CURRÍCULUM VÍTAE NORMALIZADO

Andrea del Pilar Sánchez Camargo

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GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA E INNOVACIÓN

FECYT FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y LA TECNOLOGÍA

Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

BACKGROUND

I am B. Sc. in Chemical Engineering by National University of Colombia (2006) and M.Sc. in Food Engineering by University of Campinas (Brazil, 2010). I finished my Ph.D. studies in Biology and Food Science at Autonomous University of Madrid (Spain, 2017), developing my doctoral thesis at the Research Institute of Food Science (CIAL-CSIC). Recently, I have continued my research career abroad as a postdoctoral fellow at National University of Colombia and Federal University of Santa Catarina (Brazil). My background includes experience in research and development functional food products in both scientific and industrial scenarios. My research topic has been focused on the integration and intensification of green processes to obtain bioactive compounds and prove their functional bioactivity, from agro industrial products and by-products. I have participated in 9 R&D national and international research projects and I have co-authored 32 publications and 5 book chapters.

EDUCATIONAL DEGREES

Ph. D Biology and Food Science
Autonomous University of Madrid – UAM – Madrid, Spain (2013-2017)
Project: Development of new integrated extraction processes to obtain bioactive compounds.

Master of Science in Food Engineering
University of Campinas, UNICAMP, Campinas – SP, Brazil (2008-2010)
Project: Supercritical CO2 extraction of astaxanthin and omega-3 fatty acids from Brazilian redspotted shrimp waste.

Bachelor of Chemical Engineering
National University of Colombia, UNAL, Bogotá, Colombia (2000-2006)
Monograph Project: Synthesis and characterization of alkylpolyglucoside as non-ionic surfactant.

MORE RELEVANT PROFESSIONAL EXPERIENCE

- Postdoctoral research fellowship -Faculty of Chemical and Food Engineering - Federal University of Santa Catarina (Brazil) (November, 2019 - October, 2020)
- Postdoctoral research fellowship - Institute of Food Science and Technology (ICTA) - National University of Colombia (Jul, 2018- August, 2019)
- Part-time Lecturer-Faculty of Engineering - Department of Chemical Engineering - University of LaSalle (Colombia) (Feb, 2018 – May, 2018)
- Part-time Lecturer-Faculty of Science - Department of Chemistry- National University of Colombia, (Aug, 2017 – March, 2019)
- R&D Food Scientist - TECNAS S.A. - Institute of Food Science and Technology (INTAL), Medellin – Colombia (Oct, 2010- Jan, 2013)
- Packing quality engineer at AstraZeneca Colombia S.A. (Mar, 2007-Aug, 2007)

AWARDS

- São Paulo Research Foundation (FAPESP) Master of Science Scholarship (2008-2010). (Process No. 2008/52829-0)
- COLCIENCIAS (Colombia). Doctoral studies abroad program. Ph. D. Scholarship (Call 568. 2013- 2017)
- Best paper award 2017. International Journal of Molecular Science.
- Doctoral thesis with Cum Laude qualification.

SKILLS

Software: Microsoft Office 2010, STATGRAPHICS XV, HSPiP 5, Aspen Plus (Aspen Engineering Suíte 10), AutoCAD

Analytical: Bromatology, UHPLC-MS, GC-MS, Antioxidant activity measurements methodologies, cell culture.

Languages: Native language: Spanish

Other languages: English (Level B1, TOEFL Ibt, 2012), Portuguese (Full professional proficiency, CELPE-BRAS).

General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

- Total citations in articles (Scopus, Jan-2021): 847
- Total published articles (Scopus, Jan-2021): 32
- Total articles in the first quartile: 25
- Index H (Scopus, Jan-2021): 17
- Book chapters: 5 (International).
- Number of research projects in which she has participated: 9
- Contributions to congresses: 26 (10 oral presentations, 6 keynote talk and 10 posters).
- Awarded with the best paper award 2017 by International Journal of Molecular Science.

Andrea del Pilar Sánchez Camargo

Surname(s): **Sánchez Camargo**
Name: **Andrea del Pilar**
ORCID: **0000-0002-5172-7096**
ScopusID: **57192932056**
ResearcherID: **D-8105-2014**

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidade Federal de Santa Catarina	Post-doctoral Researcher	01/11/2019
2	Universidad Nacional de Colombia	Post-doctoral Researcher	25/05/2018
3	Universidad Nacional de Colombia	Part-time lecturer	04/08/2017
4	Universidad de La Salle	Part-time lecturer	09/02/2018
5	Instituto de Ciencia y Tecnología Alimentaria (INTAL) - TECNAS S.A.	Food Scientist	10/10/2010
6	Universidad Estadual de Campinas	Teaching assistant	03/02/2009
7	AstraZeneca Farmaceutica Colombia	Quality control engineer	08/03/2007
8	Aceites Eldorado S.A.	Production supervisor	06/06/2006

1 **Employing entity:** Universidade Federal de Santa Catarina **Type of entity:** University
Department: Department of Chemical and Food Engineering, Faculty of Engeneering
City employing entity: Florianopolis, Brazil
Professional category: Post-doctoral Researcher **Educational Management (Yes/No):** Yes
Phone: (+55) 48 37212537 **Fax:** (+55) 48 37219687 **Email:** s.ferreira@ufsc.br
Start-End date: 01/11/2019 - 31/10/2020 **Duration:** 1 year
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 230000 - Chemistry; 330000 - Technological Science.
Secondary (UNESCO code): 230690 - Chemistry of Natural Products Organic; 330900 - Food technology
Tertiary (UNESCO code): 330303 - Chemical processes; 330311 - Industrial chemistry; 330903 - Antioxydants in food; 330912 - Food additives; 332817 - Liquid-liquid extraction; 332825 - Solid-liquid extraction
Performed tasks: - Postdoctoral researcher; planning of basic and applied research activities; training of young researchers; writing and publishing research works; preparation of technical-scientific documents and conferences; undergraduate and graduate education
Identify key words: Natural products; Food chemistry; Food industry; Chemistral tecnology
Field of management activity: University
Applicability in teaching and/or research: - Leader researcher of the project entitled "Green-based biorefinery approaches for fruit by-products valorization" - Supported the organization of the postgraduate course entitled "New sustainable processes, advanced analytical techniques and Foodomics" - Supported the undergraduate and graduate (M. Sc and Ph. D) students in their research projects. - Supported the writing and publishing of 2

research articles (as co-author) in peer-reviewed journals from food science and chemical engineering area (DOI: 10.1016/j.molliq.2020.113761, DOI: 10.1016/j.lwt.2020.110414) - Wrote and publishing a book chapter included in the book entitled "INNOVATIVE AND EMERGING TECHNOLOGIES IN THE BIO-MARINE FOOD SECTOR" by ELSEVIER editorial. - Supported the writing of 2 research projects funded by R&D promoters agencies of the Brazilian government. - Developed of analytical methodologies and standard operational procedures for the Laboratory of Thermodynamics and Supercritical Technology (LATESC) - Acted as guest reviewer at the Journal of Supercritical Fluids (Special Issue: PROSCIBA), Journal of Chromatography A and the Journal of Food Science. - Acted as guest editor of the special issue "Supercritical Fluid Extraction of Bioactive Compounds" of the journal Separations (Open access). https://www.mdpi.com/journal/separations/special_issues/food_extraction - Requested for quotation and reception of equipment and materials for LATESC.

2 **Employing entity:** Universidad Nacional de Colombia **Type of entity:** University Research Institute

Department: Instituto de Ciencia y Tecnología de Alimentos (ICTA)

City employing entity: Bogotá D.C, Colombia

Professional category: Post-doctoral Researcher **Educational Management (Yes/No):** Yes

Phone: (+57) 3165000 - 19227 **Email:** lfgutierreza@unal.edu.co

Start-End date: 25/05/2018 - 25/08/2019 **Duration:** 1 year - 1 month

Type of contract: Grant-assisted student (pre or post-doctoral, others)

Dedication regime: Full time

Primary (UNESCO code): 230000 - Chemistry; 240700 - Cell biology; 330000 - Technological Science.

Secondary (UNESCO code): 230690 - Chemistry of Natural Products Organic; 240701 - Cell culture; 330900 - Food technology

Tertiary (UNESCO code): 330311 - Industrial chemistry; 330313 - Preservation technology; 330903 - Antioxydants in food; 330912 - Food additives; 330928 - Vegetable oils and fats; 332817 - Liquid-liquid extraction; 332825 - Solid-liquid extraction

Performed tasks: - Postdoctoral researcher; planning of basic and applied research activities; training of young researchers; writing and publishing research works; preparation of technical-scientific documents and conferences; undergraduate and graduate education

Identify key words: Food chemistry; Food technology; Industrial chemistry

Field of management activity: University

Applicability in teaching and/or research: - Leader researcher of the project entitled "Application of emerging technologies for the valorization of industrial by-products from mango (Mangifera indica L.) to obtain food ingredients with functional characteristics", awarded by Ministry of Science and Technology (Colombia) - Supported the undergraduate and graduate (M. Sc and Ph. D) students in their research projects. - Wrote and publishing 7 scientific papers (as co-author) in peer-reviewed journals from food science and chemical engineering area . - Wrote and publishing a book chapter included in the book entitled "Chapter 17. Gas Expanded-liquids'" by ELSEVIER editorial - Development of analytical methodologies and Standard Operational Procedures for the Laboratory of High Pressure of the Food Chemistry research group - Guest reviewer at the Journal of Supercritical Fluid and Electrophoresis journal. - Requested for quotation and request of equipment and materials for the research group. - Development and participation of group feedback seminars.

3 **Employing entity:** Universidad Nacional de Colombia **Type of entity:** University

Department: Department of Chemistry, Faculty of Science

City employing entity: Bogotá D.C, Colombia

Professional category: Part-time lecturer **Educational Management (Yes/No):** Yes

Phone: (+57) 3165000 - 18414 **Email:** fparadaa@unal.edu.co

Start-End date: 04/08/2017 - 15/03/2019 **Duration:** 1 year - 8 months - 9 days

Type of contract: Temporary employment contract
Dedication regime: Part time
Performed tasks: Responsible of the subjects "Experimental Physical Chemistry (I, II) " and "Basic principles in experimental chemistry"
Field of management activity: University
Applicability in teaching and/or research: R&D assistant professor- Food Chemistry Research Group (GIQA). Planning of basic and applied research activities, training of young researchers, and preparation of technical-scientific documents and conferences.

4 **Employing entity:** Universidad de La Salle **Type of entity:** University
Department: Chemical engineering, Engineering
City employing entity: Bogotá D.C., Colombia
Professional category: Part-time lecturer **Educational Management (Yes/No):** Yes
Phone: (+57) 3488000 - 1407 **Email:** gestionhumana@lasalle.edu.co
Start-End date: 09/02/2018 - 07/06/2018 **Duration:** 4 months
Type of contract: Temporary employment contract
Dedication regime: Part time
Primary (UNESCO code): 331005 - Processing engineering; 331315 - Machine design; 620304 - Drawing, engraving
Performed tasks: Responsible for the subject Graphic Expression in Chemical Engineering with a dedication of 3h per week.
Identify key words: Basic chemical industry
Field of management activity: University
Applicability in teaching and/or research: Responsible for the subject Graphic Expression in Chemical Engineering with a dedication of 3h per week.

5 **Employing entity:** Instituto de Ciencia y Tecnología Alimentaria (INTAL) - TECNAS S.A. **Type of entity:** Innovation and Technology Centres
City employing entity: Medellín, Colombia
Professional category: Food Scientist **Educational Management (Yes/No):** No
Phone: (+57) 4 2854290 **Email:** ljaramillo@tecnas.com.co
Start-End date: 10/10/2010 - 31/01/2013 **Duration:** 2 years - 3 months
Type of contract: Permanent employment contract
Dedication regime: Full time
Primary (UNESCO code): 320613 - Nutrition; 330903 - Antioxydants in food; 330912 - Food additives; 330914 - Food processing
Performed tasks: Coordinator of the R&D research areas: * Microencapsulation of flavors and production of meat flavors by Maillard reaction * Animal protein enzymatic hydrolysis * Alternative use of agro-industrial waste * Extraction of natural colorants and antioxidant compounds
Identify key words: Agri foodstuffs; Food aditive; Processed agricultural produce; Foodstuff
Field of management activity: Investigación y desarrollo
Applicability in teaching and/or research: Coordination and execution of research projects developed in the R+D+i area for obtaining food additives: Microencapsulation of flavors, enzymatic hydrolysis of protein of animal origin, use of by-products from agribusiness, production of meat flavors and extraction of natural colorants and antioxidants (lead researcher). In addition, formulation of research projects for funding by agents promoting R + D + i of the Colombian government (Ministry of Science, Ministry of Agriculture, National Learning Service -SENA-).

