Ph.D. Iris Beatriz Vega Erramuspe
Auburn University (AU)
College of Forestry, Wildlife, & Environment (CFWE)
Forest Products Development Center
Curriculum Vitae
ibv0002@auburn.edu; +1 (334) 524 6076

Education

Ph.D., in Fibre and Cellulose Technology, Chemical Engineer Department. Faculty of Sciences and Engineering. Thesis Title: Fibre surface engineering using polysaccharide derivatives.	Åbo Akademi Finland Dec 2017
M.Sc. in Chemistry (Licenciatura en Química), Organic Chemistry Department. School of Chemistry. Project Title: 1,8 cineole conversion using *Gimnopilus spectabilis 7423* under resting cell conditions.	Universidad de la República (UdelaR) Uruguay Nov 2007

Research Experience

Auburn University, School of Forestry and Wildlife Sciences Research Fellow in the Forest Products Development Center Project2: **1.** Formaldehyde paper-based device (PAD) for cost-efficient detection of formaldehyde emissions from wood panels. Alabama Research and Development Enhancement Fund (ARDEF) Program. Alabama Department of Economic and Community Affairs (ADECA). **2.** FIA Biomass Carbon Study. USDA Project. Advisors: Prof. Brian Via and Research Engineer Dana Mitchell (Southern Research Station Forest Operations Research Unit, USDA, Auburn) **3.** RII Track-2 FEC: Developing a Circular Bio-Based Framework for Architecture, Engineering and Construction Through Additive Manufacturing. National Science Foundation (NSF).	March 2020-Present
Auburn University, School of Forestry and Wildlife Sciences Research Scholar in the Forest Products Development Center Projects: **1.** Soy protein applications in oriented strand board and/or new applications. Advisors: Prof. Brian Via and Assist. Prof. Maria S. Peresin. **2.** Substitution of conventional resin in Oriented Strained Boards with soy flour. Advisor: Prof. B. Via	Feb 2018-February 2020 Jul2017-Sept 2017

Fibre and Cellulose Technology Laboratory, Chemical Engineering Department, ÅAU Mar 2009-Jan 2011

Research Assistant

Project: Polysaccharide-based Biofuels and Smart Biomaterials. Polysmart consortium: ÅAU (Finland) and Universidad de Concepcion (Chile). Advisor, Prof. Pedro Fardim **2.** Study of the oxygen delignification process under different conditions using eucalyptus pulp from Botnia, Uruguay. Advisor, Prof. Pedro Fardim.

Laboratory of Biocatalysis and Biotransformations. Organic Chemistry Department, School of Chemistry, UdelaR Apr 2007- Mar 2009

Research Assistant

Project: 1,8 cineole conversion using *Gimnopilus spectabilis 7423* under resting cell conditions. PDT S/C/OP/63/315

Technological Laboratory of Uruguay (LATU) Oct 2000-Feb 2001

Internship: Statistical treatment of X-ray spectroscopy data obtained. Studies on the concentration vs. intensity, considering uncertainties in both variables. Advisor: M.Sc. Eduardo Quagliata

Scientific Publications

***Book Chapters**

2 Vega Erramuspe, IB, and Mondal, I. Chapter 5: Technical Organic and Inorganic Fibers from Natural Resources. Chapter 5: Dietary Fibers - Production, functions and benefits. In: Technical Organic and Inorganic Fibers from Natural Resources. Ed. Ibrahim Mondal. Elsevier (2024. In Progress)

1 Vega, B; Grigoray, O.; Gustafsson, J; and Fardim, P. Chapter 4: Advances in Sugar-based Polymers: Xylan and its Derivatives for Surface Modification of Pulp Fibres. In: Biomass Sugars for Non-Fuel Applications. Eds. Dimitry Murzin and Olga Simakova. Royal Society of Chemistry. Pages: 134-158. (2015)

***Peer-Reviewed Papers**

22 Iris Beatriz Vega Erramuspe, Astrid Rojas Márquez, Brian Via, Bhima Sastri, Sujit Banerjee. Dewatering Spent Ion-Exchange Resins with Supercritical CO2. *Solvent Extraction and Ion Exchange Journal, 42(2),* 183-190, **2024**.

21 Bansode, A.; Portilla Villarreal, L.A.; Wang, Y.; Asafu-Adjaye, O.; Via, B.K.; Farag, R.; Vega Erramuspe, I.B.; Auad, M.L. Kraft Lignin Periodate Oxidation for Biobased Wood Panel Resins. *ACS Applied Polymer Materials,5(6),* 4118-4126*,* **2023**

20 Gomez-Maldonado D.; Stephens, H.; Sutcliffe A.C., Eula, M.A.C., Vega Erramuspe, I.B., Dotson, E.M.; Peresin, M.S.; Zohdy, S. Assessment of Bio-Based Materials as a Sustainable and Scalable Alternative for Detection of Plasmodium spp. (Haemosporida: Plasmodiidae) Sporozoites in Field Deployable Testing. *Journal of Medical Entomology, 60(3)*, 535-545, **2023**.

