

Alex Harry Vielma Zamora

Personal Information

Name: Alex Harry Vielma Zamora

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Current Position: Post-doctoral Researcher

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Education

(2009 - 2013) PhD in Neuroscience. Universidad de Valparaíso, Chile.

(2004 - 2006) Undergraduate Biochemist Thesis. Universidad de Valparaíso, Chile.

(1997 - 2004) Lic. in Biochemistry. Pontificia Universidad Católica de Valparaíso, Chile.

Professional training

(Nov 2013 to date) Post-doctoral researcher. PI in FONDECYT 3140599: Inhibitory regulation of light response in retinal OFF bipolar cells. Universidad de Valparaíso, Chile.

(Mar 2009 - Sep 2013) PhD Student, supervised by Dr. Oliver Schmachtenberg. Universidad de Valparaíso, Chile.

(Mar 2007 - Feb 2009) Research Assistant at Sensory Physiology lab., supervised by Dr. Oliver Schmachtenberg. Universidad de Valparaíso, Chile.

(Apr 2006 - Dec 2006) Research Assistant at ECOVIS lab., supervised by Dr. Adrián Palacios. Universidad de Valparaíso, Chile.

Teaching experience

(Mar 2013 – Jul 2013) Coordinator Professor at course “Neurobiología”, for students of Biotechnology Engineering. Universidad Andrés Bello, Chile.

(Dec 2011 - Jan 2012) Teaching Assistant at course “Neurociencias II”, for students of Psychology. Universidad de Valparaíso, Chile.

(Mar 2011 - Jul 2011) Teaching Assistant at course “Fundamentos de la biología moderna” (PCBQ 112), for students of Bachelor of Sciences. Universidad de Valparaíso, Chile.

(Mar 2010 – Jul 2010) Teaching Assistant at course “Fundamentos de la biología moderna” (PCBQ 112), for students of Bachelor of Sciences. Universidad de Valparaíso, Chile.

(Mar 2008 - Jul 2008) Teaching Assistant at course “Fundamentos de la biología moderna” (PCBQ 112), for students of Bachelor of Sciences. Universidad de Valparaíso, Chile.

(Aug 2006 - Dec 2006) Teaching Assistant at course “Neurociencias II”, for students of Psychology. Universidad de Valparaíso, Chile.

Scientific publications

(2014) Angelina Palacios-Muñoz, Maria José Escobar, **Alex Vielma**, Joaquín Araya, Aland Astudillo, Gonzalo Valdivia, Isaac Garcia, José Hurtado, Oliver Schmachtenberg¹, Agustín D. Martínez, Adrián G. Palacios. Role of Connexin Channels in the Retinal Light Response of a Diurnal Rodent. (Accepted in Front. Cell. Neurosci.)

(2012) **Vielma AH**, Retamal MA, Schmachtenberg O. Nitric oxide signaling in the retina: what have we learned in two decades? Brain Res. 1430:112-125.

(2010) **Vielma A**, Delgado LM, Osorio R, Elgueta C, Palacios AG, Schmachtenberg O. Nitric oxide amplifies the rat electroretinogram. Exp Eye Res. 91(5):700-709.

(2010) Schleich C, **Vielma A**, Glössman M, Palacios AG, Peichl L. The retinal photoreceptors of two subterranean Tuco-tuco species (Rodentia, *Ctenomys*): morphology, topography and spectral sensitivity. J Comp Neurol. 518(19):4001-4015.

(2010) Palacios AG, Bozinovic F, **Vielma A**, Arrese CA, Hunt DM, Peichl L. Retinal photoreceptor arrangement, SWS1 and LWS opsin sequence, and electroretinography in the South American marsupial *Thylamys elegans* (Waterhouse, 1839). J Comp Neurol. 518(9):1589-1602.

(2009) Delgado LM, **Vielma A**, Kahne T, Palacios AG, Schmachtenberg O. The GABAergic system in the retina of neonate and adult *Octodon degus*, studied by immunohistochemistry and electroretinography. J Comp Neurol. 514(5):459–472.

(2008) Herrera G, Zagal JC, Diaz M, Fernandez MJ, **Vielma A**, Cure M, Martinez J, Bozinovic F and Palacios AG. Spectral sensitivities of photoreceptors and their role in colour discrimination in the green-backed firecrown hummingbird (*Sephanoides sephaniodes*). J Comp Physiol A. 194(9):785-794.

(2008) **Vielma A**, Ardiles A, Delgado LM, and Schmachtenberg O. The elusive crypt olfactory receptor neuron: Evidence for its stimulation by amino acids and cAMP pathway agonists. J Exp Biol. 211(Pt 15):2417-2422.

Selected Meetings

(2014) **Vielma AH**, Fuenzalida M, Schmachtenberg O (Oral presentation). Patterns of glutamate response in OFF bipolar cells of rat retina. XXI ISER biennial meeting, San Francisco, California, USA.

(2013) Schmachtenberg O, **Vielma A** (Poster). Nitric oxide modulates OFF bipolar cell responses in the retina. 43th Neuroscience meeting, San Diego, California, USA.

