

Section b: Curriculum vitae

Segura-Carretero, Antonio

Date of Birth: 4 November 1969
Nationality: Spanish
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Current position

2009-ongoing: Full Professor of University of Granada

2010-ongoing: Head of R&D of Functional Food Technological Centre (CIDAF)

Most relevant merits and numbers

447 International publications
 26 Areas of publication
 49 H index
 9,000 Citations
 2 Books
 37 Book chapters
 31 PhD Theses as supervisor
 10 Awards
 5 European projects
 54 Research projects as IP
 4.2 million euros managed by projects
 51 Research contracts as IP
 740,000 euros managed by contracts
 5 Millions of facilities in CIDAF
 10 Employees in CIDAF
 23 Academic years teaching
 3 Teaching projects as IP
 8 Stays as visiting professor
 600 Dissemination activities
 9 Patents
 120 National collaborations
 130 International collaborations

Education

1996: Ph.D. in Chemistry, University of Granada (Spain)

1992: B.Sc. in Chemistry, University of Granada (Spain)

Awards

From 2000 until the present recognized with **10 awards** such as the Extraordinary PhD award, Young Researcher award in Analytical Chemistry in Spain, awards for research related to olive oil and breast cancer and recently a Scientific Trajectory award from the University of Granada.

(Post) graduate supervision

2001-ongoing: Supervisor of **31 completed PhD theses** (19 have been PhDs with an International Mention, and 3 have won the San Alberto Magno Award), **10 have been with foreign students** and 3 ongoing PhDs.

1997-ongoing: Primary supervisor of **46 dissertations** (including Diploma for Advanced Studies and Master's) and 8 work plans in Chemistry, Food Technology and Biochemistry Master's programme.

Teaching activities

23 years in different levels (first and second cycles, Master's, PhD and university-extension courses), involving different degrees and faculties (Chemistry, Pharmacy, and Biochemistry).

Developed **3 projects of teaching innovation** and 40 innovation communications.

Head of 3 editions of a **specialized course about bioactive compounds**.

Visiting professor

From 1996 stays as visiting professor in several Spanish universities (Universidad de Córdoba-Prof. M. Valcárcel and Oviedo-Prof. A. Sanz-Medel), European (University of Plymouth-Prof. Paul J. Worsfold, Università di Bologna-Prof. G. Dinelli and University of Novi Sad-Prof. J. Svarc-Gajic), American (UC Davis Olive Center-Prof. E. Frankel) and in other countries for a total duration of three years.

Organization of scientific meetings

Participated in the organization of **12 meetings dedicated to bioactive compounds** from vegetable samples and related to the different pathologies, in the organization of 4 congresses related to Analytical Chemistry and its application in Metabolomics.

Self-funding ID: Projects and research contracts

Participated in **5 European projects** such as Molecular Reclassification to Find Clinically Useful Biomarkers for Systemic Autoimmune Diseases funded by European Framework Innovative Medicine Initiative (PRECISESADS, EU, Grant Agreement nr°115565) with a budget of 10 million euros in the European Framework: Capacity building of personnel in Jordanian olive industry Acronym: CBPJOI", Tempus, Join Project (EU) EACEA

N° 543820-TEMPUS-1-2013-1 JO-TEMPUS-JPHES with a budget of 1 million euros. Also participated in international networks such as the Ibero-American Network of Comprehensive Use of Native Foods (CYTED Program, code P117RT0220)

Led **10 national projects** (1.2 million euros total funding; average per project: €120,000). Has also led **39 other R&D complementary projects** (€800,000 total funding; **5 regional projects** (1.4 million euros total funding)).