19 Diego Gomez-Maldonado, D.; Filpponen, I.; Vega Erramuspe, I.B.; Johansson, L.S.; Mori, M.F.; Ramapuram, J.B.; Waters, M.N.; Peresin, M.S. Development of a β-cyclodextrin-chitosan polymer as active coating for cellulosic surfaces and capturing of microcystin-LR. Surfaces and Interfaces, 33, 102192, **2022**

18 Hernandez, J.A.; Soni, Bhawna; Iglesias, M.C.; Vega Erramuspe, I.B., Frazier C.E., Peresin, M.S. Soybean hull pectin and nanocellulose: tack properties in aqueous pMDI dispersions. *Journal of Materials Science, 57*, 5022–5035, **2022**

17 Gomez-Maldonado D.; Stephens, H.; Sutcliffe A.C., Eula, M.A.C., Vega Erramuspe, I.B., Dotson, E.M.; Peresin, M.S.; Zohdy, S. Assessment of bio-based materials for enhanced signal detection of sporozoites using csELISA. Research Square (Pre-print), **2022**

16 Gomez-Maldonado, D; Reynolds, A.; Johansson, L.; Burnett, D.; Ramapuram, J..; Waters, M.; Vega Erramuspe, I.B.; Peresin, M.S. Fabrication of aerogels from cellulose nanofibril grafted with β-cyclodextrin for capture of water pollutants. *Journal of Porous Materials, 28,* 1725-1736*,* **2021**

15 Gomez-Maldonado, D.; Filpponen, I.; Johansson, L; Waters, M.; Vega Erramuspe, I.B.; Peresin, M.S. Environmentally dependent adsorption of 2,4-dichlorophenol on cellulose-chitosan self-assembled composites. *Biopolymers, 112 (8),* e23434, 1-8*,* **2021**

14 Gomez-Maldonado, D; Filpponen, I. Hernández, J.; Waters, M.; Auad, M. Johansson, L.; Vega Erramuspe, I.B.; Peresin, M.S. Simple functionalization of cellulose beads with pre-propargylated chitosan for clickable scaffold substrates. *Cellulose*, *28 (10)*, 6073-6087, **2021**

13 Zhang, X.; Kim, Y., Kim, D.; Liu, M.; Vega Erramuspe, I.B.; Bahsi Kaya, G.; Wang, X.; Kim, T.; Via, B.; Cho, H. Shape-Stabilized Phase Change Material by a Synthetic/Natural Hybrid Composite Foam with Cell-Wall Pores. ACS Applied Energy Materials, *4(1)*, 416–424, **2021**

12 Joshi, P.; Ahmed, S.; Vig, K., Vega Erramuspe, I.B.; Auad, M. Synthesis and characterization of chemically crosslinked gelatin and chitosan to produce hydrogels for biomedical applications. *Polymers Advanced Technologies*, *32(5)*, 2229-2239, **2021**

11 Lacuesta, J.; Vega, B.; Sobhana, L.; Kronlund, D.; Gutiérrez, S.; Fardim, P. Rice Husk Bio-Chars as Adsorbents for Removal of Methylene Blue and Ethinylestradiol from Water. Journal of Renewable Materials, *8(3)*, 275-287, **2020**.

10 Hornus, M.; Cheng, G.; Vega, B.; Peresin, S.; Gallagher, T.; Via, B. Oriented Strand Board with Improved Dimensional Stability by Extraction of Hemicelluloses. Wood and Fiber Science Journal, *52(3)*, 257-265, **2020**.

9 Gomez-Maldonado, D.; Vega, B.; Filpponen, I.; Johansson, L.; Lombardo, S.; Zhu, J.; Thielemans, W.; Peresin, S. Cellulose-Cyclodextrin Co-Polymer for the Removal of Cyanotoxins on Water Sources. Polymers, *11 (12)*, 2075, **2019**.

8 Gómez-Maldonado, D.; Vega, B.; Peresin, S. Natural polymers as an alternative for water remediation. *Bioresources*, *14(4)*, 10093-10160, **2019**.

7 Vega, B.; Fazeli, E.; Näreoja, T.; Trygg, T.; Hänninen, P.; Heinze, T.; and Fardim, P. Advanced Cellulose Fibers for Efficient Immobilization of Enzymes. B*iomacromolecules, 17(10)*, 3188-3197, **2016**.

6 Vega, B.; Wondraczek, H.; Bretschneider, L.; Näreoja, T.; Fardim, P.; and Heinze, T. Preparation of reactive fibre interfaces using multifunctional cellulose derivatives. *Carbohydrate Polymers, 132,* 261-273, **2015**.

