals to environmental estrogens lead to epigenetically-induced evolutionary changes in embryos? *Evolution and Development*: 7:341-350.
6. Novoa F, A Rivera-hutinel, M rosenmann & P Sabat (2005) Intraspecific differences in metabolic rate in *Chroecomys olivaceus* (Rodentia: Muridae): effect of thermal acclimation in arid and mesic habitats. *Revista Chilena de historia Natural*: 78: 207-214.
7. Sabat P & C Martinez del rio. (2005) Seasonal changes in the use of marine food resources by *Cinclodes nigrofumosus* (Furnariidae, aves): carbon isotopes and osmoregulatory physiology. *Revista Chilena de historia Natural*: 78:253-260.
8. Canals M, Atala C, Olivares R, Guajardo F, Figueroa D, Sabat P, Rosenmann M. (2005) Functional And Structural Optimization Of The Respiratory System Of The Bat *Tadarida Brasiliensis* (Chiroptera; Molossidae): Does Airway Matter? *Journal of Experimental Biology* 208:3987-3995.
9. Sabat P , K Maldonado & C Martinez Del Rio (2006) Osmoregulatory Capacity and the ability to use marine food sources in two coastal songbirds (*Cinclodes*: furnariidae) along a latitudinal gradient. *Oecologia*. 148:250-257.
10. Hartman Bakken B & P Sabat (2006) Gastrointestinal and renal responses to water intake in the green-backed firecrown (*Sephanoides sephanoides*), a South American hummingbird. *American Journal of Physiology*. 291: R830-R836.

11. Sabat P, Cavieres G, Veloso C & Canals M. (2006) Water and energy economy of an omnivorous bird: population differences in the rufous-collared sparrow. *Comparative Biochemistry and Physiology. A* 144: 485-490.
12. Sabat P, K Maldonado, M Canals & C Martinez Del Rio (2006) Osmoregulation And Adaptive Radiation In The Ovenbird Genus *Cinclodes* (Passeriformes: Furnariidae): Renal form and function are associated with ecological diversification. *Functional Ecology*. 20:799-805.
13. Gatica, CDL, Sp Gonzalez, RA Vasquez & P Sabat (2006) On the relationship between sugar digestion and diet preference in two Chilean avian species belonging to the muscivora superfamily. *Revista Chilena de Historia Natural*. 79: 287-294.
14. Castañeda Le., P Sabat Sp Gonzalez & Rf Nespolo (2006) Digestive Plasticity in Tadpoles of the Chilean Giant Frog (*Caudiverbera caudiverbera*): Factorial Effects of Diet and Temperature. *Physiological and Biochemical Zoology*. 79:919–926.
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16. Canals M., Donoso C, Figueroa D & Sabat P. (2007) Pulmonary hematological parameters, energetic flight demands and their correlation with oxygen diffusion capacity in the lungs. *Revista Chilena de Historia Natural*. 80: 275-284.
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20. Merino S, J Moreno, RA Vásquez, J Martínez, I Sánchez-Monsálvez, CF. Estades, S Ippi, P Sabat, R Rozzi, S McGehee. (2008). Haematozoa in forest birds from southern Chile: Looking for latitudinal gradients in prevalence and parasite lineage richness. *Austral Ecology*. 33, 329-340.
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22. Sabat P & Bozinovic F. (2008). Do changes in dietary chemistry during ontogeny affect digestive performance in adults of the herbivorous rodent *Octodon degus*? *Comparative Biochemistry and Physiology A*. 81: 186- 194.
23. Wingfield JC, I T. Moore, R Vasquez, P Sabat, S Busch, A Clark, E Addis, F Prado & H Wada. (2008). Modulation of the adrenocortical responses to acute stress in northern and southern populations of *Zonotrichia*. *Ornitología Neotropical*.19: 241-251.
24. Hartman-Bakken B & P Sabat. (2008). The mechanisms and ecology of water balance in hummingbirds. *Ornitología Neotropical*.19: 501-509.
25. Canals, M, C Veloso, & P Sabat. (2008). The proximal airway of the bat *Tadarida brasiliensis*. A minimum entropy production design. *Journal of Comparative Physiology B*. 178: 377-384.
26. Cavieres G, Sabat, P. (2008). Geographic variation in the response to thermal acclimation in Rufous-collared Sparrows: are physiological flexibility and environmental heterogeneity correlated? *Functional Ecology*. 22, 509-515.