6 **Employing entity:** Universidad Estadual de Campinas **Type of entity:** University
Department: Department of Food engineering, Faculty of Food engineering
City employing entity: Campinas, Brazil
Professional category: Teaching assistant **Educational Management (Yes/No):** Yes

Phone: (+55) 1935217592 **Email:** cabral@fea.unicamp.br
Start-End date: 03/02/2009 - 31/07/2009 **Duration:** 6 months
Type of contract: Temporary employment contract
Primary (UNESCO code): 330903 - Antioxydants in food; 331005 - Processing engineering
Performed tasks: Teaching assistant; Planning of basic and applied research activities; training of young researchers; writing and publishing research works; preparation of technical-scientific documents and conferences.
Field of management activity: University
Applicability in teaching and/or research: - Research advisor for third-year undergraduate students in Food Engineering in the area of extraction and fractionation of bioactive compounds. - Responsible for 50% of the curricular contents of the subject "Fundamentals of calculations in processes", as well as evaluations and exams.

7 **Employing entity:** AstraZeneca Farmaceutica Colombia **Type of entity:** Business
City employing entity: Bogotá D.C., Colombia
Professional category: Quality control engineer **Educational Management (Yes/No):** No
Phone: (+57) 32572000
Start-End date: 08/03/2007 - 23/08/2007 **Duration:** 5 months
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 120306 - Automated quality control systems; 239000 - Pharmaceutical Chemistry
Performed tasks: - Inspection of packing material of the pharmaceutical products of the company portfolio. - Data compilation and issue inspection reports. - Classify products according to their quality in conformity with established standards.
Field of management activity: Quality managment

8 **Employing entity:** Aceites Eldorado S.A. **Type of entity:** Business
Department: Producción
City employing entity: Mosquera, Colombia
Professional category: Production supervisor **Educational Management (Yes/No):** No
Phone: (+57) 18671103
Start-End date: 06/06/2006 - 06/02/2007 **Duration:** 9 months
Type of contract: Permanent employment contract
Primary (UNESCO code): 330928 - Vegetable oils and fats; 331005 - Processing engineering
Performed tasks: - Supervision of edible oil extraction process from cottonseed and its subsequent chemical refining, bleaching and deodorizing. - Development of scheduling production charts for efficient use of materials, manpower and equipment in order to achieve produ- ction targets. - Establishment of logistic operations for raw materials and finished products.

Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

1 **University degree:** Maestría
Name of qualification: M.Sc. Food Engineering
City degree awarding entity: Campinas, Brazil
Degree awarding entity: Universidade Estadual de Campinas **Type of entity:** University
Date of qualification: 05/05/2010
Average mark: Excellent
Foreign qualification: Mestrado em Engenharia de Alimentos

2 **University degree:** Continuing Education Certificate
Name of qualification: Quality inspector in systems for pharmaceutical, veterinary, cosmetic, foods industries and medical devices: Based on GPM, ISO 9000, HACCP, GPA, ISO 22000 and ISO 13485
City degree awarding entity: Bogotá, Colombia
Degree awarding entity: Universidad Industrial de Santander **Type of entity:** University
Date of qualification: 01/06/2007
Average mark: Pass

3 **University degree:** Higher degree
Name of qualification: B.Sc. Chemical Enginnering
City degree awarding entity: Bogotá D.C., Colombia
Degree awarding entity: Universidad Nacional de Colombia **Type of entity:** University
Date of qualification: 21/04/2006
Average mark: Good
Foreign qualification: Chemical engineer

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Biología y Ciencias de la Alimentación
Degree awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
City degree awarding entity: Madrid, Community of Madrid, Spain
Date of degree: 23/04/2017
DEA awarding entity: Universidad Autónoma de Madrid
Date DEA was awarded: 23/04/2017
European doctorate: No
Thesis title: Desarrollo de nuevas estrategias de extracción para la obtención de compuestos bioactivos
Thesis director: Elena Ibañez
Thesis co-director: Miguel Herrero; Virginia Garcia Cañas

Obtained qualification: Sobresaliente Cum Laude
Recognition of quality: No
Special doctorate award: No
Standardised degree: No

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

1 **Type of training:** Course
Training title: 1st international workshop on emerging technologies
City awarding entity: Medellín, Colombia
Awarding entity: Instituto de Ciencia y Tecnología Alimentaria - Fundación INTAL
End date: 03/10/2012 **Duration in hours:** 10 hours

2 **Type of training:** Course
Training title: Innovation and Development of Food Products
City awarding entity: Medellín, Colombia
Awarding entity: Instituto de Ciencia y Tecnología Alimentaria - Fundación INTAL **Type of entity:** Foundation
End date: 24/03/2012 **Duration in hours:** 10 hours

3 **Type of training:** Course
Training title: Antioxidants for the Food and Health Industry
City awarding entity: Medellín, Colombia
Awarding entity: Universidad EAFIT **Type of entity:** University
End date: 10/09/2011 **Duration in hours:** 30 hours

4 **Type of training:** Course
Training title: Statistical methods for research and product development
City awarding entity: Medellín, Colombia
Awarding entity: SInfoEstad
End date: 02/09/2011 **Duration in hours:** 44 hours

5 **Type of training:** Practical work
Training title: Use of herbs and spices in the formulation and innovation of food products
City awarding entity: Medellín, Colombia
Awarding entity: Instituto de Ciencia y Tecnología Alimentaria - Fundación INTAL **Type of entity:** Foundation
End date: 04/08/2011 **Duration in hours:** 30 hours

6 **Type of training:** Course
Training title: Enzymatic hydrolysis of waste generated in the industry with agro-industrial applications
City awarding entity: Medellín, Colombia
Awarding entity: Instituto de Ciencia y Tecnología Alimentaria - Fundación INTAL
End date: 25/03/2011 **Duration in hours:** 8 hours

7 **Type of training:** Course
Training title: Encapsulation, Maillard Reactions, Emulsions and Reactions Leading to Flavor
City awarding entity: Medellín, Colombia
Type of entity: Foundation

Awarding entity: Instituto de Ciencia y Tecnología Alimentaria - Fundación INTAL
End date: 25/01/2011 **Duration in hours:** 10 hours

8 **Type of training:** Course
Training title: Supercritical Carbon Dioxide in Biomaterials: Synthesis and Processes
City awarding entity: Natal, Brazil
Awarding entity: PROSCIBA
End date: 09/04/2010 **Duration in hours:** 3 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C1	C1	C1	C1	C1
Portuguese	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

1 **Type of teaching:** Official teaching
Name of the course: Experimental Physical Chemistry I
Type of programme: Bachelor's degree **Type of teaching:** Laboratory work
Type of subject: Obligatory
University degree: Bachelor in Chemistry
Course given: Chemistry
Start date: 14/08/2017 **End date:** 15/03/2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 4
Entity: Universidad Nacional de Colombia **Type of entity:** University
Faculty, institute or centre: Chemistry
City of entity: Bogotá D.C., Colombia
Assessment entity: Universidad Nacional de Colombia
Type of entity: University
Mark obtained: 4.5 **Top mark possible:** 5.0

2 **Type of teaching:** Official teaching
Name of the course: Experimental Physical Chemistry II
Type of programme: Bachelor's degree **Type of teaching:** Laboratory work
Type of subject: Obligatory
University degree: Bachelor in Chemistry
Course given: Chemistry
Start date: 15/03/2019 **End date:** 28/06/2018
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 4
Entity: Universidad Nacional de Colombia **Type of entity:** University
Faculty, institute or centre: Chemistry

Department: Chemistry
City of entity: Bogotá, Colombia
Assessment entity: Universidad Nacional de Colombia
Type of entity: University
Mark obtained: 4.5 **Top mark possible:** 5.0
Subject language: Spanish

3 **Type of teaching:** Official teaching
Name of the course: Basic principles in experimental chemistry
Type of programme: Bachelor's degree **Type of teaching:** Laboratory work
Type of subject: Obligatory
University degree: Bachelor in Agronomic engineering
Course given: Agronomic engineering
Start date: 14/08/2017 **End date:** 08/06/2018
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 3
Entity: Universidad Nacional de Colombia **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
Department: Chemistry
City of entity: Bogotá D.C., Colombia
Assessment entity: Universidad Nacional de Colombia
Mark obtained: 4.5 **Top mark possible:** 5.0
Subject language: Spanish

4 **Type of teaching:** Official teaching
Name of the course: Expresión gráfica en Ing. Química
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Bachelor in Chemical Engineering
Course given: Chemical Engineering
Start date: 09/02/2018 **End date:** 07/06/2018
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 3
Entity: Universidad del LaSalle-Colombia **Type of entity:** University
Department: Chemical engineering
City of entity: Bogotá D.C., Colombia
Assessment entity: Universidad de LaSalle
Type of entity: University
Mark obtained: 4.4 **Top mark possible:** 5.0
Subject language: Spanish

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Use of green extraction techniques for obtaining bioactive extracts from a coffee by-product
Type of project: Minor thesis
Co-director of thesis: Fabián Parada Alfonso
Entity: Universidad Nacional de Colombia - Department of Chemistry
City of entity: Bogotá D.C, Colombia
Student: Ana Milena Escamilla Santos
Obtained qualification: Approved

Identify key words: Agri foodstuffs
Date of reading: 20/05/2020

2 **Project title:** Technical/economic proposal for the integral use of the mangosteen fruit (Garcinia mangostana) in food applications
Type of project: Minor thesis
Entity: Universidad Nacional de Colombia - ICTA
Type of entity: University Research Institute
City of entity: Bogotá D.C, Colombia
Student: Carlos Andrés Orozco Moreno
Obtained qualification: Approved
Date of reading: 31/01/2020
Quality recognition: No

Teaching experience in courses and seminars for university teacher training

1 **Type of event:** Seminar
Name of the event: Science has a name of woman: A journey on the fundamental role of women in science
City organizing entity: Duitama, Colombia
Organising entity: Colegio Nacionalizado La Presentación
Hours of teaching: 6
Teaching language: Spanish
Teaching date: 30/08/2020

2 **Type of event:** Seminar
Name of the event: Development of biorefinery strategies for the valorization of agro residues using green extraction technologies
City organizing entity: Universidad Naciona de Colombia, Brazil
Organising entity: Universidade Federal de Santa Catarina
Type of entity: University
Hours of teaching: 2
Teaching language: Portuguese
Teaching date: 16/07/2020

3 **Type of event:** Workshop
Name of the event: New sustainable processes, advanced analytical techniques and Foodomics
City organizing entity: Universidade Federal de Santa Catarina, Brazil
Organising entity: Universidade Federal de Santa Catarina
Type of entity: University
Hours of teaching: 5
Teaching language: Portuguese
Teaching date: 02/03/2020

Scientific and technological experience

Research and development groups/teams

1 **Name of the group:** Laboratory of Thermodynamics and Supercritical Technology (LATESC)
Aims of the group: Perform activities related to processes involving high pressure and phase equilibrium thermodynamics
Name of principal investigator: Marcelo Lanza **Number of members in the group:** 30
Type of collaboration: Co-authorship of projects and their development
City of group: Florianópolis, Brazil
Affiliation entity: Universidade Federal de Santa Catarina **Type of entity:** University
Number of directed thesis: 27 **Number of directed postdoc:** 9
Identify key words: Others separation techniques; Thermodynamics
Start date: 01/11/2019 **Duration:** 1 year

2 **Name of the group:** Food Biomolecules
Aims of the group: To add value to the Colombian agri-food industry, through the design and application of innovative processes
Name of principal investigator: Luis Felipe Gutierrez Alvarez **Number of members in the group:** 16
Standardised code: COL0128332 **Type of collaboration:** Co-authorship of projects and their development
City of group: Bogotá, Colombia
Affiliation entity: Universidad Nacional de Colombia **Type of entity:** University
Number of directed thesis: 0 **Number of directed postdoc:** 1
Identify key words: Foodstuffs tecnology; Food chemistry
Start date: 01/02/2018 **Duration:** 2 years - 11 months

3 **Name of the group:** Food Chemistry
Aims of the group: Food design and valorization of by-products of the food industry
Name of principal investigator: Carlos Eduardo Narvaez Cuenca **Number of members in the group:** 20
Standardised code: COL0004549 **Type of collaboration:** Co-authorship of projects and their development
City of group: Bogotá, Colombia
Affiliation entity: Universidad Nacional de Colombia
Number of directed thesis: 4 **Number of directed postdoc:** 2
Identify key words: Foodstuffs tecnology; Food chemistry
Start date: 01/06/2017 **Duration:** 3 years - 7 months

