

RESEARCH GROUP IN CONTROL AND MECHATRONICS

Code SNCTeI: COL0068009

Colciencias Classification: A1

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000004347>

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Julián Andrés Duran Peña
Lusvin Javier Amado Forero
Manuel Hernando Franco Arias
Mario Fernando Morales Cordero
Nayibe Chio Cho
Oscar Eduardo Rueda Sánchez
Sebastián Roa Prada
Sergio Andrés Ardila Gómez
Víctor Ángel Ardila Acuña

Group Description: *Conduct research for the generation of knowledge, transfer and application of technologies in the productive sector and services, high added value in the design of new products and improvement of equipment that incorporate high levels of integration and synergy in control, automation, instrumentation and mechatronic systems within the framework of innovation and sustainability projects.*

Research lines

Automation and control

Leader: Faustino Muñoz Moner

It is the most consolidated in the Mechatronics Engineering program, as a line of the CONTROL & MECHATRONIC Research Group; it is oriented to the Automation of machines, technological lines and installations with the application of advanced instrumentation, based on high precision transducers, industrial controllers and high technology actuators, which allows developing modernization and industrial technological reconversion.

Mechatronic, Biomedical and Robotic Design

Leader: Johann Barragán Gómez

Generate knowledge and development of innovation in the line of Mechatronic, Biomedical and Robotic Design, which tend to provide solutions to problems related to the areas of Biomedical Engineering and Mechatronics, for the improvement of industrial efficiency in regional and national companies. The specific objectives of the line are - To participate in scientific research projects for the modernization and technological reconversion, the dissemination of its results and the organization of scientific communities in the line of mechatronic, Biomedical and Robotic design. - Promote research that benefits the industrial and economic development of the region and the country. - Develop applied research projects that provide technological, scientific and administrative solutions to problems in the health area through the application of engineering, management and research, which is applicable to the health and productive sector.

Modeling and Simulation

Leader: Sebastián Roa Prada

It addresses the following areas: modeling, identification, optimization, simulation of dynamic systems, application of classical techniques and modern predictive control in industrial, energy, environmental and agro-industrial processes. Modeling and simulation of processes and application of predictive control to industrial, energy, environmental and agro industrial systems.

RESOURCES ENERGY AND SUSTAINABILITY RESEARCH GROUP

Code SNCTeI: COL0028711

Colciencias Classification: A

Group Director: Leonardo Esteban Pacheco Sandoval

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Luis Eduardo Jaimes Reatiga

Luis Sebastián Mendoza Castellanos

Mario Jonatan Acero Caballero

Yecid Alfonso Muñoz Maldonado

Ana Lisbeth Galindo Noguera

Alexander Meneses Jácome

Group Description: *GIRES is dedicated to the development of research projects for the generation of knowledge, transfer of technologies of high added value, oriented to the rational use of energy, use of alternative sources of energy, protection of the environment, within a framework of sustainability, oriented to solve problems of the social and productive environment, with a sense of social relevance*

Research lines

Energy efficiency in industrial process and operations

Leader: Leonardo Esteban Pacheco Sandoval

This line includes the following topics, Integral management of energy. Simulation and operation of processes. Combustion. Energy analysis Instrumentation and process control. Co-generation and tri-generation. Efficient technologies in final use of energies.



Energy Resources and energy transformation

Leader: Yecid Alfonso Muñoz Maldonado

This line includes the following themes, Renewable energies. Conventional and alternative energy systems. Energy resources and prospective. Life cycle analysis. Exploitation of biomass for energy purposes. Integration of alternative sources. Transport and energy



INFORMATION TECHNOLOGIES RESEARCH GROUP

Code SNCTeI: COL0016443

Colciencias Classification: A

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Diana Teresa Parra Sánchez

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José David Cuadros Ortiz

Juan Pablo Neira Vesga

María Alejandra Culman Forero

Maritza Liliana Calderón Benavides

Nitae Andrés Uribe Ordoñez

Paulo César Ramírez Prada

Group Description: *The research group promotes and executes research and technological development projects around Information Technologies and Computational Sciences, contributing to the solution of problems to promote regional and national development.*

Research lines

Telematics

Leader: César Darío Guerrero Santander

This line of research focuses on the study, design, management and development of projects in areas related to communications services, for the transport, storage and processing of any type of information (data, voice, video, etc.) including the Internet of things; Cyber security; Cloud computing and web data analysis.

Information Systems and Software Engineering

Leader: Daniel Arenas Seeley

This line of research focuses on the study, design, management and development of projects in areas related to: the incorporation of expert systems as a strategy for software development; the implementation of technological trends to increase business productivity; as well as the creation and adaptation of methodologies for software development to technologies such as: blockchain, IoT, Big Data, among others.

Creativity and innovation

Leader: César Darío Guerrero Santander

This line of research focuses on the study, design, management and development of projects in areas related to: Education in engineering; Technology-based transfer and entrepreneurship, as well as creativity.

SYSTEMIC THINKING RESEARCH GROUP

Code SNCTeI: COL0010092

Colciencias Classification: A

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Martha Lucia Orellana Hernández

Descripción del grupo: El grupo promueve la solución de problemas complejos mediante la aplicación de enfoques sistémicos, manteniendo relaciones de intercambio académico con investigadores, grupos y comunidades al nivel regional, nacional e internacional.

Group Description: *This group designs solutions to complex problems using a Systemic Approaches working with Research Communities.*

Research lines

Study, Intervention, and Technological Design in Institutions using Systemic Approaches

Leader: *José Daniel Cabrera, Jorge Andrick Parra Valencia*

In this Research´s line, we study, design, and promote changes in Institutions using information technology under Systemics Approaches.

Modelling, Simulation, and Learning in Organizations and Communities using System Thinking

Leader: José Daniel Cabrera, Jorge Andrick Parra Valencia

In this Research's line, we study, design, and promote changes in Organizations and Communities using information technology under Systemics Approaches.

Systemic Thinking, Education, and Technology

Leader: Adriana Inés Ávila Zarate

In this Research's line, we study and design of solutions to educational problems using information technology according to Systemics Approaches, organizational goals and Educational models.



PRESERVATION AND DIGITAL EXCHANGE OF INFORMATION AND KNOWLEDGE – PRISMA

Code SNCTeI: COL0071561

Colciencias Classification: A

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Eduardo Carrillo Zambrano
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Julián Santiago Santoyo Díaz
Lina María Osorio Valdés
Luis Gerardo Alférez Sandoval
René Alejandro Lobo Quintero
Román Eduardo Sarmiento Porras
Sandra Cristina Sanguino Galvis
William Manuel Castillo Toloza

Group Description: *PRISMA is a multidisciplinary group that carries out applied research related to the technological foundations of knowledge management, the exchange of information, accounting and financial management in organizations, as well as the search for the application of technological solutions in organizations.*

Research lines

Innovation and Educational Technology

Leader: Lina María Osorio Valdés

Seeks the design, development and evaluation of research projects that articulate the appropriate, creative and innovative use of technology in formal and non-formal educational environments.