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30. Martínez Del Rio C, P Sabat, R Andreson-Sprecher & SP. Gonzalez. (2009). Dietary and isotopic specialization: the isotopic niche of three Cinclodes ovenbirds. *Oecologia*. 161: 149-159.
31. Canals M, Figueroa DP, Miranda JP & Sabat P . (2009). Effects of environmental temperature on oxygen diffusion capacity during post-natal development in the altricial rodent, *Phyllotis darwini*. *Revista Chilena de Historia Natural*. 82:153-162.
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39. Daniel E. Naya, Claudio Veloso, Pablo Sabat& Francisco Bozinovic Seasonal Flexibility in Organ Size in the Andean Lizard *Liolaemus moradoensis*. *Journal of Morphology*. 271:1440-1445.
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46. Canals M, Figueroa Dp, & Sabat P. (2010). Symmorphosis in the proximal pathway for oxygen in the leaf-eared mouse *Phyllotis darwini*. *Biological Research* 43: 75-81,
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55. Veloso C, D Luhr, R Marfull, H Torres-Contreras, DP Figueroa, P Sabat & M Canals. (2012). Characterization of the thermal micro-environment of *Paraphysa parvula* Pocock 1903 (Araneae, Theraphosidae), a spider from Chilean Andes. *Journal of Arachnology*. 40:34-38.
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57. Karin Maldonado, Wouter F.D. van Dongen, Rodrigo A. Vásquez, Pablo Sabat. (2012). Geographic variation in the association between exploratory behavior and physiology in Rufous-collared sparrows. *Physiological and Biochemical Zoology* 160: 117-124.
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60. Francisco Bozinovic, Tamara P. Catalan, Sergio A. Estay & Pablo Sabat. (2013) [Acclimation to daily thermal variability drives the metabolic performance curve](#). *Evolutionary Ecology Research*. 15:1-9
61. Monica Villegas, Francisco Bozinovic, and Pablo Sabat. 2014. Interplay between group size, huddling behavior and basal metabolism: an experimental approach in the social degu. *Journal of Experimental Biology*. In Press.
62. Isaac Peña-Villalobos, Monica Nuñez-Villegas, Francisco Bozinovic and Pablo Sabat. 2014. Metabolic enzymes in seasonally acclimatized and cold acclimated Rufous-collared sparrow inhabiting a Chilean Mediterranean environment. *Current Zoology*. In Press.

**PROYECTOS DE INVESTIGACIÓN: (últimos 10 años)**  
**CO-INVESTIGADOR**

2013-2016 Behavioral and physiological ecology in a warming world: testing the role of thermal variability on scales pertinent to organisms. Fondecyt 1130015

2010 Implementación de un programa de monitoreo ambiental para evaluar los efectos tóxicos de los plaguicidas. Programa de Cooperación Interuniversitaria e Investigación Científica (**Spain**)

2009-2012 Animal personalities and the underlying roles of behavioral innovation and decision-making. Fondecyt 1090794, Chile

2008-2010 The functional ecology of an adaptive radiation: stable isotopes, niches, phylogenies and kidneys. National Science Foundation.

2008-2010 Compromisos entre la regulación hídrica y el gasto de energía en la araña migalomorfa *Paraphisa parvula*. Fondecyt 10800038.

2005-2006 Incidencia y transmisión de enfermedades parasitarias en la fauna silvestre de Chile y Perú: Implicaciones para la conservación de especies amenazadas. Proyecto Fundación BBVA, España. BIOCON-06-109.

2004-2008 Efecto del ambiente térmico sobre parámetros que caracterizan la optimización estructural y funcional del aparato respiratorio durante el desarrollo post-natal. FONDECYT 1040649.

## **INVESTIGADOR RESPONSABLE**

2012-2016 How does animal body express ecology? Seasonal variability in basal metabolism and trophic niche in passerines. FONDECYT 1120276

2008-2011 Estrategias nutricionales e integración fisiológica: procesos de adquisición, uso y gasto de energía en aves paseriformes. FONDECYT 1080077.

2005-2008 Economía Hídrica y Energética de Aves Pequeñas: variación fenotípica y flexibilidad fisiológica en *Zonotrichia capensis* a lo largo de un gradiente latitudinal FONDECYT 1050196.

2001-2005 Ecofisiología de la osmoregulación en *Cinclodes* (Paseriformes: Furnaridae) Plasticidad fenotípica, variación geográfica y estacional en las capacidades máximas de excreción. FONDECYT 1010647.

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