

# Curriculum vitae

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| <b>NOMBRE:</b><br>Nicanor T. Obaldía Rodríguez<br><b>D.V.M., M.S., D.Sc.PH., FASTMH.</b><br><b>DIRECCION:</b> Apdo 0819-10030, El Dorado, Panama, Panama<br>Cel-PA: 011-507-6291-7533<br>email: <a href="mailto:nobaldia@gorgas.gob.pa;">nobaldia@gorgas.gob.pa.</a> ; <a href="mailto:nobaldia@mail.harvard.edu">nobaldia@mail.harvard.edu</a> |                       | <b>TITULOS:</b><br><b>Doctor of Science</b><br><b>Master of Science</b><br><b>Médico Veterinario</b> |  |
| <b>EDUCACION Y ENTRENAMIENTO</b>  |                       |  |  |
| INSTITUCION Y LUGAR   | DIPLOMA / CERTIFICADO | ANOS(s)  | CAMPO DE ESTUDIO   |
| <b>Fellow of the American Society of Tropical Medicine and Hygiene, (FASTMH)</b>  | FASTMH                | 2015   | Medicina Tropical e Higiene  |
| <b>University of South Florida</b> , College of Public Health, Department of Global Health, Tampa, Florida, USA.  | Postdoctoral Fellow   | 2015   | Salud Global y Enfermedades Infecciosas  |
| <b>Harvard University</b> , School of Public Health, Department of Immunology and Infectious Diseases, Boston, Massachusetts, USA.<br><b>Doctor of Science</b>  | D.Sc.                 | 2009-2013  | Salud Pública, Inmunología y Enfermedades Infecciosas, Epidemiología y Bioestadística. |
| <b>University of Wisconsin-Madison</b> , School of Veterinary Medicine, Department of Veterinary Science, Madison, Wisconsin, USA.<br><b>Master of Science</b>  | M.S.                  | 1984-1985  | Ciencias Veterinarias, Virología   |
| <b>Universidad Nacional de Colombia-Bogotá</b> , Facultad de Medicina Veterinaria, Bogotá, Colombia.<br><b>Médico Veterinario</b>   | M.V.                  | 1975-1981  | Medicina Veterinaria   |
| <b>Colegio Javier</b> , Panamá, Panamá.<br><b>Bachiller en Ciencias, Letras y Filosofía.</b>  | B.S.                  | 1962-1973  | Ciencias, Letras & Filosofía   |

**BECAS DE INVESTIGACION:** Investigador Principal (IP).

2021-2024

**Investigador Principal**, Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT. Panamá. Grant/Contrato **SENACYT-PFID-FID-2021-094**. Evaluación preclínica de una vacuna de estadios

sanguíneos de organismos completos contra la infección experimental por *Plasmodium vivax* en el modelo Aotus.

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| 2020-2023 | <b>Investigador Principal</b> , Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT. Panamá. Grant/Contrato <b>SENACYT-COVID19-041</b> . Eficacia <i>in vitro</i> de drogas antimaláricas contra cepas circulantes del virus SARS CoV-2 causante del COVID-19 en Panamá.                             |
| 2016-2019 | <b>Investigador Principal</b> , Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT. Panamá. Grant/Contrato <b>SENACYT-FID16-097</b> . Diversidad genética y estructura poblacional de los parásitos de la malaria de Panamá.  |
| 2015-2018 | <b>Investigador Principal</b> , Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT. Panamá. Grant/Contrato <b>SENACYT-ITE15-004</b> . Validación de una prueba ultra sensible de qRT-PCR para la detección de gametocitos de <i>Plasmodium vivax</i> de individuos de regiones endémicas de Panamá. |
| 2013-2015 | <b>Investigador Principal</b> , US Army Medical Research and Materiel Command (USAMRMC), 820 Chandler Street. Fort Detrick, Frederick, MD, 21702-5014. Grant/Contract <b>W81XWH-12-C-0138</b> , Drug and Vaccine Evaluation in the Human Aotus <i>Plasmodium Falciparum</i> Model. Promed/WRAIR/ICGES.            |
| 2007-2012 | <b>Investigador Principal</b> , US Army Medical Research and Materiel Command (USAMRMC), 820 Chandler Street. Fort Detrick, Frederick, MD, 21702-5014. Grant/Contract <b>W81XWH-07-C-044</b> . Drug and Vaccine Evaluation in the Human Aotus <i>Plasmodium Falciparum</i> Model. Promed/WRAIR/ICGES.             |
| 2001-2006 | <b>Investigador Principal</b> , US Army Medical Research and Materiel Command (USAMRMC), 820 Chandler Street. Fort Detrick, Frederick, MD, 21702-501. Grant/Contract <b>DAMD17-01-C0039</b> . Evaluation of Antimalarial Drug and Vaccine Candidates. Promed/WRAIR/ICGES.   |
| 1996-2000 | <b>Investigador Principal</b> , US Army Medical Research and Materiel Command (USAMRMC), 820 Chandler Street. Fort Detrick, Frederick, MD, 21702-501, Grant/Contract <b>DAMD-17-96-C-6051</b> . Evaluation of Antimalarial Drug and Vaccine Candidates. Promed/WRAIR/ICGES.                                       |

**BECAS DE INVESTIGACION:** Co-investigador.

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| 2013-2015 | <b>Co-Investigador</b> , Bill and Melinda Gates Foundation, University of South Florida, Tampa (USF)-Harvard School of Public Health, Boston, |
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MA. BMRC, The Netherlands. Consortium Grant-sub-Contract : **BMGF OPP#1023643** (Co-PI: Saadi, Sattabongkot, Schofield, Kaneko, Wellem, Obaldía). Long-term Continuous Culture of *Plasmodium Vivax* Blood Stages.

- 1991-1995                   **Co-investigador**, US Army Medical Research and Development Command Grant/Contract (USAMRDC). Drug Evaluation in the *Plasmodium falciparum* - Aotus Model. **DAMD-17-91-C-1072**. Promed/WRAIR/ICGES

## RECONOCIMIENTOS:

- 2015                           **Beca: Harvard University**, The Science of Malaria Eradication: Leadership development course, core and advance modules, Harvard School of Business. Harvard University, Boston, MA. IsGlobal Barcelona Institute of Global Health y Swiss Tropical and Public Health Institute. 14-22 de Junio, Boston, MA. USA
- 2013                           **Beca: Bill and Melinda Gates Foundation**, Keystone Symposium “The Science of malaria eradication” 3-7 Febrero 2014, Merida, Yucatan, Mexico.
- 2010                           **Medalla de Oro, General William Crawford Gorgas**. Instituto Conmemorativo Gorgas de Estudios de la Salud, Agosto 2010, Panamá.
- 2009-2013                   **Beca Doctoral**. Doctor of Science, Harvard University, Cambridge, MA. USA. Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT-IFHARU, Panamá.
- 2008-2018                   **Investigador Distinguido**, Sistema Nacional de Investigación, (SNI), Secretaría Nacional de Ciencia, Tecnología e Innovación, SENACYT, Panamá.
- 1998                           **Beca: Congreso Panamericano de Ciencias Veterinarias**, Santa Cruz de la Sierra, Bolivia. Noviembre 1998. SENACYT, Panamá.
- 1994                           Beca: **Gorgas Memorial Institute Fellow**, American Society of Tropical Medicine and Hygiene al Naval Medical Research Institute, Rockville, Maryland.
- 1986                           **Beca: Agencia Española de Cooperación Internacional**. Curso Internacional Peste Porcina Africana al INIA, Madrid, España.

