CARLOS ARTURO STORTZ

1. Personal information and educational data

- Born in Buenos Aires, Argentina, on September 20, 1956
- Work address: Departamento de Química Orgánica, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires. Ciudad Universitaria- Pab.2, 1428 Buenos Aires – Argentina.
- Home address: Thames 549 5ºB, 1414 Buenos Aires.
- Phone: (54-11)-5285-8519
- E-mail: stortz@qo.fcen.uba.ar
- Marital status: Married, 2 children.
- Bachelor in Chemistry (Licenciado en Ciencias Químicas), December 1979, University of Buenos Aires.
- Ph. D.in Chemistry, December 1984, University of Buenos Aires.
- Languages: Spanish, English, and some manage of Italian.

2. Main teaching and research positions

- At the Department of Organic Chemistry, University of Buenos Aires: Lab Assistant (1980-1984), Instructor (1984-1989), Assistant Professor (1989-1997), Associate Professor (1997-2013), Full Professor (2013-2021) and **Plenary Full Professor** (2021-) full-time in all the cases.
- At the National Research Council of Argentina, CONICET, member of the Research Career, as Assistant Researcher (1989-1993), Associate Researcher (1993-1998), Independent Researcher (1998-2007), Principal Researcher (2008-2020), and **Superior Researcher** (2020-)
- Post-doctoral Research Associate at the Georgia State University, Department of Chemistry, Atlanta, GA, USA (1986-1988).
- Member of several commitees of teaching, research evaluation and administration, at the school, university, research council, and government levels. Vice-President of the Chemistry Committee of the National Research Council of Argentina (2004). Vice-Coordinator (2013) and Coordinator (2014) of the Chemistry Committee of the National Research Council of Argentina. Vice-Coordinator (2020-21) and Coordinator (2021-22) of the Chemistry Committee for New Researchers of the National Research Council of Argentina. .
- Member of the Board of Directors of the Argentine Society of Research in Organic Chemistry (SAIQO), 1993-1997. Vicepresident of the Society (2015-2017). President of the Society (2017-2019).
- First category in the Incentive Program of the National Ministery of Education, since 2005.
- Associate Editor of the journal *Anales de la Asociación Química Argentina*, 1994-2001.
- Editor of the journal *Carbohydrate Polymers*, since 2018.
- Vice-Chairman of the Department of Organic Chemistry, University of Buenos Aires, 1995-1999, 2004-2008, 2022-.
- Member of the Board of the Department of Organic Chemistry, 1991-1994, 2001-2004, and 2012-2014.

- Elected Member of the Council (Board) of the School of Exact Sciences of the University of Buenos Aires (2018-2022, reelected in 2022).
- Courses given: Basic Organic Chemistry for chemists, Basic Organic Chemistry for biologists, Natural Products, Molecular Modeling, Analytical Techniques for Polysaccharides, Instrumental Analysis (NMR), Chemical Aspects of Environmental Contamination, and Macroalgae of Economical Interest.

3. Research projects under his direction (last years)

- Director of succesive Projects of the University of Buenos Aires 2004/2007 (X-174), 2008-2010 (X-214), 2011-2014 (W-759), 2014-2017 (20020130100203BA) y 2018-2021 (20020170100255BA) "Renewable raw resources: polysaccharides with pharmaceutical, industrial and/or academic value from renewable sources: seaweeds, marine plants, invertebrates and fruits. Relationship between structure-conformation-activity-properties".

- Director of succesive PIP Projects from CONICET: PIP-5699 2005/06 (extended to 2010), PIP 0559/10 (2010-14), PIP 298/14 (2016-21) and PIP 11220200101158CO (from 2021) "Polysaccharides and related compounds from natural renewable sources with biological activity, functional properties and/or industrial application. Search of bioactive products. Shape and interactions of biomacromolecules".

- Researcher in charge of the Project "Incidence of echophysiological and technological factor son the metabolism of the cell Wall of Maloideae and Prunoideae fruits with commercial importance", ANPCyT, PICT 01267-2006 (2008-2011).

- Codirector of the Project from the Institute 2016 "Generation of products with high adde value from polysaccharides and related products", CONICET. Director of the PICT-E attached to this project (2018-0167) for the purchase of equipment.

