

CURRICULUM VITAE (2000-2010)



ANDRÓNICO NEIRA-CARRILLO Ph.D.

PRESENT ADDRESS

Faculty of Veterinary and Animal Sciences
Department of Biological Animal Sciences
Universidad de Chile
Santa Rosa 11735, La Pintana
Santiago, Chile.

Ph: 56-2-29785674
Fax: 56-2-29785526
aneira@uchile.cl

WEB SITE:

http://www.veterinaria.uchile.cl/?_nfpb=true&_pageLabel=conUrlVeterinaria&url=66658
<http://www.accdis.cl>
<http://www.polyforms.cl/es/acerca-de-polyforms>
http://www.vaccimed.cl/equipo_de_trabajo.php



SHORT BIOGRAPHY

Dr. Neira-Carrillo received an undergraduate degree in Biochemistry (1996) and a Ph.D. degree (2003) from the University of Concepción (Chile)/Sponsor by Max Planck Institute for Polymer Research of Mainz (MPI-P), working on “Synthesis and characterization of derived Polysiloxane - Polysilazane by Cationic Method. Precursors of Ceramic Materials and Dispersion-Mineralization Agents”. Through a DAAD fellowship he spent 3 years at the MPI-P, where he worked with Prof. Gerhard Wegner. Currently, I have two Postdoc at the CIMAT (Center for Advanced Interdisciplinary Research in Materials) of the University of Chile and Max Planck Institute of Colloid and Interface Science and honorary research fellow at DAAD, Germany. I am author of 28 articles (26 ISI) and 9 Book’s chapter and I have participated in over 80 (national and international) conferences with more than 120 presentations and I have received invitation to give 15 lectures. My main research is related to the “**Synthesis of functionalized polymer materials and their biomedical applications**”.

Other lines associated are:

- Bio-related materials & Biomineralization
- Classical and non-classical crystallization (prenucleación) of inorganic materials
- Hybrid microparticles encapsulating and photothermal therapy
- Polymeric adjuvants for vaccines
- Micro and nano electrospun fibers by electrospinning. Synthesis, characterization and applications

I am evaluator of ISI publications belonging to Elsevier, Americal Chemical (ACS), Springer, Wiley, Benham, American Scientific publishers, RSC publishing, Química Nova, among others. My research and project have been funded by Fondecyt, Ecos-Conicyt, Andes Foundation, VID of University of Chile and Fondef. I am currently involved in a Fondecyt, Fondap and Fondef grant as principal investigator, co_director and associate researcher, respectively. I am also funder member of Vaccimed S.A., 1st Spin-Off of the University of Chile, which is currently scaling-up several fermentation processes for vaccine and biological drug developing for veterinary industry. Nowadays, I am director of Polyforms (The Platform for the Development of Polymeric Technological Solutions), which is a research network at the University of Chile funded by Program U-Redes, Vice-presidency of Research and Development, University of Chile and associate researcher of ACCDiS center (Advanced Center for Chronic Diseases), Fondap Chile Grant.

1. CURRICULAR DATA

Title or Degree (s)	Institution where it was obtained	Date it was obtained
BIOQUIMICO	Universidad de Concepción	1995
Licenciatura en Bioquímica	Universidad de Concepción	1996
Doctor en Ciencias c/m Química	Universidad de Concepción	2003
Postdoc	Center For Advanced Interdisciplinary Research in Materials (CIMAT). University of Chile	2003-2005
Postdoc	Max Planck Institute of Colloid and Interfaces, Colloid Chemistry. Research Campus Golm. Germany	2006

2. HONORS & DISTINCTIONS

- DAAD scholarships: SANDWICH-STIPENDIUM

Deutscher Akademischer Austauschdienst. (DAAD).

Polymer Chemistry Area: 1999-2002

Max-Planck - Institut Für Polymerforschung,

Prof. Dr. Gerhard Wegner. (Director MPI-P). Mainz. Germany.