1984-1985            **Beca: Master en Ciencias**, Master's of Science, University of Wisconsin-Madison, WI. USA). Banco Interamericano de Desarrollo / Ministerio de Desarrollo Agropecuario, Panamá.

## **EXPERIENCIA ACADEMICA:**

- 2017-2020            **Investigador Asociado**, Wellcome Trust Center for Molecular Parasitology, Institute of Infection, Immunity and Inflammation, College of Medical, Veterinary & Life Sciences, University of Glasgow, Glasgow, Scotland, UK.
- 2014-2019            **Profesor Asociado Afiliado**, Departamento de Salud Global, College of Public Health, University of South Florida, Tampa. FL. USA.
- 2014-Presente        **Científico Afiliado Visitante**, Departamento de Inmunología y Enfermedades Infecciosas, Harvard University, School of Public Health, Boston., MA. USA.
- 1999-2001            **Profesor de Epidemiología**. Facultad de Medicina Veterinaria, Universidad de Panamá.
- 1994-2001            **Profesor Metodología de la Investigación**. Facultad de Medicina, Universidad Latina, Panamá.

## **EXPERIENCIA LABORAL:**

- 2018-presente        Investigador en Salud Senior, Departamento de Investigaciones en Parasitología, Instituto Conmemorativo Gorgas de Estudios de la Salud, Panamá, Panamá
- 2015-2018            Investigador en Salud, Departamento de Investigaciones en Parasitología, Instituto Conmemorativo Gorgas de Estudios de la Salud, Panamá, Panamá.
- 2004-2009            Asesor Académico y Científico, Instituto Conmemorativo Gorgas de Estudios de la Salud, Panamá, Panamá
- 1996-2015            Director e Investigador Principal, Evaluation of Antimalarial Drugs and Vaccine Candidates. Contract: Experimental Therapeutics, Walter Reed Army Institute of Research (WRAIR), Silver Spring, MD. USA. Promed S.A. / ICGES, Panamá.
- 1994-2015            Investigador Asociado, Laboratorio Conmemorativo Gorgas., Panamá, Panamá.

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| 1991-1995     | Co-investigador, Evaluation of Antimalarial Drugs and Vaccine Candidates. Contract WRAIR, Silver Spring, MD. USA. Promed, Panamá.  |
| 1991-2015     | Director de Investigación, Promed S.A. Costa del Este, Panamá, Panamá.   |
| 1991-presente | Presidente y Director, Biotecnología Veterinaria S.A., (Biovet S.A.). Investigación Médica y Veterinaria.  |
| 1991-2009     | Director y Médico Veterinario Cirujano de la Clínica Animal Especializada, BIOVET, Panamá, Panamá.   |
| 1988-1993     | Veterinario Staff, Gorgas Memorial Institute, Bethesda, MD / Gorgas Memorial Laboratory, Panamá.   |
| 1986-1987     | Director <i>a.i.</i> Laboratorio de Diagnóstico e Investigación Veterinaria, (LADIV), Ministerio de Desarrollo Agropecuario (MIDA), Panamá.  |
| 1986-1987     | Director, Departamento de Microbiología e Inmunología, Laboratorio de Diagnóstico e Investigación Veterinaria (LADIV), Ministerio de Desarrollo Agropecuario (MIDA), Panamá.                       |
| 1982-1987     | Veterinario Investigador, Laboratorio de Diagnóstico e Investigación Veterinaria (LADIV), Ministerio de Desarrollo Agropecuario (MIDA), Panamá.  |
| 1982-1983     | Residente en Patología Veterinaria, (Dr. Otto Alvarez, q.e.p.d., supervisor) Laboratorio de Diagnóstico e Investigación Veterinaria (LADIV), Ministerio de Desarrollo Agropecuario (MIDA), Panamá. |
| 1981-1982     | Residente Cirugía y Medicina, Hospital de Grandes y Pequeños Animales, (Dra. Elena Jaramillo, supervisora). Facultad de Medicina Veterinaria, Universidad Nacional de Colombia-Bogotá-Colombia.    |

#### **OTROS NOMBRAMIENTOS O ACTIVIDADES PROFESIONALES RELEVANTES:**

|      |   |
|------|---|
| 2017 | Consultor Temporario, Organización Pan-Americana de la Salud (OPS): Segunda misión de verificación de datos de malaria para Guatemala como parte de la Iniciativa para la Eliminación de la Malaria para Meso-América y la Hispaniola. (EMMIE). Guatemala City, Guatemala, Marzo 16-27, 2017. |
| 2016 | Consultor Temporario, Organización Pan-Americana de la Salud (OPS): Segunda misión de verificación de datos de malaria para República Dominicana como parte de la Iniciativa para la Eliminación  |

de la Malaria para Meso-América y la Hispaniola. (EMMIE).. Santo Domingo, Republica Dominicana, Septiembre 25 to Octubre 3, 2016.

- 2007 Director *ad honorem*, Estación Biomédica Experimental, Instituto Conmemorativo Gorgas de Estudios de la Salud (ICGES), Panamá.
- 2007 Miembro de la delegación Panameña del SENACYT a Singapore. 22 Sept to 3 Octubre, 2007.
- 2007 Miembro de la delegación Panameña del SENACYT a Texas A & M University, Renseelear Institute of Technology, Troy, NY, Rochester Polytechnic Institute, Rochester, NY and George Washington University School of Medicine, Washington DC. Noviembre 11-17, 2007.
- 2006 Asesor y miembro de la Comisión Panameña para la Inspección del US Food Safety Program. United States Department of Agriculture, Washington DC, CDC, Atlanta, GA, FIS Laboratories Athens, GA and the Animal Health and Plant Inspection Service, APHIS-USDA, MD and Quarantine Stations, Atlanta and Miami, Airports. Por nombramiento del Ministerio de Desarrollo Agropecuario de Panamá. Febrero 12-17, 2006.
2005. Delegación Panameña a la 73th General Session of the World Animal Health Organization (OIE). Paris, France. Nombrado por el Ministro de Desarrollo Agropecuario, Panamá. Mayo 22-27, 2005.
- 2004-2009 Asesor Científico y Académico, Instituto Conmemorativo Gorgas de Estudios de la Salud. Nombrado mediante resolución # 001, 19 Octubre, 2004.
- 1998-2005 Presidente, del Comité Institucional para el Buen Uso y Cuidados de los Animales de Laboratorio (CIUCAL). Ministerio de Salud, Panamá. Nombrado por decreto del Ministerio de Salud, Decreto 02203, May 25 1998. *Ad honorem*.
- 1997 Miembro de la Comisión Nacional de la Ley de Vida Silvestre, 1997. Autoridad de Medio Ambiente (ANAM). Nombrado por el Ministerio de Justicia. *Ad honorem*.
- 1993 Delegado a la 61th General Sesión de la Organización Mundial de la Salud Animal (OIE). Paris, France. Nombrado por el Ministro de Desarrollo Agropecuario. May 24-28, 1993. *Ad honorem*.
- 1993 Asesor a la Comisión para la Erradicación del Gusano Barrenador del Ganado, MIDA. Panamá. Nombrado por el Ministro del

Ministerio de Desarrollo Agropecuario (MIDA), Panamá. Resolución ALP-077-ALM. Nov. 19, 1993. Ad honorem.