Technology and Society

Leader: Román Eduardo Sarmiento Porras

It focuses on the integration of ICT-based solutions that generate productive processes, under conditions of sustainable development, seeking the improvement of the quality of life in the vulnerable population of Colombian society.

Marketing and logistics

Leader: Adolfo Segura Moya

The identification and interpretation of marketing phenomena is sought, the use of technologies applied to the exchange and relationship of companies and markets, incorporating the analytics and the use of ICTs to interpret and predict social behaviors associated with marketing and consumption of goods and services.

INGENIERÍA FINANCIERA - GIF **FINANCIAL ENGINEERING RESEARCH GROUP - GIF**

Code SNCTeI: COL0066786

Colciencias Classification: B

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Luz Helena Carvajal Herrera

María Eugenia Serrano Acevedo

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Pedro Fernando Quintero Balaguera

Group Description: *The purpose of the group is the deepening, generation of knowledge, and interaction University - Company - State in the regional, national and international environment, in the areas of Financial Engineering such as investments, corporate finance, risk, hedge, speculation and disciplines as the economic area.*

Research lines

Corporate Finances

Leader: Isabel Cristina Barragán Arias

Plans for the formation of support networks for SMEs, creation of methodologies and models for financial diagnosis, capital costs, capital budget, dividend policies, and valuation of companies, mergers, acquisitions and privatizations.

Investments

Leader: *José Luis Flórez Rueda*

Addresses issues such as fixed income markets, in which bonds and securitized assets are valued, international investment (yield calculations, risks, profits, and amounts), effects of political events, monetary policy announcements, supply shocks, announcements of corporate policy or restructuring, quarterly announcements of dividend results. Market models such as CAPM, single index, multi-index, factors and APT and study of donations and altruism.

Coverage risk and speculation

Leader: *Gloria Inés Macías Villalba*

Study and propose derivative instruments, of inputs, aversion to risk and country risk.

APPLIED SCIENCES – GINCAP

Code SNCTeI: COL0002493

Colciencias Classification: C

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Nohora Isabel Nájera Esteban

Oscary Ávila Hernández

William González Calderón

Yoe Alexander Herrera Jaramillo

Group Description: *GINCAP group is multidisciplinary research group which works in a strict manner in the areas of natural sciences and mathematics. The group is projected to be a leader in the field of Applied Sciences with national and international collaborations by not only strengthening its areas of research but also through continuous work in the development of projects with scientific and social impact.*

Research lines

Science and Mathematics Education

Leader: Martha Lucía Barrera

Application of methodologies that support the teaching-learning process, based on the analysis of pre-knowledge and the students learning styles.

Mathematical modeling and applied statistics

Leader: *William González Calderón*

Application of mathematical modeling and statistical analysis in any discipline and multidisciplinary work that requires any of them in order to describe different types of behavior that lead to the analysis of various situations.

Applied optics and signal processing

Leader: *Ligia Beleno Montagut*

Development of optical and/or digital methods and procedures to be applied in scientific and technological research oriented to the needs of the productive sector of the region and the country.

CLINICAL RESEARCHS

Code SNCTeI: COL0046021

Colciencias Classification: A1

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Juan Carlos Mantilla Suárez

Juan José Rey Serrano

Miguel Enrique Ochoa Vera

Ricardo Flaminio Rojas Ricardo

Sergio Eduardo Serrano Gómez

Silvia Milena Becerra Bayona

William Omar Contreras López

Group Description: *The clinical research UNAB- group develops its Mission through the following permanent work strategies: - Training and development of human talent: The group manages and programs training according to the needs of researchers, groups and lines of research. research, in coordination with the areas to which they are enrolled.*

- Methodological advice: The group provides advice and designates the advisors requested by the researchers according to their specific needs in the realization of the projects that are in the process of planning, from the methodological point of view, fundamentally.

- Consultation of processes: The group has necessary information on standardization and regulation of research in different areas, and can guide researchers to adhere to processes that make them more timely, efficient and consistent with international quality standards.

- Process follow-up: The group collaborates with the follow-up of projects, programs and

lines in order to account for the progress and difficulties whose solutions can be supported with specific interventions.

- Inter-institutional management: It has information, manages and seeks strategic alliances to obtain resources or funding for research and is available to researchers who request it.

Research lines

Anesthesiology

Leader: German William Rangel

Study of clinical cases and evaluation of anesthesia techniques.

Critical Care and Intensive Care

Leader: Francisco Fernando Naranjo Junoy

Study of clinical cases, risk factors, management protocols and prognosis of the main events attended in critical care.

Dermatology

Leader: Hernando Mosquera Sánchez

Description of clinical characteristics of prevalent dermatological problems, novel diagnostic methods and associated factors.

Internal Medicine

Leader: Claudia Lucia Sossa Melo

Study of clinical cases, risk factors, treatment and prognosis of diseases of interest in the area of internal medicine.

Ophthalmology

Leader: Alejandro Tello Hernández

Study of clinical cases, risk factors, evaluation of diagnostic tests, treatment and prognosis of diseases of interest in the area of ophthalmology.

Radiology

Leader: Federico Guillermo Lubinus Badillo

Diagnostic evaluation of different radiological and imaging techniques with emphasis on the efficacy and safety of new technologies.



Surgical Specialties

Leader: William Omar Contreras López

Study of clinical cases, risk factors, treatment and prognosis of diseases of interest in the area of surgical specialties (urology, orthopedics, neurosurgery and others that will be included in the future).

GROUP QUALITY OF LIFE AND PUBLIC HEALTH

Code SNCTeI: COL0046021

Colciencias Classification: A

Group Director: Mónica Mojica Perilla

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Martha Eugenia Ortega Ortiz

Mónica Mojica Perilla

Mónica Trinidad Molina Guzmán

Gladys Arias Chacón

Yamilena Parra Villa

Sergio Ribero Marulanda

Group Description: *The Quality of Life and Public Health Research Group belongs to the Center for Research in Health and Psychosocial Sciences and is classified by Colciencias in Category A. It is currently made up of professionals from different academic disciplines, which allows the strengthening of interdisciplinary research processes in the areas of interest of its researchers, thus generating discussion spaces that allow the inclusion of different disciplinary, theoretical and methodological perspectives. Traditionally the work has focused on two areas of Psychology: Clinical Psychology and Health and Neuropsychology, in the last two years has begun to work in the area of Organizational Psychology, Social Psychology, Basic and Superior Psychological Processes and Dynamics of the Pharmaceutical Service. Although it is true that the group's core of knowledge is Psychology, the opening of it will allow it to continue working on the understanding and solution of current problems in our society that require different approaches and alternative solutions.*

Líneas de Investigación - Research lines

Basic and superior psychological processes

Leader: Juan Carlos Riveros Rodríguez

The line Basic and higher psychological processes aims to generate knowledge through the identification of the various phylogenetic, biological, and social factors that affect the development of individuals, including cognitive and behavioral changes that live in different circumstances. Also identify the way in which cognitive and behavioral changes can lead to the development of thought processes and dysfunctional behaviors. Consequently, the line seeks to generate basic knowledge about the factors that affect both the psychological development of individuals and their interactions and social relationships.