4 **Name of the group:** Foodomics
Aims of the group: Estudiar mediante una aproximación Alimentómica cómo los alimentos repercuten en la prevención o evolución de enfermedades que tienen una elevada incidencia en nuestra sociedad, en concreto el cáncer de colon y Alzheimer.
Name of principal investigator: Alejandro Cifuentes Gallego **Number of members in the group:** 8
Standardised code: 642526 **Type of collaboration:** Co-authorship of projects and their development

City of group: Madrid, Community of Madrid, Spain
Affiliation entity: Instituto de Investigación en Ciencias de la Alimentación
Type of entity: R&D Centre
Number of directed thesis: 18
Number of directed postdoc: 4
Relevant results: El término “Foodomics” fue definido por primera vez en una publicación SCI por el grupo de investigación (J. Chromatogr. A 1216 (2009) 7109; Anal. Chem. 84 (2012) 10150)
Identify key words: Foodstuffs tecnology; Food chemistry; Biological sciences; Food biotechnology
Start date: 23/04/2017
Duration: 4 years - 1 month

5 **Name of the group:** INTAL
Aims of the group: Design and development of products and processes for the food industry
Name of principal investigator: Claudio Jimenez Cartagena
Number of members in the group: 12
Standardised code: COL0056242
Type of collaboration: Co-authorship of projects and their development
City of group: Bogotá, Colombia
Affiliation entity: Fundación INTAL - Instituto de Ciencia y Tecnología Alimentaria
Type of entity: Foundation
Number of directed thesis: 0
Number of directed postdoc: 0
Identify key words: Foodstuffs tecnology; Food chemistry
Start date: 01/05/2010
Duration: 2 years - 8 months

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 **Name of the project:** “Industrial Sustainability: waste treatment and resource recovery; clean technologies; renewable energy sources and use of biodiversity”
Type of project: Basic research (including archaeological digs, etc)
Geographical area: National
Degree of contribution: Researcher
Entity where project took place: Universidade Federal de Santa Catarina
Type of entity: University
City of entity: Florianópolis, Brazil
Name principal investigator (PI, Co-PI....): Sandra Regina Salvador Ferreira
Nº of researchers: 10
Funding entity or bodies:
CAPES

Name of the programme: Programa Institucional de Internacionalização
Start-End date: 01/11/2019 - 01/11/2020
Duration: 1 year
Dedication regime: Full time
Applicant's contribution: - Post-doctoral researcher developing a sub-project entitled " Green emerging technologies applied for the valorization of Brazilian agro-industrial waste following the biorefinery concept”. - Supported the undergraduate and graduate (M. Sc and Ph. D) students in their research projects. - Supported the writing and publishing of 2 research articles (as co-author) in peer-reviewed journals from food science and chemical engineering area (DOI: 10.1016/j.molliq.2020.113761, DOI: 10.1016/j.lwt.2020.110414) - Wrote and publishing a book chapter included in the book entitled "INNOVATIVE AND EMERGING TECHNOLOGIES IN THE BIO-MARINE FOOD SECTOR" by ELSEVIER editorial. - Supported the writing of 2 research projects funded by R&D promoters agencies of the Brazilian government. - Developed of analytical methodologies and standard operational procedures for the Laboratory of Thermodynamics and Supercritical Technology (LATESC) - Acted

as guest reviewer at the Journal of Supercritical Fluids (Special Issue: PROSCIBA), Journal of Chromatography A and the Journal of Food Science. - Acted as guest editor of the special issue "Supercritical Fluid Extraction of Bioactive Compounds" of the journal Separations (Open access). https://www.mdpi.com/journal/separations/special_issues/food_extraction - Requested for quotation and reception of equipment and materials for LATESC.

2 **Name of the project:** Application of emerging technologies for the valorization of industrial byproducts from mango (Mangifera indica L.) to obtain food ingredients with functional characteristics

Identify key words: Sustainable chemistry; Food chemistry; Fruti product

Identify key words: Food industry

Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Instituto de Ciencia y Tecnología de Alimentos - Universidad Nacional de Colombia

City of entity: Bogotá D.C., Colombia

Name principal investigator (PI, Co-PI....): Andrea del Pilar Sánchez Camargo; Luis Felipe Gutierrez; Hugo Alexander Martinez Correa; Fabián Parada Alfonso

Nº of researchers: 4

Nª people/year: 4

Funding entity or bodies:

COLCIENCIAS

Type of entity: State agency

City funding entity: Bogotá D.C, Colombia

Type of participation: Co-ordinator

Name of the programme: Convocatoria 784. Estancias pos-doctorales

Start-End date: 01/07/2018 - 30/06/2019

Duration: 1 year

Total amount: 51.250 €

Relevant results: Three scientific papers published in peer-reviewed journals and participation to two international scientific conferences

Dedication regime: Full time

Applicant's contribution: Conceptualization, Methodology, Validation, Investigation, Writing - original drafts, Visualization, Project administration.

3 **Name of the project:** A new strategy to bring the in-vitro tests in human reality and its application to foodomic study of bioactivity of food compounds

Identify key words: Natural products; Cell culture; Food chemistry

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION

Type of entity: State agency

City of entity: Madrid, Community of Madrid, Spain

Name principal investigator (PI, Co-PI....): Alejandro Cifuentes Gallego; Miguel Herrero

Nº of researchers: 5

Funding entity or bodies:

Ministerio de Ciencia e Innovación

Type of entity: State agency

City funding entity: Madrid, Community of Madrid, Spain

Type of participation: Team member

Name of the programme: Plan Nacional de I+D+I

Code according to the funding entity: AGL2014-53609-P

Start-End date: 01/01/2015 - 01/01/2018

Duration: 3 years

Participating entity/entities: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION

Total amount: 145.000 €
Dedication regime: Full time
Applicant's contribution: In this project, I participated as PhD student. The objective of my work there had two parts: i) to develop sub and supercritical fluids integrated processes for obtaining bioactive compounds from natural sources (mainly algae, microalgae, plants and food industry by-products) and ii) to study by Foodomic approach their effects in prevention and evolution of one of the diseases with higher incidence in our society, colon cancer. For this I use colon cancer cell lines, which may have important consequences in the prevention of this disease through the diet. Also, I had participation creating the methodology, validation, investigation, and writing of scientific papers as outcomes of this project.

4 **Name of the project:** The CO2 algae biorefinery. "Multi-product Integrated bioRefinery of Algae: from Carbon dioxide and Light Energy to high-value Specialties - MIRACLES
Identify key words: Sustainable chemistry; Foodstuff; Marine sciences
Identify key words: Food chemistry; Algae; Chemical industry
Type of project: Research and development, including transfer **Geographical area:** European Union
Degree of contribution: Researcher
Entity where project took place: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Hans Reith
Nº of researchers: 25
Funding entity or bodies:
Unión Europea (FP7) **Type of entity:** State agency
City funding entity: Madrid, Community of Madrid, Spain

Type of participation: Team member
Name of the programme: European Union's Research and Innovation funding programme for 2007-2013
Code according to the funding entity: KBBE.2013.3.2-02
Start-End date: 01/10/2013 - 01/10/2017 **Duration:** 3 years
Total amount: 459.123 €
Dedication regime: Full time
Applicant's contribution: For this project, I participated as PhD student. The objective of my work there had two parts: i) to develop sub and supercritical fluids integrated processes for obtaining bioactive compounds from natural sources (mainly algae, microalgae, plants and food industry by-products) and ii) to study by Foodomic approach their effects in prevention and evolution of one of the diseases with higher incidence in our society, colon cancer. For this I use colon cancer cell lines, which may have important consequences in the prevention of this disease through the diet. Also, I had participation creating the methodology, validation, investigation, and writing of scientific papers as outcomes of this project.

5 **Name of the project:** Recovery of agro-industrial fruit waste for the food and cosmetic industry
Identify key words: Micelles, emulsions and colloids; Agri foodstuffs; Food technology
Identify key words: Agri foodstuffs
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** Non EU International
Degree of contribution: Researcher
Entity where project took place: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Elena Ibañez
Nº of researchers: 12
Funding entity or bodies:
CSIC - ORGANIZACION CENTRAL **Type of entity:** State agency

Name of the programme: Programa i-COOP Agro Food 2014
Code according to the funding entity: 2014CD0021
Start-End date: 01/08/2014 - 01/02/2015 **Duration:** 1 year - 6 months
Participating entity/entities: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION; Universidad de Nariño-Colombia
Total amount: 35.000 €
Relevant results: Three scientific papers published in peer-reviewed journals, five young researchers trained and two master dissertation accomplished.
Dedication regime: Part time
Applicant's contribution: For this project, I participated as PhD student. The objective of my work was to plan of basic and applied research activities, training of young researchers, and preparation of technical-scientific documents and conferences.

6 **Name of the project:** Evaluation of the synergistic effect of the addition of rosemary extract, alfa, beta, gamma -tocopherols and mortiño extract on the lipid oxidation of three food matrices
Identify key words: Foodstuffs tecnology
Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services **Geographical area:** National
Degree of contribution: Scientific coordinator
Entity where project took place: Instituto de Ciencia y Tecnología Alimentaria (INTAL) - Tecnas S.A. **Type of entity:** Foundation
City of entity: Medellín, Colombia
Name principal investigator (PI, Co-PI....): Andrea del Pilar Sánchez Camargo; Andrea Zapata; Jaime Andrés Cano
Nº of researchers: 12
Funding entity or bodies:
Instituto de Ciencia y Tecnología Alimentaria - Tecnas S.A. **Type of entity:** Foundation
City funding entity: Medellín, Colombia

MINCIENCIAS
City funding entity: Bogotá, Colombia

Type of participation: Principal investigator
Name of the programme: Convocatoria 562-2012. Proyectos elegibles de investigación con enfoque de mercado, desarrollo tecnológico e innovación en la modalidad de cofinanciación
Code according to the funding entity: 338756235960
Start-End date: 01/01/2012 - 01/01/2015 **Duration:** 3 years
Participating entity/entities: Instituto de Ciencia y Tecnología Alimentaria (INTAL) - Tecnas S.A.; MINCIENCIAS - COLOMBIA
Total amount: 124.855 €
Percentage as grant: 40
Dedication regime: Part time
Applicant's contribution: For this project, I participated as R&D Food scientist. The objective of my work was to create a methodology to investigate the synergistic effect of the addition of rosemary extract, a, b, g-tocopherols and agraz extract to protect three food matrices from lipid oxidation. In addition, to write scientific reports as outcomes of this project.

7 **Name of the project:** Foodomics evaluation of dietary polyphenols activity against colon cancer using in-vitro and in-vivo models
Identify key words: Sustainable chemistry; Food aditive; Cancer
Identify key words: Natural products; Cell culture; Food chemistry; Cancer
Geographical area: National

Type of project: Basic research (including archaeological digs, etc)
Degree of contribution: Researcher
Entity where project took place: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Alejandro Cifuentes
Type of participation: Team member
Name of the programme: Plan Nacional de I+D+I
Code according to the funding entity: AGL2011-29857-C03-01
Start-End date: 01/01/2012 - 01/01/2015 **Duration:** 3 years
Participating entity/entities: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION; Instituto Universitario de Biología Molecular y Celular; Universidad de Granada
Total amount: 266.000 €
Dedication regime: Part time
Applicant's contribution: For this project, I participated as PhD student. The objective of my work there had two parts: i) to develop sub and supercritical fluids integrated processes for obtaining bioactive compounds from natural sources (mainly algae, microalgae, plants and food industry by-products) and ii) to study by Foodomic approach their effects in prevention and evolution of one of the diseases with higher incidence in our society, colon cancer. For this I use colon cancer cell lines, which may have important consequences in the prevention of this disease through the diet. Also, I had participation creating the methodology, validation, investigation, and writing of scientific papers as outcomes of this project.

8 **Name of the project:** Effect of the addition of deodorized rosemary extract on the oxidative stability of palm olein subjected to frying processes
Identify key words: Preservative; Vegetable fats
Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services **Geographical area:** National
Degree of contribution: Scientific coordinator
Entity where project took place: Instituto de Ciencia y Tecnología Alimentaria (INTAL) - Tecnas S.A. **Type of entity:** Foundation
City of entity: Medellín, Colombia
Name principal investigator (PI, Co-PI....): Andrea del Pilar Sánchez Camargo
Nº of researchers: 12
Funding entity or bodies:
Instituto de Ciencia y Tecnología Alimentaria (INTAL) - Tecnas S.A. **Type of entity:** Foundation
City funding entity: Medellín, Colombia

MINCIENCIAS-COLOMBIA **Type of entity:** State agency
City funding entity: Bogotá, Colombia

Type of participation: Principal investigator
Name of the programme: Proyectos elegibles de investigación con enfoque de mercado, desarrollo tecnológico e innovación en la modalidad de cofinanciación.
Code according to the funding entity: 611359937212
Start-End date: 01/01/2013 - 30/06/2014 **Duration:** 1 year - 6 months
Total amount: 136.000 €
Dedication regime: Part time
Applicant's contribution: In this project, I participated as R&D Food scientist. The objective of my work was to design a process for obtaining a deodorized rosemary extract, include it into a palm olein and to study its oxidative stability, when subjected to frying processes. In addition, to write scientific reports as outcomes of this project.