- 1991-1992 Director *a.i.* Instituto Conmemorativo Gorgas, Ministerio de Salud, Panamá. *Ad. honorem.* Diciembre 1991-Enero, 1992.
- 1990-2015 Investigador Asociado, Instituto Conmemorativo Gorgas, Ministerio de Salud, Panamá. *Ad. honorem.*
- 1988-1990 Investigador Científico, Veterinario. Gorgas Memorial Institute, Bethesda, MD, USA / Gorgas Memorial Laboratory, Panamá.
- 1986-1987 Director *a.i.*, Laboratorio de Diagnóstico e Investigación Veterinaria, Ministerio de Desarrollo Agropecuario (MIDA), Panamá.
- 1982-1987 Director, Departamento de Microbiología e Inmunología, Laboratorio de Diagnóstico e Investigación Veterinaria, Ministerio de Desarrollo Agropecuario (MIDA), Panamá.

#### **ASOCIACIONES PROFESIONALES:**

- 2017-presente American Association for Microbiology (ASM), Miembro
- 2017-2019 Sociedad Panameña de Salud Pública, Miembro
- 2016-presente American Public Health Association (APHA), Miembro
- 2000-2005 World Small Animal Veterinary Association (WSAVA)  
Miembro y Representante Nacional.
- 1992- 2009 Asociación de Médicos Veterinarios de Pequeñas Especies (AMVEPE)  
Presidente 1999-2001  
Presidente 2003-2005
- 1994-presente American Society of Tropical Medicine and Hygiene, Miembro
- 1994-presente American Veterinary Medical Association, Miembro
- 1994- 2009 American Animal Hospital Association, Miembro
- 1989-presente Asociación Panameña de Médicos Veterinarios (APMV)  
Presidente 1991-1993  
Presidente 1993-1995
- 1991-1995 Editor y Fundador de Notas Veterinarias, Revista Científica de la Asociación Panameña de Médicos Veterinarios (APMV).

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|---------------|--|
| 1993-1995     | World Veterinary Association, Miembro  |
| 1992-presente | Asociación Panameña para el Avance de las Ciencias, (APANAC)<br>Miembro        |
| 1989- 2009    | American Association of Avian Pathologist, Miembro                             |
| 1989-1990     | Asociación Panameña de Especialistas en Ciencias Avícolas (APECA), Presidente  |
| 1985-1987     | Asociación Colombiana de Médicos Veterinarios y Zootecnistas (ACOVEZ), Miembro |

#### **OTRAS EJECUTORIAS:**

|      |  |
|------|--|
| 2014 | Miembro Comité Organizador, IV Congreso Internacional de Parasitología Molecular y Salud Global Molecular. Instituto Conmemorativo Gorgas de Estudios de la Salud, Hotel Hard Rock Café, 30 Julio – 1 de Agosto, 2014. Panamá, Panamá                  |
| 2012 | Miembro Comité Organizador, III Simposio Anual de Parasitología Molecular y Enfermedades Tropicales, Instituto Conmemorativo Gorgas de Estudios de la Salud. Hotel RIU, 2 -3 de Agosto, 2012, Panamá, Panamá   |
| 2011 | Miembro Comité Organizador, II Simposio de Parasitología Molecular de las Enfermedades Tropicales. Instituto Conmemorativo Gorgas de Estudios de la Salud / Harvard School of Public Health. Hotel Intercontinental, 4 de Agosto, 2011, Panamá, Panamá |
| 2010 | Miembro Comité Organizador, Gorgas, Simposio Científico Internacional VIH-SIDA, Enfermedades Respiratorias Emergentes, Medicina de los Trópicos. Hotel Continental, Agosto 6-7, 2010. Panamá, Panamá   |
| 2003 | Miembro Comité Organizador, III Congreso Científico del ICGES: Presente y Futuro de la Medicina en los Trópicos. Hotel Plaza Paitilla Inn, 18-20 de Agosto de 2003, Panamá, Panamá   |
| 2000 | Presidente Comité Científico del XVII Congreso Panamericano de Ciencias Veterinarias. Centro de Convenciones Atlapa, 11-15 Septiembre Panamá City, Panamá  |
| 1994 | Presidente Comité Organizador y Comité Científico del III Congreso Nacional de Medicina Veterinaria, Asociación Panameña de Médicos  |

Veterinarios, Centro de Convenciones Atlapa, 17-19 Mayo, 1995,  
Panamá, Panamá

- 1993 Miembro del Comité Organizador, I Expomedica Internacional: I Jornada de Medicina Veterinaria APMV. Cámara de Comercio Industrias y Agricultura de Panamá, Centro de Convenciones Atlapa, 6-10 de octubre, 1993. Panamá, Panamá
- 1992 Presidente Comité Organizador y Comité Científico del II Congreso Nacional de Medicina Veterinaria, Asociación Panameña de Médicos Veterinarios, Centro de Convenciones Atlapa, 8-10, Octubre 1992, Panamá, Panamá

## PUBLICACIONES:

1. **Nicanor Obaldía III**, Joao Luiz Da Silva Filho, Marlon Núñez, Katherine A. Glass, Tate Oulton, Fiona Achcar, Grennady Wirjanata, Manoj Duraisingh, Philip Felgner, Kevin K.A. Tetteh, Zbynek Bozdech, Thomas D. Otto, Matthias Marti. Repeated *Plasmodium vivax* blood stage infection provides sterile protection against 1 homologous challenge in non-human primates. doi: <https://doi.org/10.1101/2023.02.13.528262>
2. **Obaldia N**, Barahona I, Lasso J, Avila M, Quijada M, Núñez M, Marti M. 2022. Comparison of PvLAP5 and Pvs25 qRT-PCR assays for the detection of *Plasmodium vivax* gametocytes in field samples preserved at ambient temperature from remote malaria endemic regions of Panama. *PLoS Negl Trop Dis* 16(4): e0010327. <https://doi.org/10.1371/journal.pntd.0010327>
3. **Obaldia N**, Barahona I, Lasso J, Avila M, Quijada M, Núñez M, Marti M. 2021. Deployment of Molecular Tools to Track the Epidemiology of *Plasmodium Vivax* in Panama. Preprint from **Research Square**, 29 Jun 2021. DOI: [10.21203/rs.3.rs-643436/v1](https://doi.org/10.21203/rs.3.rs-643436/v1) PPR: PPR363336
4. Buyon LE, Santamaria AM, Early AM, Quijada M, Barahona I, Lasso J, Avila M, Volkman SK, Marti M, Neafsey DE, **Obaldia NIII**. 2020. Population genomics of *Plasmodium vivax* in Panama to assess the risk of case importation on malaria elimination. *PLoS Negl Trop Dis.* 2020 Dec 14;14(12):e0008962. doi: [10.1371/journal.pntd.0008962](https://doi.org/10.1371/journal.pntd.0008962)
5. Buyon LE, Santamaria AM, Early AM, Quijada M, Barahona I, Lasso J, Avila M, Volkman SK, Marti M, Neafsey DE, Obaldia NIII. 2020. Population Genomics of *Plasmodium vivax* in Panama to Assess the Risk of Case Importation on Malaria Elimination. *bioRxiv*. doi: <https://doi.org/10.1101/2020.08.26.267823>
6. **Obaldia NIII**, Núñez M. 2020. On the survival of 48 h *Plasmodium vivax* Aotus monkey-derived ex vivo cultures: the role of leucocytes filtration and chemically defined lipid concentrate media supplementation. *Malaria Journal.* 19, 278 (2020). DOI: 10.1186/s12936-020-03348-9
7. McCallum F. ...**Obaldia NIII**, et. al, 2020. In Vivo Efficacy and Pharmacokinetics of the 2-Aminomethylphenol Antimalarial, JPC-3210, in the Aotus Monkey-Human Malaria Model. *Antimicrobial Agents and Chemotherapy.* 64(3):e01538-19. doi: 10.1128/AAC.01538-19. Print 2020 Feb 21
8. **Obaldia NIII** et. al. 2018. Reversal of Chloroquine Resistance of *Plasmodium vivax* in Aotus Monkeys. *Antimicrobial Agents and Chemotherapy.* 62 (9):e00582-18. <https://doi.org/10.1128/AAC.00582-18>.
9. **Obaldia NIII** et. al. 2018. Tuberculosis (TB) outbreak in a closed Aotus monkey breeding colony: Epidemiology, diagnosis and TB screening using antibody and interferon-gamma

