

CURRICULUM VITAE

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Born the 29th of February 1988 in Montevideo, Uruguay.

Married.

Residence permit B.

EDUCATION

2017-present

Postdoctoral researcher. Laboratoire d'Ophthalmologie Expérimentale, UNIGE, Geneva, Switzerland

2013-2017

Ph.D. in Biological Science. College of Science - Universidad de la República. Montevideo, Uruguay. Program for the Development of Basic Sciences (PEDECIBA). Ph.D. Thesis: "Development and characterization of a minimal residual disease non-Hodgkin lymphoma model to evaluate new immunotherapies". Departamento de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine - Universidad de la República. Supervisors: José A. Chabalgoity, Ph.D. (Director), Sofía Grille, M.D. (Co-director) and María Moreno, Ph.D. (Co-director). Graduated with honors

Brief Synopsis of Research

Non Hodgkin Lymphomas (NHL) are the most frequent hemato-oncological malignancies. Despite the development and advances in treatments that achieve high rates of complete remission, a substantial proportion of patients relapse, highlighting the need for new therapeutic modalities. It is known there are many pre-clinical studies with promissory results with immunotherapies against cancer, but few of them have shown similar results in clinical trials. One of the main reasons to explain that could be that immunotherapies are applied in different scenarios. While animal immunotherapies are frequently tested with high tumor burden and without chemotherapy, in patients it is necessary to apply them in chemotherapy treated individual. In this work, we established a minimal residual disease NHL-B pre-clinical model using standard chemotherapy, CHOP (Cyclophosphamide, Doxorubicin, Vincristine, and steroids), in which we studied new therapeutic approaches, including both specific (whole cell vaccine) and non-specific immunotherapies (*Salmonella*).

2010-2011

M.S. in Biological Science. College of Science - Universidad de la República. Montevideo, Uruguay. Program for the Development of Basic Sciences (PEDECIBA). M.Sc. Thesis: "Microcin H47 genetic system: an *Escherichia coli* small genomic island with novel features". Fisiología y Genética Bacterianas. College of Science - Universidad de la República. Montevideo. Uruguay. Director: M. Fernanda Azpiroz, Ph.D. Graduated with honors. Average schooling 9.2/12

2006-2010

B.S of Biological Science. College of Science. Universidad de la República. Montevideo, Uruguay. B.S. Thesis: "Study of the mobility of Microcin H47 genetic system". Fisiología y Genética Bacterianas. College of Science. Montevideo, Uruguay. Director: M. Fernanda Azpiroz, Ph.D. Average schooling 8.59/12. Final grade: 12/12

Postgraduate courses

- * Immune regulation in health and disease (Pre-course Congress). 11th Congress of the Latin American Association of Immunology (ALAI) – INMUNOCOLOMBIA. Medellín, Colombia. 10/2015
- * Scientific writing and publishing workshop. MEC. Instituto de Investigaciones Biológicas Clemente Estable. Montevideo, Uruguay. 03/2015
- * RT-PCR applications in research, PEDECIBA. Facultad de Medicina. Universidad de la República. Montevideo, Uruguay. 04-05/2013. Final grade 10/12
- * Basic course of cell culture, PEDECIBA. MEC. Instituto de Investigaciones Biológicas Clemente Estable. Montevideo, Uruguay. 11/2012. Final grade 10/12
- * Animal experimentation as a biological reagent in research, diagnosis and control of drugs, CHEA. Facultad de Medicina. Universidad de la República. Montevideo, Uruguay. 09/2012. Final grade 12/12 (technical experimenter certified)
- * Basic course of Flow Cytometry. Grupo Rioplatense de Citometría de Flujo. Colegio Oficial de Farmacéuticos y Bioquímicos de la Capital Federal. Buenos Aires, Argentina. 08/2012. Final grade 8/12
- * Health Biotechnology: Fundamentals and Applications, PEDECIBA. Facultad de Medicina. Universidad de la República. Montevideo, Uruguay. 10-11/2011. Final grade 10/12
- * II Regional School of Microbiology. MEC. Instituto de Investigaciones Biológicas Clemente Estable. Montevideo, Uruguay. 09/2011. Final grade 10/12
- * Recombinant protein expression, PEDECIBA. Facultad de Ciencias. Universidad de la República. Montevideo, Uruguay. 07/2011. Final grade 11/12
- * Host-microbe interactions. Module: animal-bacteria interaction, PEDECIBA. Facultad de Ciencias. Universidad de la República. Montevideo, Uruguay. 03-04/2011. Final grade 8/12
- * Massive sequencing data analysis for the study of microbial communities, PEDECIBA. Institut Pasteur de Montevideo. Montevideo, Uruguay. 03/2011. Final grade 10/12
- * Biostatistics, PRO.IN.BIO. Facultad de Medicina. Universidad de la República. Montevideo, Uruguay. 08-12/2010. Final grade 7/12