- CONICYT CHILE Grant.

Comisión Nacional de Investigación Científica y Tecnológica

Field of Study: Polymer Chemistry

Date: 1999-2001

- International Scholarships: **CENTER FOR MATERIALS RESEARCH (ICMR) SUMMER SCHOOL ON TOPICS IN BIOMATERIALS**

UCSB, CA 93106, USA.

Field of study: Biomaterials

Date: 07-23.08.2005

Place: University of California, Santa Barbara CA, USA.

- INTERNAL UCHILE Grant: CONCURSO AYUDA DE VIAJE

Institution: Vicerrectoría de Investigación y Desarrollo (VID), Universidad de Chile

Activity: Oral conference at the Simposio de la Sociedad Latinoamericana de Polímeros SLAP 2010

Place: San José de Costa Rica,

Date: 13-16.07.2010

DISTINCTIONS

2014 Best Poster: VII Coloquio de Macromoléculas, División de Macromoléculas - Sociedad Chilena de Química, 3-6 de Diciembre, Termas de Catillo, Parral, Chile.

Electro-Crystallization of CaCO₃ Crystals in the presence of Alginate-CNT nanocomposites

M. Sánchez, P. Vásquez-Quitral, J. F. Silva, R. Egaña-Palma, M. Yazdani-Pedram, **A. Neira-Carrillo**

- 2013** CONICYT acknowledged our Research “Fondef Project D08I1085” within the 10 Chilean scientific milestones of 2013.
(<http://diario.latercera.com/2013/12/29/01/contenido/tendencias/16-154560-9-los-10-hitos-cientificos-de-2013.shtml>)
- 2012** Selected in the First TV Show “All for Science” – Docureality of science (www.13c.cl).
(<http://vimeo.com/42269209>)
- 2010** The recognized Newsrx publisher, of great prestige doctor and leader in the industry, who regularly publishes medical journals of interest in USA, highlighted the oxalates research published in the journal Molecular Crystals & Liquid Crystals (A. Neira-Carrillo et al. 2010) in the Life Science Weekly: Researchers at University of Chile release new data on oxalates; Published in Life Science Weekly, July 6th, 2010.
- 2007** Coworker of the Year Award 2007 given by the Academy of Sciences of Cuba, Decree-Law 163 of 1986, Field of research: "New polysaccharide derivatives for pharmaceutical and biotech Applications" by Dr. R. Villalonga. Enzyme Technology Center, University of Matanzas. Cuba.
- 2007** Nominated for the best poster. International congress of the Material Research Science (MRS) - Spring Meeting. 09-13.04.2007, San Francisco, CA. USA. Study of architecture of inorganic-organic matrix in the ventral segmental concretion of *Porcellio scaber* (Crustacea, Isopoda). R. Krishna Pai*, A. Neira-Carrillo, M.S. Fernández, J.L. Arias.

3. CURRENT PROJECT

RESEARCH GRANTS OBTAINED UNDER COMPETITIVE BASIS

(PR: Principal Researcher or CoR: Co-Researcher)

(D: Director or AD: Alternate Director)

- 2015-2018 FONDECYT Chile Project N° 1150681 (**CoR: Neira-Carrillo, A**): “Avian Eggshell as a Natural Template for Bio-inspired Synthesis of New Materials”
- 2014-2016 U-Redes Program_ Grant of Domeyko II: (**D: Neira-Carrillo, A**): “Plataforma polimérica para el desarrollo de soluciones tecnológicas (Polymforms)”
www.polyforms.cl
- 2014-2017 FONDECYT Chile Project N° 1140660 (**PR: Neira-Carrillo, A**): “Hierarchical hybrid polymeric materials for understanding classical and non-classical crystallizations and their applications”
- 2014-2019 Fondap ACCDiS: N° 15130011 (**CoR: Neira-Carrillo, A**): “Advanced Center For Chronic Diseases”
- 2014-2016 II Concurso de Ciencia Aplicada FONDEF (IT13I20021) PROGRAMA IDeA (**AD: Neira-Carrillo, A**): “Desarrollo de una vacuna oral contra circovirus porcino en base a microencapsulación de antígenos VL Ps con quitosano funcionalizado con propiedades mucoadhesivas”
- 2013-2015 Cooperación Científica Internacional (PCCI) CONICYT/DAAD Convocatoria 2012 (PCCI-12039) (**CoR: Neira-Carrillo, A**): “Rol of charged polysaccharides on calcium carbonate nanocrystalline nucleation and growth Associated Researcher”