Health, State and Society

Leader: Mónica Mojica Perilla

The Health, State and Society research line aims to develop research proposals that take into account both the health and illness conditions of the public and their links with the social, cultural, historical, political and economic dimensions. From the research line, health and illness are assumed as realities that go beyond the level of the merely individual, to include the social, historical, cultural, political and economic dimension, thus establishing a dialectical relationship between these and the health and health processes. disease. Such an approach requires research proposals that take into account both the health and illness conditions of the public and their links with the previously mentioned dimensions. This requires the joint work of professionals from various disciplines and the implementation of varied methodologies, in an attempt to understand health and disease as a collective fact.

Quality of life

Leader: Martha Ortega Ortiz

This line of research aims to build knowledge about the quality of life variable in different human areas through documentary, exploratory, descriptive and replication studies, focused from a bio-psycho-socio-cultural model, focusing needs and facilitating decision making in relevant variables for the quality of life, which in turn allow promoting and generating intervention strategies in favor of human welfare.

GENETIC STUDY OF COMPLEX DISEASES

Code SNCTeI: COL0004513

Colciencias Classification: A

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Norma Cecilia Serrano Díaz

Rafael María Zamora Prieto

Ricardo Ortiz Serrano

Silvia Milena Becerra Bayona

Sonia Esperanza Osma Zambrano

Víctor Alfonso Solarte David

Víctor Mauricio Herrera Galindo

Group Description: *Interdisciplinary research team that studies common diseases of high prevalence and impact in the Colombian population, evaluating in an integrated form the genetic and environmental factors that interact in a complex way in its pathophysiology.*

Research lines

Cancer

Leader: *Claudia Janeth Uribe Pérez*

To determine the sociodemographic characteristics and their possible association as risk factors for the development of cancer and to identify incidents of malignant cancer in residents of the Metropolitan Area of Bucaramanga. In addition, it seeks to explore the molecular and immunohistochemical characterization of different types of cancer with high prevalence in Bucaramanga and establish in subgroups of the study population, the role of genetic variants in the presentation of familial cancer.

Genetics and molecular biology of complex diseases

Leader: *Silvia Milena Becerra Bayona*

Characterize the impact of genes of biological interest in the development of common diseases, by visualizing the role of genetic polymorphisms in the networks pathophysiologicals involved their origins. In a complementary manner, it promotes the creation of a bank of human biological material for the molecular study of common diseases of national relevance.

Serological biomarkers in complex diseases - MASEC

Leader: *María Carolina Páez Leal*

Identifies the shape and strength of association between the levels of diverse biomarkers and the presence of complex diseases, and their relation with severity and therapeutic response.

Social representations in health

Leader: *María Carolina Páez Leal*

Identifies social representations related to the knowledge, attitudes and practices around common diseases, their clinical presentation, how to prevent and treat them, as well as the short and long term consequences for the affected person and their family; whose knowledge contributes to the design of integral strategies of intervention, promotion and prevention that impact all the instances and actors of the health system.

ICT as a strategy in the comprehensive approach to Common Diseases

Leader: *María Lucrecia Luna González*

Promotes and facilitates projects of social innovation in health based on Information and communications technology (ICT), with the aim of consolidating its use, as a tool to mitigate



inequities in the approach of chronic diseases, making approximations in education, monitoring, diagnosis and intervention.

PUBLIC HEALTH OBSERVATORY OF SANTANDER

Código SNCTeI - Code SNCTeI: COL0031341

Clasificación Colciencias - Colciencias Classification: B

Director de Grupo - Group Director: Claudia Milena Hormiga Sánchez

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Rafael Gustavo Ortiz Martínez

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Virgilio Galvis Ramírez

Group Description: *Observatorio de Salud Pública de Santander (OSPS) is an interdisciplinary research group, founded in 2005 under FOSCAL Foundation endorsement. From 2017 it's endorsed also by Universidad Autónoma de Bucaramanga UNAB. We have seven research lines: Health situation analysis, Non-communicable diseases (NCD) risk factors surveillance, Health and environment, Health information systems, Social appropriation of knowledge in health, Gender and health, and Ocular health.*

Observatorio de Salud Pública de Santander (OSPS) research group was gestated inside the program with the same name, which was an integratory instance of experience and knowledge in public health management in Santander, born in 2004 as an alliance between Departamento de Santander and Foscal Foundation. Its mission is to contribute to the public policy creation, health plans and programs and development of academic projects.

Also, it facilitates knowledge management through processing, analysis and diffusion of information of interest in public health.

Research lines

Non-communicable diseases (NCD) risk factors surveillance

Leader: *Claudia Milena Hormiga Sánchez*

This research line has its focus in study of factors for Non-communicable diseases, mainly the biological and behavioral factors defined as priorities by the World Health Organization in the STEPwise surveillance system: overweight / obesity, hypertension, diabetes, hypercholesterolemia, practice of physical activity, consumption of alcohol, tobacco and fruits and vegetables.

Within the framework of this line, the OSPS group has developed, under the coordination of the Ministry of Health of Santander, two cross-sectional studies with departmental coverage (2010 and 2015) following the STEPwise methodology of the WHO. The data generated in these investigations have been included in the work carried out by the NCD Risk Factor Collaboration (NCD-RisC).

Health situation analysis

Leader: *Silvia Constanza Plata Vanegas*

This line includes research on the state of the population health situation in the territories, mainly in the department of Santander and its municipalities. In the development of this line, the OSPS group has developed periodic analysis of the departmental health situation since 2005 and studies of events of interest in the area of public health.

Social Appropriation of Knowledge in Health

Leader: *Diana María Delgado Chinchilla*

Through this line, OSPS develops projects for management, transfer, citizen participation and communication of knowledge produced in the area of health in the department. In this line, OSPS has participated in the development of several local projects with schooled adolescent aimed at promoting the adoption of health care habits.

Gender and Health

Leader: *Claudia Milena Hormiga Sánchez*

This line of research focuses on studying the relationship between gender, as the axis of social structure and social determinant of health, and various outcomes of the health disease process, using mixed methodological approaches.

Eye Health

Leader: *Virgilio Galvis Ramírez*

This line focuses on the study of human eye health through observational and experimental studies that have estimated the population magnitude of some eye diseases or the casuistry of these in the Fundación Oftalmológica de Santander, as well as the effectiveness of new therapeutic procedures.

Health and Environment

Leader: *Claudia Milena Hormiga Sánchez*

It focuses on the study of the environmental influences of the physical environment, mainly air quality, on human health. The studies carried out have shown the effects of air pollution on respiratory health and cancer in Santander and other territories of the country.