- release testing. **Comparative Immunology, Microbiology & Infectious Diseases.** 58:1-10, June 2018.
10. **Obaldia NIII**, et. al. 2018. Bone marrow is a major parasite reservoir in *Plasmodium vivax* infection. **MBio.** 2018 May 8;9(3). pii: e00625-18. doi: 10.1128/mBio.00625-18
11. **Obaldia NIII**, Michael G. Stockelman, William Otero, et al. 2017. A *Plasmodium vivax* plasmid DNA- and adenovirus-vectored malaria vaccine encoding blood stage antigens AMA1 and MSP1<sub>42</sub> in a prime/boost heterologous immunization regimen partially protects Aotus monkeys against blood stage challenge. **Clin Vaccine Immunol.** 2017 Apr 5;24(4). pii: e00539-16. doi: 10.1128/CVI.00539-16. Print 2017 Apr.
12. Shaw-Saliba K, Thomson-Luque R, **Obaldia NIII**, et. al. 2016. Insights into an Optimization of *Plasmodium vivax* Sal-1 *In Vitro* Culture: The *Aotus* Primate Model. **PLoS Neglected Tropical Diseases.** DOI:10.1371/journal.pntd.0004870 July 27, 2016.
13. **Obaldia NIII** et. al. 2016. Altered drug susceptibility during host adaptation of a *Plasmodium falciparum* strain in a non-human primate model. **Scientific Reports** | 6:21216 | DOI: 10.1038/srep21216
14. **Obaldia NIII**. 2015. Determinants of low socio-economic status and risk of *Plasmodium vivax* malaria in Panama (2009-2012): a case-control study. **Malaria Journal**, 2015 Jan 21;14:14. doi: 10.1186/s12936-014-0529-7.
15. **Obaldia NIII**, et al. 2015. Clonal outbreak of *Plasmodium falciparum* in Eastern Panama. **Journal of Infectious Diseases**, 2015 Apr 1;211(7):1087-96. doi: 10.1093/infdis/jiu575. Epub 2014 Oct 21.
16. Ohrt C., Qigui Li, **Obaldia NIII**, Rawiwan I, Xie L, Berman J. 2014. Efficacy of IV methylene blue, IV artesunate, and their combinations in preclinical models of malaria. **Malaria Journal**, 2014 Oct 21;13:415. doi: 10.1186/1475-2875-13-415.
17. **Obaldia NIII** et al. Diversity of Panamanian *Plasmodium falciparum* isolates and characterization of *Plasmodium vivax* gametocytes. Doctoral Thesis, November 2013. Harvard School of Public Health, Harvard University, Cambridge, Massachusetts, USA.
18. Cassera MB , Hazleton KZ, Merino EF, **Obaldia NIII**, Ho MC, Murkin AS, DePinto R, Gutierrez JA, Almo SC, Evans GB, Babu YS, Schramm VL. 2011. A transition state analogue of purine nucleoside phosphorylase clears *Plasmodium falciparum* infections in *Aotus* monkeys. **PLoS One.** 2011;6(11):e26916. Epub 2011 Nov 11.
19. **Obaldia NIII**, Otero W, Aparicio J, Marin C, Cisneros G. 2011. Life history traits of laboratory bred *Aotus zonalis* (Panamanian owl monkey): An animal model for malaria research. **J. Med Primatol.** 2011 Dec;40(6):383-91.
20. **Obaldia NIII**, Milhous W, Kyle D.: 2009. Adaptation of a Thai multidrug resistant C2A clone of *Plasmodium falciparum* to Aotus monkeys and its preliminary *in vivo* antimalarial resistance profile. **Am J Trop Med Hyg.** Am J Trop Med Hyg. Vol 81 (4):587-594.
21. **Obaldia NIII**, Kotecka BM, Haynes RK, Fugmann B, Edstein MD, Kyle DE, Rieckmann KH.. 2009. Evaluation of Artemisone combinations in Aotus monkeys infected with *Plasmodium falciparum*. **Antimicrobial Agents and Chemotherapy.** 53(8):3592-4.
22. Dow G, Chen Y, Caridha D, Cysin A, Gerena L, Gettayacamin M, Johnson J, Li Q, Melendez V, **Obaldia NIII**, Tapadarand S, Kozikowski A. 2008. Antimalarial activity of phenylthiazolyl-hidroxamante-based histone deacetylase Inhibitors. **Antimicrob Agents Chemother.** 52(10):3467-77.

23. Calzada JE, Samudio F, Bayard V, **Obaldia NIII**, De Mosca I, Pascale JM. 2008. Revising antimalarial drug policy in Central America, Panama experience. .Trans R Soc Trop Med Hyg. 102(7):694-8.
24. **Obaldia NIII**. 2007. Clinico-pathological observations on the pathogenesis of severe thrombocytopenia and anemia induced by *Plasmodium vivax* infections during antimalarial drug efficacy trials in *Aotus* monkeys. Am J Trop Med Hyg. Jul; Vol 77 (1):3-13.
25. Dow GS, Heady TN, Bhattacharjee AK, Caridha D, Gerena L, Gettayacamin M, Lanteri CA, **Obaldia N III**, Roncal N, Shearer T, Smith PL, Tungtaeng A, Wolf L, Cabezas M, Yourick D, Smith KS. 2006. Alkylaminoquinolinyl methanols as new antimalarial drugs. . Antimicrob Agents Chemother.. Dec;50(12):4132-43.
26. Jian Guan, Quan Zhang, Michael O'Neil, **Nicanor Obaldia III**, Arba Ager, Lucia Gerena and Ai J. Lin. 2005. Antimalarial Activity of New Pyrrolo[3,2-f]quinazoline-1,3-diamine Derivatives. Antimicrobial Agents and Chemotherapy. Vol. 49 (12):4928-4933.
27. Samudio F, Santamaria A, **Obaldia NIII**, Pascale J, Bayard V, Calzada J. 2005. Prevalence of *Plasmodium falciparum* mutations associated with antimalarial drug resistance during and epidemic in Kuna Yala, Panama, Central America. Am J Trop Med Hyg. Vol. 73(5):839-841, 2005.
28. **Obaldia NIII**. 2005. Outbreaks of Aujesky's disease in pigs from Panama. Tropical Animal Health and Production. 37:277-283.
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## DIVULGACION DE LA CIENCIA

Lípidos aumentan la longevidad del parasito de la malaria -Gorgas

08/28/2020 — Noticias sobre Panamá y el mundo en **LA PRENSA** de Panamá. ... Gorgas de Estudios de la Salud, liderados por **Nicanor Obaldía III**...