5 Vega, B.; Reyes, B.; Rodriguez, P.; Sierra, W.; Gonzalez, D.; and Menendez, P. 3-Hydroxycineole bioproduction from 1,8-cineole using *Gymnopilus spectabilis* 7423 under resting cell conditions. *Biocatalysis*, *1*, 44-48, **2014**.

4 Vega, B.; Wondraczek, H.; Pinto Zarth, C.; Heikkilä, E.; Fardim, P.; Heinze, T. Charge-Directed Fiber Surface Modification by Molecular Assemblies of Functional Polysaccharides. *Langmuir, 29(44)*, pp 13388-13395, **2013**.

3 Reyes, P; Texeira, R.; Aguayo, M.; Rodriguez, J.; Vega, B.; Fardim, P. Extraction and characterization of hemicelluloses from *Pinus radiata* and its feasibility for bioethanol production. Revista *Árvore, 37 (1)*, 175-180, **2013**.

2 Reyes, P.; Teixeira, R.; Rodríguez, J.; Fardim, P.; and Vega, B. Characterization of the hemicellulosic fraction obtained after pre-hydrolysis of *Pinus radiata* wood chips with hot-water at different initial pH. *Journal of the Chilean Chemical Society*, ***58** (1)*, 1415-1419, **2013**.

1 Vega, B.; Petzold-Welcke, K.; Fardim, P.; and Heinze, T. Studies on the fibre surfaces modified with xylan polyelectrolytes. *Carbohydrate Polymers, 89 (3),* 768-776, **2012**.

Oral and Poster Presentations

47 Iris Beatriz Vega Erramuspe, Astrid Melissa Rojas Marquez, Abiodun Oluseun Alawode, Lucila Carias, Maria Auad, Brian Via. A New Era in Sustainable Manufacturing? Developing Bio-Based Resins for 3D Printed Engineered Wood Composites. **Forest Products Society Annual International Conference, Knoxville, TN, USA. June 4-7, 2024**. (Oral Presentation)

46 Iris Beatriz Vega Erramuspe, Astrid Melissa Rojas Marquez, Christian Rivera Caicedo, Laura Michelle Nieto, Abiodun Oleuseum Alawode, Brian K. Via. The Role of Natural Polymers in Monitoring Formaldehyde Emissions: Innovative Approaches for the Adhesive industry. **Forest Products Society Annual International Conference, Knoxville, TN, USA. June 4-7, 2024**. (Oral Presentation)

45 Laura Nieto Arciniegas, Melissa Rojas Márquez, Brea Thomas, Thomas Gallagher, Mathew Smidt, Juliet D. Tang, Abiodun Oluseun Alawode, Lori Eckhardt, Iris Vega Erramuspe, Brian Via. Near Infrared Spectroscopy as a Valuable Tool for Assessing Wood-Rot Decay. **Forest Products Society Annual International Conference, Knoxville, TN, USA. June 4-7, 2024**. (Oral Presentation)

44 Christian Rivera Caicedo, Laura Michelle Nieto, Iris Beatriz Vega Erramuspe, Brian Via. Formaldehyde paper-based analytical device (PAD) for a cost-effective detection of formaldehyde in the air. **Forest Products Society Annual International Conference, Knoxville, TN, USA. June 4-7, 2024**. (Poster Presentation)

43 Christian Rivera, José A. García, Lorena A. Portilla, Brian K. Via Iris Beatriz Vega Erramuspe. Paper-based analytical device (PAD) for a cost-effective detection of formaldehyde in the air. **Forest Products Society 75th Annual International Conference, Maddison WI, USA. June 14-16, 2022**. (Oral Presentation)

42 Lorena A. Portilla Villarreal, Archana Bansode, Osei Asafu-Adjaye, Abiodun Alawode, Iris Beatriz Vega Erramuspe, Maria L. Auad, Brian K. Via. Development of Wood Polymer Composites for 3D Printing Materials. **Forest Products Society 75th Annual International Conference, Maddison WI, USA. June 14-16, 2022**. (Oral Presentation)

41 Lorena A. Portilla Villarreal, Archana Bansode, Osei Asafu-Adjaye, Abiodun Alawode, Iris Beatriz Vega Erramuspe, Maria L. Auad,,Brian K. Via. Formulation of Bio-based Resins for the Fabrication of Engineered Wood Composites (EWC). **Forest Products Society 75th Annual International Conference, Maddison WI, USA. June 14-16, 2022** (Poster Presentation)

40 Suharsha Baskarla, Iris Beatriz Vega Erramuspe, Dana Mitchel, Jason Thompson, Thomas Elder, Adam Maggard, Brian Via. A non-destructive method for Predicting the Carbon Content in Wood Samples Using Near-Infrared Spectroscopy and Elemental Analysis. **Forest Products Society 75th Annual International Conference, Maddison WI, USA. June 14-16, 2022.** (Poster Presentation)