Health Information Systems

Leader: *Rafael Gustavo Ortiz Martínez*

It focuses on the application of information and communication technologies in the field of health. It is a transversal line that contributes to the study of the other lines of the group. Within the framework of this line, the support that ICT applications can offer to the health sector in community action and the prevention, care and rehabilitation of health events is studied. In this field applications of electronic medical history, telemedicine, mobile health, data analytics and digital health literacy have been developed.



VIOLENCE, LANGUAGE AND CULTURAL STUDIES

Code SNCTeI: COL0015259

Colciencias Classification: C

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Martha Elena Curcio Borrero

Martha Eugenia Ortega Ortiz

Iris Aleida Pinzón Arteaga

América Celeste Guevara Parra

Group Description: *The research group studies psychosocial processes related to the manifestation of aggressiveness and the irruption of violent phenomena that have effects in the subjectivity as well as the social bond. It concentrates its efforts on the construction of interdisciplinary knowledge and theoretical models, which allow the analysis of emerging problematics in the Colombian and Latin American context. As a group oriented by a critical perspective, research is assumed in a strict sense, with methodologies focused on the explanation of psychosocial phenomena, the strengthening of formative research and the social appropriation of knowledge.*

Research lines

Discursive practices

Leader: Doris Amparo Barreto Osma

This line aims to make contributions to the research processes of psychology and social life, as well as the discussion about human construction of meaning, the other, the place that is given to violence in its daily manifestations, such as the ones that take place at work, and the various ways to establish bonds, from the analysis of the discourses that constitute the practices of contemporary culture.

Psychoanalysis and Culture

Leader: Carlos Germán Celis Estupiñán

This research line aims to maintain a critical dialogue with the epistemic path opened by Freud and continued by Lacan, taking into account the theoretical and clinical principles of psychoanalytic knowledge; all of this, through the analysis of the effects of the subject's relationship with the other and culture, as well as the symptomatic forms in which subjectivity expresses its discomfort through language, violence and the body.

Violence, childhood and adolescence

Leader: Carlos Germán Celis Estupiñán

The line focuses on claiming the recognition of the subject present in a child and a teenager, at a time in which childhood and adolescence tend to be explained by developmental paradigms that reduce them to an age range. The subject present in a child or a teenager is the one that gives an account of the symptoms, the marks that have been left by the encounter with the other, violence, as well as culture, with its imperatives of consumption, that have produced new frailties in children and adolescents, resulting in manifestations of violence against themselves and others.

CARING RESEARCH GROUP

Code SNCTeI: COL0139078

Colciencias Classification: C

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Gloria Inés Arenas Luna

Jeam Zulma Moreno Arias

Juan Manuel Nova Rodríguez

Socorro Fajardo Nates

Mary Luz Jaimes Valencia

Martha Isabel Robles Carreño

Socorro Fajardo Nates

Olga Lucia Gómez Díaz

Pilar Abreu Peralta

Darlen Aragón Borré

Skarlet Marcell Vásquez Hernández

Angie Sidney Naranjo García

Clara Inés Padilla García

Angélica María Pedraza Concha

María Catalina De Montijo Vargas

María Fernanda Barragán Vergel

Group Description: *The research group from UNAB nursing program: CARING, whose meaning in Spanish is "taking care of", subscribed in the Research in Health and Psychosocial Sciences Office from UNAB, founded since July 2012, and is currently registered and classified as C category (Call 781 of 2017).*

The research group is conformed by full-time and cathedraic teachers from the nursing program, graduates and undergraduate students. Colciencias has recognized several researchers enrolled in our group.

Research lines

Nursing Care of the Pregnant, Children and Adolescents

Leader: *Martha Isabel Robles Carreño*

It seeks developing research projects that may contribute to the object of study of the nursing discipline. These involve nursing care of the pregnant woman, children and adolescents. The research line looks forward understanding diverse health situations of the pregnant woman, child and adolescent around the health-illness process, by using nursing scientific evidence. It develops investigation in clinical and community context that reflects daily life situations from this population group, both at an individual, family and community level.

Nursing Care of the adult and the elder adults

Leader: *Hendrik Adrián Baracaldo Campo*

It seeks developing research that contributes to the nursing discipline object of study, which is the nursing care of the adult and the elder adults. This line pursuits understanding health situations from adults and the elderly, in the health-illness process, using nursing scientific evidence. It develops research in clinical and community contexts from this population, which reflects daily living, at individual, familiar and community levels.

PREVENTIVE CARDIOLOGY

Code SNCTeI: COL0021318

Colciencias Classification: B

Group Director: Víctor Mauricio Herrera Galindo

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000003072>

Researchers

Juan Carlos Villar Centeno

Luz Ximena Martínez Contreras

Skarlet Marcell Vásquez Hernández

Víctor Mauricio Herrera Galindo

Group Description: *To evaluate strategies to prevent, diagnose, and treat risk factors for the development of atherothrombotic events.*

Research lines

Chagas' disease

Leader: Juan Carlos Villar Centeno

To contribute to bridge the knowledge gap in the areas of diagnosis and preventions of the acute and indeterminate phases of Chagas' disease.

Milestones: a) Assembly and follow-up of the CHICAMOCHA cohort (n ~ 400 asymptomatic adults, seropositive for T.cruzi, evaluated for changes in cardiovascular function at 2 and 4 years) aimed at determining prognostic factors in Chagas' disease; b) Conduction of RCTs (n ~ [250 - 500]) to evaluate the efficacy of trypanocidal and combined therapy (trypanocidal and neurohormonal) to reduce the risk of progression from the indeterminate to the chronic phase of Chagas' disease.

Cardiovascular Health

Leader: Juan Carlos Villar Centeno

To estimate the incidence and monitor the change of health behaviours and factors that constitute the construct of "cardiovascular health" and to determine its association to atherothrombotic events. Milestones: Assembly and follow-up of the CHICAMOCHA cohort (n ~ 1,200 asymptomatic adults, seronegative for T.cruzi, evaluated for changes of cardiovascular health at 12 years).

Cardiovascular complications related to surgical procedures

Leader: Juan Carlos Villar Centeno

To estimate the incidence of cardiovascular complications and to determine prognostic factors among patients undergoing cardiac and non-cardiac surgical procedures. Milestones: a) Coordination of recruitment centers in Colombia for the PeriOperative ISchemic Evaluation Trials (POISE-1 and POISE-2) and the Steroids In caRdiac Surgery Trial (SIRS Trial); b) Coordination of recruitment centers in Bucaramanga for the Myocardial Injury After Noncardiac Surgery (MANAGE), Left Atrial Appendage Occlusion Study III (LAAOS III), and the Transfusion requirements in cardiac surgery III (TRICS III); c) Coordination of recruitment centers in Colombia for Vascular events in noncardiac surgery patients cohort evaluation (VISION).