[https://www.prensa.com/impresa/vivir/Estudian-antigenos-vivax-causante-malaria\\_0\\_4702779756.html](https://www.prensa.com/impresa/vivir/Estudian-antigenos-vivax-causante-malaria_0_4702779756.html)

**Agro TV** programa televisivo sobre simposio de la malaria desde Santiago, noviembre, 2018. Panamá

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## **PRESENTACIONES EN CONGRESOS CIENTÍFICOS:**

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4. **Obaldia NIII.** Conferencia: Inducción de inmunidad estéril por infección repetida contra *Plasmodium vivax* en primates no-humanos permite la detección de antígenos nuevos candidatos a vacuna. XXV Congreso de la Federación Latinoamericana de Parasitología. 24-27 de noviembre de 2019. Panamá, Panamá.
5. **Obaldia NIII.** Conferencia y organización de Foro Científico: Epidemiología Molecular de la Malaria en Panamá. 24 de octubre, 2019. Hotel Gran David, Santiago, Veraguas, Panamá.

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7. **Obaldia NIII.** Poster: Population Genomics of *Plasmodium vivax* from Selective Whole Genome Amplification to Inform Malaria Elimination Efforts in Panama. Malaria Gordon Research Conference Frontiers in Science. Les Diablerets Conference Center, Les Diablerets, Suiza. Junio 30-Julio 5, 2019.
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9. **Obaldia NIII.** Conferencia: Diversidad genética y estructura poblacional de los parásitos de la malaria humana de Panamá. Avances de Proyecto BID-SENACYT. FID16-P-097. Salón Coiba, SENACYT, Ciudad del Saber, Panamá. Abril 29, 2019.
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12. **Obaldia NIII. et. al.** Poster: Un modelo robusto de primates no humanos con inmunidad estéril inducida contra *Plasmodium vivax* como plataforma para el desarrollo de vacunas candidatas 67<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, October 28-Noviembre 1, 2018, New Orleans, LA, USA.
13. **Buyon L. ... and Obaldia NIII.** Poster: Population genomics of *Plasmodium vivax* in Panama from Selective Whole Genome Amplification of Clinical Samples. 67<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, October 28-Noviembre 1, 2018, New Orleans, LA, USA.
14. **Obaldia NIII.** Conference: The bone marrow is a major reservoir for *Plasmodium vivax* infection. The Jenner Institute, The University of Oxford, Oxford, UK. 9 April, 2018.
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16. **Obaldia NIII. et. al.** Poster: Controlled *P. vivax* blood stage repeated infection induces protection against heterologous challenge in the non-human primate model. 66<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Noviembre 5-9, 2017, Baltimore, MD, USA
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21. **Obaldia NIII.** Conferencia: Malaria zoonótica: *Plasmodium knowlesi* un patógeno emergente del Sureste Asiático. XXV Pan-American Congress of Veterinary Science. Panama City, Panama. 3-7 October, 2016.
22. **Obaldia NIII.** Conferencia: Quincuagesimo aniversario del modelo malaria humana – Aotus: Una perspectiva histórica (1966-2016). XVI Congreso Nacional de Ciencia y Tecnología. Windham Hotel, Albrook, Panama City, Panama. 19-22 October, 2016.
23. **Obaldia NIII, et. al.** Poster: Attempts to reverse adapt Aotus derived *Plasmodium vivax* to *in vitro* culture by *ex-vivo* co-cultivation with human erythrocytes. 64<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Marriott, Philadelphia, PA, USA. 24-29 October, 2015.
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25. **Obaldia NIII**, et al. Poster: Investigation of the Thai multidrug resistant *Plasmodium falciparum* C2A strain in the Aotus monkey model. 63<sup>rd</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Sheraton, New Orleans, USA. 2-6 November, 2014.
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28. **Obaldia NIII et al.** Conferencia: Diversity of Panamanian *Plasmodium falciparum* isolates and characterization of *P. vivax* transmission stages. Instituto de Salud Global, Universidad de Barcelona, March 11<sup>th</sup>, 2014. Barcelona, Spain.
29. **Obaldia NIII et al.** Conferencia: *Aotus l. lemurinus*: an animal model for *Plasmodium vivax* research. "Malaria Culture Consortium 2014 Annual Meeting" March 5-6, 2014, Rafael Hoteles, Madrid, Spain.
30. **Obaldia NIII et al.** Poster: Diversity of Panamanian *Plasmodium falciparum* isolates. Keystone Symposium "The Science of malaria eradication" 3-7 February, 2014, Merida, Yucatan, Mexico.
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32. **Obaldia NIII et. al.** Poster: Evidence of Clonal *Plasmodium falciparum* Populations Expansion in Eastern Panama. 62<sup>nd</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. 13-17 November, 2013. Marriott Wardman Park Hotel, Washington DC, USA
33. **Obaldia NIII.** Conferencia: Epidemiology, Diversity, and Spatial Distribution of Malaria Parasites Field Isolates in Panama, 2003-2012. Spatial Information, Spatial Analysis, and Spatial Thinking<sup>[1]</sup>. June 14, 2013, Harvard University Center for Geographic CGIS South Building, Cambridge, MA.
34. **Obaldia NIII.** Conferencia: Animal models in Malaria Vaccine Research. Vaccinology in the Tropics. Hotel Intercontinental Playa Bonita, 13-17 March, 2012. Panama, Panama.
35. **Obaldia NIII.** Conferencia: Genotypic and phenotypic characterization of *Plasmodium vivax* blood and transmission stages from Panama. Second Molecular Biology Symposium, Gorgas Memorial Institute of Health Studies annual meeting. Hotel Intercontinental, Panama, Panama. August, 2010.
36. **Obaldia NIII.** Conferencia: Evaluation of Drug and Vaccine Candidates in the Human Malaria/Aotus Model. First Molecular Biology Symposium, Gorgas Memorial Institute of Health Studies annual meeting. Hotel Continental, Panama, Panama. August 6-7th, 2010.
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39. Smith B, **Obaldia NIII**, Gerena L, Dow GS. Poster: Thai multidrug-resistant (MDR) C2A strain of *Plasmodium falciparum* adapted for use in the Aotus lemurinus *in vivo* model. Annual Meeting of the American Society of Tropical Medicine and Hygiene, Marriott, Atlanta, Georgia, USA. November 3-7, 2010.
40. **Obaldia NIII.** Conferencia: Pathogenesis of falciparum malaria sequestration in the human *P. falciparum* /Aotus model. Gorgas Memorial Annual Meeting, Hotel Continental, Panama. August, 2010.
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43. **Nicanor III Obaldia**, Wilbur K. Milhous, Dennis E. Kyle. Poster: Adaptation of a Multidrug Resistant C2A Clone of *Plasmodium falciparum* from Thailand to Aotus lemurinus lemurinus Monkeys and its Preliminary *in vivo* Antimalarial Drug Sensitivity-Resistance Profile. 57<sup>th</sup> Annual Meeting of The American Society of Tropical Medicine and Hygiene. December 7-11, 2008. Sheraton New Orleans, New Orleans, Louisiana, USA.

