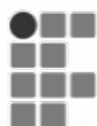


CFAES Engagement in Brazil

July | 2018

**p. 1****Memoranda of Understanding**
*Effective and developing MOUs***p. 2****Recent Activities & Engagement**
*Ten documented collaborative institutes***p. 8****Additional Programmatic Engagement**
The Ohio Program and partnership**THE OHIO STATE UNIVERSITY**COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES160 Bevis Hall
1080 Carmack Road
Columbus, OH 43210
ipa.osu.edu

Brazil Gateway

The Brazil Gateway serves as a mini embassy for Ohio State University to foster connections and facilitate opportunities for students, researchers, alumni and partners. The Brazil Gateway is located in the city of São Paulo, the largest city in the Southern Hemisphere, known for its bustling atmosphere and multicultural population. São Paulo is the state's capital and holds the largest economy in Latin America. The gateway's office is situated in the Moema district, one of the premier business areas in the city.



This report is intended to highlight the most recent activities occurring between CFAES and institutions in Brazil. It builds upon activities described in earlier editions of this report (i.e. 2014 and 2016) by summarizing collaborative teaching, research, and outreach activities that have occurred in the past 2 years with Brazilian partners.



I. Memoranda of Understanding

The College of Food, Agricultural, and Environmental Sciences (CFAES) currently has formal Memoranda of Understanding (MOUs) with the following institutions in Brazil:

- **Universidade Estadual Paulista (UNESP)** - São Paulo, Brazil
- **Universidade Federal do Paraná (UFPR)** - Paraná, Brazil

CFAES is also in the process of developing a MOU with Universidade Federal do Mato Grosso (UFMT)

II. Recent Activities & Engagement

Universidade de São Paulo (USP) – Escola Superior de Agricultura (ESALQ)

Ohio State and University of São Paulo (USP) - Escola Superior de Agricultura (ESALQ) share a long (50+ years) history of collaborative research and educational cooperation. Beginning in 1964, the U.S. Agency for International Development (USAID) contracted with Ohio State's Office of International Programs in Agriculture for an institutional development project in Brazil, initially with the College of Agriculture (ESALQ) of the University of São Paulo. The Ohio State project was one of four such university agreements in Brazil, which focused on integrating teaching, research and extension activities; development of graduate level courses and U.S. style graduate degree programs; the development of a School of Home Economics; and policy research development. Under this project, 16 CFAES faculty undertook long-term assignments at ESALQ and over 75 ESALQ faculty members undertook graduate degree programs at Ohio State. Newly created graduate degree programs were then filled and sustained by returning ESALQ faculty. Over the entire period of this strategic relationship, 90 Ohio State faculty members have been engaged and over 100 Brazilian faculty members have received advanced degrees or special training at Ohio State.



Kelly Newlon (Director, CFAES Education Abroad) oversees a CFAES education abroad program at the USP-ESALQ. The campus has hosted a six-week study abroad program for 12-20 students for more than 15 years. The program focus is agricultural economics, rural sociology, and international studies with an emphasis on leadership. Portuguese language training is included along with various field visits to industries, farms, government agencies, etc. Ohio State's primary partner there is Dr. Ricardo Shiota, Ohio State alum in Agricultural Economics. The group that attends each year is the **Alpha Zeta Partners Student Honorary**, advised by **Dr. Jeff King** (Professor, ACEL).

Dr. Enrico Bonello (Professor, Department of Plant Pathology) has engaged in a collaborative project with Dr. Luis Aranha Camargo (Associate Professor, Plant Pathology and Nematology, USP-ESALQ) since he participated in the Tripartite Collaborative biennial meeting in Maresias, São Paulo, in the fall of 2016. Dr. Bonello is the organizer of 2018 meeting in Columbus, which will take place the third week of October. He visited Maresias again in May 2018 after receiving an Office of International Affairs (OIA) Academic Enrichment grant to further the collaborative work and to discuss issues associated with the Dual Degree program between Ohio State and USP. In that regard, he met with Dr. Raul Machado (Provost for International Cooperation), and Dr. Marcio C. Silva-Filho (Deputy Provost of Graduate Studies), also met with several Brazilian

students interested in participating in the program. In connection with the research project with Dr. Camargo, Dr. Bonello began hosting one of Dr. Camargo's PhD students on June 1, 2018, to conduct collaborative work for one month. They have planned on potentially collaborating on an Agriculture and Food Research Initiative (AFRI) proposal for which the student would seek funding from the São Paulo Research Foundation (FAPESP).