- 2013-2015 Cooperación Científica Internacional (PCCI) CONICYT/MINCYT Convocatoria 2012 (PCCI-12038) (**PR: Neira-Carrillo, A**): “Preparación de Materiales híbridos Nanoestructurados con Aplicaciones Bionanotecnológicas y de Encapsulación”
- 2011-2013 FONDECYT Chile Project 1110194 (**PR: Neira-Carrillo, A**): “Biomimetic approaches for obtaining hierarchical hybrid materials by using functionalized polysiloxane and chitosan as templates.”
- 2011 - 2012 U-Redes Program (**PR: Neira-Carrillo, A**): “Plataforma polimérica para el desarrollo de soluciones tecnológicas (Polymforms)” www.polyforms.cl
- 2011-2011 Proyecto Go to Market, De la Idea al Mercado - Chilean Business Plan Competition. InnovaChile-Corfo (only until second step) (**PR: Neira-Carrillo, A**) “Vaccimed, biotechnological solutions for the veterinary market. Mammalian immunocastration vaccines”
- 2011-2013 FONDECYT Chile Project N° 1110194 (**PR: Neira-Carrillo, A**): “Biomimetic approaches for obtaining hierarchical hybrid materials by using functionalized polysiloxane and chitosan as templates”
- 2011-2013 Science to Business Program – Incubadora de Negocios NOVOS - Universidad de Chile (**CoR: Neira-Carrillo, A**): “Desarrollo de una plataforma tecnológica de formulación de vacunas para la inmunocastración en mamíferos”
- 2010-2012 Programa de Cooperación Científica Internacional (PCCI) CONICYT/MINCYT (**CoR: Neira-Carrillo, A**): “Desarrollo de aplicaciones biotecnológicas de nanopartículas de polímeros conductores”
- 2010-2011 Programa Enlace VID, ENL10/02(**PR: Neira-Carrillo, A**): “Preparation of self-assembled polysiloxane- chitosan nanotemplates for biomimetic mineralization of controlled calcium carbonate and calcium oxalate structures”
- 2010-2014 FONDEF. XVI Concurso Nacional de Proyectos Fondef (D08I1085). Tipo Proyecto: Investigación y Desarrollo Precompetitivo (**CoR: Neira-Carrillo, A**): “Desarrollo de una plataforma tecnológica de formulación de vacunas para la inmunocastración en mamíferos”
- 2010-2012 Programa de Cooperación Científica Internacional (PCCI) CONICYT/MINCYT (**CoR: Neira-Carrillo, A**): “Desarrollo de aplicaciones biotecnológicas de nanopartículas de polímeros conductores”
- 2008-2010 FONDECYT Chile Project N° 1080185 (**CoR: Neira-Carrillo, A**): “Design, fabrication, characterization and evaluation of new composite biomaterials for modulating bone regeneration”
- 2008 - 2010 FONDECYT Chile Project 1120172 (**CoR: Neira-Carrillo, A**): “Design, fabrication, characterization and evaluation of new composite biomaterials for modulating bone regeneration”
- 2007-2009 ECOS-CONICYT Project C07B02 (**CoR: Neira-Carrillo, A**): “Study of the calcium reservoir structures in the crustacean: structural, crystallographic, molecular and phylogenetic analyses”
- 2007-2009 FONDECYT Chile Project 11070136 (**PR: Neira-Carrillo, A**): “Synthesis of functionalized polymers as templates for biomineralization processes. Use of metallic nanoparticles as a novel molecular visualizing agent.”
- 2007-2008 CHILE - CSIC/ESPAÑA (CSIC 04/07-08) Bilateral Chile Project 11070136 (**CoR: Neira-Carrillo, A**): “Bionanocompositos como substrato para procesos de biomineralización y desarrollo de otros materiales nanoestructurados”
- 2007-2008 Internal CIMAT Chile Grant (Fondap 11980002 c.c. 2402) (**CoR: Neira-Carrillo, A**): “Biocompatibilización de nanopartículas metálicas mediante el uso de polímeros”