9 **Name of the project:** Antimicrobial efficacy of natural substances against L. monocytogenes and Lactobacillus spp. in processed meat products
Identify key words: Meta processing industry
Type of project: Industrial research **Geographical area:** National
Degree of contribution: Scientific coordinator
Entity where project took place: Instituto de Ciencia y Tecnología Alimentaria (INTAL) - Tecnas S.A.
City of entity: Medellín, Colombia
Name principal investigator (PI, Co-PI....): Andrea del Pilar Sánchez Camargo; Andrea Zapata
Nº of researchers: 12
Funding entity or bodies:
MINCIENCIAS-COLOMBIA
City funding entity: Bogotá, Colombia

Type of participation: Co-ordinator
Name of the programme: Convocatoria 562-2012. Proyectos elegibles de investigación con enfoque de mercado, desarrollo tecnológico e innovación en la modalidad de cofinanciación.
Code according to the funding entity: 61135937220
Start-End date: 01/11/2012 - 01/11/2013 **Duration:** 1 year
Participating entity/entities: Instituto de Ciencia y Tecnología Alimentaria (INTAL)-Tecnas S.A.; MINICIENCIAS-COLOMBIA
Total amount: 54.532 €
Percentage as grant: 40
Dedication regime: Full time
Applicant's contribution: For this project, I participated as R&D Food scientist. The objective of my work was to create a methodology to evaluate the growth of Listeria monocytogenes, Salmonella Typhimurium and E. coli in sausages and mortadelas formulated with a natural antimicrobial containing Rosemary extract. In addition, to write scientific reports as outcomes of this project.

Scientific and technological activities

Scientific production

H index: 17
Date of application: 05/01/2021
Fuente de Indice H: SCOPUS

Publications, scientific and technical documents

1 Andrea del Pilar Sánchez Camargo; Diego Ballesteros Vivas; Luis Miguel Buelvas Puello; Hugo Alexander Martinez Correa; Fabián Parada Alfonso; Alejandro Cifuentes Gallego; Sandra Regina Salvador Ferreira; Luis Felipe Gutierrez. Microwave-assisted extraction of phenolic compounds with antioxidant and anti-proliferative activities from supercritical CO<inf>2</inf> pre-extracted mango peel as valorization strategy. LWT - Food Science and Technology. 137 - 110414, pp. 1 - 12. Elsevier, 19/10/2020. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S002364382031402X?via%3Dihub#!>. ISSN 0023-6438
DOI: 10.1016/j.lwt.2020.110414
Type of production: Scientific paper **Format:** Journal
Position of signature: 1 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 8 **Corresponding author:** Yes

Impact source: SCOPUS
Category: Agricultural and Biological Sciences: Food Science
Impact index in year of publication: 1.313
Journal in the top 25%: Yes
Position of publication: 28
No. of journals in the cat.: 299
Source of citations: SCOPUS
Citations: 0

Relevant results: Mango peel extract recovered at optimal conditions provided high anti-proliferative activity against HT-29 colon cancer cells line, after 24 h treatment (IC50 = 22.98 µg/mL)
Relevant publication: Yes

2 Andrea del Pilar Sánchez Camargo; Luis Felipe Gutierrez Álvarez; Sandra Milena Vargas; Hugo Alexander Martínez Correa; Fabián Parada Alfonso; Carlos-Eduardo Narvaéz Cuenca. Valorisation of mango peel: Proximate composition, supercritical fluid extraction of carotenoids, and application as an antioxidant additive for an edible oil. The Journal of Supercritical Fluids. 152 - 104574, pp. 1 - 9. Elsevier B.V., 18/07/2020. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844619302980?via%3Dihub>. ISSN 0896-8446
DOI: 10.1016/j.supflu.2019.104574
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6
Corresponding author: Yes
Impact source: SCOPUS
Category: Chemical Engineering (miscelaneus)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 9

Relevant results: Mango peel is a source of dietary fiber and its ScCO2 extract is able to protect edible oil systems, which might be regarded as an interesting alternative for the valorisation of this food by-product.
Relevant publication: Yes

3 Diego Ballesteros Vivas; Gerardo Álvarez Rivera; Sandra Johanna Morantes; Andrea del Pilar Sánchez Camargo; Fabián Parada Alfonso; Elena Ibañez; Alejandro Cifuentes. An integrated approach for the valorization of mango seed kernel: Efficient extraction solvent selection, phytochemical profiling and antiproliferative activity assessment. Food Research International. 126 - 108616, pp. 1 - 14. Elsevier, 12/08/2019. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0963996919304946?via%3Dihub>. ISSN 09639969
DOI: 10.1016/j.foodres.2019.108616
Type of production: Scientific paper
Format: Journal
Position of signature: 4
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 7
Corresponding author: No
Impact source: SCOPUS
Category: Agricultural and Biological Sciences- Food Science
Impact index in year of publication: 1.44
Journal in the top 25%: Yes
Position of publication: 31
No. of journals in the cat.: 299
Source of citations: SCOPUS
Citations: 6

Relevant results: A novel valorization strategy is proposed in this work for the sustainable utilization of a major mango processing waste (i.e. mango seed kernel, MSK), integrating green pressurized-liquid extraction (PLE), bioactive assays and comprehensive HRMS-based phytochemical characterization to obtain bioactive-rich fractions with high antioxidant capacity and antiproliferative activity against human colon cancer cells. The obtained MSK-extract exhibited higher antiproliferative activity against human colon adenocarcinoma cell line HT-29 compared to traditional extraction procedures described in literature for MSK utilization (e.g. Soxhlet), demonstrating the great potential of the proposed valorization strategy as a valuable opportunity for mango processing industry to deliver a value-added product to the market with health promoting properties

Relevant publication: Yes

4 Andrea del Pilar Sánchez Camargo; Natalia Pleite; Miguel Herrero Calleja; Alejandro Cifuentes Gallego; Elena Ibañez Ezequiel; Bienvenida Gilbert López. New approaches for the selective extraction of bioactive compounds employing bio-based solvents and pressurized green processes. The Journal of Supercritical Fluids. 128, pp. 112 - 120. Amsterdam(Holland): Elsevier, 12/05/2017. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844617301304>. ISSN 08968446

DOI: 10.1016/j.supflu.2017.05.016

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of reserved scientific or technical document
Total no. authors: 6
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 26

Relevant results: The use of theoretical calculations narrowed the search of suitable solvents, thus making the process greener. Among the bio-based solvents proposed, d-limonene was the most selective, although it was not able to recover all the fucoxanthin present in the biomass unless a continuous extraction aided by supercritical CO2 was used. he other three solvents tested showed good recoveries of fucoxanthin, but were less selective, following the decreasing order: ethyl acetate > ethyl lactate > ethanol.

Relevant publication: Yes

5 Andrea del Pilar Sánchez Camargo; Virginia García Cañas; Miguel Herrero; Alejandro Cifuentes; Elena Ibañez. Comparative study of green sub- and supercritical processes to obtain carnosic acid and carnosol-enriched rosemary extracts with in vitro anti-proliferative activity on colon cancer cells. International Journal of Molecular Science. 17 - 12, pp. 1 - 18. Basel(Switzerland): MDPI, 07/12/2016. Available on-line at: <https://www.mdpi.com/1422-0067/17/12/2046>. ISSN 16616596

DOI: 10.3390/ijms17122046

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 5
Corresponding author: No
Impact source: SCOPUS
Category: Organic Chemistry
Impact index in year of publication: 1.317
Journal in the top 25%: Yes
Position of publication: 43
No. of journals in the cat.: 183
Source of citations: SCOPUS
Citations: 21

Relevant results: Extracts obtained using the PLE + SAF process provided the most active rosemary extracts against both colon cancer cell lines, with LC50 ranging from 11.2 to 12.4 µg/mL and from 21.8 to 31.9 µg/mL for HCT116 and HT-29, respectively. In general, active rosemary extracts were characterized by containing carnosic acid (CA) and carnosol (CS) at concentrations above 263.7 and 33.9 mg/g extract, respectively. This contribution was awarded by the Journal in 2018.

Relevant publication: Yes

6 Andrea del Pilar Sánchez Camargo; Lidia Montero; Alejandro Cifuentes; Miguel Herrero; Elena Ibañez. Application of Hansen solubility approach for the subcritical and supercritical selective extraction of phlorotannins from Cystoseira abies-marina. RSC Advances. 6 - 97, pp. 94884 - 94895. Londres(United Kingdom): Royal Society of Chemistry, 28/09/2016. Available on-line at: <https://pubs.rsc.org/en/Content/ArticleLanding/2016/RA/C6RA16862K#!divAbstract>. ISSN 20462069

DOI: 10.1039/c6ra16862k

Type of production: Scientific paper
Format: Journal

Position of signature: 1
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 5
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 0.736
Journal in the top 25%: Yes
Position of publication: 35
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 19

Relevant results: The theoretical modelling of the Hansen solubility parameters provided a useful and accurate estimation for the solvent selection and prediction of the solubility of these natural bioactive compounds.
Relevant publication: Yes

7 Andrés Hurtado Benavides; Daniela Dorado; Andrea del Pilar Sánchez Camargo. Study of the fatty acid profile and the aroma composition of oil obtained from roasted Colombian coffee beans by supercritical fluid extraction. The Journal of Supercritical Fluids. 113, pp. 44 - 52. Amsterdam(Holland): Elsevier, 01/07/2016. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844616300456?via%3Dihub>. ISSN 08968446
DOI: 10.1016/j.supflu.2016.03.008
Type of production: Scientific paper
Format: Journal
Position of signature: 3
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 3
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 30

Relevant results: The volatile compounds of the oil from roasted coffee bean belong mainly to the family of furans and pyrazines, which maintain the particular features of the roasted coffee. This fact makes the coffee oil attractive to be used in the food and/or cosmetic industry.
Relevant publication: Yes

8 Andrea del Pilar Sánchez Camargo; Lidia Montero; Valérie Stiger Pouvreau; Anaëlle Tanniou; Alejandro Cifuentes; Miguel Herrero; Elena Ibañez. Considerations on the use of enzyme-assisted extraction in combination with pressurized liquids to recover bioactive compounds from algae. Food Chemistry. 192 - 17780, pp. 67 - 74. Amsterdam(Holland): Elsevier, 01/02/2016. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0308814615009905?via%3Dihub>. ISSN 03088146
DOI: 10.1016/j.foodchem.2015.06.098
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 5
Corresponding author: No
Impact source: SCOPUS
Category: Food Science
Impact index in year of publication: 1.775
Journal in the top 25%: Yes
Position of publication: 6
No. of journals in the cat.: 299
Source of citations: SCOPUS
Citations: 58

Relevant results: Pressurized liquids (PLE) and enzyme-assisted extraction, EAE, have been tested to improve the extraction of phlorotannins from the seaweed Sargassum muticum. Enzymatic treatment with proteases and carbohydrases, alkaline hydrolysis and PLE with ethanol:water as extracting solvent have been studied in terms of extraction yield, total phenolic content and antioxidant activity (TEAC assay). Results demonstrated that the application of PLE alone provided the highest yields and relevant antioxidant activity.
Relevant publication: Yes

9 Lidia Montero; Andrea del Pilar Sánchez Camargo; Virginia García Cañas; Anaëlle Tanniou; Valérie Stiger Pouvreau; Mariateresa Russo; Luca Rastrelli; Alejandro Cifuentes; Miguel Herrero; Elena Ibánez. Anti-proliferative activity and chemical characterization by comprehensive two-dimensional liquid chromatography coupled to mass spectrometry of phlorotannins from the brown macroalga Sargassum muticum collected on North-Atlantic coasts. Journal of Chromatography A. 1428, pp. 115 - 125. Amsterdam(Holland): Elsevier, 08/01/2016. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0021967315010213?via%3Dihub>. ISSN 00219673

DOI: 10.1016/j.chroma.2015.07.053

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 10
Corresponding author: No
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 1.13
Journal in the top 25%: Yes
Position of publication: 17
No. of journals in the cat.: 119
Source of citations: SCOPUS
Citations: 59

Relevant results: The macroalgae samples collected at the extreme locations of a latitudinal gradient from Portugal and Norway, were found to be the richest on total phenols and, particularly, on phlorotannins, containing up to 148.97 and 5.12mg phloroglucinol equivalents g-1, respectively. The extracts obtained from these locations were further purified and chemically characterized using a modified HILIC×RP-DAD-MS/MS method.
Relevant publication: Yes