Dr. Peter Piermarini (Associate Professor, Department of Entomology) received a 2015 Ohio State/FAPESP Mobility Grant to initiate a collaborative research project, titled "The effects of dengue infection on the molecular physiology of mosquito kidneys", with USP. The grant supported reciprocal visits between Ohio State and USP. Dr. Piermarini and his graduate student visited the lab of Dr. Margareth Capurro (Associate Professor, Institute of Biomedical Sciences) in January of 2017 for 2 weeks to develop a research project. They conducted preliminary studies on the effects that Zika virus and dengue fever virus infection have on gene expression in mosquitoes. Dr. Piermarini also presented a departmental seminar while at the USP. The Ohio State /FAPESP Mobility Grant also supported the visit of Dr. Capurro and her postdoc to Ohio State in March 2017. They spent 2 weeks in Wooster where they further developed the research project. Dr. Capurro presented a departmental seminar during her visit. They are now awaiting another opportunity to apply for an Ohio State / FAPESP Research Grant to advance the research project.

Dr. Andy Michel (Associate Professor, Department of Entomology) has continued to work with his former Ph.D. advisee student from USP-ESALQ, Julio Fatoreto (SU 17), and the collaboration has led to 2 funded projects from Syngenta totalling over \$200,000. His lab has had extensive collaborations with ESALQ Department of Entomology, including the hosting of visiting scientists: Dr. Natália Alves Leite (Department of Entomology, Sep 2015 - Jan 2016), and Dr. Antonio Rogério B Nascimento (Department of Entomology, Sep 2016 - Nov 2017). Dr. Michel also surprised a past-doc, Dr. Vitor Pavinato, who left in 2017 and a current post-doc, Dr. Aline Guidolin, both of them are from Brazil. These collaborations has resulted in a number of joint publications including:

- Pavinato, V. A., **Michel, A. P.**, Campos, J. B., Omoto, C., & Zucchi, M. I. (2018). Influence of historical land use and modern agricultural expansion on the spatial and ecological divergence of sugarcane borer, *Diatraea saccharalis* (Lepidoptera: Crambidae) in Brazil. *Heredity*, 120(1), 25-37.
- Leite, N., Correa, A., **Michel, A.**, Alves-Pereira, A., Pavinato, V., Zucchi, M., & Omoto, C. (2017). Pan-American similarities in genetic structures of *helicoverpa armigera* and *helicoverpa zea* (Lepidoptera: Noctuidae) with implications for hybridization. *Environmental entomology*, 46(4), 1024-1034.
- Pavinato, V., Margarido, G., Wijeratne, A., Wijeratne, S., Meulia, T., Souza, A.,...Zucchi, M. (2017). Restriction site associated DNA (RAD) for de novo sequencing and marker discovery in sugarcane borer, *Diatraea saccharalis* Fab.(Lepidoptera: Crambidae). *Molecular Ecology Resources*, 17(3), 454-465.
- Fatoreto, J. C., **Michel, A. P.**, Silva Filho, M. C., & Silva, N. (2017). Adaptive potential of fall armyworm (Lepidoptera: Noctuidae) limits Bt trait durability in Brazil. *Journal of Integrated Pest Management*, 8(1), 17.

Dr. John Finer (Professor, Department of Horticulture and Crop Science) has hosted a number of visitors from Brazil over the years. His most long-term colleague is Dr. Adriana Martinelli (Associate Professor, Department of Plant Biotechnology, USP). Dr. Martinelli conducted a

sabbatical in his laboratory a few years ago, and she makes reoccurring visits back to CFAES. She is looking for a travel grant to sustain cooperation and future visits.

Center for Applied Plant Sciences (CAPS) has many research collaborations and interactions with Brazilian Researchers at USP-ESALQ. CAPS is planning the Tripartite Collaborative biennial meeting (in cooperation with USP and Rutgers University) in Columbus in October 2018 (this effort is being chaired by Dr. Enrico Bonello (Department of Plant Pathology).