- 2005-2007 FUNDACION ANDES Chile Grant for Young Scientific (**C-14060/31**) (**PR: Neira-Carrillo, A**): “Obtención de biomateriales poliméricos mediante la cristalización biomimética de carbonato de calcio e hidroxiapatita”
- 2006-2010 FONDAP Chile Project N° **11980002** (**CoR: Neira-Carrillo, A**): “Centro para la investigación interdisciplinaria avanzada en ciencias de materiales (CIMAT) Universidad de Chile.”
- 2003-2005 FONDAP Chile Project N° **11980002** (**CoR (Posdoc): Neira-Carrillo, A**): “Centro para la investigación interdisciplinaria avanzada en ciencias de materiales (CIMAT) Universidad de Chile.”
- 1999-2002 FONDECYT Chile Project N° 2990059 (**PR (PhD): Neira-Carrillo, A**): “Obtención vía catiónica de derivados de polisilazanos precursores de materiales cerámicos”

4. **SCIENTIFIC PUBLICATION & BOOK CHAPTERS**

Local publications were not mentioned.

Peer-reviewed publications (in reverse chronological order)

33. Journal of Biomedical Materials Research Part A

Preparation of purified alginate beads from commercial and Chilean source of *Lessonia nigrescens* algae as cell implant therapy

A. Neira-Carrillo^{1,2}, R. Egaña Palma¹, P. Caviedes³, P. Cabané Toledo⁴
(In preparation 2015; ISI: 3.369IF)

32. Chem Mater.

Multidimensionally template CaCO₃ crystallization by submicron and nanosized fibers.

Andrónico Neira-Carrillo,* Rafael Gentsch, Hans G. Börner,* Cesar A Barbero, and Helmut Cölfen.
(In preparation 2015; ISI: 8.354IF)

31. Undefined Journal

Functionalized multiwalled carbon nanotubes as template for crystal growth of calcium carbonate

A. Neira-Carrillo*, P. Vásquez-Quitral, J. Miranda, M. S. Fernández, J. L. Arias, M. Yazdani-Pedram, H. Cölfen
(in preparation 2015; Adv. Mater; ISI: 13.877 IF)

30. Undefined Journal

Biomimetic Retrosynthesis of Calcium Carbonate Crystals Using Gastrolith of Red Claw Lobster (*Cherax quadricarinatus*) via Amorphous Precursor Particles

A. Neira-carrillo*, H. Cölfen, M. S. Fernández, D. Gebauer and J.L. Arias
(In preparation 2015; ISI: IF)

29. Biomacromolecules

pH-dependent schemes of calcium carbonate formation in presence of alginates

Ashit Rao, Patricio Vásquez-Quitral, María S. Fernández, John K. Berg, Marianela Sánchez, Markus Drechsler, Andrónico Neira-Carrillo*, José L. Arias, Denis Gebauer, Helmut Cölfen*
(In preparation 2015; ISI: 5.750IF)

28. Ionics; DOI: 10.1007/s11581-015-1558-0

Control of calcium oxalate morphology through electrocrystallization technique. Electrochemical approach for preventing pathological disease.