10 Andrea del Pilar Sánchez Camargo; Jose Antonio Mendiola; Alberto Valdés; Maria Castro Puyana; Virginia García Cañas; Alejandro Cifuentes; Miguel Herrero; Elena Ibañez. Supercritical antisolvent fractionation of rosemary extracts obtained by pressurized liquid extraction to enhance their antiproliferative activity. The Journal of Supercritical Fluids. 107, pp. 581 - 589. Amsterdam(Holland): Elsevier, 01/01/2016. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844615300723?via%3Dihub>. ISSN 08968446

DOI: 10.1016/j.supflu.2015.07.019

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 8
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 31

Relevant results: Enriched fractions with up to 47% carnosic acid + carnosol were obtained by Supercritical antisolvent fractionation.
Relevant publication: Yes

11 Miguel Herrero Calleja; Andrea del Pilar Sánchez Camargo; Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego. Plants, seaweeds, microalgae and food by-products as natural sources of functional ingredients obtained using pressurized liquid extraction and supercritical fluid extraction. Trends in Analytical Chemistry. 71, pp. 26 - 38. Amsterdam(Holland): Elsevier, 01/09/2015. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0165993615001326?via%3Dihub>. ISSN 01659936

DOI: 10.1016/j.trac.2015.01.018

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 2.15
Journal in the top 25%: Yes

Position of publication: 4 **No. of journals in the cat.:** 119

Source of citations: SCOPUS **Citations:** 143

Relevant results: We presented an up-to-date (2015) review on the use of subcritical and supercritical extraction processes to obtain functional bioactive compounds from different natural matrices, including plants, food by-products, seaweeds and microalgae.
Relevant publication: Yes

12 Andrea del Pilar Sánchez Camargo; Alberto Valdés; Giuseppe Sullini; Virginia García Cañas; Alejandro Cifuentes; Elena Ibañez; Miguel Herrero. Two-step sequential supercritical fluid extracts from rosemary with enhanced anti-proliferative activity. Journal of Functional Foods. 11 - C, pp. 293 - 303. Amsterdam(Holland): Elsevier, 01/11/2014. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S175646461400320X?via%3Dihub>. ISSN 17564646
DOI: 10.1016/j.jff.2014.10.014
Type of production: Scientific paper **Format:** Journal
Position of signature: 1 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 7 **Corresponding author:** No
Impact source: SCOPUS **Category:** Agricultural and Biological Sciences- Food Science
Impact index in year of publication: 0.998 **Journal in the top 25%:** Yes
Position of publication: 33 **No. of journals in the cat.:** 299
Source of citations: SCOPUS **Citations:** 25

Relevant results: Two-step sequential supercritical fluid extraction (SFE) pilot scale was proposed. Under pilot scale conditions, enriched extracts with up to 40% carnosic acid were obtained.
Relevant publication: Yes

13 Hugo Alexander Martinez Correa; Fernando Antonio Cabral; Pedro M. Magalhães; Carmen L. Queiroga; Adriana T. Godoy; Andrea del Pilar Sánchez Camargo; Losiane C. Paviani. Extracts from the leaves of Baccharis dracunculifolia obtained by a combination of extraction processes with supercritical CO2, ethanol and water. The Journal of Supercritical Fluids. 63, pp. 31 - 39. Amsterdam(Holland): Elsevier, 01/03/2012. Available on-line at: <https://www.scopus.com/record/display.uri?eid=2-s2.0-84857592489&origin=resultslist>. ISSN 08968446
DOI: 10.1016/j.supflu.2011.12.016
Type of production: Scientific paper **Format:** Journal
Position of signature: 6 **Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 7 **Corresponding author:** No
Impact source: SCOPUS **Category:** Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06 **Journal in the top 25%:** Yes
Position of publication: 32 **No. of journals in the cat.:** 281
Source of citations: SCOPUS **Citations:** 28

Relevant results: The supercritical extract showed a higher concentration and yield of Artepillin C, low antioxidant activity by the DPPH method and high antioxidant activity by the β-carotene method.
Relevant publication: Yes

14 Andrea del Pilar Sánchez Camargo; Maria Ângela A. Meireles; Ana L.K. Ferreira; Erika Saito; Fernando A. Cabral. Extraction of w-3 fatty acids and astaxanthin from Brazilian redspotted shrimp waste using supercritical CO2 + ethanol mixtures. The Journal of Supercritical Fluids. 61, pp. 71 - 77. Elsevier, 01/01/2012. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844611004177>. ISSN 08968446
DOI: 10.1016/j.supflu.2011.09.017
Type of production: Scientific paper **Format:** Journal

Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 5
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 44

Relevant results: Maximum recoveries of 93.8% and 65.2% for lipids and astaxanthin, respectively, from shrimp waste with regard to the initial content in the waste occurred when the condition using the maximum proportion (15% wt.) of ethanol in the scCO2/ethanol mixture was used. The best results for the recovery of EPA and DHA were also obtained under this condition, showing that supercritical extraction employing entrainers could be a competitive technology as compared to organic solvent extraction.
Relevant publication: Yes

15 Andrea del Pilar Sànchez Camargo; Hugo Alexander Martínez Correa; Losiane C. Paviani; Fernando Antonio Cabral. Supercritical CO2 extraction of lipids and astaxanthin from Brazilian redspotted shrimp waste (Farfantepenaeus paulensis). The Journal of Supercritical Fluids. 56 - 2, pp. 164 - 173. Amsterdam(Holland): Elsevier, 01/03/2011. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844610005152>. ISSN 08968446
DOI: 10.1016/j.supflu.2010.12.009
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: IN-RECS
Citations: 73

Relevant results: It was found that the pressure and temperature showed a very low significant effect on the lipid extraction yield using supercritical CO2. In comparison with lipid extraction by solvents, maximum efficiency of supercritical fluid extraction achieved 64% of hexane extraction yield. On the other hand, temperature and pressure had significant effects on astaxanthin extraction yield. The greatest amount of extract was obtained at 43 °C and 370 bar, with 39% of recovery
Relevant publication: Yes

16 Andrea del Pilar Sánchez Camargo; Maria Angela A. Meireles; Bruna L.F. Lopes; Fernando Antonio Cabral. Proximate composition and extraction of carotenoids and lipids from Brazilian redspotted shrimp waste (Farfantepenaeus paulensis). Journal of Food Engineering. 102 - 1, pp. 87 - 93. Amsterdam(Holland): Elsevier, 01/01/2011. Available on-line at: <https://www.sciencedirect.com/science/article/abs/pii/S0260877410003961>. ISSN 02608774
DOI: 10.1016/j.jfoodeng.2010.08.008
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Food Science
Impact index in year of publication: 1.338
Journal in the top 25%: Yes
Position of publication: 17
No. of journals in the cat.: 299
Source of citations: SCOPUS
Citations: 60

Relevant results: Shrimp waste (freeze-dried heads, shells and tails) was found to have high protein (49% d.w.) and ash (27% d.w.) contents, but a low lipid content (4.9% d.w.) although the latter was higher than those found in other kinds of shrimp captured in Brazil. The fatty acid compositions showed that the lipids had a high content of unsaturated fatty acids, mainly EPA (C20:5; n-3) and DHA (C22:6; n-3).
Relevant publication: Yes

17 Laís Benvenutti; Andrea del Pilar Sánchez Camargo; Antonio Acacio Ferreira Zielinski; Sandra Regina Salvador Ferreira. NADES as potential solvents for anthocyanin and pectin extraction from Myrciaria cauliflora fruit by-product: In silico and experimental approaches for solvent selection. Journal of Molecular Liquids. 315, Elsevier, 08/06/2020. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S016773222032780X?via%3Dihub>. ISSN 0167-7322
DOI: 10.1016/j.molliq.2020.113761

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Physical and Theoretical Chemistry
Impact index in year of publication: 0.883
Position of publication: 18
No. of journals in the cat.: 162

Relevant results: The proposed approach established a wise way to select Natural deep eutectic:water solutions as low-cost green solvents, aiming to achieve selective recoveries of value-added compounds.

18 Diego Ballesteros Vivas; Gerardo Alvarez Rivera; Andrés Felipe García Ocampo; Sandra Johana Morantes; Andrea del Pilar Sánchez Camargo; Alejandro Cifuentes Gallego; Fabián Parada Alfonso; Elena Ibañez Ezequiel. Supercritical antisolvent fractionation as a tool for enhancing antiproliferative activity of mango seed kernel extracts against colon cancer cells. Journal of Supercritical Fluids. 152 - 104563, Elsevier, 27/06/2019. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844619302852?via%3Dihub>. ISSN 08968446
DOI: 10.1016/j.supflu.2019.104563

Type of production: Scientific paper
Format: Journal
Position of signature: 5
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 8
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscelaneus)
Impact index in year of publication: 1.055
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281

Source of citations: SCOPUS
Citations: 3

Relevant results: A targeted phytochemical profiling by LC-q-TOF-MS/MS followed by a multivariate statistical analysis of the observed bioactivity and the chemical composition evidenced the presence of characteristic compounds which might explain the enhanced antiproliferative activity ofthe optimal SAF extract from Mango seed.

19 Diego Ballesteros Vivas; Gerardo Álvarez Rivera; Andrea del Pilar Sánchez Camargo; Elena Ibañez Ezequiel; Fabián Parada Alfonso; Alejandro Cifuentes Gallego. A multi-analytical platform based on pressurized-liquid extraction, in vitro assays and liquid chromatography/gas chromatography coupled to high resolution mass spectrometry for food by-products valorisation. Part 1: Withanolides-rich fractions from goldenberry (Physalis peruviana L.) calyces obtained after extraction optimization as case study. Journal of Chromatography A. 1584, pp. 155 - 164. Elsevier, 24/11/2018. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0021967318314559?via%3Dihub>. ISSN 00219673
DOI: 10.1016/j.chroma.2018.11.055

Type of production: Scientific paper
Format: Journal
Position of signature: 3
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 6
Corresponding author: No

Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 1.129
Journal in the top 25%: Yes
Position of publication: 17
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 9

Relevant results: The obtained results demonstrate the great potential of this multi-analytical approach for developing valorisation strategies of goldenberry (Physalis peruviana L.) by-products under sustainable conditions, to obtain bioactive-enriched extracts with potential medicinal or health-promoting properties
Relevant publication: No

20 Andrea del Pilar Sánchez Camargo; Natalia Pleite; Jose Antonio Mendiola; Alejandro Cifuentes; Miguel Herrero; Bienvenida Gilbert López; Elena Ibañez. Development of green extraction processes for Nannochloropsis gaditana biomass valorization. Electrophoresis. 39 - 15, pp. 1875 - 1883. Wiley-VCH Verlag, 01/08/2018. Available on-line at: <https://onlinelibrary-wiley-com.ezproxy.unal.edu.co/doi/full/10.1002/elps.201800122>. ISSN 01730835
DOI: 10.1002/elps.201800122
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 7
Corresponding author: No
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 0.698
Journal in the top 25%: No
Position of publication: 36
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 8

Relevant results: The valorization of Nannochloropsis gaditana biomass is proposed within the concept of biorefinery, using green processes.
Relevant publication: No

21 Imma Pagano; Andrea del Pilar Sánchez Camargo; Jose Mendiola; Luca Campone; Alejandro Cifuentes; Luca Rastrelli; Elena Ibanez. Selective extraction of high-value phenolic compounds from distillation wastewater of basil (Ocimum basilicumL.) by pressurized liquid extraction. Electrophoresis. 39 - 15, pp. 1884 - 1891. WILEY-VCH Verlag GmbH & Co, 31/01/2018. Available on-line at: <https://onlinelibrary.wiley.com/doi/pdf/10.1002/elps.201700442>. ISSN 01730835
DOI: 01730835
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 7
Corresponding author: Yes
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 0.698
Journal in the top 25%: No
Position of publication: 36
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 10

Relevant results: Basil distillation wastewaters are proposed as new promising sources of natural additives and/or functional ingredients for cosmetic, nutraceutical, and food applications
Relevant publication: No

22 Emilio Meaurio; Eva Sánchez Rexach; Ester Zuza; Ainhoa Lejardi; Andrea del Pilar Sánchez Camargo; Jose-Ramón Sarasua. Predicting miscibility in polymer blends using the Bagley plot: Blends with poly(ethylene oxide). Polymer. 113, Amsterdam(Holland): Elsevier, 24/03/2017. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0032386117300587?via%3Dihub>. ISSN 00323861
DOI: 10.1016/j.polymer.2017.01.041

Type of production: Scientific paper
Format: Journal
Position of signature: 5
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6
Corresponding author: No
Impact source: SCOPUS
Category: Polymers and Plastics
Impact index in year of publication: 1.016
Journal in the top 25%: Yes
Position of publication: 14
No. of journals in the cat.: 142
Source of citations: SCOPUS
Citations: 14