* Structure, organization and evolution of prokaryotic genome, PEDECIBA. Facultad de Ciencias. Universidad de la República. Montevideo, Uruguay. 03-04/2010. Final grade 10/12

RESEARCH

Scientific fields and interests

- Molecular biology
- Microbiology
- Gene therapy
- Cancer immunology / Cancer immunotherapies

Research & Development Projects

2017-present

Swiss National Science Foundation. Transposon based gene cell therapy in the treatment of dry macular degeneration. Coordinator Prof. G. Thumann. Laboratory of Experimental Ophthalmology, UNIGE. Geneva, Switzerland

European Union's Seventh Framework Programme for research, technological development and demonstration. TargetAMD. Coordinator Prof. G. Thumann. Visit www.targetamd.eu

2013-2015

Project ANII. Development of a minimal residual disease pre-clinical model in B-cell non Hodgkin lymphoma and immunotherapy optimization. Departamento de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine – Universidad de la República. Montevideo, Uruguay

2014-present

Detection of *Helicobacter pylori* in oral and gastric cavity. Gastroesophageal disease and gastric cancer correlation in an Uruguayan population. Cátedra de Microbiología. College of Dentistry – Universidad de la República. Clínica Gastroenterología. College of Medicine – Universidad de la República. Montevideo, Uruguay

Detection and prevalence of periodontal pathogens in an Uruguayan population with aggressive periodontitis by conventional methodology and metagenomics. Cátedra de Microbiología. College of Dentistry – Universidad de la República. Montevideo, Uruguay

2009-2011

Microcin H47 genetic system: an *Escherichia coli* small genomic island with novel features. Fisiología y Genética Bacterianas. College of Science – Universidad de la República. Montevideo, Uruguay

PUBLICATIONS

Peer reviewed Journals

Vola M., Mónaco A., Bascuas T., Rimsky G., Agorio C.I., Chabalgoity J.A., Moreno M. TLR7 agonist in combination with *Salmonella* as an effective antimelanoma immunotherapy. *Immunotherapy*. 2018 10:665-679. doi: 10.2217/imt-2017-0188

Bascuas T., Moreno M., Grille S., Chabalgoity J.A. Salmonella Immunotherapy Improves the Outcome of CHOP Chemotherapy in Non-Hodgkin Lymphoma-Bearing Mice. 2018. *Frontiers in Immunology*. 9:7. doi: 10.3389/fimmu.2018.00007

Bascuas, T., Moreno M., Mónaco A., Reyes L., Paolino A., Oliver P., Kramer M.G., Engler H., Pacheco J.P., Grille S., Chabalgoity J.A. A novel non-Hodgkin lymphoma murine model closer to the standard clinical scenario. *J. Transl. Med.* 2016. 14:323. doi: 10.1186/s12967-016-1073-8

Grille, S., Moreno M., Bascuas T., Marqués J.M, Muñoz N., Lens D., Chabalgoity J.A. *Salmonella enterica* serovar Typhimurium immunotherapy for B-Cell Lymphoma induces broad antitumor immunity with therapeutic effect. *Immunology*. 2014. 143:428-37. doi: 10.1111/imm.12320

Azpiroz, M.F., Bascuas, T., Laviña, M. 2011. Microcin H47 system: an *Escherichia coli* small genomic island with novel features. *PLoS ONE*. 6: e26179. doi: 10.1371/journal.pone.0026179

Abstracts in meeting proceedings

Bascuas, T., Kropp M., Harmening N., Tobalem S., Midroit M., Conti A., Asrih M., Sealy G., Thumann G. Non-viral transfections with the neuroprotective factors PEDF and GM-CSF reduces oxidative stress in human pigment epithelium cells in vitro offering a promising approach to treat avascular age-related macular degeneration. ESGCT Annual Congress in collaboration with ISSCR and SFTCG. Lausanne, Switzerland. 10/2018. Book abstracts pag. 88. P205

Bascuas, T., Harmening N., Kropp M., Tobalem S., Midroit M., Conti A., Asrih M., Sealy G., Thumann G. Co-transfection of human Pigment Epithelium cells to express the neuroprotective factors PEDF and GM-CSF to treat nonvascular age-related macular degeneration. 111^e Congrès annuel de la Société Suisse d'Ophtalmologie. Fribourg, Switzerland. 08/2018. Book abstracts pag. S41. Free paper 2303