A. Neira-Carrillo, P. Vásquez-Quitral, M. Sánchez, A. Vargas-Fernández, J. Francisco Silva
ISI: 1.836 IF; In press

- 27. Journal of Structural Biology, 2015, 191, pag.263-271**
M.S. Fernández, J. I. Arias, A. Neira-Carrillo, and J. L. Arias
Austromegabalanus psittacus barnacle shell structure and proteoglycan localization and functionality.
(ISI: 3.231 IF)
- 26. CrystEngComm, 2015, 17, 5953-5961**
Calcium carbonate crystallization in tailored constrained environments
Beato, Carolina; Fernandez, Maria; Fermani, Simona; Reggi, Michela; Neira-Carrillo, Andronico; Rao, Ashit; Falini, Giuseppe; Arias, Jose Luis
(ISI: 3.858 IF)
- 25. European Journal Inorganic Chemistry, 1167-1177, 2015**
Preparation of sulfonated polymethylsiloxane as additive for the selective calcium oxalate crystallization
A. Neira-Carrillo*, F. Luengo-Ponce, P. Vásquez-Quitral, M. Yazdani-Pedram, M. S. Fernández, H. Cölfen, J. L. Arias
- 24. Virology Journal, Vol. 11, 2014, 149- 161**
Chitosan microparticles loaded with yeast- derived PCV2 VLPs elicit antigen-specific cellular immune response in mice after oral administration
Sergio A. Bucarey*, Myriam Pujol, Joaquín Poblete, Ignacio Nuñez, Cecilia V. Tapia, **Andrónico Neira-Carrillo**, Jonatán Martínez, Oliver Bassa
- 23. LWT - Food Science and Technology, 59, 2014, 1283-1289**
Preparation and characterization of heme iron-alginate beads
Carolina Valenzuela*, **Valesca Hernández**, **María Sol Morales**, **Andrónico Neira-Carrillo** and **Fernando Pizarro**.
(ISI: ISI: 2.468 IF)
- 22. Journal of Chilean Chemical Society Vol. 59, N°1, 2014, pp. 1986-1988**
Selective control of calcium carbonate crystals morphologies using sulfonated polymer as additive
A. Neira-Carrillo*, S. Pillai, R. K. Pai
- 21. Journal of Biomaterials and Tissue Engineering, Vol 6, 2013, pp. 1-6**
Capping gold nanoparticles with modified chitosan polymers for biomedical applications
Juan Mena, **Andrónico Neira-Carrillo***, M. Yazdani-Pedram and Marcelo J. Kogan*
(J. Biomater. Tissue Eng.) Times Cited: 0
- 20. Journal of Nanoscience and Nanotechnology, Vol, 2012, N° 10, pp.8087-8093**
Nanostructured Manganese Oxide Particles from Coordination Complex Decomposition and their Catalytic Properties for Ethanol Oxidation
Humberto Palza*, Andres Maturana, Francisco Gracia, **Andronico Neira**, Victor M. Fuenzalida, Jonathan Avila, Noelia M. Sanchez-Ballester, Mark R. J. Elsegood, Simon J. Teat, Katsuhiko Ariga, Jonathan P. Hill
- 19. Journal of Solid State Chemistry 194, 2012, pp.400-408**
Control of Calcium Carbonate Crystallization by using Anionic Polymethylsiloxanes as Templates
Andrónico Neira-Carrillo*, Patricio Vásquez-Quitral, María Paz Díaz, María Soledad Fernández, José Luis Arias, Mehrdad Yazdani-Pedram
- 18. Journal of Crustacean Biology 32(5), 2012, pp. 802-815**

Proteoglycan occurrence in Gastrolith of the Crayfish *Cherax quadricarinatus* (Crustacea, Malacostraca, Decapoda)