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51. **Obaldia NIII**. Conference: Malaria research in Panamá. Symposium on Biomedical Research Initiatives and Opportunities in Panamá. National Institute of Allergy and Infectious Diseases. NIH, Bethesda, Maryland.. Panamaweeek. Washington, DC, October 26-29, 2005.
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Jian Guan, Quan Zhang, Michael O'Neil, **Nicanor Obaldia III**, Arba Ager, Lucia Gerena and Ai J. Lin. Poster: Medicine and Health in the Tropics Meeting. Marseille, France. 11-15, September, 2005.
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54. **Obaldia NIII**. Conferencia: *Aotus lemurinus lemurinus* un modelo animal para el estudio de la malaria: Eficiencia reproductiva en cautiverio. IV Congreso Científico del Instituto Commemorativo Gorgas. Centro Ascanio Arosemena, Autoridad del Canal de Panama ACP. 7-8 de Junio del 2004.
55. **Obaldia NIII**. Poster: Etica en el Buen Uso y Cuidados de los Animales de Laboratorio. IV Congreso Científico del Instituto Conmemorativo Gorgas. Centro Ascanio Arosemena, Autoridad del Canal de Panama ACP. 7-8 de Junio del 2004.
56. **Obaldia NIII**. Conferencia: Platelet kinetics in *Plasmodium vivax* AMRU-1 infected Aotus Monkeys: Use in Drug Pre-clinical Trials. Presented at the Army Malaria Institute, (AMI). Brisbane, Australia. January 30, 2004.
57. **Obaldia NIII**. Conferencia: En la Busqueda de Nuevas Drogas y Vacunas Antimalaricas. III Congreso Científico del Instituto Conmemorativo Gorgas (ICGES) y III Reunion Cientifica de Enfermedades Emergentes y Reemergentes de CentroAmerica y Republica Dominicana. Panama, Panama Agosto 18-20, 2003.
58. **Obaldia NIII**. Conferencia: Casos Clínicos Dermatológicos en Pequeñas Especies. V Congreso de Medicina Veterinaria y IV Jornada Científica de la Facultad de Medicina Veterinaria. Hotel Country Inn, Amador, Panama. Octubre 1-4, 2003.
59. **Obaldia NIII**. Conferencia: Enfermedades Virales Reproductivas de los Cerdos en Panama. IV Congreso Nacional de Medicina Veterinaria. Los Santos, Herrera, Panama. Octubre 3-6, 2002.
60. **Obaldia NIII**, Kyle D, Milhous W. Conferencia: Reversal of Chloroquine Resistance with the Co-Administration of Prochlorperazine and Chloroquine Against Infections of the Chloroquine Resistant (CQR) AMRU-1 Strain of *P. vivax* in *Aotus lemurinus lemurinus* Monkeys. Presented at: Vivax Malaria Research 2002 and Beyond, Multilateral Initiative on Malaria (MIM). Bangkok, Thailand, February 3-8, 2001.

61. **Obaldia NIII**, Jones TR, Rogers WO, Kyle D, Milhous W, Hoffman SL. Conferencia: Anemia in *Aotus lemurinus lemurinus* monkeys infected with *Plasmodium vivax*. Presented at: Vivax Malaria Research 2002 and Beyond, Multilateral Initiative on Malaria (MIM). Bangkok, Thailand, February 3-8, 2001.
62. Jones TR, Gramzinski RA, Aguiar JC, Sim BKL, Narum DL, Fuhrmann SR, Kumar S, **Obaldia NIII**, Hoffman SL. Poster: Absence of Antigenic Competition in Aotus monkeys immunized with *Plasmodium falciparum* DNA vaccines delivered as a mixture. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting. Atlanta, Georgia, November 11-15, 2001.
63. Jones TR, Gozalo AS, **Obaldia NIII**, Andersen EM, Stroncek DF, Lucas C, Narum DL, Sim BKL, Hoffman SL. Poster: Anemia in Aotus monkeys infected with *Plasmodium falciparum*. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting. Houston, Texas, October 29-November 2, 2000.
64. **Obaldia NIII**, Jones T, Hoffman SL. Conferencia: Desarrollo de una vacuna contra la malaria: La perspectiva de una vacuna multi-estadio basad en acidos nucleicos. Proceedings of the XVII Panamerican Congress of Veterinary Sciences, PANVET 2000, 11-15, September, 2000. Panama, Rep of Panama. Pp 212.
65. Ohrt C,... **Obaldia NIII**, et al. Poster: Status of Artelinic Acid Development. .Presented at the American Society of Tropical Medicine and Hygiene Meeting. Houston, Texas, October 29-November 2, 2000.
66. Jones TR, **Obaldia NIII**, Gramzinski RA, Hoffman SL. Poster: Repeated Infection of Aotus Monkeys with *Plasmodium falciparum* Induces Protection Against Subsequent Challenge with Homologous and Heterologous strains of Parasite. Am J Trop Med Hyg. Presented at the American Society of Tropical Medicine and Hygiene Meeting. Washington DC, November 28-December 2, 1999.
67. **Obaldia NIII**, Jones TR, Gramzinski RA, Charoenvit Y, Kolodny N, Kitov S, Davis HL, Krieg AM, Hoffman SL. Poster: Synthetic Oligodeoxynucleotides Containing CpG Motifs Enhance Immunogenicity of a Peptide Malaria Vaccine in Aotus Monkeys. Presented at the American Society of Tropical Medicine and Hygiene Meeting. Washington DC, November 28-December 2, 1999.
68. **Obaldia NIII**: Conferencia: Porcine Reproductive and Respiratory Syndrome in Panama XVI PanAmerican Congress of Veterinary Science. November, Santa Cruz de la Sierra. Bolivia, 1998.
69. Gramzinski RA, Kumar S, Aguiar J, Liang H, Sim BK, **Obaldia NIII**, Haynes D, Hobart P, Hoffman SL.: Poster: Immunogenicity and Protective Efficacy of a *Plasmodium falciparum* MSP-1, AMA-1 or EBA-175 DNA Vaccine Alone or in Combination in Aotus Monkeys. Presented at the American Society of Tropical Medicine and Hygiene Meeting. Lake Buena Vista, Orlando Florida December 7-11, 1997.
70. **Obaldia NIII**, Gramzinski RA, Rossan RN, Collins WE, Oliveira D, Lal A, Hoffman SL.: Panamanian *Aotus lemurinus lemurinus* Susceptibility to Sporozoite *Plasmodium falciparum* Infection: Conferencia: A *P. falciparum* Challenge Model. Presented at the American Society of Tropical Medicine and Hygiene Meeting. Lake Buena Vista, Orlando Florida December 7-11, 1997.
71. Gramzinski RA., Maris DC, **Obaldia NIII**, Rossan R, Sedegah M, Wang R, Hobart P, Margalith M, Hoffman SL.: Conferencia: Optimization of Immune Responses to a Plasmodium DNA Vaccine in Aotus Monkeys. Presented at the American Society of Tropical Medicine and Hygiene Meeting. San Antonio, Texas. 17-21, November. 1995.
72. **Obaldia NIII**. Conferencia: Rabies Diagnostic Techniques, Pan American Health Organization Rabies Regional Seminar, Continental Hotel, Panama, July, 1995.
73. **Obaldia NIII**. Conferencia: President's Inaugural Speech, III National Veterinary Congress of Panama, May, 1995.
74. **Obaldia NIII**, Rodriguez E. Conferencia: Outbreak of Pseudorabies in Panama. III National Veterinary Congress of Panama, May, 1995.
75. **Obaldia NIII**. Conferencia: Aotus Monkey as an Animal Model for Malaria Research. Naval Medical Research Institute, Rockville, Maryland, November, 1994.
76. **Obaldia NIII**. Conferencia: Laparoscopic surgery: the pig as an animal model. Expomedica International, APMV Veterinary Seminars, Panama, October 4-10, 1993.
77. **Obaldia NIII**. Conferencia: Anesthesia in the critical care patient. Expomedica International, APMV Veterinary Seminars, Panama, October 4-10, 1993.
78. **Obaldia NIII**. Conferencia: Antimalarial Drug Evaluation Program USAMRDC, Fort Detrick, Maryland, USA, August 10-12, 1993.
79. **Obaldia NIII**. Conferencia: President's Inaugural Speech, II National Veterinary Congress of Panama, October 8-10, 1992.