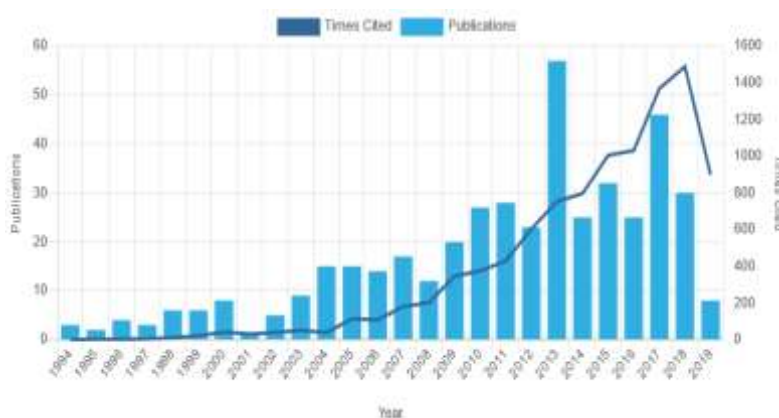
Led **51 research contracts** with companies such as Maeva, Grupo Mahou, Puleva, Natac, Herbafor and Monteloeder specializing in functional food and bioactive compounds (€740,000 total funding; average per project: €21,142). In many cases, such as Monteloeder, this has been SME Instrument project INNOPREFAT, Stability and compatibility of Metaboloid in food matrix, Grant Agreement 783838 with European funding.

Leadership in industrial innovation

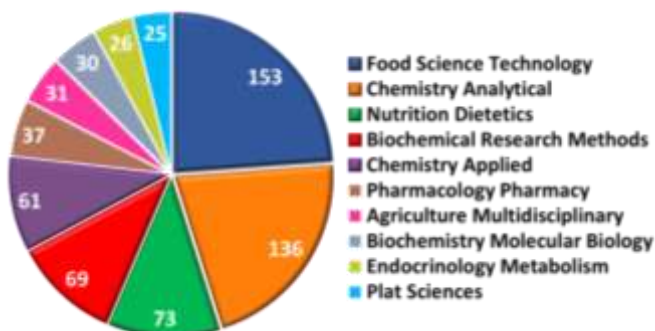
Participated from 2010 in the creation of the Functional Food Technological Centre (CIDAF) associated to the University of Granada as Head of R&D and has led several projects dedicated to the purchase of equipment with a value of 5 million euros that have allowed the start up of a lab and a pilot plant of bioactive compounds and to contract 8 PhDs.

Publications: International articles

Published 447 articles in indexed journals with around 10,000 citations, 300 of these manuscripts are in Q1 of JCR within their respective areas of knowledge and with more than 100 in the top 10%. The high citation of the articles has resulted in an h-index 49 (Web of Science Researcher ID B-6867-2014)



My publications have been developed in 26 areas of knowledge and the 5 most prominent areas of publication in order of greatest to least have been Food Chemistry, Analytical Chemistry and Nutrition with a Category Normalized Citation Impact of 1.68.



Books and book chapters

Editor of two books and co-author of 37 chapters in various monographs in renowned international publishers (Elsevier, AOCs Press, Studium Press LLC, CRE Press Taylor and Francis Group, Wiley).

Invited presentations/conferences

Presented 400 communications in posters and 30 oral or invited presentations in conferences. Given lectures in 40 conferences in different Master's and national and international universities and private companies and has developed more than 600 dissemination activities.

Patents

Co-inventor of 9 registered patents and 2 of them dedicated to bioactive compounds and breast cancer and treatment of receptor tyrosine kinase related disorders.

Major collaborations

More than 250 collaborations with other national and international researchers that are reflected in different projects and publications highlighting the collaboration in the publication of articles with 50 % of them in collaboration with other universities or centres with a total of 72 institutions.

Appendix: All ongoing and submitted grants and funding of the PI (Funding ID)**Ongoing Grants**

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>	<i>Relation to current ERC proposal</i>
An innovative metabonomic approach to identify the metabolites of dietary plant polyphenols and their molecular targets	Ministry of Science, Innovation and Universities (RTI2018-096724-B-C22)	€121,000	2019-2021	PI, Supervisor of PhD student	High
2nd generation nutraceuticals of edible plants, based on phenolics modulators of energy metabolism extracts: applications for the prevention of obesity	Ministry of Economy and Competitiveness(A GL2015-67995-C3-2-R)	€110,000	2016-2019	PI, Supervisor of PhD student	High
Molecular Reclassification to Find Clinically Useful Biomarkers for Systemic Autoimmune Diseases ACRONYM: PRECISESADS	Innovative Medicine Initiative (EU) (Grant Agreement nr°115565)	€549,480	2014-2019	PI, Supervisor of PhD student	Medium