María S. Fernández, Cristián Bustos, Gilles Luquet, Daniel Saez, **Andrónico Neira-Carrillo**, Marion Corneillat, Gérard Alcaraz, and José L. Arias

- 17. Journal of Tissue Engineering and Regenerative Medicine Vol 6, N° 6, 2012, pp. 497-504**
Evaluation of a multilayered chitosan-hydroxyapatite porous composite enriched with fibronectin or an in vitro generated bone-like extracellular matrix on proliferation and differentiation of osteoblasts.
M.S. Fernández*, J.I. Arias, M.J. Martínez, L. Sáenz, **A. Neira-Carrillo**, M. Yazdani-Pedram, J.L. Arias.
- 16. Macromolecular Research, Vol 11, N°19, 2011, pp. 1105-1113**
Preparation of a porous scaffold based on polypropylene grafted with monomethylitaconate as potential bone graft
A. Neira-Carrillo*, S. Navarrete G., M. Paz Díaz, M.S. Fernández, M. Yazdani-pedram, J. L. Arias
- 15. Journal of Iranian Chemical Society, Vol 8, N°3, 2011, pp. 811-824**
Preparation, characterization and effect of grafted chitosan with polyvinylsulfonic acid as a template for crystal growth of CaCO₃
A. Neira-Carrillo*, P. Mercadé-Jaque, M. Diaz-Dosque, C. Tapia-Villanueva, M. Yazdani-Pedram
- 14. Revista Chilena de Cirugía. Vol.63, N1 (2011) pp. 110-113**
Microencapsulación de células y tejido para terapia celular
P. Cabané T*, A. Alvo V, **A. Neira-Carrillo**, P. Caviedes F, P. Gac E
- 13. Medical Mycology, Vol 48(8) 2010, pp. 1018-1023**
C. Alburquenque*, S.A. Bucarey, **A. Neira-Carrillo**, B. Urzúa, G. Hermosilla, C.V. Tapia
Antifungal activity of low molecular weight chitosan against clinical isolates of candida spp
- 12. European Polymer Journal, Vol. 46 (2010) pp. 1184-1193**
Crystal growth of CaCO₃ induced by new carboxylated monomethylitaconate grafted polymethylsiloxane
A. Neira-Carrillo*, P. Vásquez Quitral, M. Yazdani-Pedram, J. Luis Arias
- 11. Molecular Crystals & Liquid Crystals, Vol. 522 (2010) pp. 307-317**
A. Neira-Carrillo*, P. Vásquez-Quitral, M. Yazdani-Pedram, J. L. Arias
Selective calcium oxalate crystallization induced by monomethylitaconate grafted polymethylsiloxane
- 10. Colloid and Polymer Science, 287 (2009) pp. 385-393**
Synthesis and characterization of sulfonated polymethylsiloxane polymer as template for Crystal growth of CaCO₃
A. Neira-Carrillo*, R. Krishna Pai, M.S. Fernández, E. Carreño, P. Vásquez Quitral, J. L. Arias
- 9. International Journal of Pharmaceutics, 369(1) (2009) pp. 64-71**
Chitosan formulations improve the immunogenicity of a GnRH-I peptide based vaccine
L. Sáenz*, **A. Neira-Carrillo**, R. Paredes, M. Cortés, S. Bucarey, J. L. Arias
- 8. Langmuir, 24, (2008) pp. 12496-12507**
A. Neira-Carrillo*, D.F. Acevedo, M.C. Miras, C.A. Barbero, D. Gebauer, H. Cölfen*, J. L. Arias
Influence of Conducting Polymers Based on Carboxylated Polyaniline on *In Vitro* CaCO₃ Crystallization

7. **Journal of the Chilean Chem. Soc., Vol. 53, N°2 (2008) pp. 1469-1473**
A. Neira-Carrillo*, R. Krisna Pai, V. M. Fuenzalida, M.S. Fernandez, J. Retuert, J.L. Arias
 Calcium carbonate growth modification by constituents released from porous filter membranes.
 (ISI: 0.469 IF) Times Cited: 0