- Researcher in charge of the Project ANPCYT PICT-2017-1675 "Polysaccharides with pharmacological and/or industrial value originated in renewable natural sources and generated by chemical modifications".2019-2023.

4. Published work

PH.D.THESIS:
"Study of the "soluble" carrageenans from the red seaweed *Iridaea undulosa* Bory" , University of Buenos Aires (1984). Director: Dr. Alberto S. Cerezo.

Refereed articles in Periodical Journals:

Until 2007: 66 papers. Then:

67. “Conformational and electronic effects on the regioselectivity of the glycosylation of different anomers of *N*-dimethylmaleoyl-protected glucosamine acceptors”, M. L. Bohn, M. I. Colombo, E. A. Rúveda & C. A. Stortz*, *Org. Biomol. Chem.*, **2008**, *6*, 554-561.

68. “Disaccharide conformational maps: adiabaticity in analogs with variable ring shapes”, C. A. Stortz* & A. D. French*, *Mol. Simul.*, **2008**, *34*, 373-389.

69. “DFT/MM Modeling of the five-membered ring in 3,6-anhydrogalactose derivatives and its influence on disaccharide adiabatic maps”, D. A. Navarro & C. A. Stortz*, *Carbohydr. Res.*, **2008**, *343*, 2292-2298.

70. “The system of xylogalactans from the red seaweed *Jania rubens* (Corallinales, Rhodophyta)”, D. A. Navarro & C. A. Stortz*, *Carbohydr. Res*, **2008**, *343*, 2613-2622.

71. “Antiretroviral activity of fucoidans extracted from the brown seaweed *Adenocystis utricularis*”, J. Trinchero, N. M. A. Ponce, O. L. Córdoba, M. L. Flores, S. Pampuro, C. A. Stortz, H. Salomón & G. Turk, *Phytotherapy Res.*, **2009**, *23*, 707-712.

72. “Commercial cell wall hydrolytic enzymes for producing pectin-enriched products from butternut (*Cucurbita moschata,* Duchesne ex Poiret)”, E. N. Fissore, N. M. Ponce, E. A. Wider, C. A. Stortz, L. N. Gerschenson* & A. M. Rojas, *J. Food Eng.*, **2009**, *93*, 293-301.

73. “Evaluation of density functionals and basis sets for carbohydrates”, G. I. Csonka*, A. D. French, G. P. Johnson & C. A. Stortz, *J. Chem. Theory Comput.*, **2009**, *5*, 679-692.

74. “Comparison of different force fields for the study of disaccharides”, C. A. Stortz*, G. P. Johnson, A. D. French & G. I. Csonka, *Carbohydr. Res.*, **2009**, *344*, 2217-2228.

75. “Compositional changes in cell wall polysaccharides from Japanese plum (*Prunus salicina*) during growth and on-tree ripening”, N. M. A. Ponce, V. H. Ziegler, C. A. Stortz* & G. O. Sozzi, *J. Agric. Food Chem.*, **2010**, *58*, 2562–2570.

76. “Characterization of acid-extracted pectin-enriched products obtained from red beet (*Beta vulgaris* L. var. conditiva) and butternut (*Cucurbita moschata* Duch ex Poiret)”, E. N. Fissore, N. M. A. Ponce, M. De Escalada Pla, C. A. Stortz, A. M. Rojas & L. N. Gerschenson*, *J. Agric. Food Chem.*, **2010**, *58*, 3793–3800.

77. “Differences in polysaccharide structure between calcified and uncalcified segments in the articulated coralline *Calliarthron cheilosporioides* (Corallinales, Rhodophyta)”, P. T. Martone, D. A. Navarro, C. A. Stortz & J. M. Estevez*, *J. Phycol.*, **2010**, *46*, 507–515.

78. “Diet, prey narcotization and biochemical composition of salivary gland of the volutid snail *Odonotocymbiola magellanica*”, G. Bigatti*, H. Sacristán, M. C.

Rodríguez, C. A. Stortz & P. E. Penchaszadeh, *J. Mar. Biol. Assoc. UK*, **2010**, *90*, 959–967.

79. "The conformational pathways of simple six-membered rings", C. A. Stortz*, *J. Phys. Org. Chem.*, **2010**, *23*, 1173–1186.