Grant applications

None

Section c: 10-year track-record.**330 International publications in the past 10 years and some more relevant articles related with the proposal in aspects related to bioactive compounds, gastrointestinal digestion, epigenetic, *in silico*, mass spectrometry, characterization, metabolomic and metabolites**

- Different behaviour of polyphenols in the energy metabolism of lipopolysaccharide-stimulated cells. Food Research International 118, 96-100 (2019). IF: 3.6
- Evolution of the profile of phenolic compounds of olive-leaf extract encapsulated by spray-drying during *in vitro* gastrointestinal digestion. Food Chemistry 279, 40–48 (2019). IF: 5.4
- Computational de-orphanization of the olive oil biophenol oleacein: Discovery of new metabolic and epigenetic targets. Food and Chemical Toxicology 131, 110529 (2019). IF: 3.8
- A fingerprinting metabolomic approach reveals deregulation of endogenous metabolites after the intake of a bioactive garlic supplement. Journal Functional Foods 49, 137–145 (2018). IF: 3.2
- Microbial and metabolic multi-omic correlations in systemic sclerosis patients. Annals of the New York Academy of Sciences 6, 97-110 (2018). IF: 4.3
- Extra-virgin olive oil contains a metabolo-epigenetic inhibitor of cancer stem cells. Carcinogenesis 39(4), 601-613 (2018). IF: 4.0
- Phenolic compounds in rosemary as potential source of bioactive compounds against colorectal cancer: *in situ* absorption and metabolism study. Journal of Functional Foods 33, 2020-210 (2017). IF: 3.1

These articles have received 5,059 citations reaching a Category Normalized Citation Impact (CNI) of 1.68, which indicates that an impact is obtained that is much higher than the world average. In all areas where more than 15 articles have been published, CNI values reached are above the world average. Highlighting for example FOOD SCIENCE & TECHNOLOGY (CNI = 1.86) or PHARMACOLOGY & PHARMACY (1.85). I must also indicate that comparing the CNI with the EU values my work greatly exceeds the average impact. Finally I must highlight the % documents in the top 10% where globally 28% of the articles and the % of international collaboration is 47 %, highlighting the University of Bologna, Centre Biotechnologie Borj Cedria (Tunisia), University of Parma, University of Novi Sad.

	Dr. Segura CNI	EU CNI
FOOD SCIENCE & TECHNOLOGY	1.86	1.08
CHEMISTRY ANALYTICAL	1.65	0.97
CHEMISTRY APPLIED	1.77	1.15
BIOCHEMICAL RESEARCH METHODS	1.59	1.16
NUTRITION & DIETETICS	1.51	1.12
PHARMACOLOGY & PHARMACY	1.85	1.05
PLANT SCIENCES	2.02	1.22
BIOCHEMISTRY & MOLECULAR BIOLOGY	1.84	1.20
AGRICULTURE MULTIDISCIPLINARY	2.62	1.11

27 book chapters in the past 10 years and most related with the proposal in aspects such as pathologies, promiscuity, epigenetic and polyphenols as bioactive compounds in plants:

- Natural phenolic compounds and Parkinson's disease. Phenolic compounds: types, effects and research. Nova Science Publishers, Inc 2017
- Molecular Promiscuity of Plant Polyphenols in the Management of Age-Related Diseases: Far Beyond Their Antioxidant Properties. Oxidative Stress and Inflammation in Non-communicable Diseases – Molecular Mechanisms and Perspectives in Therapeutics, Advances in Experimental Medicine and Biology (DOI 10.1007/978-3-319-07320-0_11). Springer International Publishing Switzerland (2014)
- Polyphenols from the Mediterranean diet: Structure, analysis and health evidence. Occurrences, Structure, Biosynthesis, and Health Benefits Based on the Evidence of Medicinal Phytochemicals in Vegetables and Fruits (Volume 2) (ISBN: 978-1-63117-755-2). Nova Science Publishers (2014)

All the book chapters have been by invitation of the Editor or Editorial Board of international publishers as a specialist in the topic of the book.