39 Iris Beatriz Vega Erramuspe, Jason Thompson, Thomas Elder, Dana Mitchell, Brian Via. Near Infra-red (NIR) spectroscopy coupled with chemometric analysis as a valuable non-destructive tool for the prediction of carbon content in wood**. 22nd International Nondestructive Testing and Evaluation of Wood Symposium, Quebec, Canada. May 24-27, 2022.** (Oral presentation)

38 Archana Bansode, Iris Beatriz Vega Erramuspe, Lorena A. Porilla Villarreal, Braden Han, Alan David, Brian K. Via, Maria L. Auad. Non-isothermal Curing Kinetics of Novolac-Type Phenolic Resins for 3D Printing of Structural Materials. **PrinTimber NSF Annual Meeting**. **Idaho, USA. May 10-13, 2022.** (Poster Presentation)

37 Lorena A. Portilla Villarreal, Archana Bansode, Osei Asafu-Adjaye, Abiodun Alawode, Iris Beatriz Vega Erramuspe, Maria L. Auad, and Brian K. Via. Formulation of Bio-based Resins for the Fabrication of Engineered Wood Composites (EWC). **PrinTimber NSF Annual Meeting**. **Idaho, USA. May 10-13, 2022.** (Poster Presentation)

36 Lorena A. Portilla Villarreal, Archana Bansode, Osei Asafu-Adjaye, Abiodun Alawode, Iris Beatriz Vega Erramuspe, Maria L. Auad, Brian K. Via. Manufacture and characterization of wood composites with phenolic resin, with projection for sustainable

3D printing. **PrinTimber NSF Annual Meeting**. **Idaho, US. May 10-13, 2022.** (Poster Presentation)

35 Lorena A. Portilla Villarreal, Archana Bansode, Osei Asafu-Adjaye, Abiodun Alawode, Iris Beatriz Vega Erramuspe, Brian K. Via, Maria L. Auad. Formulation of Bio-based Resins for the Fabrication of Engineered Wood Composites (EWC). **Auburn Research 2022 Student Symposium. March 28, 2022** (Poster Presentation)

34 José A. Garcia Alonso, Iris Beartiz Vega Erramuspe, Brian K. Via. Development and validation of a Paper-based analytical device (PAD) for formaldehyde detection and its utilization in wood composites emissions. **Auburn Research 2022 Student Symposium. March 28, 2022** (Poster Presentation)

33 Suharsha Baskarla, Iris Beatriz Vega Erramuspe, Dana Mitchel, Jason Thompson, Thomas Elder, Adam Maggard, Brian Via. A non-destructive method for Predicting the Carbon Content in Wood Samples Using Near-Infrared Spectroscopy and Elemental Analysis. **The Sustainable Future of CLT in the South: Grow. Design, Build. Auburn AL, USA. Apr 27-29, 2022.** (Poster Presentation)

32 Jonathan Lacuesta, Iris Beatriz Vega Erramuspe, Liji Sobhana, Dennis Kronlund, Jouko Peltonen, Soledad Gutiérrez, Pedro Fardim. Residual rice husk char valorization as an adsorbent for removal of methylene blue and ethinylestradiol from water. 2020 **Bays & Bayous Symposium. Virtual Event, Dec 1-3** (Oral presentation)

31 Maria Andrea Camarano Eula, Haley Stephens, Beatriz Vega, Diego Gómez Maldonado, Alice Sutcliffe, Ellen Dotson, Maria Soledad Peresin, Sarah Zohdy. Ink-jet printable malaria surveillance: a sustainable, cost effective circumsporozoite detection assay. **American Society of Tropical Medicine & Higiene (ASTMH) 68th Annual Meeting. National Harbor, Maryland, USA. November 2019.** (Poster Presentation)

30 Diego Gómez-Maldonado, Beatriz Vega, Ilari Filpponen, Matthew Waters, Soledad Peresin. Oriented beta-cyclodextrin-chitosan Polymer Adsorption on Nanocellulose Surfaces and its use on Capture of Microcystin-LR. **This is Research: Student Symposium. Auburn University. Auburn AL. April 2019.** (Poster Presentation)

29 Beatriz Vega. Fiber Engineering using multifunctional polysaccharides. **Fondecyt Seminar. Center of Biotechnology, University of Concepción, Chile. March 2019** (Invited keynote speaker)

28 Diego Gomez-Maldonado, Beatriz Vega, Ilari Filpponen, Soledad Peresin. Development of cellulose-based materials for the capture of microcystin-LR from analytical water sources. **SESAF 2019 Annual Meeting "Managing Natural Resources at the Speed of Change" Mobile, Alabama, USA. January 2019.** (Poster Presentation)

27 Diego Gómez-Maldonado, Sara Lombardo, Beatriz Vega Erramuspe, Ilari Filpponen, A. King, Wim Thielemans, Soledad Peresin. Enhanced adsorption of microcystin-LR on nanocellulose/ β-cyclodextrin polymer surfaces. **American Chemical Society National Spring Meeting, Orlando FL, USA. March 2019.** (Oral presentation)