80. **Obaldia NIII.** Conferencia: Detection of *Klebsiella pneumoniae* antibodies by ELISA, in Laboratory born *Aotus lemurinus lemurinus*. Department of Veterinary Science, University of Wisconsin-Madison, June 30, 1989.
81. **Obaldia NIII.** Conferencia: Studies on Free-ranging Owl Monkeys on Maje island in Lake Bayano, Panama, Panama. University of Wisconsin-Madison, Wisconsin Regional Primate Research Center. July 6, 1989.
82. **Obaldia NIII.** Conferencia: Immunological profiles for avian vaccination. IV National Poultry Congress of Panama, 1989.
83. **Obaldia NIII**, Samudio R, Rogee N.: Conferencia: Preliminary studies on the night monkey Aotus of Maje island lake Bayano, Panama. University of Wisconsin-Madison, Veterinary Science Department, August 15, Gorgas Memorial Institute, Bethesda Maryland, August 9, 1988.
84. **Obaldia NIII.** Conferencia: Avian Influenza. Panamanian Poultry Science Specialists Association, Panama, April, 1987.
85. **Obaldia NIII.** Conferencia: Hog Cholera and African Swine Fever. First National Panamanian Congress on Swine Production. 23-25, Hotel Soloy, Panama, April, 1987.
86. **Obaldia NIII.** Conferencia: Porcine Parvovirus in Panama. First National Congress on Swine Production. Hotel Soloy, Panama. 25 April, 1987.
87. **Obaldia NIII.** Conferencia: Respiratory Viral Diseases of Poultry (Newcastle and Influenza) VI National and International Congress on Clinical Laboratory, ATLAPA Convention Center, Panama, 3-7 February, 1987.
88. **Obaldia NIII.** Conferencia: Pathogenesis of Newcastle Disease Virus in Ocularly Inoculated Chickens, III National Poultry Congress and II Poultry Science Specialists Congress. Holiday Inn Hotel, Panama, 4-6 September, 1986.
89. **Obaldia NIII.** Pathogenesis of Newcastle Disease Virus in Ocularly Inoculated Chickens, Veterinary Science Department, University of Wisconsin-Madison, 1985.
90. **Obaldia NIII.** Conferencia: Enfermedades animales transmitidas por garrapatas (Revisión histórica). Ministerio de Desarrollo Agropecuario, Capira, Panamá, 1983.
91. **Obaldia NIII**, Amaya G.: Conferencia: Nerve-muscle implant for the correction of laryngeal hemiplegia in the horse. School of Veterinary Medicine, National University of Colombia-Bogota, Bogota, Colombia, 1981.

## OTROS ENTRENAMIENTOS, MISIONES & PRESENTACIONES:

- 2018      67<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, October 28-Noviembre 1, 2018, New Orleans, LA, USA.
- 2017      66<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Noviembre 5-9, 2017, Baltimore, MD, USA.
- 2017      Molecular Epidemiology for Malaria Elimination: Community Use Case Discussion Meeting. Broad Institute of the MIT and Harvard, Cambridge, MA, USA. July 11-13, 2017.
- 2016      65<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Marriott, Atlanta, GA, USA. 13-17 November, 2016.
- 2015      64<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Marriott, Philadelphia, PA, USA. 24-29 October, 2015.
- 2015      The Science of Eradication: Malaria Leadership Development Course, core and advance modules, June 14-22, 2015. Harvard Business School, Boston, MA. Sponsored by Harvard University, ISGlobal Barcelona Institute for Global Health and the Swiss Tropical and Public Health Institute.
- 2014      63<sup>rd</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Sheraton, New Orleans, USA. 2-6 November, 2014.
- 2014      Instituto de Salud Global de Barcelona. Curso de Actualizacion para la Eliminacion de la Malaria en Mesoamerica y la Espanola. Hotel Intercontinental, San Salvador, El Salvador 16-21, Febrero 2014.

- 2014 Keystone Symposium: The Science of Malaria Eradication. February 2-7, 2014. Hotel Fiesta Americana, Merida, Yucatan, Mexico
- 2013 Harvard University Center for Geographic Analysis. Geographic Information Systems Certification. June 4-14<sup>th</sup>, 2013.
- 2010 59<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Marriott, Atlanta, Georgia, USA. November 3-7, 2010.
- 2009 58<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Marriott Wardman Park, Washington DC, USA. November 18-22, 2009
- 2008 146<sup>Th</sup> Annual Convention of the American Veterinary Medical Association. Seattle Convention Center, Seattle, WA. July 11-15, 2009.
- 2009 Vivax Malaria Research III: 2009 and Beyond. Gamboa, Panama. May 24-28, 2009.
- 2009 Bio2009 International Convention, Atlanta Convention Center, Atlanta, GA. May 18-21, 2009.
- 2008 57<sup>th</sup> Annual Meeting of The American Society of Tropical Medicine and Hygiene. December 7-11, 2008. Sheraton New Orleans, New Orleans, Louisiana, USA.
- 2008 Armed Forces Institute of Pathology 17th Annual Veterinary Descriptive Pathology Course. June 2-6, 2008, Bethesda, MD. USA.
- 2008 Bio2008 International Convention, San Diego Convention Center, San Diego, CA. June 17-20, 2008.
- 2008 Molecular Approaches to Malaria Conference. MAM-2008. Lorne, Victoria, Australia. February 3-7., 2008.
- 2007 56<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Philadelphia Marriott Downtown, Philadelphia, PA. November 4-8, 2007.
- 2007 NIH/NIAID National Institute of Health (NIH-NIAID) C.W. **Bill Young Center for Biodefense and Emerging Infectious Diseases** The Walter Reed Army Institute of Research, Department of Animal Medicine (WRAIR) Division of Veterinary Medicine, and The Uniformed Services University of Health Sciences (USUHS) Center for Laboratory Animal Medicine, Bethesda, MD. Sponsored by the US Embassy in Panama. 18-21 March, 2007.
- 2007 Tres Cantos GlaxoSmithKline Malaria Research Facility, 8-9 February, Madrid Spain.
- 2006 ESAC-Medicine for Malaria Venture (MMV) Malaria Review Meeting, Geneva, Switzerland, December 5-6.
- 2006 55<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Marriott Marquis, Atlanta, GA. November 12-16, 2006
- 2006 XI International Congress of Parasitology ICOPA XI, August 6-11, Glasgow, Scotland.
- 2006 Swiss Tropical Institute, Basel, Switzerland, August 13-17.
- 2006 143<sup>nd</sup> Annual Meeting of the American Veterinary Medical Association and 28<sup>th</sup> World Veterinary Congress. July 15-19, Honolulu, Hawaii, USA.

