

Research Projects

AO Spine Latin America stimulates research as a key tool to capacitate surgeons. The high capacity and good quality of scientific papers in our region show that the efforts made have produced good results. Due to their quality, some of these articles were published in first line scientific journals:

Surgery for adult spinal scoliosis: does the benefit outweigh the risk?

To investigate whether surgical treatment demonstrates significant benefits as compared to conservative treatment.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Jeferson Dedéa

TEAM: Jeferson Dedéa; Alisson Roberto Teles; Asdrubal Falavigna

Completed and published

Coluna/Columna
2 September 2019

[Link](#)

Active biomolecules incorporated into a polymeric biomaterial as potential mediators in collagen replacement

To evaluate the role of active biomolecules such as PDGF-BB and PRP loaded or not into polymeric biomaterial to seek potential mediators in types I and III collagen deposition and epithelization.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Anderson Ingracio

TEAM: Anderson Ricardo Ingracio, Natália Fontana Nicoletti, Fernanda Trindade Gonzalez Dias, Manuela Figueiró, Otávio Bianchi, Asdrubal Falavigna

Completed and published

Materials Science and Engineering
1 June 2019

[Link](#)

Solution blow spinning (SBS) as new feasible carrier to treat traumatic spinal cord injury

To develop a simple, translational and cost-effective system that combines active biomaterials and cellular therapy (stem cells) in a new delivery system, feasible for future translational application.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: André Arruda

TEAM: André Oiveira de Arruda; Asdrubal Falavigna; Fernanda Trindade Gonzalez Dias; Natália Fontana Nicoletti; Otavio Bianchi.

ONGOING

Presented at Sociedade Brasileira de Coluna Congress 2019; won the 2nd place at Sociedade Brasileira de Coluna Congress 2019 (SBC; 2-4 May, 2019)

Research Projects

Relation between genotoxicity and degenerative disc disease

To characterize the association between DNA damage and Intervertebral disc degeneration (IDD).

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Charles Carazzo

TEAM: Charles André Carazzo, Bruno Saciloto, Manuela Peletti Figueiró, Natalia Fontana Nicoletti, Asdrubal Falavigna

ONGOING

Crosstalk between autophagy and apoptosis in intervertebral disc disease

To clarify the crosstalk between autophagy and apoptosis and the possible signaling pathways involved in degenerative disc disease (DDD).

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Bruno Saciloto

TEAM: Bruno Saciloto, Charles André Carazzo, Manuela Figueiró, Natália Fontana Nicoletti, Asdrubal Falavigna

ONGOING

Acute spinal cord injury

To evaluate the opinion and practices among spine surgeons on timing of decompression in patients with acute traumatic spinal cord injury.

COORDINATOR: Asdrubal Falavigna

TEAM: Asdrubal Falavigna, Alisson R. Teles

ONGOING

The use of Artificial Intelligence to predict improvement after hernial disc surgery

To identify the questions in quality of life questionnaires that had the most significant correlation with patient satisfaction.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Daniel Cunha

TEAM: Daniel Cunha de Araujo, Asdrubal Falavigna, Leandro Corso

ONGOING

Use, accessibility and limitations of intraoperative neurophysiology in Latin America

To describe the use, accessibility and limitations of the intraoperative neuromonitoring in Latin America.

COORDINATOR: Alfredo Guiroy

ONGOING

Perceived impact of gender on spine surgery

To identify gender-based differences within spine surgery, trying to identify factors that may influence male and female careers.

COORDINATOR: Asdrubal Falavigna

ONGOING

Published Articles

Influence of the MISDEF algorithm on the therapeutic decision of vertebral deformity in the adult

To compare the impact of the MISDEF algorithm (minimally invasive spine deformity algorithm) on the therapeutic decision for adult deformity cases.

COORDINATOR: Guilherme Ramos

PRINCIPAL INVESTIGATOR:

Ramon Ferreira

TEAM: Guilherme Zandavalli Ramos, Emiliano Vialle, Rafael Pinto, Cristiano Menezes, Suzana Gusmão Santos Gusmão, Nicolas Masanes, Asdrubal Falavigna, Charbel Jacob Junior, Luiz Roberto Gomes Vialle, Ramon Ferreira

PRESENTATION

Presented at Sociedade Brasileira de Coluna Congress 2019 (SBC; 2-4 May, 2019)

Assessment of interobserver variability for CT scan-based evaluation of posterior ligament complex injury in thoracolumbar fractures: an international multicenter pilot study

To determine the interobserver variability for computed tomography (CT) scan-based evaluation of posterior ligament complex (PLC) injury in thoracolumbar fractures.