Environmental determinants of cardiovascular disease

Leader: Víctor Mauricio Herrera Galindo

To estimate the exposure to air pollution (outdoor and indoor) and to determine its association to the development and progression of cardiovascular disease. Milestones: a) Conduction of a cross-sectional study to estimate the exposure to fine particulate matter (mass and composition) and their association to blood pressure among non-smoker adults in Bucaramanga (n ~ 500); b) Conduction of a pilot study (n ~ 80) to characterize the exposure to air pollution related to different patterns of vehicle traffic and its association to markers of inflammation and cardiovascular function.

RESEARCH GROUP HEALTH AND EDUCATION

Code SNCTeI: COL0067399

Colciencias Classification: B (preliminar)

Group Director: Diego Torres Dueñas

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000004306>

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Edgar Giovanni Corzo Gómez
Bladimir Saldarriaga Téllez
Boris Damian Jaimes Parra
Deisy Yurley Rodríguez Sarmiento
Gustavo Bruges Morales
Hernán Darío Delgado Rico
Hilda Leonor González Olaya
Juan Carlos Uribe Caputi
Luis Ernesto Ballesteros Acuña
Luis Roberto Carvajal Tapias
María Eugenia Cárdenas Angelone
Sergio Andrés Ardila Gómez
Edgar Adrián Torres Sepúlveda

Group Description: *We are an interdisciplinary group that from the basic sciences, in the areas of cellular and molecular biology, biochemistry, anatomy, physiology, immunology and pharmacology tried to preserve, foment, produce and disseminate knowledge that impacts on the people's health in the fields of health education, generating teaching-learning strategies that favor significant learning in students, and innovation in the teaching field, as well as in the area of development of new technologies that positively impact the course and outcomes of the disease, both in the patient and in the community*

Research lines

Clinic application of the anatomical variations

Leader: Edgar Giovanni Corzo Gómez

It deals with the study of anatomical variations of clinical importance.

Cellular and molecular mechanisms involved in the disease

Leader: Diego Torres Dueñas

This line investigates the participation and mechanisms of multiple mediators in the pathogenic and physiopatology of the disease and their relationship as markers of severity and forecasting, which allow for the search for new and more effective therapies.

New medicines and technologies in health

Leader: Deisy Yurley Rodríguez Sarmiento

Deals with design, chemical synthesis and characterization of endogenous molecules of interest, as drug analogues with similar pharmacological applications, as well as Advanced Therapies development through the application of tissue engineering with prophylactic, diagnostic, forecasting and therapeutic objectives that intervene in the natural history of diseases

Education/Learning in health

Leader: Hilda Leonor González Olaya

Inclined to the search for teaching alternatives to health education, incorporating new technologies of information technology and communication, emphasizing ethics and factors associated with performance and academic performance.

Basic and applied physiology

Leader: Edgar Adrián Torres Sepúlveda

Proned the design and execution of studies that generate and strengthen knowledge about physiological events in humans and animals. Similarly, it allows the recognition of organic and systemic physiology applied to the course of different pathologies in all population groups.

TRANSDISCIPLINARITY, CULTURE AND POLITICS

Code SNCTeI: COL0026181

Colciencias Classification: A

Group Director: Julio Eduardo Benavides Campos

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Wilson Javier Sandoval
Ysabel Cristina Briceño Romero
Yulenis Estela Caballero Mier

Group Description: *It builds knowledge on the social processes of symbolic production, emphasizing its political character in search of better levels of coexistence, committed to a reorientation of knowledge production practices from academia, with a view to interdisciplinary exchange and the decentralization of knowledge. It also strategically projects our intellectual production both in teaching and in social action.*

Research lines

Contemporary aesthetics and sensitivities

Leader: *Edwin Rey Velasco*

Privileges looks to the world of today, that allow to understand the forces that define our time from its social, economic, technological, historical conditions, etc. But this priority for the contemporary does not represent any type of exclusion, and rather defines an intention to understand and explore the development of culture from a perspective that, going beyond purely historicist conceptions, conceives previous developments of culture as living and acting processes, which we make our own to the extent that they constitute us, defining our belonging to an era and conditions of our own.

Gender, social movements and power

Leader: *Ángel Nemecio Barba*

It groups research interests around the politics of identity and difference (of gender, generation, class, ethnicity and culture, among others) as dominant characteristic traits, but not excluding power relations at stake, not only in the conventional spaces of institutional politics (state, parties, government...), but in other spaces of construction/transformation of the political (Mouffe, 1999, p.13). These can be both those of private and intimate life, passing through institutions (universities) up to the

organizational processes and collective action that promote cultural and political transformations, in any of these contexts.

Cultural Heritage

Leader: *Frank Alexander Rodríguez*

It places at the centre of the cultural debate a dimension of what heritage is, which broadens the more canonical vision of heritage seen as a museum, extending it to more everyday and socially extensive cultural practices, opening the way to the recognition of the cultural heritage of the region, as well as being a privileged space for the development of research.

Representations, Memory and Institutionability (RMI)

Leader: *Roberto Sancho Larrañaga*

It seeks to recognize and understand the constituent and instituting plots of significance of social experience, derived from theoretical discussions and methodological proposals in research processes, consolidated a space of open epistemic formulation, with a clear potential for interdisciplinary dialogue and for the exercise of the transdisciplinary.

EDUCATION AND LANGUAGE

Code SNCTeI: COL0004157

Colciencias Classification: B

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Elgar Gualdrón Pinto

Gloria Esperanza Sierra Delgado

María Nuria Rodríguez

María Piedad Acuña Agudelo

Nelly Milady López Rodríguez

Yolanda Carrillo Rivera

Group Description: *Focuses its interest, reflection and action in the field of education from: Pedagogy and Didactics; Childhood, Culture and Diversity; Education Management; and Innovation; This with the aim of building a broad and solid vision of different elements and contexts that provoke questions, discussion, studies, inquiries and constructions from and for multiple environments and educational actors.*

Research lines

Pedagogical and Didactic Knowledge

Leader: *María Piedad Acuña*

Establishes a relationship between the theoretical field of education, pedagogy, didactics and the pedagogical practices, considered as spaces for reflection where the teacher puts into play multiple pieces of knowledge and skills.

Childhood, Culture, and diversity

Leader: *Joyce Mildred Pérez*

Support the formation of teachers and other educational agents, from the conceptions of childhoods in contemporary and its transcendence in the development of the person to transforming the educational environments for the benefit of equality, equity and respect for difference.

Innovation and Creativity in Education

Leader: *Adriana Cadena León*

It proposes to generate methods, materials, techniques and innovative strategies, to transformation of educational practice to have significant, creative and autonomous learning.

Management in Education

Leader: *Nelly Milady López*

It works about the reflection and analysis in order of management, academic, pedagogical, administrative and community fields to guarantee a quality educational service and challenges of continuous improvement in institutions of formal, non-formal and informal education as well as in both Public and private sector.