Relevant results: The solubility parameters of PEO and 55 blending partners were obtained using the most widely used group contribution (GC) methods, namely the ones proposed by Hoy, Hoftyzer-Van Krevelen, Stefanis-Panayiotou and Yamamoto (Y-MB), and were used to build a Bagley plot.
Relevant publication: No

23 Losiane Paviani; Erika Saito; Cláudio Dariva; Maria Cristina Marcucci; Andrea del Pilar Sánchez Camargo; Fernando Antonio Cabral. Supercritical CO2 extraction of raw propolis and its dry ethanolic extract. Brazilian Journal of Chemical Engineering. 29 - 2, pp. 243 - 251. Sao Paulo(Brazil): Brazilian Society of Chemical Engineering, 01/04/2012. Available on-line at: <http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-66322012000200005&lng=en&tlng=en>. ISSN 01046632
DOI: 10.1590/S0104-66322012000200005
Type of production: Scientific paper
Format: Journal
Position of signature: 5
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 0.325
Journal in the top 25%: No
Position of publication: 169
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 21

Relevant results: The concentrations of the markers (3,5-diprenyl-4-hydroxycinnamic acid; 3-prenyl-4-hydroxycinnamic acid; 4-hydroxycinnamic acid and 4-methoxy-3,5,7-trihydroxyflavone) in the different extracts differed as a function of the operational parameters, indicating that the addition of co-solvent and the selectivity of sc-CO2 could be manipulated so as to obtain extracts with the yields and concentrations of interest.
Relevant publication: No

24 Bruna L.F. Lopes; Andrea del Pilar Sánchez Camargo; Ana L.K Ferreira; Renato Grimaldi; Losiane C. Paviani; Fernando A.. Selectivity of supercritical carbon dioxide in the fractionation of fish oil with a lower content of EPA + DHA. The Journal of Supercritical Fluids. 61, pp. 78 - 85. Amsterdam(Holland): Elsevier, 01/01/2012. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0896844611004153>. ISSN 08968446
DOI: 10.1016/j.supflu.2011.09.015
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 6
Corresponding author: No
Impact source: SCOPUS
Category: Chemical Engineering (miscellaneous)
Impact index in year of publication: 1.06
Journal in the top 25%: Yes
Position of publication: 32
No. of journals in the cat.: 281
Source of citations: SCOPUS
Citations: 26

Relevant results: The scCO 2 was selective in fractionating the triacylglycerols containing the fatty acids EPA and DHA under the conditions of 100 and 200 bar, thus proving the technical viability of fractionating fish oils with lower contents of these fatty acids in the triacylglycerol molecules.

Relevant publication: No

25 Martiza Andrea Gil Garzón; Luz María Alzate Tamayo; Andrea del Pilar Sánchez Camargo; Leonidas de Jesus Millán Cardona. Spray drying: An alternative to conserve bioactive and aromatic compounds from garlic extract (Allium sativum L.). Revista LaSallista de Investigación. 8 - 2, pp. 40 - 52. Medellín(Colombia): Corporación Universitaria Lasallista, 01/07/2011. Available on-line at: <http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S1794-44492011000200005>. ISSN 17944449

Type of production: Scientific paper
Format: Journal
Position of signature: 3
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Multidisciplinary
Impact index in year of publication: 0.120
Journal in the top 25%: No
Position of publication: 73
No. of journals in the cat.: 111
Source of citations: SCOPUS
Citations: 3

Relevant results: A mixture of modified starch and the mixture of gums had better characteristics in the final product, allowing widening the use of other encapsulants for the garlic extract, different from the acacia gum resin, which is expensive and difficult to get.
Relevant publication: No

26 Andrea del Pilar Sánchez Camargo; Mónica Bueno; Diego Ballesteros Vivas; Fabián Parada Alfonso; Alejandro Cifuentes Gallego; Elena Ibañez Ezequiel. 2.46 - Hansen Solubility Parameters for Selection of Green Extraction Solvents. Comprehensive Foodomics. 2, pp. 710 - 724. Elsevier, 12/11/2020. Available on-line at: <https://www.sciencedirect.com/science/article/pii/B978008100596522814X>. ISBN 978-0-12-816396-2
DOI: 10.1016/B978-0-08-100596-5.22814-X
Type of production: Book chapter
Format: Book
Position of signature: 1
Degree of contribution: Author or co-author of chapter in book
Total no. authors: 1
Corresponding author: Yes
Relevant results: An updated discussion of the most recent applications of Hansen Solubility Parameters on green extraction and some concluding remarks about the importance of using this solvent selection approach in the near future were included.
Relevant publication: Yes

27 Diego Ballesteros Vivas; Jenny Paola Ortega Barbosa; Andrea del Pilar Sánchez Camargo; Luis Ignacio Rodriguez Varela; Fabián Parada Alfonso. 2.49 - Pressurized Liquid Extraction of Bioactives. Comprehensive Foodomics. 2, pp. 754 - 770. Elsevier, 12/11/2020. Available on-line at: <https://www.sciencedirect.com/science/article/pii/B9780081005965228175>. ISBN 978-0-12-816396-2
DOI: 10.1016/B978-0-08-100596-5.22817-5
Type of production: Book chapter
Format: Book
Position of signature: 3
Degree of contribution: Author or co-author of entire book
Total no. authors: 5
Relevant results: Pressurized Liquid Extraction (PLE) is an environment-friendly extraction technique which uses pressurized liquids at high temperature as its extractant phase. Through the use of PLE in sequential processes, it is possible to obtain bioactive extracts from agri-food byproducts with the aim of generating biorefineries. The development of processes at the bench (lab) or pilot scale to obtain bioactive extracts (with antioxidant, antiproliferative, anti-inflammatory, antidiabetic, and antimicrobial activity) is noteworthy. Indeed, the challenge being faced consists on scaling up PLE to the industrial level with the aim of generating cleaner and more efficient processes.
Relevant publication: Yes

28 Andrea del Pilar Sánchez Camargo; Lidia Montero García; Jose Antonio Mendiola; Miguel Herrero Calleja; Elena Ibañez Ezequiel. Novel Extraction Techniques for Bioactive Compounds from Herbs and Spices. Herbs, Spices and Medicinal Plants: Processing, Health Benefits and Safety. pp. 95 - 128. (United Kingdom): John Wiley & Sons, Ltd, 12/10/2020. Available on-line at: <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119036685.ch5>. ISBN 9781119036616

DOI: 10.1002/9781119036685.ch5

Type of production: Book chapter
Format: Book
Position of signature: 1
Degree of contribution: Author or co-author of chapter in book
Total no. authors: 5
Corresponding author: No

Relevant results: The reader is invited to learn about the huge potential of these techniques for extraction of high added!value compounds (with improved bioactivity) while complying with Green Chemistry goals.

Relevant publication: Yes

29 Andrea del Pilar Sánchez Camargo; Jose Antonio Mendiola; Elena Ibañez. Chapter 17: Gas Expanded-liquids. Supercritical and Other High-pressure Solvent Systems: For Extraction, Reaction and Material Processing. pp. 512 - 531. Croydon(United Kingdom): Royal Society of Chemistry, 28/08/2018. Available on-line at: <https://pubs.rsc.org/en/Content/Chapter/9781788013543-00512/978-1-78801-354-3>. ISSN 17577039, ISBN 978-1-78262-880-4

DOI: 10.1039/9781788013543-00512

Type of production: Book chapter
Format: Book
Position of signature: 1
Degree of contribution: Author or co-author of chapter in book
Total no. authors: 3
Corresponding author: Yes

Impact source: SCOPUS
Category: Environmental Chemistry
Impact index in year of publication: 0.156
Journal in the top 25%: No
Position of publication: 95
No. of journals in the cat.: 115

Impact source: SCOPUS
Category: Environmental Science (miscellaneous)
Impact index in year of publication: 0.4
Journal in the top 25%: No
Position of publication: 77
No. of journals in the cat.: 102

Source of citations: SCOPUS
Citations: 0

Source of citations: SCOPUS
Citations: 1

Relevant results: In this chapter, the potential use of gas-expanded liquids (GXLs) is presented, highlighting the applications of those that employ carbon dioxide to modify the chemical and/or physical properties of the solvents. The possibility of using these new types of solvents opens the door to the development of more sustainable chemical and technological processes that can contribute to the planet's sustainability.

Relevant publication: Yes

30 Miguel Herrero; Elena Ibañez; Jose Antonio Mendiola; Andrea del Pilar Sánchez Camargo. Supercritical Fluid Extraction. Reference Module in Chemistry, Molecular Sciences and Chemical Engineering. Amsterdam(Holland): Elsevier, 01/07/2014. Available on-line at: <https://www.sciencedirect.com/science/article/pii/B978012409547210753X>. ISBN 9780124095472

DOI: 10.1016/B978-0-12-409547-2.10753-X

Type of production: Book chapter
Format: Book
Position of signature: 1
Degree of contribution: Author or co-author of chapter in book
Total no. authors: 4
Corresponding author: No
Source of citations: SCOPUS
Citations: 2

Relevant publication: No

31 Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego; Fabián Parada Alfonso; Mónica Bueno; Andrea del Pilar Sánchez Camargo. Hansen solubility parameters for selection of green extraction solvents. Trends in Analytical Chemistry. 118, pp. 227 - 237. Elsevier, 05/06/2019. ISSN 01659936

DOI: 10.1016/j.trac.2019.05.046

Type of production: Bibliographic review
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of review
Total no. authors: 5
Corresponding author: Yes
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 2.153
Journal in the top 25%: Yes
Position of publication: 4
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 17

Relevant results: This review work includes a brief description about the emerging green solvents extraction, the HSP theory and an updated discussion of the most recent publications (from 2009 till January 2019). As well, some concluding remarks about the importance of using this solvent selection approach in the near future are included.
Relevant publication: Yes

32 Andrea del Pilar Sánchez Camargo; Fabián Parada Alfonso; Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego. Recent applications of on-line supercritical fluid extraction coupled to advanced analytical techniques for compounds extraction and identification. Journal of Separation Science. 42 - 1, pp. 243 - 257. WILEY VCH Verlag GmbH & Co, 29/08/2018. Available on-line at: <https://onlinelibrary.wiley.com/doi/pdf/10.1002/jssc.201800729>. ISSN 1615-9306

DOI: 10.1002/jssc.201800729

Type of production: Bibliographic review
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of review
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 0.717
Journal in the top 25%: No
Position of publication: 32
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 20

Relevant results: This review includes and discusses the application of on-line supercritical fluid extraction coupled to chromatographic techniques (from January 2016 till June 2018).
Relevant publication: Yes

33 Andrea del Pilar Sánchez Camargo; Fabián Parada Alfonso; Elena Ibañez; Alejandro Cifuentes. On-line coupling of supercritical fluid extraction and chromatographic techniques. Journal of Separation Science. 40 - 1, pp. 213 - 227. Amsterdam(Holland): WILEY-VCH Verlag GmbH & Co., 01/01/2017. Available on-line at: <https://onlinelibrary.wiley.com/doi/abs/10.1002/jssc.201601040>. ISSN 16159306

DOI: 10.1002/jssc.201601040

Type of production: Bibliographic review
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of review
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Analytical Chemistry
Impact index in year of publication: 0.72
Journal in the top 25%: No
Position of publication: 32
No. of journals in the cat.: 119

Source of citations: SCOPUS
Citations: 37

Relevant results: This review summarized and discussed recent advances and applications of on-line supercritical fluid extraction coupled to liquid chromatography, gas chromatography, and supercritical fluid chromatographic techniques
Relevant publication: Yes

34 Andrea del Pilar Sánchez Camargo; Miguel Herrero. Rosemary (Rosmarinus officinalis) as a functional ingredient: recent scientific evidence. Current Opinion in Food Science. 14, pp. 13 - 19. Amsterdam(Holland): Elsevier, 30/12/2016. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S2214799316301825?via%3Dihub>. ISSN 22147993

DOI: 10.1016/j.cofs.2016.12.003

Type of production: Bibliographic review
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of review
Total no. authors: 2
Corresponding author: No
Impact source: SCOPUS
Category: Agricultural and Biological Sciences (miscellaneous)
Impact index in year of publication: 1.466
Journal in the top 25%: Yes
Position of publication: 16
No. of journals in the cat.: 299
Source of citations: SCOPUS
Citations: 16

Relevant results: This review summarizes and discusses recent remarkable advances on the use of rosemary as a potential functional ingredient in order to provide beneficial health benefits against various human chronic diseases. Besides, the recent scientific evidence related to its safety and bioavailability has been critically discussed

Relevant publication: Yes

35 Lidia Montero; Andrea del Pilar Sánchez Camargo; Elena Ibañez; Bienvenida Gilbert López. Phenolic Compounds from Edible Algae: Bioactivity and Health Benefits. Current Medicinal Chemistry. 25 - 37, pp. 4808 - 4826. Cambridge(United Kingdom): Bentham Science, 01/01/2018. Available on-line at: <http://www.eurekaselect.com/152644/article>. ISSN 09298673

DOI: 10.2174/0929867324666170523120101

Type of production: Bibliographic review
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of scientific or technical document for the general public
Total no. authors: 4
Corresponding author: No
Impact source: SCOPUS
Category: Organic Chemistry
Impact index in year of publication: 0.903
Journal in the top 25%: Yes
Position of publication: 34
No. of journals in the cat.: 143
Source of citations: SCOPUS
Citations: 14

Relevant results: In this contribution, we highlighted the different phenolic compounds present on seaweeds and their important role in the functional and health effects, paying special attention to the antioxidant, anti-proliferative, anti-obesity and antidiabetic.