Translational Plant Sciences Graduate Program (TPSGP) has graduated 3 dual-degree students from USP-ESALQ (Julio Fatoretto, SU17, Danielle Izilda Rodrigues da Silva, AU17, and Fernanda Raquel Rezende de Castro Moretti, AU17) over the past 2 years. The program is in the process of being renegotiated and renewed with USP-ESALQ partners.



Instituto Federal de Educação, Ciência e Tecnologia de Mato Grosso (IFMT)

Dr. Rattan Lal (Professor, School of Environment and Natural Resources) is hosting Dr. Milson Evaldo Serafim (Professor, Department of Soil Science, Campus Cáceres) until September 2018. His current research aims to obtain reference values for soil organic attributes and organic carbon in areas of commercial high grain yield soybean cultivation.



Universidade Estadual de Maringa (UEM)



Dr. Rattan Lal (Professor, School of Environment and Natural Resources) hosted Guilherme Anghinoni (Department of Agronomy) for 5 months as a visiting scholar in the Carbon Management and Sequestration Center (C-MASC) in 2012. This collaborative work has resulted in one recent publication:

- Anghinoni, G., Tormena, C. A., **Lal, R.**, Moreira, W. H., Júnior, E. B., & Ferreira, C. J. B. (2017). Within cropping season changes in soil physical properties under no-till in Southern Brazil. *Soil and Tillage Research*, 166, 108-112.

Universidade Federal do Paraná (UFPR)



Dr. Stan Thompson (Emeritus Professor, Department of Agricultural, Environmental, and Development Economics) visited UFPR in Curitiba, Brazil (26 February - 10 May 2018) as a visiting professor, which was supported by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). During the visit, he has accomplished the following:

- ✓ Offered course and seminar:
 - Offered the course “Applied Econometrics” comprised of 17 lectures (2 hours each).
 - Offered the special lecture (March 19, 2018) “Conducting and Writing an Econometric Research Report.”
 - Presented a special seminar “Studying at an American University: Information and Perspectives” to undergraduate students (May 4, 2018), attendance: 25.
- ✓ Prepared for scientific journal submission following manuscripts:
 - Carmo, A.S.S. d., Bittencourt, M.V.L., & **Thompson, S.R.**. “Do China Exports to MERCOSUR Compete with those of Brazil?”
 - Carmo, A.S.S. d., Bittencourt, M.V.L., & **Thompson, S.R.**. “Intra-industry Trade between Brazil and OECD Countries: Decomposition and Determinants”
 - Carmo, A.S.S. d., Bittencourt, M.V.L., & **Thompson, S.R.**. “Exchange Rate Volatility and the Extensive Margin of Trade.”
- ✓ Submitted and received acceptance for presentation:
 - Souza do Carmo, A.S., Bittencourt, M.V.L., & **Thompson, S. R.** (August, 2018). Effect of Exchange Rate Volatility on the Extensive Margin of International Trade. Paper presented at the 58th ERS (European Regional Science Association) Congress. Cork, Ireland.

Dr. Thompson also hosted Bruno Mazzucco, a visiting UFPR Ph.D. student at Ohio State from 2017 to 2018. Bruno has worked on a research project entitled “Domestic Determinants and Regional Consequences of Brazilian Protection”, and prepared the paper “Interest Groups and Brazilian Trade Policy: Reassessing the Protection for Sale Model.” To improve Bruno’s subject matter expertise and quantitative analytical tools, he attended two formal graduate courses at Ohio State - “Advanced Quantitative Methods I and II”, offered by **Dr. Mario Miranda** (Professor in AEDE) and “International Economics and Policy” by **Dr. Ian Sheldon** (Professor in AEDE).





Universidade Estadual de Ponta Grossa (UEPG)



Dr. Rattan Lal (Professor, School of Environment and Natural Resources) has collaborated with Dr. João Carlos de Moraes Sá (Associate Professor, Department of Soil Science and Agricultural Engineering), who has been a Visiting Scholar at C-MASC during 1999, 2008, 2012, 2015, and he visited C-MASC on June 28, 2017 to present a seminar on "Potential and Challenges of World Conservation Agriculture to Mitigate Climate Change and Advance Food Security." Their collaborations have further resulted in two recent publications:

- Briedis, C., de Moraes Sá, J. C., **Lal, R.**, Tivet, F., Franchini, J. C., de Oliveira Ferreira, A.,...Gonçalves, D. R. P. (2018). How does no-till deliver carbon stabilization and saturation in highly weathered soils? *Catena*, 163, 13-23. [doi:https://doi.org/10.1016/j.catena.2017.12.003](https://doi.org/10.1016/j.catena.2017.12.003)
- de Oliveira Ferreira, A., de Moraes Sá, J. C., **Lal, R.**, Tivet, F., Briedis, C., Inagaki, T. M.,...Romaniw, J. (2018). Macroaggregation and soil organic carbon restoration in a highly weathered Brazilian Oxisol after two decades under no-till. *Science of The Total Environment*, 621, 1559-1567. [doi:https://doi.org/10.1016/j.scitotenv.2017.10.072](https://doi.org/10.1016/j.scitotenv.2017.10.072)



Universidade Federal de Lavras (UFLA)



Dr. Pablo Jourdan (Associate Professor, Department of Horticulture and Crop Science) delivered an invited presentation, titled "Short- and medium-term in vitro conservation and management of germplasm within the USDA's National Plant Germplasm System", at the 7th International Symposium on Production and Establishment of Micropropagated Plants, which was hosted by UFLA from April 24 - 28, 2017. He hosted Amanda Lima Vilela (Department of Agriculture) at the Ornamental Plant Germplasm Center for a 5-month internship since August 2017. Their study, entitled "Seed quality parameters in different Phlox species" has presented on the 12th Annual International Scholar Research Exposition at Ohio State.

Dr. Alexander Lindsey (Assistant Professor, Department of Horticulture and Crop Science) has hosted two visiting scholars from UFLA to work on research projects collaboratively: Gabriel Francisco Brito Zanetti (Department of Agriculture, May 1 - Sept 15, 2017), and Matheus Henrique Silveira Mendes (Department of Biology, May 1 - Sept 15, 2018).

Dr. Rattan Lal (Professor, School of Environment and Natural Resources) hosted Marla

Alessandra de Araujo (Department of Agronomy) for 9 months in 2012 as a visiting scholar in the Carbon Management and Sequestration Center, resulting in a joint publications:

- Araujo, M. A., Zinn, Y. L., & **Lal, R.** (2017). Soil parent material, texture and oxide contents have little effect on soil organic carbon retention in tropical highlands. *Geoderma*, 300, 1-10.
- Zinn, Y. L., Vilela, E. F., Araujo, M. A., & **Lal, R.** (2017). A Simple Model To Estimate Brunauer–Emmett–Teller-N₂ Specific Surface Area of Contrasting Soils in Brazil. *Soil Science Society of America Journal*, 81(6), 1340-1349. doi:10.2136/sssaj2017.07.0220



In October 2017, a technical commission of Brazilian university professors, business, and government agencies related to agronomy visited Ohio State. The delegation was composed of representatives from UFMT, Federation of Agriculture and Livestock of Mato Grosso (FAMATO), Teaching and Training Service (SENAR), Statistics and Economic Institute (IMEA) and Association of Soy and Corn Producers of Mato Grosso (Aprosoja). The visit's purpose was to continue previous contacts, and search and discuss for collaborative opportunities for creating techniques to “revolutionize agriculture”. Involved faculty and staff included (but not limited to) Dr. Rattan Lal (Professor, School of Environment and Natural Resources), **Dr. Mark Sulc** (Professor, Department of Crop and Horticultural Science), **Mr. Mike Chrisman** (Assistant Director, Ohio Program), and **Dr. Anne Dorrance** (Professor, Department of Plant Pathology).

Dr. Rattan Lal (Professor, School of Environment and Natural Resources) supervised Dr. Frederico Terra de Almeida (Associate Professor, Institute of Agrarian and Environmental Sciences) during his internship, titled “Models of soil loss prediction based on USLE: A Review”, at Ohio State from August - December 2017. He was presented a Certificate of Recognition by Dr. Lal with **Mr. Mike Chrisman** (Assistant Director, Ohio Program) at his farewell event on December 18, 2017.