- 2005 54<sup>th</sup> Annual Meeting of the American Association of Tropical Medicine and Hygiene. Hilton Washington Towers and Hotel. December 11-15, 2005
- 2005 Medicine and Health in the Tropics Meeting. Marseille, France. 11-15, September, 2005.
- 2005 142<sup>nd</sup> Annual Meeting of the American Veterinary Medical Association and 28<sup>th</sup> World Veterinary Congress. July 16-20, Minneapolis, Minnesota, USA.
- 2005 Panamanian delegate to the 73<sup>a</sup> General Session of the World Animal Health Organization (OIE), May 22-27, Paris, France, 2005.
- 2004 II Congreso Nacional, VII Congreso Centroamericano, VIII Congreso Internacional Purina de Médicos Veterinarios de Pequeñas Especies (AMVEPE). Noviembre 17-19, Hotel Caesar Park, Panamá City, Panamá.
- 2004 Taller de Neurología Quirúrgica Pre-congreso AMVEPE. Noviembre 16, Hotel Caesar Park, Panama City, Panama.
- 2004 53th Annual Meeting of the American Society of Tropical Medicine and Hygiene Annual Meeting. Fontainebleau, Hilton. Miami, Florida, November 7-11, 2004
- 2004 VI Congreso Nacional de Medicina Veterinaria. David, Chiriquí, Panamá. 6-9 de Octubre, 2004
- 2004 Molecular Approaches to Malaria Meeting. Lorne, Victoria, Australia. February 1-5, 2004.
- 2003 52th Annual Meeting of the American Society of Tropical Medicine and Hygiene Annual Meeting. Philadelphia Marriott Downtown. Philadelphia, Pennsylvania. December 3-7, 2003.
- 2003 V Congreso Nacional y IV Jornada Científica de Medicina Veterinaria. Hotel Country Inn, Amador, Panamá. Octubre 1-4, 2003.
- 2003 Military Infectious Diseases Research Program (MIDRP) Malaria Drug Research Program Programmatic Review. Walter Reed Army Institute of Research/Navy Medical Research Command. Silver Spring, MA. March 17-20, 2003.
- 2002 American Society of Hematology Annual Meeting. Philadelphia, PA. December, 3-10, 2002.
- 2002 Malaria MIM Workshop. Philadelphia, PA. December, 3-10, 2002.
- 2002 51th Annual Meeting of the American Society of Tropical Medicine and Hygiene Annual Meeting. Adams Mark Dever Hotel. Denver, Colorado, November 10-14, 2002.
- 2002 IV Congreso Nacional de Medicina Veterinaria. Octubre 3-6, Los Santos, Herrera, Panama.
- 2002 Vivax Malaria Research 2002 and Beyond, Multilateral Initiative on Malaria (MIM) Meeting. Bangkok, Thailand, February 3-8.
- 2001 138<sup>th</sup> Annual Meeting of the American Veterinary Medical Association. Boston, MA. July 14-18, 2001.
- 2001 50th Annual Meeting of the American Society of Tropical Medicine and Hygiene Annual Meeting. Atlanta, Georgia, November 11-15.
- 2001 Updates in Special Bacterial Pathogens. 2001 Pre-Meeting Course;

Sponsored by the American Society of Tropical Medicine and Hygiene. November 10-11, 2001. Hilton Atlanta Hotel and Towers, Atlanta Georgia, USA.

- 2000 49<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene Annual Meeting. October 29-November 2. Houston, Texas, USA.
- 2000 XVII PanAmerican Congress of Veterinary Science. Panama City, Panama. 11-15 September, 2000.
- 2000 World Small Animal Veterinary Congress (WSAVA). Amsterdam, The Neetherlands. April 24-May 5
- 2000 I Seminario Taller Centroamericano de Vigilancia Epidemiológica de las Encefalitis Equinas. Hotel Continental, Panama, 21-24, February, 2000.
- 1999 48<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Hilton Washington Hotel. November 28-December 2. Washington DC.
- 1998 136<sup>th</sup> Annual Meeting of the American Veterinary Medical Association. New Orleans, LA, USA. July 10-14.
- 1999 Epizootic Foreign Animal Disease Training Course. University of Wisconsin, School of Veterinary Medicine. June 11-18.
- 1998 XVI PanAmerican Congress of Veterinary Science. Santa Cruz de la Sierra, Bolivia. November, 1998.
- 1998 Basic Aspects of Immunology. 4<sup>th</sup> National Symposium. Walter Reed Army Institute of Research, Washington D.C. and The Office of Naval Research. At the Uniformed Services Universityh of the Health Sciences. October 21-23. Bethesda MD.
- 1997 46<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Lake Buena Vista, Florida, 7-11 December.
- 1996 45<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Baltimore, MA, December 1-5.
- 1995 44<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, San Antonio, Texas, Nov 17-21.
- 1995 III Panamanian National Veterinary Congress, Panama, May
- 1994 Research Fellow Gorgas Memorial Fellowship, ASTMH, Naval Medical Research Institute, Bethesda, Maryland, November-December
- 1994 43th Annual Meeting of the American Society of Tropical Medicine and Hygiene, Cincinnati, Ohio, November.
- 1994 XIV Pan-American Veterinary Congress, Acapulco, Mexico, October.
- 1994 Seminar on the Privatization of Govermental Veterinary Services, PAHO, FAO, PanVet, Acapulco, Mexico, October.
- 1994 Seminar on the Privatization of Govermental Veterinary Services, OIRSA, PanVet, San Salvador, El Salvador, January 15-19.
- 1993 I Veterinary Surgical and Orthopedics Seminars APMV. Expomedica International Congress, Panama, October 6-10.

- 1993 I Small Animal Specialist Central American Congress. San Jose, Costa Rica. July 21-23.
- 1993 XXV General Assembly of the World Veterinary Association, Maison d'Alfort, Paris, France, May 24-28.
- 1993 63th General Session of the Office International of Epizootics, Paris, France. May 24-28.
- 1993 I Small Animal Dermatology Course. AMVEPE, Panama, April 23-24
- 1992 II Panamanian National Veterinary Congress, Atlapa Convention Center, Panama City, Panama October 8-10
- 1989 38<sup>th</sup> Annual Meeting of The American Society of Tropical Medicine and Hygiene. Honolulu, Hawaii, December 10-14
- 1989 126<sup>th</sup> Annual Meeting of the American Veterinary Medical Association. Orlando, Florida, July 15-19
- 1989 Primate Behavior Course. University of Wisconsin-Madison Primate Research Center, Madison Wisconsin, June 20-July 14
- 1988 Pathology of Laboratory Animals, Armed Forces Institute of Pathology. Bethesda, Maryland, August 8-12
- 1986 International Course on African Swine Fever Diagnostic Procedures. National Institute for Research on Agriculture and Livestock, (INIA), Madrid, Spain, November.
- 1984 Laboratory Animal Care, Research Resources Center. University of Wisconsin-Madison, Madison, Wisconsin.
- 1983 Curso de Salud Animal Intensivo, Ministerio de Desarrollo Agropecuario, David, Chiriquí, Panamá.
- 1983 Primer Curso Regional de Epidemiología y Sistemas de Información. MIDA, Organización Panamericana de la Salud, Banco Interamericano de Desarrollo, Universidad de Panamá, Panamá.
- 1982 Rabies Diagnostic Procedures, US Army MEDDAC SOUTHCOM, Panama. Veterinary Public Health Laboratory, Corozal, Fort Clayton, Panama.