36 María Alejandra Beltrán Penagos; Andrea del Pilar Sánchez Camargo; Carlos Eduardo Narvaez Cuenca. Proximal composition, bioactive compounds and biorefinery approach in potato tubers of Solanum tuberosum Group Phureja: a review. International Journal of Food Science and Technology. 55 - 6, pp. 2282 - 2895. Wiley-Blackwell Publishing Ltd, 28/11/2019. Available on-line at: <https://ifst.onlinelibrary.wiley.com/doi/abs/10.1111/ijfs.14461>. ISSN 0950-5423

DOI: 10.1111/ijfs.14461

Type of production: Bibliographic review
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of review
Total no. authors: 3
Corresponding author: No
Impact source: SCOPUS
Category: Agricultural and Biological Sciences- Food Science
Impact index in year of publication: 0.798
Journal in the top 25%: Yes
Position of publication: 62
No. of journals in the cat.: 299

Source of citations: SCOPUS **Citations:** 0

Relevant results: The application of a biorefinery approach for the valorisation of Group Phureja wastes was proposed. The strategy of valorisation of wastes was focused on the production of starch and proteins, previously reported with important technological properties.
Relevant publication: No

37 Andrea del Pilar Sánchez Camargo; Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego; Miguel Herrero Calleja. Bioactives Obtained From Plants, Seaweeds, Microalgae and Food By-Products Using Pressurized Liquid Extraction and Supercritical Fluid Extraction. Comprehensive Analytical Chemistry. 76, pp. 27 - 51. Elsevier, 01/01/2017. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S0166526X17300016?via%3Dihub>. ISSN 0166526X
DOI: 10.1016/bs.coac.2017.01.001
Type of production: Bibliographic review **Format:** Journal
Position of signature: 1 **Degree of contribution:** Author or co-author of review
Total no. authors: 4 **Corresponding author:** No
Impact source: SCOPUS **Category:** Analytical Chemistry
Impact index in year of publication: 0.307 **Journal in the top 25%:** No
Position of publication: 74 **No. of journals in the cat.:** 119

Source of citations: SCOPUS **Citations:** 6

Relevant results: In this chapter, an overview of the principles and recent applications for the extraction of bioactives from several important natural sources using advanced extraction techniques, such as supercritical fluid extraction and pressurized liquid extraction were discussed.
Relevant publication: No

Works submitted to national or international conferences

1 **Title of the work:** Integrative processes for Colombian mango peel biorefinery to co-produce carotenoids, phenolic compounds and dietary fiber employing green emerging technologies
Name of the conference: V Iberoamerican Conference on Supercritical Fluids
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
Corresponding author: Yes
City of event: Campinas, Brazil
Date of event: 02/09/2019
End date: 06/09/2019
Organising entity: Universidade Estadual de Campinas
Luis Felipe Gutierrez Alvarez; Fabián Parada Alfonso; Elena Ibañez Ezequiel; Carlos Eduardo Narvaéz Cuenca; Luis Miguel Buelvas Puello; Diego Ballesteros Vivas; Andrea del Pilar Sánchez Camargo.

2 **Title of the work:** Green foodomics: new discoveries in a long journey
Name of the conference: EuroAnalysis 2019
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation
Corresponding author: No
City of event: Istanbul, Turkey
Date of event: 01/09/2019
End date: 05/09/2019
Organising entity: Istanbul University

Elena Ibañez Ezequiel; Jose Antonio Mendiola; Diego Ballesteros Vivas; Andrea del Pilar Sánchez Camargo; Gerardo Alvarez Rivera; Mónica Bueno; Rocío Gallego; Miguel Herrero; Alejandro Cifuentes Gallego.

3 **Title of the work:** Green foodomics: new strategies for greener extraction techniques
Name of the conference: XVII Latin American Symposium on Chromatography and Related Techniques (2019)
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - invited/keynote talk
Reasons for participation: Upon invitation
Corresponding author: No
City of event: Aracaju, Brazil
Date of event: 14/07/2019
End date: 19/07/2019
Miguel Herrero Calleja; Andrea del Pilar Sánchez Camargo; Lidia Montero García; Alejandro Cifuentes Gallego; Elena Ibañez Ezequiel.

4 **Title of the work:** Sequential pressurized liquid extraction and subsequent supercritical antisolvent fractionation of mango seed kernel extracts with antiproliferative activity
Name of the conference: 17th European Meeting on Supercritical Fluids (EMSF 2019)
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
Corresponding author: No
City of event: Ciudad Real, Castile-La Mancha, Spain
Date of event: 08/04/2019
End date: 11/04/2019
With external admission assessment committee: Yes
Diego Ballesteros Vivas; Gerardo Alvarez Rivera; Andrés Felipe García Ocampo; Andrea del Pilar Sánchez Camargo; Sandra Johanna Morantes Medina; Fabián Parada Alfonso; Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego.

5 **Title of the work:** Proximate composition and green extraction of carotenoids compounds from a Colombian mango processing by-product (Mangifera indica)
Name of the conference: 1st ICBC - International Congress on Bioactive Compound and 2nd International workshop on Bioactive compounds: Food design and health nutrition
Type of event: Conference
Geographical area: Non EU International
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
Corresponding author: Yes
City of event: Campinas, Brazil
Date of event: 22/11/2018
End date: 23/11/2018
Organising entity: Universidade Estadual de Campinas
Type of entity: University
City organizing entity: Campinas, Brazil
Fabián Parada Alfonso; Hugo Alexander Martinez Correa; Luis Felipe Gutierrez; Sandra Milena Vargas; Andrea del Pilar Sánchez Camargo.

6 **Title of the work:** Two step sequential pressurized liquid extracts from mango by-products with antioxidant acitvity
Name of the conference: IX Reunión de Expertos en Tecnologías de Fluidos Comprimidos (2018)
Type of event: Seminar
Geographical area: National

Type of participation: Participatory - oral communication
Reasons for participation: Open access
Corresponding author: No
City of event: Madrid, Community of Madrid, Spain
Date of event: 13/06/2018
End date: 15/06/2018
Organising entity: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION
Type of entity: State agency
With external admission assessment committee: Yes
Diego Ballesteros Vivas; Andrea del Pilar Sánchez Camargo; Elena Ibañez Ezequiel; Fabián Parada Alfonso; Alejandro Cifuentes Gallego; Gerardo Alvarez Rivera.

7 **Title of the work:** Phytochemical profiling of pressurized liquid extracts from Physalis peruviana calyces by LC and GC couple to q-TOF mass spectrometry
Name of the conference: 42th International Symposium on Capillary Chromatography and 15th GCxGC Symposium (2018)
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
Corresponding author: No
City of event: Riva del Garda, Italy
Date of event: 13/05/2018
End date: 18/05/2018
With external admission assessment committee: Yes
Diego Ballesteros Vivas; Andrea del Pilar Sánchez Camargo; Elena Ibañez Ezequiel; Fabián Parada Alfonso; Alejandro Cifuentes Gallego; Gerardo Alvarez Rivera.

8 **Title of the work:** Green Foodomics: new approaches for the isolation and purification of bioactive compounds with antiproliferative activity
Name of the conference: 17th Asia-Pacific International Symposium on Microscale Separation and Analysis
Type of event: Symposium
Geographical area: Non EU International
Type of participation: Participatory - invited/keynote talk
Reasons for participation: Upon invitation
Corresponding author: No
City of event: Shanghai, China
Date of event: 10/10/2017
End date: 13/10/2017
Organising entity: Shanghai Jiaotong University
Type of entity: University
With external admission assessment committee: No
Andrea del Pilar Sánchez Camargo; Miguel Herrero Calleja; Lidia Montero García; Jose Antonio Mendiola; Alejandro Cifuentes Gallego; Elena Ibañez Ezequiel.

9 **Title of the work:** Food Bioactives, Pressurized Extraction and Foodomics
Name of the conference: 19th International Symposium on Advances in Extraction Technologies
Type of event: Symposium
Geographical area: Non EU International
Type of participation: Participatory - invited/keynote talk
Reasons for participation: Upon invitation
City of event: Santiago de Compostela, Galicia, Spain
Date of event: 27/06/2017
End date: 30/06/2017
Organising entity: Universidade de Santiago de Compostela

Andrea del Pilar Sánchez Camargo; Lidia Montero; Alberto Valdés; Tanize Acunha; Miguel Herrero; Elena Ibañez; Alejandro Cifuentes.

10 **Title of the work:** Procesos verdes y sostenibilidad. Procesos basados en el empleo de fluidos comprimidos para la revalorización de fuentes naturales
Name of the conference: XXVIII Congreso peruano de química “Dr. Gastón Pons Muzzo”
Type of event: Conference
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation
Corresponding author: No
City of event: Lima, Peru
Date of event: 29/03/2017
End date: 31/03/2017
Organising entity: Sociedad Química del Perú.
Andrea del Pilar Sánchez Camargo; Miguel Herrero Callejo; Jose Antonio Mendiola; Alejandro Cifuentes Gallego; Elena Ibañez Ezequiel.

11 **Title of the work:** Last advances in the trilogy: Food, health, and Foodomics
Name of the conference: International Conference on Food Innovation: Food Innova 2017
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation
Corresponding author: No
City of event: Cesena, Italy
Date of event: 31/01/2017
End date: 03/02/2017
With external admission assessment committee: Yes
Andrea del Pilar Sánchez Camargo; Lidia Montero García; Alberto Valdés; Miguel Herrero Calleja; Elena Ibañez Ezequiel; Alejandro Cifuentes Gallego.

12 **Title of the work:** Green selective extraction of fucoxanthin from Phaeodactylum tricornutum employing the Hansen solubilty parameters approach
Name of the conference: ALGAEurope 2016
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
Corresponding author: No
City of event: Madrid, Spain
Date of event: 13/12/2016
End date: 15/12/2016
Organising entity: European Algae Biomass Organisation **Type of entity:** Associations and Groups
Andrea del Pilar Sánchez Camargo; Natalia Pleite; Miguel Herrero Calleja; Elena Ibañez Ezequiel; Bienvenida Gilbert López.

13 **Title of the work:** Green Foodomics: new approaches for the isolation and purification of bioactive compounds with antiproliferative activity using green technologies
Name of the conference: 40th International Symposium on Capillary Chromatography and 13th GCxGC Symposium
Type of event: Symposium **Geographical area:** European Union
Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation

City of event: Riva del Garda, Italy
Date of event: 29/05/2016
End date: 03/06/2016

14 **Title of the work:** Sustainable Processes for Bioactives Extraction: Present and Future
Name of the conference: V Congreso Iberoamericano de Productos Naturales
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - invited/keynote talk
Reasons for participation: Upon invitation
City of event: Bogotá D.C, Colombia
Date of event: 25/04/2016
End date: 29/04/2016
Organising entity: Sociedad Colombiana de Ciencias Químicas
Type of entity: Associations and Groups
Type of contribution: Scientific-technical report

15 **Title of the work:** Development of new strategies of integrated green processes for obtaining phlorotannin enriched extracts from brown algae Cystoseira abies-marina
Name of the conference: IV Iberoamerican Conference on Supercritical Fluids
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
City of event: Viña del Mar, Chile
Date of event: 28/03/2016
End date: 01/04/2016
Organising entity: PROSCIBA
Type of entity: Associations and Groups

16 **Title of the work:** Chemical characterization of particular phlorotannins from Sargassum muticum by LC×LC-DAD-MS/MS
Name of the conference: VII Reunión Nacional de Espectrometría de Masas-SEEM 2015
Type of event: Workshop
Geographical area: National
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Castellón, Spain
Date of event: 27/10/2015
End date: 30/10/2015
Organising entity: Universitat Jaume I
Type of entity: University
Lidia Montero; Andrea del Pilar Sánchez Camargo; Virginia García Cañas; Anelle Tanniou; Valérie Stiger Pouvreau; Mariateresa Russo; Luca Rastrelli; Alejandro Cifuentes; Miguel Herrero; Elena Ibañez.