In May 2016, Dr. Lal visited UFMT with **Mr. Rodrigo Da Silva Viana Goncalves** (program assistant, Ohio Program) to present lectures and seminars to students, and have meetings with related UFMT faculty. A UFMT delegation subsequently visited Ohio State from September 4 - 9, 2016, which was jointly sponsored by C-MASC and the Ohio Program. The goal of their visit was to establish cooperation between UFMT and Ohio State especially in student and faculty exchange, distant learning, and research on themes of mutual interest. During their visit, **President Michael Drake** hosted lunch for Dr. Maria Lúcia Cavalli Neder (Rector, UFMT), Dr. Paulo Teixeira de Sousa, Jr (Head, International Relations Office), and two faculty members, Dr. Rogério de Andrade Coimbra (Associate Professor, Institute of Agrarian and Environmental Sciences), and Dr. Daniel Carneiro de Abreu (Assistant Professor, Institute of Agricultural and Environmental Sciences). A MOU between Ohio State and UFMT is in the development process.



Universidade Estadual Paulista (UNESP)



unesp

Dr. Rattan Lal (Professor, School of Environment and Natural Resources) has hosted Ricardo Oliveira de Bordonal (Department of Exact Sciences) from UNESP at the Carbon Management Sequestration Center prior to 2014, where they focused on research projects related to greenhouse gas emissions and biofuels. Together they have produced the following publication:

- Bordonal, R. d. O., **Lal, R.**, Ronquim, C. C., de Figueiredo, E. B., Carvalho, J. L. N., Maldonado, W.,...La Scala, N. (2017). Changes in quantity and quality of soil carbon due to the land-use conversion to sugarcane (*Saccharum officinarum*) plantation in southern Brazil. *Agriculture, ecosystems & environment*, 240, 54-65.
[doi:https://doi.org/10.1016/j.agee.2017.02.016](https://doi.org/10.1016/j.agee.2017.02.016)



Universidade Estadual de Campinas (UNICAMP)



Dr. Thaddeus Ezeji (Associate Professor, Department of Animal Sciences) has cooperated with Dr. Adriano Pinto Mariano (Assistant Professor, Department of Chemical Engineering). In 2016, he was awarded an Ohio State/FAPESP Mobility Grant, titled “Energy-efficient production of butanol (an advanced biofuel) from eucalyptus wood”, which has supported visits during the project period (October 2016 - January 2018). One of Dr. Mariano’s graduate students, Daniel de Castro Assumpção, visited Dr. Ezeji’s laboratory at Ohio State (March - April 2017), and received training on acetone butanol ethanol (ABE) fermentation with solventogenic *Clostridium* species. Dr. Ezeji visited Brazil (October 16 - 27, 2017) and gave an invited lecture, titled “Production of bio-derived Chemicals from lignocellulosic biomass: Challenges, mitigation strategies and select success stories”, to the 2017 Brazilian BioEnergy Science and Technology Conference (BBEST 2017), Campos do Jordão, São Paulo, Brazil, October 17 - 19. On October 24, 2017, Dr. Ezeji visited the School of Chemical Engineering at the UNICAMP where he gave a seminar titled “Butanol production from lignocellulosic biomass: Challenges and opportunities” to students and staffs of the school. Dr. Ezeji had one-on-one meetings with several students and faculty, including Dr. Daniel Atala (Laboratório Nacional de Ciência e Tecnologia do Bioetanol) and Dr. Ariovaldo Silva (Professor, Department of Agricultural Engineering), who are active collaborators of Dr. Mariano.

Dr. Mariano visited Ohio State, Wooster campus, from January 22 - 25, 2018, and delivered a seminar titled “Designing the future of pulp and sugarcane ethanol mills” to the students and staffs of OARDC and ATI. He visited with several of Dr. Ezeji’s students and collaborators, including **Dr. Ajay Shah** (Assistant Professor, Department of Food, Agricultural and Biological Engineering) and **Dr. Victor Ujor** (Assistant Professor, Agricultural Technical Institute). This collaborative work has resulted in one published journal article and one awaiting publication:

- Pereira, G. C., Braz, D. S., Hamaguchi, M., **Ezeji, T. C.**, Maciel Filho, R., & Mariano, A. P. (2018). Process design and economics of a flexible ethanol-butanol plant annexed to a eucalyptus kraft pulp mill. *Bioresource technology*, 250, 345-354.
- “Resolving mismatches in the flexible production of ethanol and butanol from eucalyptus wood with vacuum fermentation”. Currently under revision by the *Bioprocess and Biosystems Engineering* journal.