6. **Journal of the Chilean Chem. Soc., Vol. 53, N°1 (2008) pp. 1367-1372**
A. Neira-Carrillo*, J. Retuert, F. Martínez, J.L. Arias
 Effect of crosslinked chitosan as a constrained volume on the *in vitro* calcium carbonate crystallization

5. **Bioprocess and Biosystems Engineering, Vol. 28 (6) (2006) pp. 387-395**
 L. Gómez, H. L. Ramírez, **A. Neira-Carrillo**, R. Villalonga*
 Polyelectrolyte complex formation mediated immobilization of chitosan-invertase neoglycoconjugate on pectin-coated chitin

4. **J. Colloid and Interface Science, 286(1) (2005) pp. 134-141**
A. Neira-Carrillo, M. Yazdani-Pedram, J. Retuert, M. Diaz-Dosque, S. Gallois, J. L. Arias*
 Selective crystallization of calcium salts by poly(acrylate)-grafted chitosan

3. **J. Mater. Chem., 14 (2004) pp. 2154-2160**
 J. L. Arias*, **A. Neira-Carrillo**, J.I. Arias, C. Escobar, M. Boderó, M. David, M.S. Fernández.
 Sulfated polymers in biological mineralization: a plausible source for bio-inspired engineering.

2. **Journal of the Chilean Chem. Soc., Vol. 48, N°2 (2003) pp. 72-77**
 Mario Rodríguez-Baeza*, **Andrónico Neira C**, Carlos Aguilera J.
 Thermogravimetric Studied of the Formation of Crosslinked Structures in the Synthesis of Poly (methylsiloxane).

1. **Polym. Bull., 50, 1-2 (2003) pp. 25-32**
 Mario Rodríguez-Baeza*, **Andrónico Neira C**, Carlos Aguilera J.
 Synthesis of poly[(methylsiloxane)-co-(dimethylsilazane)] copolymers as precursors of ceramic materials.

BOOK CHAPTERS

(n= 9)

9. F. Oyarzún-Ampuero, M.J. Kogan, **A. Neira-Carrillo**, J.O. Morales. Surface-modified nanoparticles to improve drug delivery, in Dekker Encyclopedia of Nanoscience and Nanotechnology, Editor S.E. Lyshevski. ISBN: 9781439891346, New York, USA, 2014, 1-21, In press.

8. J. I. Arias*, **A. Neira-Carrillo**, M. Yazdani-Pedram, M.S. Fernández, J. L. Arias.
 A New Multilayered Composite Bioceramic for Bone Graft, *in Structure-Property Relationships in Biomimetic and Biomimetic Composites*, edited by D. Kisailus, L. Estroff, W. Landis, P. Zavattieri, H.S. Gupta (Mater. Res. Soc. Symp. Proc. Volume 1187, Warrendale, PA, 1187-KK09-02, 2009.

7. J.I. Arias*, **A. Neira-Carrillo**, M. Yazdani-Pedram, M.S. Fernandez, J.L. Arias
 Phosphorylation efficiency of chitosan at different times and temperatures for bone graft substitute.
 Mary Ann Liebert, Inc. DOI: 10.1089/tea.2008.1504.
 Tissue Engineering: Part A, Volume 14, Number 5, pp. 895-896, 2008.

6. R. Krishna Pai*, **A. Neira-Carrillo**, M. S. Fernández and J. L. Arias.

Study of architecture of Inorganic-organic matrix in the ventral segmental concretion of *Porcellio chilensis* Nicolet, 1849 (Crustacea, Isopoda), in *Synthesis, Processing and Properties of Organic/Inorganic Hybrid Materials*, edited by R.M. Laine, C. Sanchez, C. Barbé, U. Schubert (ISBN: 978-1-55899-967-1, Mater. Res. Soc. Symp. Proc. Volume 1007, Warrendale, PA, 1007-S12-21, 2007).