26 Diego Gómez-Maldonado, Javier Hernández, Beatriz Vega, Ilari Filpponen, Maria Auad, Leena-Sisko Johansson, Orlando Rojas, Soledad Peresin. Propargylation and azidation of chitosan-cellulose systems as template for clickable substrates. **American**

Chemical Society National Spring Meeting, Orlando FL, USA. March 2019. (Oral presentation)

25 Beatriz Vega, Soledad Peresin, Thomas Heinze, and Pedro Fardim. Cellulose surface modification using polysaccharide multifunctional systems. **American Chemical Society National Spring Meeting, New Orleans LA, USA, March 2018.** (Oral presentation)

24 Alejandro Cardozo, Marina Hornus, Osei Asafu-Adjaye, Beatriz Vega, Brian Via. Wood Composites. **This is Research: Student Symposium. Auburn University. Auburn AL, March 2018.** (Poster Presentation)

23 Diego Gomez Maldonado, Marina Hornus, Beatriz Vega, Ilari Filpponen, Alan Wilson, Matthew Waters, Soledad Peresin. Cellulose-based material for removal of microcystin from contaminated water sources**. This is Research: Student Symposium. Auburn University. Auburn AL, March 2018.** (Poster Presentation)

22 Marina N. Hornus, Brian Via, George Cheng, Beatriz Vega. Oriented Strand Board from softwood: a biorefinery approach. Forest Product Society **72nd International Convention**. **Wisconsin, June 2018.** (First place, student poster competition) (Poster Presentation)

21 Diego Gómez-Maldonado, Marina Hornus, Beatriz Vega, Ilari Filpponen, Adam Wilson, Matthew Waters, Soledad Peresin. Cellulose-cyclodextrin co-polymer for removal of microcystin on water remediation. Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, **American Chemical Society National Spring Meeting, New Orleans, LA, March 2018.** (Poster Presentation)

20 Sara Santos, José M. Carbajo, Nuria Gómez, Beatriz. Vega, Manuel Ladero, Thomas Heinze, Pedro Fardim, and Juan C. Villar Modification of Cellulose Biofilms with Xylan Polyelectrolytes. **1st International Workshop on Insights and Strategies Towards a Bio-based Economy (I&S2016). Montevideo, Uruguay, Nov 2016.** (Poster Presentation)

19 Beatriz Vega, Elnaz Fazeli, Tuomas Näreoja, Jani Trygg, Pekka Hänninen, Thomas Heinze, and Pedro Fardim. Advanced cellulose fibres with potential applications in biocatalysis. **I&S2016. 1st International Workshop on Insights and Strategies Towards a Bio-Based Economy, Montevideo, Uruguay, Nov 2016**. (Oral presentation)

18 Sara Santos, José M. Carbajo, Nuria Gómez, Beatriz Vega, Miguel Ladero, Thomas Heinze, Pedro Fardim, and Juan C. Villar. Production and characterization of novel bacterial cellulose-xylan polyelectrolyte composites. **IX Iberoamerican Congress on Pulp and Paper Research Under the theme "Building bridges in research and innovation for the sustainable bioeconomy" (Ciadicyp2016). Espoo, Finland, Sept 2016.** (Poster Presentation)

17 Beatriz Vega, Pedro Fardim, and Thomas Heinze. Polysaccharide Derivatives and Their Potential Applications in Biorefineries (original title in Spanish: Derivados de polisacáridos y sus potenciales aplicaciones en las biorefinerías). **1st Workshop on Biorefineries and Their Possibilities, INIA, Madrid, Spain, Jun 2015.** (Invited speaker)

16 Beatriz Vega, Pedro Fardim, and Thomas Heinze. Modification of Pulp Fibre Surfaces Using Multifunctional Polysaccharide Derivatives. 1st International Workshop on Biorefinery of Lignocellulosic Materials, Córdoba, Spain, Jun 2015. (Oral presentation)

15 Beatriz Vega, Pedro Fardim, and Thomas Heinze. A Versatile Platform to Produce Functional Cellulosic Fibres. **APOL Innovation Workshop, Rudolstadt, Germany, Jun 2014.** (Oral presentation)

14 Beatriz Vega, Pedro Fardim, Thomas Heinze, Holger Wondraczek, and Elina Heikkilä. Modification of Wood Fibre Surfaces Using Functional Bio-Based Polyelectrolytes as a Tool to Produce High-added Value Materials. **6th International Colloquium on Eucalyptus Pulp, Uruguay, Nov 2013.** (Oral presentation)

13 Beatriz Vega, Pedro Fardim, and Thomas Heinze. Fibre Functionalization with Polysaccharide-Based Polyelectrolytes. **Workshop on Polymer and Composite Materials from Renewable Resources and Biorefinery: from Chemistry to Applications. Pan-American Advanced Studies Institute (PASI), Costa Rica, Aug 2013.** (Oral presentation)