80. "Synthesis and conformational analysis of 1,2-*cis* fused bicyclic α-d-galactofuranosyl thiocarbamate from per-O-tert-butyldimethylsilyl-β-d-galactofuranosyl isothiocyanate", L. Baldoni, C. A. Stortz & C. Marino*, *Carbohydr. Res.*, **2011**, *346*, 191–196.

81. "Xylogalactans from *Lithothamnion heterocladum*, a crustose member of the Corallinales (Rhodophyta)", D. A. Navarro, A. M. Ricci, M. C. Rodriguez & C. A. Stortz*, *Carbohydr. Polymers*, **2011**, *84*, 944–951.

82. "Usage of α-picoline borane for the reductive amination of carbohydrates", V. A. Cosenza, D. A. Navarro & C. A. Stortz*, *Arkivoc*, **2011**, *vii*, 182–194.

83. "A comparative study of the O-3 reactivity of isomeric *N*-dimethylmaleoyl-protected d-glucosamine and d-allosamine acceptors", M. I. Colombo, C. A. Stortz & E. A. Rúveda*, *Carbohydr. Res.*, **2011**, *346*, 569–576.

84. "Regioselectivity of the glycosylation of *N*-dimethylmaleoyl-protected hexosamine acceptors. An experimental and DFT approach", M. I. Colombo*, E. A. Rúveda & C. A. Stortz*, *Org. Biomol. Chem.*, **2011**, *9*, 3020–3025.

85. "Compositional changes in 'Bartlett' pear (*Pyrus communis* L.) cell wall polysaccharides as affected by sunlight conditions", M. D. Raffo, N. M. A. Ponce, G. O. Sozzi, A. R. Vicente & C. A. Stortz*, *J. Agric. Food Chem.*, **2011**, *59*, 12155–12162.

86. "Isolation of pectin-enriched products from red beet (*Beta vulgaris* L. var. *conditiva*) wastes: composition and functional properties", E. N. Fissore, N. M. A. Ponce, L. Matkovic, C. A. Stortz, A. M. Rojas & L. N. Gerschenson*, *Food Sci. Technol. Int.*, **2011**, *17*, 517–527.

87."Compositional changes in cell wall polysaccharides from apple fruit callus cultures modulated by different plant growth regulators", P. Alayón-Luaces, N. M. A. Ponce, L. A. Mroginski, C. A. Stortz* & G. O. Sozzi, *Plant Science*, **2012**, *185/186*, 169–175.

88. "Effect of extraction time and temperature on the characteristics of loosely-bound pectins from Japanese plum", M. F. Basanta, N.M. A. Ponce, Ana M. Rojas and Carlos A. Stortz*, *Carbohydr. Polymers*, **2012**, *89*, 230–235.

89. "Structural analysis of methyl 6-*O*-benzyl-2-deoxy-2-dimethylmaleimido-α-d-allopyranoside by X-ray crystallography, NMR and QM calculations: hydrogen bonding and comparison of density functionals",
M. I. Colombo*, E. A. Rúveda, O. Gorlova, R. Lalancette & C. A. Stortz*, *Carbohydr. Res.*, **2012**, *353*, 79–85.

90. “Changes on the cell wall composition of tree-ripened ‘Bartlett’ pears (*Pyrus communis* L.)”, M. D. Raffo, N. M. A. Ponce, G. O. Sozzi, C. A. Stortz & A. R. Vicente*, *Postharvest Biol. Technol.*, **2012**, *73*, 72–79.

91. “Hydrolitic stability of L-(+) ascorbic acid in low methoxyl pectin films with potential antioxidant acticity at food interfaces”, M. D. De´Nobili, C. D. Pérez, D. A. Navarro, C. A. Stortz & A. M. Rojas*, *Food Bioprocess Technol.*, **2013**, *6*, 186-197.

92. “Chemical and functional properties of cell wall polymers from two cherry varieties at two developmental stages”, M. F. Basanta, M. F. de Escalada Pla, C. A. Stortz* & A. M. Rojas, *Carbohydr. Polymers*, **2013**, *92*, 830–841.

93. “Developmental changes in cell wall polysaccharides from sweet cherry (*Prunus avium* L.) cultivars with contrasting firmness”, G. S. Salato, N. M. A. Ponce, M. D. Raffo, A. R. Vicente & C. A. Stortz*, *Postharvest Biol. Technol.*, **2013**, *84*, 66–73.