23 PhDs as supervisor in the past 10 years and most of them related with the proposal in aspects such as the development of nutraceutical, diabetes and plant sources (*Hibiscus sabdariffa* and *Psidium guajava* L.):

- Development of nano-encapsulated phenolic green extracts for functional food and nutraceutical: **Hibiscus sabdariffa** as example. Qualification: unanimously voted as “Excellent” “*cum laude*”. Defense date: 11/01/2019

- New analytical approaches to assess the phenolic composition of guava (*Psidium guajava L.*) leaves with anti-diabetic related risk factors bioactivity. Qualification: unanimously voted as Excellent, “*cum laude*”. Defense date: 9/06/2017
- Of the 23 PhD students who I have supervised in the last ten years, 9 have been foreign students who followed their doctoral studies under the supervision of our research group, and specifically, under my supervision, which has allowed several of these researchers to achieve a fixed and highly relevant position within their original institutions/countries. Some good examples of this are in the Table below. Note that some of the first doctoral students who trained with me are now lecturers in the University of Granada with their own lines of research.

PhD student name	PhD year	Current position
M. L. Cádiz Gurrea	2018	Postdoctoral fellow at Porto University (Portugal)
J. G. Figueroa Hurtado	2018	Associate Professor University of Loja (Ecuador)
C. Rodríguez Pérez	2017	Marie Curie at University College Dublin (Ireland)
P. García Salas	2016	Postdoctoral fellow at Bologna University (Italy)
I. Abu Reidah	2013	Researcher at the BERC Centre (Nablus, Palestine)
A. Taamalli	2012	Researcher at Center Biotechnologie Borj Cédria (Tunisia)
I. Iswaldi	2012	Researcher at the Functional Food Centre (Banten, Indonesia)
M. Gómez Romero	2010	Postdoctoral fellow at Imperial College, London (UK)
R. García Villalba	2010	Postdoctoral fellow at CEBAS (CSIC, Spain)
A.M. Gómez Caravaca	2009	Lecturer at Granada University (Spain)
S. Sawalha	2009	Lecturer at the University of Al-Quds (Palestine)

10 International consortiums, I have been invited as a specialist in bioactive compounds to be part of ten international consortiums by various European and International Universities (Universitaet Hohenheim, National and Kapodistrian University Of Athens, Centre for Renewable Energies Athens, Tehnoloski Fakultet Novi Sad, University of Jordan, Ethniko Kai Kapodistriako Panepistimio Athinon) for different European calls (RIA, CSA, Tempus, IMI, MSCA-IF-EF-ST, BBI-IA-DEMO).

15 participations in evaluation commissions, I have been invited to participate as evaluator in the areas of Analytical Chemistry and Food Chemistry in the evaluation of projects from different national (ANEP) and international commissions (Portuguese Fundação para a Ciência e a Tecnologia, I.P. (FCT), Chilean CONICYT, Qatar University, Ministry of Education and Science of Republic of Kazakhstan, Innova Corfo, United Arab Emirates University, Jordan University, Colciencias from Colombia).

30 invitations to editorial boards, I have been invited to join the editorial boards of Antioxidants, Frontier Molecular Biosciences, International Journal Molecular Sciences, Journal of Traditional and Complementary Medicine, Cellular and Molecular Biology, Frontiers in Nutrition, The Open Biology Journal, Journal of Young Pharmacists, Annals of Medical and Health Sciences Research, Journal of Biologically Active Products from Nature and the Biomedical and Pharmacology Journal.

65 peer-reviewed journals as reviewer (Molecular Nutrition and Food Research, Food Chemistry, Journal of Agricultural and Food Chemistry, Food Control, Industrial Crops and Products,...).

30 invited lectures, in recent years I have been invited to speak in different congresses dedicated to functional food and nutraceuticals and in privates companies around the world.

- The role of mass spectrometry in the field of functional foods. University of Chile, 2013.
- Obtaining bioactive ingredients: An interesting solution for agro-industrial wastes such as olive leaves. Perrotis College Krinos Olive Center-Thessaloniki, 2014.
- CIDAF in the world of functional food. Universidade Federal do Estado do Rio de Janeiro, 2016.
- Innovation in functional food and nutraceuticals. III International Congress in Functional Foods and Nutraceutical. Pacific University of Mazatlan, 2018.
- Advanced analytical strategies in the field of bioactive ingredients. XVIII Reunión de la Sociedad Española de Cromatografía y Técnicas Afines (SECyTA) 2018. Plenary session.