12 Beatriz Vega in representation of EPNOE. European Polysaccharide Network of Excellence (EPNOE). **Workshop on Polymer and Composite Materials from Renewable Resources and Biorefinery: from Chemistry to Applications. Pan-American Advanced Studies Institute (PASI), Costa Rica, Aug 2013.** (Oral presentation)

11 Beatriz Vega, Katrin Petzold-Welcke, Pedro Fardim and Thomas Heinze. Studies on Cellulose Fibre Surfaces Modified with Xylan Derivatives. ABTCP 2012 – 45th International Pulp and Paper Congress and Exhibition, San Paulo, Brazil, Oct 2012. (Oral presentation)

10 Beatriz Vega, Pedro Fardim and Thomas Heinze. Fiber Functionalization with Xylan Polyelectrolytes. **APOL workshop - New Frontiers in Polysaccharide Research, Jena, Germany, Jun 2012.** (Oral presentation)

9 Beatriz Vega, Katrin Petzcold, Pedro Fardim, and Thomas Heinze. Interaction Between Fibres and Polyelectrolytes. **EPNOE 2nd Conference on Polysaccharides as a Source of Advanced Materials. Wageningen, Netherlands, Aug 2011.** (Poster Presentation)

8 Beatriz Vega, Pedro Fardim and Thomas Heinze. Xylan Polyelectrolytes. **APOL Workshop on Cellulose and Light**, **Jena, Germany, Jun 2011**. (Oral presentation)

7 Beatriz Vega, Risto Korpinen, Pilar Menéndez, and Pedro Fardim. Bioprocessing of hemicelluloses for the production of novel materials (original title in Spanish: Bioprocesamiento de hemicelulosas para la preparación de nuevos materiales). **4to Encuentro Regional de Biocatálisis y Biotransformaciones (EnReBB). Montevideo, Uruguay, Dec 2010.** (Poster Presentation)

6 Beatriz Vega, Beatriz Reyes, Paula Rodríguez, Wilson Sierra, and Pilar Menéndez. Studies of the Reaction Conditions for the Optimization of the 1,8-cineol Bioconversion using *Gymnopilus spectabilis* 7423 in resting cell conditions. **4th Regional Meeting of Chemical Engineering**, **Montevideo, Uruguay, May 2008**. (Oral presentation)

5 Beatriz Vega and Pedro Fardim. On the Recovery of Polysaccharides from Oxygen Delignification Stage of Eucalyptus Pulp. **1st Conference TECNICELPA / VI**

Iberoamerican Congress on Pulp and Paper Research - CIADICYP 2010. Lisboa, Portugal, Oct 2010. (Poster Presentation)

4 Beatriz Vega, Beatriz Reyes, Paula Rodríguez, Wilson Sierra, David González, and Pilar Menéndez. The 3-hydroxycineole production by Biotransformation of 1,8 cineole Using Gymnopilus spectabilis-7423. **ACS Summer School on Sustainability and Green Chemistry. Colorado School of Mines, Golden, Colorado, United States, Jul 2008.** (Poster Presentation)

3 Beatriz Vega and Pilar Menéndez. Production of 3 Hydroxycineol by Biotransformation of 1,8-cineol. **1st Latin American Course of Biocatalysis applied to Green Chemistry (CiBAQ). Universidad Nacional de Quilmes, Buenos Aires, Argentina, Oct 2008.** (Poster Presentation)

2 Beatriz Vega, Soledad Camarano, Carmen Rossini, and Pilar Menéndez. Hydroxicineoles Production by Biocatalysis and Study of Their Anti insect Activity. **VIII National Meeting of Microbiologists. Montevideo, Uruguay, Oct 2008.** (Poster Presentation)

1 Beatriz Vega, Soledad Camarano, Carmen Rossini, and Pilar Menéndez. Hydroxicineoles Production by Biocatalysis and Study of Their Anti insect Activity. **3rd Regional Meeting of Biocatalysis and Biotransformations (EnReBB). Universidad Nacional de San Luis, Argentina, Nov 2008.** (Poster Presentation)

Teaching Experience

FORY-7970-006 - Introduction to infrared spectroscopy — Auburn, USA
Sustainable Biomaterials and Packaging Program, College of Forestry, Wildlife & Environment, Auburn University — Fall 2023
Role: Instructor — 3 Credit hours

FORY-7930-003 - Fundamentals on UV-Vis Spectroscopy — Auburn, USA
Sustainable Biomaterials and Packaging Program, College of Forestry, Wildlife & Environment, Auburn University — Summer 2022
Role: Instructor — 3 Credit hours

FOEN 4930 - Fabrication of a Paper-Based Analytical Tool — Auburn, USA
Sustainable Biomaterials and Packaging Program, College of Forestry, Wildlife & Environment, Auburn University — Summer 2021
Role: Instructor — 3 Credit hours