94. “Differential O-3/O-4 selectivity in the glycosylation of *N*-dimethylmaleoyl-protected hexosamine acceptors: effect of a conformationally armed (superarmed) glycosyl donor”, F.Della Felice, E. A. Rúveda, C. A. Stortz & M. I. Colombo*, *Carbohydr. Res.*, **2013**, *380*, 167–173.

95. “The system of fucoidans from the brown seaweed *Dictyota dichotoma*: chemical characterization and antiviral activity”, M. Rabanal, N. M. A. Ponce, D. A. Navarro, R. M. Gómez & C. A. Stortz*, *Carbohydr. Polymers*, **2014**, *101*, 804–811.

96. “Cherry fibers isolated from harvest residues as valuable dietary fiber and functional food ingredients”, M. F. Basanta, M. F. de Escalada Pla, M. D. Raffo, C. A. Stortz & A. M. Rojas*, *J. Food Eng.*, **2014**, *126*, 149–155.

97. “New insights into molecular recognition of 1,1-bisphosphonic acids by farnesyl diphosphate synthase”**,** M. Ferrer-Casal, C. Li, M. Galizzi, C. A. Stortz, S. H. Szajnman, R. Docampo, S. N. J. Moreno & J. B. Rodriguez***,** *Bioorg. Med. Chem.*, **2014**, *22*, 398–405.

98. “Chemical and rheological characterization of the carrageenans from *Hypnea musciformis* (Wulfen) Lamoroux”, V. A. Cosenza, D. A. Navarro, E. N. Fissore, A. M. Rojas & C. A. Stortz***,** *Carbohydr. Polymers*, **2014**, *102*, 780–789.

99. “A sulfated galactan from the mucilaginous sheath of the red filamentous alga *Chroodactylon ornatum* (Stylonematophyceae, Rhodophyta)”. J. M. Cabrera, C. A. Stortz & M. C. Rodríguez*, *J. Appl. Phycol.*, **2014**, *26*, 1801–1811.

100. “Compositional changes in cell wall polysaccharides from five sweet cherry (*Prunus avium* L.) cultivars during on-tree ripening”, M. F. Basanta, N. M. A. Ponce, M. L. Salum, M. D. Raffo, A. R. Vicente, R. Erra Balsells & C. A. Stortz*, *J. Agric. Food Chem.*, **2014**, *62*, 12418-12427.

101.“Contributions of South American research centers to *Carbohydrate Research*”. C. A. Stortz*, *Carbohydr. Res.*, **2015**, *403*, 8-12.

102. “Partial and total C-6 oxidation of gelling carrageenans. Modulation of the antiviral activity with the anionic character”. V. A. Cosenza, D. A. Navarro, C. A. Pujol, E. B. Damonte & C. A. Stortz*
Carbohydr. Polymers, **2015**, *128*, 199–206.

103. “DFT/PCM theoretical study of the conversion of methyl 4-O-methyl-□-d-galactopyranoside 6-sulfate and its 2-sulfated derivative into their 3,6-anhydro counterparts”. V. A. Cosenza, D. A. Navarro & C. A. Stortz*, *Carbohydr.Res.*, **2016**, *426*, 15–25.

104. “Alkylation of 2- and 3-alkoxycarbonyl-4-quinolinones. DFT study on the regioselectivity”. M. S. Schmidt, P. Arroyo Mañez, C. A. Stortz, I. A. Perillo, D. Vega & M. M. Blanco*, *J. Mol. Struct.* **2017**, *1128*, 142–150.

105. “Minor polysaccharidic constituents from the red seaweed *Hypnea musciformis*. Appearance of a novel branched uronic acid”, V. A. Cosenza, D. A. Navarro & C. A. Stortz*, *Carbohydr.Polymers*, **2017**, *157*, 156–166.

106. “Free radical scavenging activity of extracts from seaweeds *Macrocystis pyrifera* and *Undaria pinnatifida*: applications as functional food in the diet of prawn *Artemesia longinaris*”, A. C. Diaz*, M. L. Espino, N. S. Arzoz, S. M. Velurtas, N. M. A. Ponce, C. A. Stortz & J. L. Fenucci, *Lat. Am. J. Aquat. Res.*, **2017**, *45*, 104–112.