Anne Dorrance, (Professor, Department of Plant Pathology) has advised Dr. Jaqueline Huzar Novakowski, who has completed at a Ph.D in December 2016 in the Department of Plant Pathology at Ohio State. Dr. Novakowski was supported by Brazil’s Science without Borders Program, and is a graduate of the UNICENTRO located in Parana State, Brazil. Her graduate research focuses on the management of white mold of soybean with host resistance and chemical control, formally titled “Management of Sclerotinia stem rot of soybean and diversity of *Pythium irregulare* in Ohio”. Their collaborations have resulted in 3 publications:

- Huzar Novakowski, J., & **Dorrance, A. E.** (2018). Genetic Diversity and Population Structure of *Pythium irregulare* from Soybean and Corn Production Fields in Ohio. *Plant Disease*. doi:10.1094/PDIS-11-17-1725-RE
- Huzar-Novakowski, J., & **Dorrance, A. E.** (2018). Ascospore Inoculum Density and Characterization of Components of Partial Resistance to *Sclerotinia sclerotiorum* in Soybean. *Plant Disease*, 102(7), 1326-1333. doi:10.1094/PDIS-11-17-1786-RE
- Huzar-Novakowski, J., Paul, P. A., & **Dorrance, A. E.** (2017). Host Resistance and Chemical Control for Management of *Sclerotinia* Stem Rot of Soybean in Ohio. *Phytopathology*, 107(8), 937-949. doi:10.1094/PHYTO-01-17-0030-R

This research was also presented at the Brazilian Soybean Congress, titled “Phytophthora and other soil-borne diseases of soybean”, on June 13, 2018.



III. Additional Programmatic Engagement

The Ohio Program



The Ohio Program (TOP) has been working with Brazil heavily over the last several years. The Program has partnerships with 16 Brazilian universities and institutions where recent graduate or undergraduate students complete internships in American companies. The program specializes in providing international internships in the fields of agriculture, horticulture, turfgrass, and inbound and outbound agricultural business, and has placed 41 Brazilian interns in the United States in 2016, and 43 interns in 2017.

Currently there are partnerships between TOP and the following universities:

University / Institute	Contact Person
Casareu Comunicação e Cultura - Uberlândia / Minas Gerais	Dr. David Francis (Ohio State)
Escola Superior de Agricultura “Luiz de Queiroz” (ESALQ) - Piracicaba / São Paulo	Maria Clara de Lima Costa Barretto
Instituto Federal Catarinense (IFC) - Blumenau / Santa Catarina	Dr. Fernando Garbuio
Instituto Federal Catarinense (IFC) - Blumenau / Santa Catarina	Dr. Carla Zandavalli
Pontifícia Universidade Católica do Paraná (PUC-PR) - Curitiba / Paraná	Leonardo Peroni
Universidade do Estado de Santa Catarina (UDESC) - Florianópolis / Santa Catarina	Cecília Just Milanez Coelho
Universidade Estadual de Londrina (UEL) - Londrina / Paraná	Manuel Simões Filho
Universidade Estadual de Maringá (UEM) - Maringá / Paraná	Dr. Tadeu Takeyoshi Inoue
Universidade Estadual de Maringá (UEM) - Maringá / Paraná	Dr. Arney Eduardo do Amaral Ecker
Universidade Estadual de Ponta Grossa (UEPG) - Ponta Grossa / Paraná	Glaci Meira Hilgemberg
Universidade Federal de Lavras (UFLA) - Lavras / Minas Gerais	Dr. Antônio Chalfun Junior
Universidade Federal de Mato Grosso (UFMT) - Cuiabá / Mato Grosso	Dr. Daniel Carneiro de Abreu
Universidade Federal do Paraná (UFPR) - Curitiba / Paraná	Dr. Luiz Antonio Correa Lucchesi
Universidade Federal do Rio Grande do Sul (UFRGS) - Porto Alegre / Rio Grande do Sul	Dr. Paulo César de Faccio Carvalho
Universidade Federal de Viçosa (UFV) - Viçosa / Minas Gerais	Dr. Aluizio Borém
Ulrich-Brazil-IEP	Ulrich Ribeiro
Universidade Estadual Paulista (UNESP) - São Paulo / São Paulo	Neilson Cassimiro da Silva
Universidade de Passo Fundo (UPF) - Passo Fundo, Rio Grande do Sul	Maria Elisabete Mariano dos Santos