(2013) **Vielma A**, Schmachtenberg O (Poster). Electrophysiological characterization of OFF bipolar cells in rat retina. XXVII reunión anual de la Sociedad Chilena de Biología Celular, Puerto Varas, Chile.

(2013) **Vielma A** (Oral Presentation). Cannabinoid receptor activation modulates the temporal properties of scotopic visual signal in rat retina. CINV meeting 2013, Valparaíso, Chile.

(2012) **Vielma AH**, Schmachtenberg O (Poster). Nitric oxide modulates OFF bipolar cell responses in the retina. I Congreso FALAN, Cancún, México.

(2012) Schmachtenberg O, Fuenzalida M, **Vielma A** (Poster). Nitric oxide modulates OFF bipolar cell responses in the retina. 8th FENS meeting, Barcelona, España.

(2011) **Vielma A**, Schmachtenberg O (Poster). Óxido nítrico modula corrientes activadas por voltaje en células bipolares ON de retina de rata. LIV reunión anual de la Sociedad de Biología de Chile, Puerto Varas, Chile.

(2011) **Vielma A**, Schmachtenberg O (Poster). Nitric oxide modulates voltage-gated currents in ON bipolar cells of rat retina. VII reunión anual de la Sociedad Chilena de Neurociencia, Santa Cruz, Chile.

(2010) Schmachtenberg O, Delgado L, Elgueta C, Palacios AG, **Vielma A** (Poster). Nitric oxide amplifies the rod response of the rat retina, measured by electroretinography. 7th FENS Meeting. Amsterdam.

(2010) Peichl L, **Vielma A**, Glösmann M, Palacios AG, Schleich CE (Poster). Retinal Photoreceptors in Fossorial Tuco-tucos (Rodentia, Ctenomys): Types, Topographies, and UV Sensitivity. ARVO Meeting. Fort Lauderdale, USA.

(2009) Peichl L, Bozinovic F, **Vielma A**, Arrese CA, Hunt DM, Palacios AG (Poster). Spectral tuning and retinal distribution of photoreceptors in the South American marsupial *Thylamys elegans*. European Retina Meeting. Oldenburg, Germany.

(2009) **Vielma A**, Delgado LM, Elgueta C, Palacios AG, Schmachtenberg O (Poster). Nitric oxide amplifies the ERG amplitude of the dark-adapted retina. IV Reunión de la Sociedad Chilena de Neurociencias. Coquimbo, Chile, septiembre.

(2008) **Vielma A**, Delgado L, Palacios AG and Schmachtenberg O (Poster). Comparative analysis of the retinal gabaergic system in neonate and adult *Octodon degus*. I Congreso IBRO/LARC de Neurociencias de America latina, Caribe y Peninsula Ibérica. Buzios, Brasil.

(2006) **Vielma A**, Herrera G, Pizarro J, Ardiles AO, Rojas JM, Schmachtenberg O, Palacios AG (Poster). Sistema visual de peces del litoral rocoso chileno: *Auchenionchus microcirrhis* y *Scartichtys viridis*. II Reunión Anual de la Sociedad Chilena de Neurociencias. Curicó, Chile.

(2005) **Vielma A**, Palma F, Palacios A (Poster). Contribución de receptores GABA_A y GABA_C a la respuesta visual, en retina de *Octodon degus*. I Reunión Anual de la Sociedad Chilena de Neurociencias. Santiago, Chile.

(2005) **Vielma A**, Palacios A (Oral Presentation). Regulación gabaérgica de la transmisión sináptica en retina de Octodón degus. Segundo Simposio de Alumnos Tesistas de Bioquímica de Chile. Valparaíso, Chile.

(2004) Quiroz E, Boric K, **Vielma A**, Martinez A, Palacios A (Poster). Sistema visual y conducta en el roedor Octodón degus. IV Reunión Anual de Investigación de la Universidad de Valparaíso. Valparaíso, Chile.

Outreach

(May 2014) Talk of support on principal talk: “Los sentidos, nuestra ventana al mundo” by Dr. Oliver Schmachtenberg at Escuela Marie Poussepin, Putaendo, Chile. Ciclo de Charlas de Neurociencia “¿Qué Tienes en Mente?” of EXPLORA CONICYT.

(Sep 2013) Talk: “Viaje al fondo del ojo” at Escuela Básica Almendral F-66, San Felipe, Chile; Escuela Básica Ignacio Carrera Pinto G-119, Los Andes, Chile; Colegio Cervantino, Putaendo, Chile. Program “1000 científicos 1000 aulas” of EXPLORA CONICYT.

(Sep 2013) Talk: “Viaje al fondo del ojo” at Liceo JUAN XXIII, Villa Alemana, Chile; Escuela Juan de Saavedra, Quilpué, Chile; Escuela Básica 21 de Mayo F-97, San Felipe, Chile. Program “1000 científicos 1000 aulas” of EXPLORA CONICYT.

Honors

(2014) ISER Travel Fellowship

(2012) IBRO/LARC Travel Fellowship

(2012-2013) CONICYT Support Fellowship for Doctoral Thesis (AT-24121445)

(2009-2013) CONICYT Fellowship for Doctoral studies in Chile (21090706)

(1997) Academic Excellence scholarship. Universidad Católica de Valparaíso.