RESEARCH GROUP LEGAL HERMENEUTICS

Code SNCTeI: COL0011821

Colciencias Classification: B

Group Director: Camilo Euclides Quiñónez Avendaño

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https://scienti.colciencias.gov.co/cvlac/visualizador/generarCurriculoCv.do?cod_rh=0001402723

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Emma Elvira Ortiz Arciniegas
Iván Santos Ballesteros
Juan Carlos Díaz Restrepo
Judith Lucía Del Socorro Ramírez Carrero
Julián Eduardo Prada Uribe
Mauricio Enrique Rodríguez Delgado
Pablo Andrés Delgado Peña
Ruth Adriana Ruiz Alarcón

Group Description: *Research group composed of professors of the Law program of the Universidad Autónoma of Bucaramanga, created in 1985.*

Research lines

Legal Analysis

Leader: *Julian Eduardo Prada Uribe*

Research on the logical and epistemological assumptions of production, interpretation and application of Law.

Legal Argumentation

Leader: Carlos Arturo Duarte

Research oriented to the study of the rational justification of a legal decision or interpretation, as well as the methods or rules useful for this purpose.

Legal Dogmatic

Leader: Camilo Quiñónez Avendaño

Research where the present or past legal order is studied, in its dispositive or abstract content.

History of Law

Leader: Mauricio Enrique Rodríguez Delgado

Roman law, starting from the colony until the creation of the unitary Republic of Colombia. Review the content of the texts used in each stage to specify the curricula of the law faculties of each period. Describe the contents of the courses of Roman Law and Civil Law in the colonial period and in the first century of Republican life.

RESEARCH GROUP FAMILY, GENDER AND CONFLICT

Code SNCTeI: COL0005038

Colciencias Classification: B

Group Director: Mario Guevara Mendoza

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000003075>

Researchers

Aida Fernández De los Campos

Carlos Mario Frías Rubio

Jenny Carolina Bayona Rangel

Mario Guevara Mendoza

Rodolfo Mantilla Jacome

Group Description: *An oldest law institute is Family, whose evolution means different ways of understanding it, but does not mean that his essence has change: the protection of relationships between people who share genetic or affective components.*

From this institute, the research group Family, Gender and Conflict pretends to undersantd how this process has been affected by contemporary developments as the gender conception, the impact of new techonologies that change the esenciales relationships of the institute, and the attacks to the natural harmony of the family, whose is the base of society.

Research lines

Bioetics and new technologies law

Leader: Mario Guevara Mendoza

The impact of the aplication of new technologies, specially in the conception and procreation, as a new way to construct new types of affective relationships, in the familia as a law institute, create new legal relations that is necessary to study.

Human rights, Children and Adolescent

Leader: Aida Fernández de los Campos

The children and adolescents, in last years, has having an special attention in the society

development, acquiring the status as special protection, in national law and international law, affair that is important to study, always thinking in the protection of this special group.

Family

Leader: Mario Guevara Mendoza

Although been an oldest institute, the study of this legal institute is relevant, being the fundamentals of society and the genesis of development.

Family Violence

Leader: Aida Fernández de los Campos

The study of this phenomenon is crucial to understanding the problem that arises and threatens the fundamental values of the family as an institute.



RESEARCH GROUP THEORY OF LAW AND LEGAL TRAINING

Code SNCTeI: COL0132371

Colciencias Classification: C

Group Director: Ana Patricia Pabón Mantilla

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000013441>

Researchers

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Carlos Andrés González León

Diana Carolina Pinzón Mejía

Paul Cáceres Rojas

Luis Francisco Casas Farfán

Antonio Bohórquez Orduz

Elisa Martín Peré

Group Description: *The Research Group on Theory of Law and Legal Training was created in 2011 as a stage for the generation of new knowledge in the field of theories of justice and law, and in discussions about the teaching of law. Based on this assumption, the group has three lines of research Discussions on the teaching of Law and the training of citizenship competencies, Theories of contemporary justice and Typicity and interpretation in Private Law. These lines are consistent with the areas of work of its members and with the need to address issues that impact positively the processes of formation of the Law students at the Universidad Autónoma de Bucaramanga, UNAB*

Within the group, different projects have been proposed that have given rise to products of new knowledge and social appropriation of knowledge. Its members directly support the process of formation of the seedbeds of the University, which is expected to strengthen the teaching - research relationship.

Research lines

Discussions about the teaching of Law and the training of citizens' competences

Leader: Diana Carolina Pinzón Mejía

In this line is problematized around the teaching of Law, its particularities, the role of the actors in the process, as well as the review and design of teaching and learning strategies that facilitate mediation processes and the achievement of meaningful learning.

Contemporary theories of justice

Leader: Ana Patricia Pabón Mantilla

In this line problematizes around the theories of justice of contemporary authors, from the political philosophy, the philosophy of law and legal theory, linking this discussion to contemporary legal and social problems in order to establish relevant routes to guide the solution of these problems in the legal sphere.

Typicality and interpretation in the Private Law

Leader: Carlos Andrés González León

In this line is problematized about the issues related to the formation and interpretation of legal business, its form, content and economic and social function, in order to determine the processes of change, the discussions and contemporary difficulties that the hiring schemes offer of Private law in global markets, in order to review the scope and structure and characteristics of contemporary legal dogmatic.

RESEARCH GROUP POLITIC SCIENCES

Código SNCTeI - Code SNCTeI: COL0009538

Clasificación Colciencias - Colciencias Classification: B

Director de Grupo - Group Director: María Eugenia Bonilla Ovallos

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Andrea Carolina Silva Nino

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Esther Parra Ramírez

Ángela María Díaz

Mairene Tobón Ospino

Mario Andrés Páez Ruiz

Descripción del grupo: Analiza la interrelación entre los actores, las redes y las instituciones que da lugar a la configuración del poder político, las características de la representación y la calidad de la respuesta pública a las demandas sociales, centrando particularmente el foco de atención en las políticas públicas orientadas a la construcción de paz y la promoción del desarrollo.

Group Description: *Analyzes the interrelation between the actors, networks and institutions that gives rise to the configuration of political power, the characteristics of representation and the quality of the public response to social demands, focusing in particular the focus on public policies aimed at building peace and promoting development.*

Líneas de Investigación - Research lines

Partidos Políticos y Sistema Electoral

Líder: Esther Parra Ramírez

Analiza la naturaleza y las características de los partidos políticos, principalmente en lo referido a la forma en que se relacionan entre sí estas colectividades políticas y la incidencia que tiene el sistema electoral sobre la configuración de las fuerzas al interior de las corporaciones políticas de orden nacional y territorial. Particulares atenciones han tenido los estudios sobre los diseños institucionales en el ámbito del sistema de partidos y sus transformaciones hacia dinámicas multipartidistas y de coalición. Así mismo, se impulsan estudios comparados sobre comportamiento electoral a nivel territorial y local.

Political Parties and Electoral System

Leader: Esther Parra Ramírez

Analyze the nature and characteristics of political parties, mainly in relation to the way in which these political collectivities are related to each other and the impact that the electoral system has on the configuration of forces within political corporations. National and territorial order. Particular attention has been paid to studies on institutional designs in the field of the party system and its transformations towards multiparty and coalition dynamics. Likewise, comparative studies on electoral behavior at territorial and local level are promoted.