BIOP 4050/6050- Biomass Processing Chemistry & Bioenergy — Auburn, USA
Sustainable Biomaterials and Packaging Program, College of Forestry, Wildlife & Environment, Auburn University — Fall (Since 2020)
Role: Instructor — 3 Credit hours

Bionterfaces in Renewable Materials Montevideo, UY
Date & Place: 20-24 May 2019, Montevideo, Uruguay 20-24 May 2019
Granted by: Agency of Innovation and Research (ANII) in Uruguay 3 Credit hours
Organizers: Prof. Fernando Ferreira and MSc. Pilar Vilaró (University of the Republic, Uruguay), Dr. Beatriz Vega (Auburn University, US)

Mentoring Activities

12 Laura Michelle Nieto Arciniegas, M.Sc. student at the College of Forestry, Wildlife & Environment, Auburn University, 2023-Present.
11 Christian Rivera Caicedo, M.Sc. student at the College of Forestry, Wildlife & Environment, Auburn University, 2023-Present.
10 Suharsha Baskarla, M.Sc. student at the School of Forestry and Wildlife Sciences, Auburn University. 2021-2023.
9 Lorena Portilla, Ph.D. student at the University of Santiago, Chile. Visiting Scholar at Auburn University. 2020-Present.
8 Alfredo García, M.Sc. Student at the School of Forestry and Wildlife Sciences, Auburn University. 2020-2022.
7 Diego Gomez-Maldonado, Ph.D. student at the School of Forestry and Wildlife Sciences, Auburn University. 2017-2021.
6 Samuel Fernández Ortiz, M.Sc. student of Biochemistry at the University of Granada, Spain, Summer trainee at ÅAU, 2014
5 Bogati Dhani, M.Sc. student at ÅAU. Autumn 2013.
4 Emiliana Botto, M.Sc. student at the School of Chemistry, UdelaR, Uruguay. Research title: Production of novel materials from hemicelluloses using biocatalysis. Main tutor: Assoc. Prof. María del Pilar Menéndez. Aug 2012-Aug 2013
3 Rachel Annett, Undergraduate student from Queen's University Belfast, Summer trainee at ÅAU, 2013
2 Remi Kamamura, Bachellor from Tokyo University of Agriculture and Technology, Summer trainee at ÅAU, 2012
1 Frank Gref, Bachellor from ÅAU, Summer trainee at ÅAU, 2011

Grant Applications & Awards

Grants applications

7 Formaldehyde paper-based device (PAD) for cost-efficient detection of formaldehyde emissions from wood panels. Alabama Research and Development Enhancement Fund (ARDEF) Program. Alabama Department of Economic and Community Affairs (ADECA). Role in the project: Co-PI **(Awarded)** $247,141.06 2020

6 Exploring the use of cellulose fibers as a support material to produce plant growth-promoting bacteria (PGPB) bio inoculants. Alabama Research and Development Enhancement Fund (ARDEF) Program. $ 249,108.00 2020

	Alabama Department of Economic and Community Affairs (ADECA). *Role in the project:* Co-PI **(Awarded with reduced funds, as a subrecipient)**	
5	Paper-based Formaldehyde Sensor for Occupational Safety & Health in Forest Products. Pilot Grant Opportunity. Central Appalachian Regional Education and Research Center (CARERC), Program. *Role in the project:* Co-PI **(Awarded)**	$ 8,160.00 2020
4	Hybrid wood composites for lightweight panels. AFRI NIFA, Priority area code A1531. *Role in the project:* Co-PI **(Not awarded)**	$ 499,460.00 2020
3	Soy hull pectins as interfacial agent for wood adhesives Granted by: United Soybean Board Foundation. USA *Role in the project:* Contribution to the formulation and writing (**Awarded)**	$ 187,643.00 2018
2	Research visit grant for the Ph.D. student J. Lacuesta (Uruguay) Granted by: FinCEAL+ Funding Program *Role in the project:* Contribution to the formulation and writing **(Awarded)**	€ 3,000.00 2017
1	Contribution to the second-generation fuels production by producing laccase enzymes, facilitating access to the fermentable material. Reference: PR_ FSE_ 2010_47. Granted by: National agency for innovation and research (ANII). *Role in the project:* participation in the formulation and writing. **(Awarded)**	$ 100,000.00 2009
***Awards**		
7	First Prize, Innovation Catalyst Competition, SparkUp, Finland. *Funded by:* Åbo Akademi. Project: Paper-based Glucose Indicator System	Jun 2017 €15.000
6	Travel Grant. Attendance to the 1st International Workshop on Insights and Strategies towards a bio-based economy, Uruguay. *Funded by* the Direction of Planning and budgets, Governmental Agency (In Spanish: OPP), and Basic Sciences Development Program (In Spanish: PEDECIBA).	Nov 2016 €3.500
5	Research grant. *Funded by* Åbo Akademi, Finland.	Apr-Jun 2016 Apr-Sep 2015 €20000
4	Travel grant. Attendance to the 6th International Colloquium on Eucalyptus Pulp, Uruguay *Funded by:* Åbo Akademi, Finland	Nov 2013 €2000
3	Travel grant. Research visit to the Laboratory of Fibre and Cellulose Technology in Åbo Akademi, Finland. *Funded by* The Sectorial Commission for the Scientific Research (in Spanish: CSIC).	Mar-Aug 2009 €2000
2	Full scholarship for attending the ACS Summer School on Sustainability and Green Chemistry, Colorado, USA. *Funded by:* The American Chemical Society.	June 2008 €2000