5. **A. Neira-Carrillo***, J. I. Arias, M.S. Fernández, R. Krishna Pai, C. Quilodrán C, J. L. Arias. 3D composites based on hydroxyapatite-chitosan-polysiloxane as a biomimetic scaffold materials, in *Synthesis, Processing and Properties of Organic/Inorganic Hybrid Materials*, edited by R.M. Laine, C. Sanchez, C. Barbé, U. Schubert (ISBN: 978-1-55899-967-1, Mater. Res. Soc. Symp. Proc. Volume 1007, Warrendale, PA, 1007-S04-49, 2007).

4. C. Escobar*, **A. Neira-Carrillo**, M.S. Fernandez, J.L. Arias. Role of sulfated macromolecules in urinary stone formation. pp. 343-358, 2007. In: *Biom mineralization, from Paleontology to Materials Science*, J.L. Arias, M.S. Fernández (Eds) Editorial Universitaria, Santiago, Chile

3. J.I. Arias*, **A. Neira-Carrillo**, J. Retuert, J.L. Arias. Hydroxyapatite mineralized on derivatized chitosan films as a possible substitute. pp. 449-456, 2007 In: *Biom mineralization, from Paleontology to Materials Science*, J.L. Arias, M.S. Fernández (Eds) Editorial Universitaria, Santiago, Chile

2. **A. Neira-Carrillo***, M.S. Fernández, J.I. Arias, J. Retuert, J.L. Arias. Obtention of bioimplantable materials from polysiloxane-chitosan composites by using hydroxyapatite crystallization. pp. 457- 466, 2007. In: *Biom mineralization, from Paleontology to Materials Science*, J.L. Arias, M.S. Fernández (Eds) Editorial Universitaria, Santiago, Chile

1. **A. Neira C**, M.S. Fernández, J. Retuert, J.L. Arias*. Effect of the crystallization chamber design on the polymorphs of calcium carbonate using the sitting-drop method. ISBN: 1-55899-745-8, Mater. Res. Soc. Symp. Proc. Volume EXS-1, pp. 321-326, 2004. Architecture and Application of Biomaterials and Biomolecular Materials Symposium held December 1-4, 2003, Boston, Massachusetts, U.S.A.

5. Affiliation to Scientific Societies & Research evaluator:

- ❖ Member of the Chilean Chemical Society (www.schq.cl), from 2005.
- ❖ Member of the Mineralogical Society of America (MSA), from 2004.
- ❖ Electronic Member of the Instituto Nacional de Tecnología -Argentina, from 2006.
- Editorial Board member of the Journal of Research in Polymer Science Updates (from 2015)
- **External evaluator INNOVA-CHILE (CORFO)** (from 03.10.2011)
- **Peer-review of ISI journals - (INTERNATIONAL)**
 - **American Scientific Publishers** (from 2015)
 - **Química Nova Editorial Office** (from 2015)
 - **Benham Science** (from 2015)

- **Latin American Applied Research (LAAR)** (from 2013)
- **Editorial SPRINGER** (from 2012)
- **Editorial WILEY** (from 2011)
- **Editorial RSC PUBLISHING** (from 2010)
- **Editorial ELSEVIER** (from 2007)
- **Editorial ACS AMERICAL CHEMICAL SOCIETY** (from 2006)
Journal Crystal Growth & Design

- **Peer-review of ISI journals - (NATIONAL)**
- **Editorial SOCIEDAD CHILENA DE QUÍMICA** (from 2006)

- **Peer-review of CHILEAN GRANT**
- ECOS-CONICYT 2008.
- FONDECYT Regular 2009.
- FONDECYT Inicio 2010.
- FIV (Funded by the Faculty of Veterinary and Animal Sciences. (from 2007))