Gobernabilidad y Liderazgo Político

Líder: María Eugenia Bonilla Ovallos

Estudia la capacidad de los poderes públicos para interactuar en aras de plantear soluciones a los problemas políticos, sociales y económicos, fortaleciendo la legitimidad de la democracia mediante el establecimiento de liderazgos sólidos, capaces de generar consensos y promover el desarrollo a partir de un ejercicio eficiente de representación.

Governance and Political Leadership

Leader: María Eugenia Bonilla Ovallos

Study the capacity of public authorities to interact in order to propose solutions to political, social and economic problems, strengthening the legitimacy of democracy through the establishment of solid leadership, capable of generating consensus and promoting development based on a efficient representation exercise

Políticas Públicas y Desarrollo

Líder: Jakeline Vargas Parra

Aborda la respuesta del Estado a los problemas públicos para producir evidencia que permita valorar la intervención gubernamental en términos de su contribución a mejorar la calidad de vida de los ciudadanos y las ciudadanas. Aporta al control social de la gestión pública a través de la asesoría para la formulación de políticas públicas y la evaluación de la implementación de programas sociales. Analiza la influencia de las políticas públicas como eje articulador entre la calidad de la democracia y desarrollo económico.

Public Policies and Development

Leader: *Jakeline Vargas Parra*

Addresses the State's response to public problems in order to produce evidence to assess government intervention in terms of its contribution to improving the quality of life of citizens. It contributes to the social control of public management through advice for the formulation of public policies and the evaluation of the implementation of social programs. Analyze the influence of public policies as an articulating axis between the quality of democracy and economic development.

Estudios de Paz, Reconciliación y Posconflicto

Líder: *Ángela María Díaz Pérez*

Reflexiona sobre la paz y la multiplicidad de estrategias para su búsqueda y consolidación. Analiza las causas sociales, políticas y económicas del conflicto y aborda la recuperación de la memoria con fines de no repetición. Desarrolla estrategias encaminadas al fortalecimiento institucional para la reparación a víctimas y la reintegración de personas desmovilizadas de grupos armados. Busca identificar iniciativas y mecanismos de reconciliación que posibiliten la convivencia pacífica; la gestión y transformación pacífica de los conflictos y la generación de una cultura de paz con enfoque territorial.

Studies of Peace, Reconciliation and Post-Conflict

Leader: *Ángela María Díaz Pérez*

Reflect on peace and the multiplicity of strategies for its search and consolidation. Analyze the social, political and economic causes of the conflict and address the recovery of memory for the purpose of non-repetition. It develops strategies aimed at institutional strengthening for the reparation of victims and the reintegration of demobilized persons from armed groups. It seeks to identify initiatives and mechanisms of reconciliation that enable peaceful coexistence; the management and peaceful transformation of conflicts and the generation of a culture of peace with a territorial approach.

RESEARCH GROUP POLITICAL INSTITUTIONS AND PUBLIC OPINION

Code SNCTeI: COL0029488

Colciencias Classification: B

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GrupLac Web Link:

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Mairene Tobón Ospino

Judith Lucía Del Socorro Ramírez Carrero

Yasnaia Rocío Urón Durán

Group Description: *Institutions are fundamental in the scenario in which public policies are implemented, individual behavior and collective action, the analysis of their functioning dynamics and their interaction with citizens in the perspective of gender and human rights. The core of interest of this group to produce knowledge that contributes to academic debate, contribution to the formation of public opinion and social transformation.*

Research lines

Gender and Social Movements

Leader: *Ángela María Díaz Pérez*

The Gender Approach is a transversal tool for the understanding of diverse socio-cultural phenomena, emphasizing the socio-economic empowerment of women, their political participation and their contribution to the construction of peace in the Colombian context. Explore innovative alternatives for a cultural transformation, the breakdown of gender roles and stereotypes, as well as the development of new masculinities and non-hegemonic femininities. Reflect on sexual affective diversity and gender identities, making visible their

corporality, psychism and subjectivity, as a tool for equality. It deepens in the study of social movements in the contemporary world, as architects of the great social transformations. It analyzes human mobility, its causes, consequences and possible alternatives for the reception of migrants and the development of an intercultural society.

Trafficking in Persons

Leader: *Jakeline Vargas Parra*

Articulates networks at national and international level with the different actors related to the approach of human trafficking, to identify the dynamics of the phenomenon and jointly build actions that prevent the occurrence of crime, assistance and protection to victims and research and prosecution of the perpetrators. Human Trafficking is a crime that involves the recruitment, harboring, transportation, provision or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary in the sex industry, begging, servile marriages, forced labour among other diverse sectors in which the dignity of men and women is undermined and their autonomy is limited.

Citizenship and Public Opinion

Leader: *Judith Lucía Del Socorro Ramírez Carrero*

Analyze the dynamics that arise from the multiple interactions between the media, political institutions and citizens, as well as the ideological forms that define institutional and public behavior. It explores the way in which public opinion is constructed and how it directly affects the way in which societies and their institutions construct their social imaginaries.

Political power

Leader: *Esther Parra Ramírez*

This line is oriented to the analysis of the relations between governors and the citizens, particularly in the territorial and local scope through studies on leadership, social control of public management, presidential powers and their transformation from institutional redesigns. His interest is also in the studies on governance in the different scenarios of application and studies on biopolitics, that is, those related to the forms of government in which power relations express a new dynamic of forces, where the life emerges as a power of resistance and creation.



GROUP IN ORGANIZATIONAL RESEARCH - GENIO

Code SNCTeI: COL0035707

Colciencias Classification: A

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Edgar Mauricio Mendoza García

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Gabriel Mauricio Martínez Toro

Germán Darío Leuro Casas

Gloria Clotilde Oviedo Chávez

Jorge Raúl Serrano Díaz

María Mónica Vargas Mantilla

Oscar Mauricio Lizcano Moreno

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Tatiana Andrea Blanco Álvarez

Adriana Rosalba Rueda Díaz

José Luis Garcés Bautista

Claudia Molina Gómez

Mónica Vargas Prieto

José Julián Lizcano

Group Description: GENIO Research Group develops activities of teaching, research and extension in topics related to: strategy, productivity, competitiveness, marketing and internationalization, quality, social accountability, entrepreneurship and innovation; creating relevant knowledge for the region and the globe, around the management carried out by the organizations, having as a baseline the school of competitiveness thought and the creation of value, which have enhanced the relations with the entrepreneurial sector.

Research lines

Entrepreneurship and Entrepreneurial Innovation

Leader: Eduardo Carrillo Zambrano

Focused on improving processes and raising, in a sustainable way, the efficiency and competitiveness of the organizations, incorporating evaluations, standards and methodologies integrally and transversely, interpreting their perspective and management model out of entrepreneurship and venture. Based on the aforementioned, the research group hosts, assesses and supports the consolidation of winner ideas out of the differentiation and the approach, contributing to the creation of companies and organizations, taking into account the competence and competitiveness standards, and the promotion and assistance in the creation and enhancement of startups and spinoffs.