1	Research Grant. *Funded by:* The Uruguayan Consejo Nacional de Innovación, Ciencia y Tecnología (In Spanish: CONICyT)	2008 €2000

Patent Applications

3	Paper-based Analytical Device for Formaldehyde Gas Detection (PAD). Patent Pending
2	Environmentally dependent adsorption of 2,4-dichlorophenol on cellulose-chitosan self-assembled hydrogel structures. Patent Pending
1	Nanocellulose-based pesticide encapsulation system for forest pest control. Patent Pending

Recent Training Courses and Workshops

8	Spectrum QUANT+ Quantitative Analysis Software. One-day training course. By Perkin Elmer, Auburn, AL	May 2021
7	AFM training course, Auburn Instrument Facilities, Auburn, AL	June 2019
6	Workshop on Packaging Materials. By: Printpack Packaging Institute, Atlanta, GA	Oct 2018
5	Training for Enzyme-linked immune assay. (ELISA) assays. By: Centers for disease and control prevention (CDC). Atlanta, GA	Nov 2018
4	Training on Atomic Force Microscope (AFM). By: Anton-Paar USA, Auburn, AL	Sept 2018
3	Workshop on Materials Characterization. By: Perkin Elmer, Leeds, AL	Apr 2018
2	QCM-D training course. By: Q-sense, Biolin Scientific, Inc., Paramount, NJ	Feb 2017
1	SEM training course. By: the AU Research Instrum. Facility, Auburn, AL	Feb 2017

Organization of Conferences and Workshops

7	72nd Southeastern Regional Meeting of the American Chemical Society (SERMACS), Birmingham AL. K-12 Program Committee Member	Nov 2021
6	1st International Workshop on Insights and Strategies Towards a Bio-based Economy, LATU, Uruguay. Organizer	$ 85,000.00 Nov, 2016
5	IX Iberoamerican Congress on Pulp and Paper Research Under the theme "*Building bridges in research and innovation for the sustainable bioeconomy*" Ciadicyp. Organizer	$ 12,600.00 Sep, 2016
4	3rd RSC-Finnish Section Annual Seminar in Turku. Title of the event: Graphene. The Platform for Future Technology and the Economy. Finland. Organizer	€ 972.00 Oct, 2015
3	XPS Workshop. Rosala Viking Centre, Rosala, Finland. Organizer	€ 664.00 Sep, 2015
2	2nd RSC-Finnish Section Annual Seminar in Turku. Title of the event: "Filling the Gaps Between Cellulose Chemistry and Cellulosic Fibre Technology", Finland. Organizer	€ 1000.00 May, 2014

1	1st RSC-Finnish Section Annual Seminar in Turku. Title of the event: "On the Sustainable Road. The Second Life of Biomass", Finland. Organizer	€ 400.00 Nov 2013

Journal Referee

7	Journal of Wood and Fiber Science. 2019-Present.
6	Journal of Wood Chemistry and Technology, 2019-Present.
5	Cellulose, 2019-Present.
4	Biomass and Bioenergy, 2018-Present.
3	Ind. Eng. Chem. Res. (ACS), 2015-Present.
2	Afr. J. Microbiol. Res., 2015-Present.
1	BioResources, 2014-Present.

Memberships and Trust Positions

5	Secretary of the American Chemical Society Auburn Local Section, 2019-2023
4	Member of the American Chemical Society, 2018-present
3	Chair of the RSC-Finland Local Section, 2017
2	Treasurer of the RSC–Finland Local Section, 2015-2016
1	Member of the Royal Society of Chemistry (RSC), 2013-2018

Work Experience

3	Ecosur, Montevideo, Uruguay. Own entrepreneurship	2000-2007
2	A chemistry teacher at high school level, Montevideo, Uruguay	1995-2000
1	Craben S.A, Quality Control Analysis	1995-1996

Others

3	External grant reviewer. PICT-2018, Ministerio de Ciencia, Tecnología e Innovación Productiva (MINCyT), Argentina. (2018)
2	Valorization of Renewable Resources & Residues into New Materials & Multiphase Systems. American Chemical Society National Spring Meeting (Session Chair, 2018 and 2019)
1	Member of the Non-Master Thesis Committee of Nima Alizadeh, under the supervision of Prof. María Auad. Title: Crosslinkable inks for 3D printing. Center of Polymers and Advanced Composites., Chem Eng. Dept., Auburn University, Auburn, AL. (2018)