107. “Exhaustive rotamer search of the $^4C_1$ conformation of □- and □-galactopyranose”, E. A. Del Vigo, C. Marino & C. A. Stortz*, *Carbohydr. Res.*, **2017**, *448*, 136–147.

108. “Insoluble soybean polysaccharides. Obtaining and evaluation of their O/W emulsifying properties”, M. C. Porfiri, J. Vaccaro, C. A. Stortz, D. A. Navarro, J. R. Wagner & D. M. Cabezas*, *Food Hydrocolloids*, **2017**, *73*, 262–273.

109. “Modified ribavirin analogues as antiviral agents against Junín virus”, M. Contin, C. Sepúlveda, M. Fascio, C. A. Stortz, E. B. Damonte & N. B. D’Accorso*, *Bioorg. Med. Chem. Lett.* **2019**, *29*, 556-559.

110. “Husks of *Zea mays* as a potential source of biopolymers for food additives and materials´devolpment”, D. C. Bernhardt, N. M. A. Ponce, M. F. Basanta, C. A. Stortz & A. M. Rojas*,
Heliyon, **2019**, *5*, e01313.

111. “Fucoidans from the phaeophyta *Scytosiphon lomentaria*: Chemical analysis and antiviral activity of the galactofucan component”, N. M. A. Ponce, M. L. Flores, C. A. Pujol, M. B. Becerra, D. A. Navarro, O. Córdoba, E. B. Damonte & C. A. Stortz*, *Carbohydr. Res.,* **2019**, *478*, 18–24.

112. “Disaccharides obtained from carrageenans as potential antitumor agents”, G. H. Calvo, V. A. Cosenza, D. A. Sáenz, D. A. Navarro, C. A. Stortz, M. A. Céspedes, L. A. Mamone, A. G. Casas & G. M. Di Venosa***,*** *Scientific Reports,* **2019**, *9*, 6654.

113. “Exhaustive exploration of the conformational landscape of mono- and disubstituted five-membered rings by DFT and MP2 calculations”, C. A. Stortz* & A. M. Sarotti*, *RSC Advances*, **2019**, *9*, 24134–24145.

114. “Regioselectivity of glycosidation reactions of galactose acceptors: an experimental and theoretical study”. E. A. Del Vigo, C. A. Stortz & C. Marino*, *Beilstein J. Org. Chem.* **2019,** *15,* 2982-2989.

115. “Chemical structure and rheological studies of arabinoglucoxylans from the *Cercidium praecox* exudates brea gum”, F. Sznaider, A. M. Rojas, C. A. Stortz & D. A. Navarro*, *Carbohydr. Polymers*, **2020**, *228*, 115388.

116. “Rheology of totally and partially oxidized red seaweed galactans”, V. A. Cosenza, D. A. Navarro, C. A. Stortz* & A. M. Rojas*, *Carbohydr. Polymers*, **2020**, *230*, 115653.

117. “Fucosylated chondroitin sulfate from the sea cucumber *Hemioedema spectabilis:* Structure and influence on cell adhesion and tubulogenesis”, N. E. Ustyuzhanina*, M. I. Bilan, A. S. Dmitrenov, A. S. Shashkov, N. M. A. Ponce, C. A. Stortz, N. E. Nifantiev & A. I. Usov, *Carbohydr. Polymers*, **2020**, *234*, 115895.

118. “Experimental and theoretical study of the O3/O4 regioselectivity of glycosylation reactions of glucopyranosyl acceptors”, E. A. Del Vigo, C. A. Stortz & C. Marino*, *Tetrahedron*, **2020**, *76*, 131719.

119. “Enzyme assisted extraction of pectin and inulin enriched fractions isolated from microwave treated *Cynara cardunculus* tissues”, C. Santo Domingo,C. Otálora González, D. Navarro, C. Stortz, A. M. Rojas, L. N. Gerschenson & E. N. Fissore, *Int. J. Food Sci. Technol.*, **2021**, *56*, 242–249.

120.”Perennial halophyte *Salicornia neei* Lag.: cell wall composition and functional properties of its biopolymers”, M. R. Villarreal, D. A. Navarro, N. M. A. Ponce, A. M. Rojas* & C. A. Stortz*, *Food Chemistry*, **2021**, *350,* 128659.