Marketing and Internationalization

Leader: Clara Inés Peña de Carrillo

Layout of strategies in territorial marketing and city marketing as support to the municipalities, regions and departments that can demonstrate, through evaluations and interventions of interdisciplinary groups, the competitiveness axis that withstands the positioning of the region in Colombia and the world, with clear marks of competitiveness and socio-economic development.

With regards to Internationalization, it encompasses sensitive topics related to International competitiveness, the international profile of the organizations, offer studies of exportable goods, international commercialization studies, export plans and international logistics, global linking, gap analysis and assistance to the company in order to improve its efficiency and achieve high standards for accessing the international market. Moreover, it is considered the national and international mobility of the researchers for the development of ensemble projects that contribute to the economic development of the participant countries.

Strategic and Competitiveness

Leader: Diana Oliveros Contreras

This line's purpose is to create knowledge that promotes productivity, internationalization, competitiveness and the creation of value in the organizations and regions. With the development of basic and applied research, and the offer of consultancy services, it is incorporated the models, techniques, tools and applications that allow the assessment of perspectives, trends and strategies that support the decision making at the organizations.

Sustainable Development

Leader: Andrea Catalina Martínez Lozada

This line of research is focused on the development and management of projects and initiatives related to the UN GLOBAL COMPACT and to the corresponding commitments with the objectives of sustainable development, and to the transfer of good entrepreneurial and organizational practices in management programs of social and economic benefit.

Educative Innovation

Leader: Mónica Vargas Prieto

Research development on the educative field, using technology and creative and innovative strategies, aiming for the strengthening and improvement of the learning process in the business area, fostering a culture of quality in the programs of the FACULTY OF ECONOMIC, ADMINISTRATIVE AND ACCOUNTABLE SCIENCES.

ACCOUNTANCY AND FINANCES - INVESCONFIN

Code SNCTeI: COL0037809

Colciencias Classification: B

Group Director: Nydia Marcela Reyes Maldonado

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=0000000002040>

Researchers

Arnaldo Helí Solano Ruiz

Carlos Alberto Oyola Moreno

Fernando Chaparro García

Nydia Marcela Reyes Maldonado

Group Description: *The research group in accountancy and finances INVESCONFIN researches creative solutions to technical and practical problems for the economic and social fields, both regional and national. Moreover, the group investigates related topics to educative innovation, the follow-up of competences and the design of better pedagogical practices that improve both teaching and learning processes of chartered accountants.*

Research lines

Audit and Control

Leader: Fernando Chaparro García

Project development in financial and internal audit under international standards, in evaluation models of entrepreneurial risks, codes of good governance, quality audit and educative research on the pedagogics and didactics of the audit.

Accountancy and Finances

Leader: Nydia Marcela Reyes Maldonado

Project development in accountancy and international finances, administrative accountancy, of expenses, as well as the educative research on the pedagogics and didactics of the accountability and finances.

Accountancy Information Technology



Leader: *Carlos Alberto Oyola Moreno*

Project development focused on the analysis of financial information with emerging technologies, on the application of new technologies to the accounting profession and the design of applied technologies to innovation and educative management.

RESEARCH GROUP SECTORAL DYNAMICS

Code SNCTeI: COL0057239

Colciencias Classification: C

Group Director: Yudy Adriana Gamboa Vesga

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GrupLac Web Link:

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Luis Rubén Pérez Pinzón

Lyda Maritza Rivera Martínez

Pedro Fernando Delgado Jaimes

Ricardo Varela Villalba

Yudy Adriana Gamboa Vesga

Group Description: *Sectoral Dynamics is an interdisciplinary research group focused on the analysis of issues related to the dynamics of economic sectors and the economic and social development of the region and the country. Its main objective is to contribute to the understanding of socio-economic phenomena in these areas and propose solutions to problems in the public and private sectors.*

Research lines

Local Economic Development

Leader: Pedro Fernando Delgado Jaimes

This line of research deals with subjects related to economic development and the productive and competitive transformation of the different economic sectors and their social implications, from a territorial perspective.

Applied Economics

Leader: *Ismael Estrada Cañas*

The objective of this line of research is to apply the theories, techniques and tools of Economics to the analysis of real problems that affect the interaction of economic agents and their context, seeking solutions to them.

Tourism and Culture

Leader: *Ricardo Varela Villalba*

This research line develops projects, which, from a social, economic and cultural perspective, identify and analyse the tourist potentials of the regions with tourism potential in Colombia. Similarly, it aims to generate proposals for the implementation of sectoral policies to foster the regional and national tourism.

BIOTECHNOLOGY AND ENVIRONMENT - CINBBYA

Code SNCTeI: COL0108984

Colciencias Classification: B

Group Director: Graciela Chalela Alvarez

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GrupLac Web Link:

<https://scienti.colciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000010966>

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Norma Yadira Rojas Aguilar
Yohana Castro Hernández
María del Pilar Velasco Uribe
Diana patricia Heredia Ospina

Group Description: *The group in Biotechnology and Environment and its two lines serves as an integrating axis of the functions of research and teaching at the level of sustainability, integrating the different disciplines of knowledge and recognizing the complexity of society itself, nature and its relationships. Given the current opportunities in the industrial sector, the group has concentrated its efforts on improving the productivity of resources, including biotechnology in production processes, reducing environmental impact, incorporating clean technologies and the reasonable use of waste to generate other products, through applied research.*

Starting from an effective and efficient management exercise as a means for present and future generations to have a healthy and ecologically balanced human environment, the group has directed efforts in the preservation of the resource base and the environment, promoting the use of biodiversity as a promising source of new resources.

Research lines

Environmental Biotechnology

Environmental biotechnology has emerged as a solution to many of today's pollution problems. Generically, environmental biotechnology encompasses any application aimed at

reducing pollution, from the use of microorganisms to generate fuels to the use of plants to absorb toxic substances.

In this line of work, viable solutions to environmental social problems are generated through the use of clean technologies in areas such as the production of bioethanol from agricultural waste, bioproduction of biodiesel from green algae and cyanobacteria, waste bioconversion processes, production of biogas, production of biohydrogen from green algae, production of biofertilizer and soil recoverers from organic waste material.

Environmental Bioethics

From this line we seek to develop environmental awareness, with the aim of generating clean production as an alternative for sustainable and eco-efficient development, using biological waste as inputs for the bioproduction of value-added compounds, working on issues such as the conservation of biodiversity, environmental awareness campaigns, determination of air microbial quality, environmental health, biodegradation of soil and water environmental pollutants, microorganisms and their effect on the deterioration of the environment, environmental management bioprocesses, air quality and their epidemiological relationship, based on bioethics in each of the processes.