Grille, S., Bascuas T., Moreno M., Brugnini A., Mónaco A., Chávez C., Seiler N., Lens D., Chabalgoity J.A. Salmonella como inmunoterapia para Linfoma no Hodgkin B. Congreso Nacional de Biociencias 2017. Montevideo, Uruguay. 05/2017. Book abstracts pag. 284. Poster 0170

Bascuas, T., Grille, S., Moreno, M., Reyes, L., Paolino A., and Chabalgoity, J.A. Salmonella enterica serovar Typhimurium combined with CHOP chemotherapy for non Hodgkin Lymphoma. IMMUNOCOLOMBIA2015 - 11th Congress of the Latin American Association of Immunology. Medellín, Colombia. 10/2015. Abstract published in *Front. Immunol.* Poster PO-085

Bascuas, T., Grille, S., Moreno, M., Chávez, C., Seiler, N. y Chabalgoity, J.A. “Desarrollo de un modelo murino de Enfermedad Mínima Residual de Linfoma no-Hodgkin B”. XIII Congreso Uruguayo de Hematología. Punta del Este, Uruguay. 11/2014. Book abstracts pag. 43. Poster 18

Bascuas, T., Grille S., Moreno M. y Chabalgoity J.A. “Modelo murino de baja carga tumoral de Linfoma no-Hodgkin a células B”. XV Jornadas de la Sociedad Uruguaya de Biociencias (SUB). Piriápolis, Uruguay. 09/2014. Book abstracts pag. 108. Poster S2_046

Bascuas, T. y Azpiroz, M.A. “Movilidad de una pequeña isla genómica”. XX Congreso Latinoamericano de Microbiología. IX Encuentro Nacional de Microbiólogos. Montevideo, Uruguay. 09/2010. Book abstracts pag. 127. Poster G-010

SKILLS

Molecular biology • genetic engineering • microbiology • immunology • cell culture • analytical methodologies • molecular imaging techniques • animal experimentation • Good Manufacturing Practice (GMP) • planning and performance of research projects • Microsoft Office • statistical packages (SPSS and GraphPad Prism)

TEACHING EXPERIENCE

2017-present

Post-graduate and continue formation at Service d’Ophtalmologie. HUG. Geneva, Switzerland

2015-2017

Assistant Professor in Departamento de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine – Universidad de la República. Montevideo, Uruguay

2014-2017

Assistant Professor in Cátedra de Microbiología. College of Dentistry – Universidad de la República. Montevideo, Uruguay

2014

Honorary Assistant in the postgraduate course “RT-PCR applications in research” (PEDECIBA). Departamento de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine – Universidad de la República. Montevideo, Uruguay

2012-2013

Honorary Assistant in the bachelor course "Community Clinical Basic Cycle" (CBCC6). College of Medicine – Universidad de la República. Montevideo, Uruguay

2010

Honorary Assistant in the bachelor course "Microbiology for Biological Sciences". College of Science – Universidad de la República. Montevideo, Uruguay

FELLOWSHIPS

- * Bill & Melinda Gates Foundation. Immune regulation in health and disease (Pre-course Congress). IMMUNOCOLOMBIA2015 - 11th Congress of the Latin American Association of Immunology. Medellín, Colombia. 2015
- * Ph.D. National Fellowship (2013-2016). Montevideo, Uruguay
- * Fellowship to complete postgraduate studies (M.S degree) (2011-2012). Montevideo, Uruguay

LANGUAGES

- * Spanish: Mother Language
- * English: First Certificate in English (Level B2)
- * Portuguese: Proficient
- * French: Level A2

REFERENCES

- José A. Chabalgoity, Ph.D.** Full Professor and Chair of Biotechnology. Dpto. de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine – Universidad de la República. Av. A. Navarro 3051, CP 11600. Montevideo, Uruguay
Phone.: (+ 5982) 487 12 88 (ext. 1120). Cell phone: (+5982) 99 195 072. e-mail: jachabal@higiene.edu.uy
- María Moreno, Ph.D.** Associate Proffesor. Departamento de Desarrollo Biotecnológico, Instituto de Higiene. College of Medicine – Universidad de la República. Av. A. Navarro 3051, CP 11600. Montevideo, Uruguay
Phone: (+5982) 487 12 88 (ext. 1123). Cell phone: (+5982) 98 870 699. e-mail: mmoreno@higiene.edu.uy
- Sofía Grille, M.D, Ph.D.** Associate Proffesor. Cátedra de Hematología, Hospital de Clínicas. College of Medicine – Universidad de la República. Av. Italia s/n, CP 11600. Montevideo, Uruguay
Phone: (+5982) 2487 15 15 (ext. 2329). Cell phone: (+5982) 99 226 612. e-mail: sofiagrille@gmail.com