COORDINATOR:

Shanmuganathan Rajasekaran

PRINCIPAL INVESTIGATOR:

Anupama Maheswaran

TEAM: Anupama Maheswaran, Siddharth N. Aiyer, Osama Farouk, Mohammad El-Sharkawi, Jong-Beom Park, Andrew O'Brien, Ige Oluwole, Yue Wang, André de Oliveira Arruda, Shanmuganathan Rajasekaran

PUBLICATION

Global Spine Journal

9 May 2019

[Link](#)

Burnout and quality of life among spine surgeons: results of a worldwide survey

To evaluate the prevalence of burnout, to assess the personal and professional characteristics associated with burnout, and to evaluate its relationship with quality of life in spine surgeons.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR: Alisson Telles

TEAM: Alisson R. Teles,

Fahad Abduljabbar, Jean A. Ouellet, Catherine E. Ferland, Chung C. Wong, Giuseppe Barbagallo, Darrel Brodke, Abdulaziz Al-Mutair, Asdrubal Falavigna

PRESENTATION

Presented at Sociedade Brasileira de Coluna Congress 2019 (SBC; 2-4 May, 2019)

PUBLICATION

Global Spine Journal

14 May 2019

[Link](#)

Published Articles

Soybean-modified polyamide-6 mats as a long-term cutaneous wound covering

To evaluate the role of active biomolecules such as PDGF-BB and PRP loaded or not into polymeric biomaterial to seek potential mediators in types I and III collagen deposition and epithelization.

COORDINATOR: Otávio Bianchi

PRINCIPAL INVESTIGATOR:

Fernanda Gonzalez

TEAM: Fernanda Trindade Gonzalez Diasa, Anderson Ricardo Ingracio, Natália Fontana Nicoletti, Felipe Castro Menezes, Lucas Dall Agnol, Daniel Rodrigo Marinowic, Rosane Michele Duarte Soares, Jaderson Costa da Costa, Asdrubal Falavigna, Otávio Bianchi

PUBLICATION

Materials Science and Engineering
1 June 2019

[Link](#)

Image correlation between facet effusion and lumbar instability

To assess the incidence of facet effusion in lumbosacral spine magnetic resonance imaging (MRI) and the relationship with radiographic segmental instability in patients submitted to spinal surgery.

COORDINATOR: Luiz Roberto Vialle

PRINCIPAL INVESTIGATOR:

Mauro Fernandes

TEAM: Mauro Antonio Fernandes Junior, Emiliano Neves Vialle, Rafael Luiz Pinto, Felipe de Negreiros Nanni, Luiz Roberto Vialle

PUBLICATION

Coluna/Columna
2 September 2019

[Link](#)

Surgery for adult spinal scoliosis: does the benefit outweigh the risk?

To investigate whether surgical treatment demonstrates significant benefits as compared to conservative treatment. A literature review was conducted, focusing on the most relevant papers on the topic published in the last five years.

COORDINATOR: Asdrubal Falavigna

PRINCIPAL INVESTIGATOR:

Jeferson Dedéa

TEAM: Jeferson Dedéa, Alisson Roberto Teles, Asdrubal Falavigna

PRESENTATION

Presented at Sociedade Brasileira de Coluna Congress 2019 (SBC; 2-4 May, 2019)

PUBLICATION

Coluna/Columna
2 September 2019

[Link](#)

Published Articles

Spinal surgery complications: an unsolved problem— Is the World

Health Organization Safety Surgical Checklist an useful tool to reduce them?

To compare the incidence of complications between two periods, from January to December 2010 (without checklist) and from January 2011 and December 2012 (with checklist), in order to assess the checklist's effectiveness.

COORDINATOR: Giovanni Barbanti-Brodano

PRINCIPAL INVESTIGATOR: Asdrubal Falavigna

TEAM: Giovanni Barbanti-Brodano, Cristiana Griffoni, Jarkko Halme, Giuseppe Tedesco, Silvia Terzi, Stefano Bandiera, Riccardo Ghermandi, Gisberto Evangelisti, Marco Girolami, Valerio Pipola, Alessandro Gasbarrini, Asdrubal Falavigna

PUBLICATION

European Spine Journal
06 November 2019

[Link](#)

Evaluation of patients with subaxial cervical fractures by the new AOSpine classification

The objective was to evaluate the profile of patients with fracture and/or dislocation of the subaxial cervical spine using the new AOSpine classification and to correlate it with the trauma mechanism and the type of neurological deficit.

COORDINATOR: Robert Meves

PRINCIPAL INVESTIGATOR: Pedro de Oliveira

TEAM: Pedro Augusto Celestino de Oliveira, Alberto Gotfryd, Maria Fernanda Cafaro, Nelson Astur, Rodrigo Mendonça, Eduardo Hideyuki Akamine, Osmar Avanzi, Robert Meves

PUBLICATION

Coluna/Columna
14 November 2019

[Link](#)