17 **Title of the work:** Development of new strategies for obtaining phlorotannin-enriched extracts from brown algae Cystoseira abies-marina
Name of the conference: VIII Reunión de Expertos en Tecnologías de fluidos comprimidos (FLUCOMP)
Type of event: Workshop
Geographical area: National
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Cadiz, Spain
Date of event: 16/09/2015
End date: 18/09/2015
Organising entity: FLUCOMP
Andrea del Pilar Sánchez Camargo; Lidia Montero; Alejandro Cifuentes; Miguel Herrero; Elena Ibañez.

18 **Title of the work:** Study of the optimal extraction conditions for phenolic-enriched extracts from Saccharina latissima using pressurized liquid extraction
Name of the conference: VIII Reunión de Expertos en Tecnologías de fluidos comprimidos (FLUCOMP)
Type of event: Workshop
Geographical area: National
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Cádiz, Spain
Date of event: 16/09/2015
End date: 18/09/2015
Organising entity: FLUCOMP
Type of entity: Associations and Groups
Elena María Balboa; Andrea del Pilar Sánchez Camargo; Elena Ibañez; Herminia Dominguez.

19 **Title of the work:** Supercritical antisolvent fractionation of rosemary extracts obtained by pressurized liquid extraction to enhance their antiproliferative activity
Name of the conference: VIII Reunión de Expertos en Tecnologías de fluidos comprimidos (FLUCOMP)
Type of event: Workshop
Geographical area: National
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
City of event: Cadiz, Community of Madrid, Spain
Date of event: 16/09/2015
End date: 18/09/2015
Organising entity: FLUCOMP
Elena Ibañez; Miguel Herrero; Alejandro Cifuentes; Virginia García Cañas; María Castro Puyana; Alberto Valdés; Jose Antonio Mendiola; Andrea del Pilar Sánchez Camargo.

20 **Title of the work:** Integrated green processes to obtain phenolic compounds from brown algae
Name of the conference: 4th International Congress on Green Process Engineering (GPE)
Type of event: Conference
Geographical area: Non EU International
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
City of event: Sevilla, Andalusia, Spain
Date of event: 07/07/2014
End date: 10/04/2014
With external admission assessment committee: Yes
Andrea del Pilar Sánchez Camargo; Miguel Herrero; Elena Ibañez.

21 **Title of the work:** Green process to obtain polyphenols from Sargassum muticum macroalgae collected of different geographic europe sites
Name of the conference: VII Reunión de Expertos en Tecnologías de fluidos comprimidos (FLUCOMP)
Type of event: Workshop
Geographical area: National
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
City of event: Barcelona, Catalonia, Spain
Date of event: 12/06/2014
End date: 13/06/2013
Organising entity: FLUCOMP
Type of entity: Associations and Groups
Andrea del Pilar Sánchez Camargo; Lidia Montero; Almudena Barranco; Alejandro Cifuentes; Elena Ibañez; Miguel Herrero.

22 **Title of the work:** Supercritical CO2 antisolvent fractionation of pressurized liquid hydroalcoholic rosemary extracts
Name of the conference: 4th International Congress on Green Process Engineering (GPE)

Type of event: Conference
Geographical area: European Union
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Sevilla, Spain
Date of event: 07/04/2014
End date: 10/04/2014
Andrea del Pilar Sánchez Camargo; Jose Antonio Mendiola; María Castro Puyana; Miguel Herrero; Elena Ibañez.

23 **Title of the work:** Comparative study of the extraction of phenolic compounds from Sargassum muticum using alkaline or enzymatic hydrolysis as pre-treatment followed by pressurized liquid extraction (PLE).
Name of the conference: XIII Reunión Científica de la Sociedad Española de Cromatografía y Técnicas Afines (SECyTA2013)
Type of event: Workshop
Geographical area: National
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Tenerife, Spain
Date of event: 08/10/2013
End date: 11/10/2013
Organising entity: Sociedad Española de Cromatografía y Técnicas Afines
Type of entity: Associations and Groups
Andrea del Pilar Sánchez Camargo; Miguel Herrero; Elena Ibañez.

24 **Title of the work:** Spray drying: an alternative for the preservation of bioactive and aromatic compounds in garlic extract (Allium sativum L.)
Name of the conference: XI Colombian Congress of Phytochemistry
Type of event: Conference
Geographical area: National
Type of participation: Participatory - oral communication
Reasons for participation: Review before acceptance
City of event: Medellín, Colombia
Date of event: 05/10/2011
End date: 07/10/2011
Organising entity: Universidad de Antioquia
Type of entity: University
With external admission assessment committee: Yes
Maritza Andrea Garzón Gil; Luz Maria Alzate Tamayo; Andrea del Pilar Sánchez Camargo; Leonidas de Jesus Millán-Cardona.

25 **Title of the work:** Centesimal composition and extraction of carotenoids and lipids from Brazilian shrimp waste (Farfantepenaeus paulensis)
Name of the conference: 10th National Congress of Food Science and Technology
Type of event: Conference
Geographical area: National
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Bogotá, Colombia
Date of event: 21/09/2010
End date: 24/09/2010
Organising entity: Asociación Colombiana de Ciencia y Tecnología de Alimentos
With external admission assessment committee: Yes
Andrea del Pilar Sánchez Camargo; Fernando Cabral; Hugo Alexander Martinez Correa.

26 **Title of the work:** Supercritical CO2 extraction of astaxanthin from brazilian redspotted shrim waste (Farfantepenaeus Paulensis)
Name of the conference: II Iberoamerican Conference on Supercritical Fluids
Type of event: Conference
Geographical area: Non EU International
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Natal, Brazil
Date of event: 05/04/2010
End date: 09/04/2010
Organising entity: PROSCIBA
With external admission assessment committee: Yes
Andrea del Pilar Sánchez Camargo; Fernando Cabral.

27 **Title of the work:** Characterization of the pink shrimp residue (Farfantepenaeus paulensis) from the coast of the state of São Paulo
Name of the conference: 8th Latin American Symposium on Food Science
Type of event: Conference
Geographical area: Non EU International
Type of participation: 'Participatory - poster
City of event: Campinas, Brazil
Date of event: 08/11/2009
End date: 11/11/2009
Organising entity: Universidade Estadual de Campinas
Type of entity: University
With external admission assessment committee: Yes
Andrea del Pilar Sánchez Camargo; Fernando Cabral.

28 **Title of the work:** Contribution to the alternatives of industrialization of Pumpkin (Cucurbita Ficifolia Bouche)
Name of the conference: XXIII Colombian Congress of Chemical Engineering
Type of event: Conference
Corresponding author: Yes
City of event: Manizales, Colombia
Date of event: 24/08/2005
End date: 26/08/2005
Organising entity: Asociación Colombiana de Ingeniería Química
Type of entity: Associations and Groups
Andrea del Pilar Sánchez Camargo; Marta Cuenca de Quicazán.

R&D management and participation in scientific committees

Organization of R&D activities

1 **Title of the activity:** Theoretical and practical introductory course to omic techniques and their application in food science and technology
Type of activity: Green extraction methods for obtaining functional ingredients and other analytical techniques (GC-MS, LC-MS, CE-MS)
Geographical area: National
City of event: Madrid, Spain
Convening entity: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION
Type of entity: State agency
City convening entity: Madrid, Community of Madrid, Spain

Type of participation: Organiser
Nº assistants: 20
Start-End date: 24/11/2015 - 26/11/2015 **Duration:** 2 days

2 **Title of the activity:** XV Madrid Week Science -
Type of activity: To bring science and technology closer to citizens. **Geographical area:** National
City of event: Madrid, Community of Madrid, Spain
Convening entity: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 20
Start-End date: 11/11/2015 - 12/11/2015 **Duration:** 2 days

3 **Title of the activity:** Theoretical and practical introductory course to omic techniques and their application in food science and technology
Type of activity: Lecturer of Green extraction methods for obtaining functional ingredients **Geographical area:** National
City of event: Madrid, Community of Madrid, Spain
Convening entity: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 20
Start-End date: 27/11/2014 - 28/11/2014 **Duration:** 2 days

4 **Title of the activity:** XIV Madrid Week Science
Geographical area: National
City of event: Madrid, Community of Madrid, Spain
Convening entity: INSTITUTO DE INVESTIGACION EN CIENCIAS DE ALIMENTACION **Type of entity:** State agency
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 20
Start-End date: 12/11/2014 - 13/11/2014 **Duration:** 2 days

Evaluation and revision of R&D projects and articles

1 **Name of the activity:** Tax benefits for investment in Science, Technology and Innovation in the industrial sector.
Performed tasks: Research project proposal evaluation for R+D industrial projects
Entity where activity was carried out: MINCIENCIAS (Colombia) **Type of entity:** State agency
City of entity: Bogotá, Colombia
Start date: 2020

2 **Name of the activity:** Research manuscripts assessment
Performed tasks: Reviewer
Entity where activity was carried out: Journal of Food Science - IFT **Type of entity:** Innovation and Technology Centres

City of entity: Chicago, United States of America
Start date: 2020

3 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Biomass Conversion and Biorefinery - Elsevier **Type of entity:** Editorial
City of entity: Amsterdam, Holland
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** Non EU International
Start date: 2020

4 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Journal of Chromatography A - Elsevier
City of entity: Amsterdam, Holland
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** Non EU International
Start date: 2019

5 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Electrophoresis - Wiley **Type of entity:** Editorial
City of entity: Amterdam, Holland
Start date: 2019

6 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Grasas y Aceites - CSIC
City of entity: Sevilla, Spain
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** Non EU International
Start date: 2019

7 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Food Analytical Methods- Springer **Type of entity:** Editorial
City of entity: Switzerland
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** Non EU International
Start date: 2019

8 **Name of the activity:** Innovational Research Incentives Scheme Grant application form 2018
Performed tasks: Research project proposal evaluation for post-doctoral fellow
Entity where activity was carried out: Netherlands Organization for Scientific Research- NWO **Type of entity:** State agency

City of entity: Utrecht, Holland
Type of activity: Evaluator of post-doctoral fellow proposal
Access system: Designated by the corresponding party without competition **Geographical area:** European Union
Start date: 2018

9 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Revista Colombiana de Química - Universidad Nacional de Colombia **Type of entity:** University
City of entity: Bogotá, Colombia
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** National
Start date: 2018

10 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Journal of Supercritical Fluids - Elsevier **Type of entity:** Editorial
City of entity: Amsterdam, Holland
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned
Start date: 2018

11 **Name of the activity:** Research manuscripts evaluation
Performed tasks: Reviewer
Entity where activity was carried out: Revista VITAE-Universidad de Antioquia (Colombia) **Type of entity:** University
City of entity: Medellín, Colombia
Type of activity: Review of articles in scientific or technological journals
Access system: With express recognition of the credits concerned **Geographical area:** National
Start date: 2013

Other achievements

Obtained grants and scholarships

1 **Name of the grant:** Post-doctoral fellowship program (Call 784- 2018)
Aims: Post-doctoral
Awarding entity: Department of Science, Technology and Innovation (COLCIENCIAS) **Type of entity:** State agency
Conferral date: 25/06/2018 **Duration:** 1 year - 2 months
End date: 25/08/2019
Entity where activity was carried out: Universidad Nacional de Colombia
Faculty, institute or centre: Instituto de Ciencia y Tecnología de Alimentos

2 **Name of the grant:** PhD abroad scholarship program (Call 568-2012)
Aims: Pre-doctoral
Awarding entity: Department of Science, Technology and Innovation (COLCIENCIAS) **Type of entity:** State agency
Conferral date: 01/04/2013 **Duration:** 4 years
End date: 01/04/2017
Entity where activity was carried out: Universidad Autónoma de Madrid
Faculty, institute or centre: Instituto de Investigación en Ciencias de la Alimentación

3 **Name of the grant:** Master of Science Scholarship
City awarding entity: Sao Paulo, Brazil
Aims: Master of Science
Awarding entity: São Paulo Research Foundation (FAPESP-Brazil)
Conferral date: 01/03/2008 **Duration:** 2 years
End date: 01/03/2010
Entity where activity was carried out: Universidade Estadual de Campinas

Scientific societies and professional associations

Name of the society: Asociación de Expertos en Fluidos Comprimidos
Affiliation entity: FLUCOMP **Type of entity:** Associations and Groups
City affiliation entity: Madrid, Spain
Start date: 01/05/2017

Prizes, mentions and distinctions

1 **Description:** Doctoral thesis qualified Summa Cum Laude
Awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
City awarding entity: Madrid, Community of Madrid, Spain
Conferral date: 01/04/2017
Recognition linked: Thesis qualified suma cum laude

2 **Description:** Best paper award 2017 by International Journal of Molecular Science
Awarding entity: MPDI Open Journals **Type of entity:** Editorial
City awarding entity: Basel, Switzerland