121.“Antioxidant edible film based on a carrot pectin-enriched fraction as an active packaging of a vegan cashew ripened cheese”, A. M. Idrovo Encalada, M. D. De’Nobili, A. N. M. Ponce, C. A. Stortz, E. N. Fissore & A. M. Rojas*, *Int. J. Food Sci. Technol.*, **2021**, *56*, 3691–3702.

122.“Monthly fluctuations in the content and monosaccharide composition of fucoidan from *Undaria pinnatifida* sporophylls from Northern Patagonia”, M. Arijón, N. M. A. Ponce, V. Solana, F. G. Dellatorre*, E. A. Latour & C. A. Stortz, *J. Appl. Phycol.*, **2021**, *33*, 2433–244.

123. “Novel gelling pectins from *Zea mays´* husks agro-industrial residue, and their interaction with calcium and iron (II)”, R. A. Higuera Coelho, L. Lizarraga, N. M. A. Ponce, C. A. Stortz, A. M. Rojas, D. C. Bernhardt & E. N. Fissore*, *Bioactive Carbohydr. Diet. Fib.*, **2021,** *26,* 100273.

124. “Mixed approach on *Chroodactylon ornatum* (Stylonematophyceae, Rhodophyta) tolerance to hiposalinity: growth, photosynthetic performance and carbohydrate analysis”, Y. Daglio, J. M. Romero, M. G. Lagorio, C. A. Stortz & M. C. Rodriguez*, *Phycologia*, **2022,** *61,* 16–26.

125. “D-Allose, a rare sugar. Synthesis of D-allopyranosyl acceptors from glucose, and their regioselectivity of glycosydation reactions”, E. A. Del Vigo, C. A. Stortz & C. Marino*, *Organic Biomol.Chem.,* **2022**, *20*, 4589–4598.

126. “Effects of ultrasonic pretreatments on the characteristics of pectin extracted from Salustiana orange cultivated in Argentina”, I. Castellarin, R. Higuera Coelho, E. Zukowski, N. M. A. Ponce, C. Stortz, L. N. Gerschenson & E. N. Fissore*, *J. Food Proc. Eng.* **2022**, en prensa (DOI 10.1111/jfpe.14229).

127. “*Cercidium praecox* brea gum arabinoglucuronoxylans: a viscosant substitute for gum Arabic?”, F. Sznaider, C. A. Stortz, A. M. Rojas* & D. A. Navarro*, *Food Hydrocolloids*, **2023,** *137*, 108403.

Book chapters and review articles:

Until 2008: 6 articles. Then:

7. “Chemical modification of carrageenans and applications of the modified products”, V. A. Cosenza, D. A. Navarro & C. A. Stortz, en *Carrageenans. Sources and extraction methods, molecular structure, bioactive properties and health effects*, L. Pereira (editor),Nova Science Publishers, New York (**2016**), pp. 189-227 (capítulo 9).

8. “Seaweed polysaccharides: structure and applications.”, V. A. Cosenza, D. A. Navarro, N. M. A. Ponce & C. A. Stortz, en *Industrial applications of renewable biomass products: past, present and future*, S. N. Goyanes & N. B. D’Accorso (editores), Springer, Cham (**2017**), pp. 75–116 (capítulo 3). ISBN 978-3-319-61287-4

9. “A comprehensive and comparative analysis of the fucoidan compositional data across the Phaeophyceae”, N. M. A. Ponce & C. A. Stortz, *Front. Plant Sci.* 11 (**2020**), 556312.

Congresses, Symposia and Meetings:

A grand total of 191 presentations (114 at the National level, and 77 at the regional or international level).

5. Supervision and direction of students

Ph.D. Theses:

- Marcelo R. Cases, September 1995. “Study of the system of polysaccharides from the calcareous red seaweed *Corallina officinalis*”, University of Buenos Aires. Qualified as Outstanding. Acted as supervisor and study councelor.
- María L. Flores, December 2000, “Study of the polysaccharides of the cell wall from the read seaweed *Iridaea undulosa* Bory”, University of the Patagonia. Qualified as Outstanding. Acted as Director.
- Nora M.A.Ponce, March 2007. “Studies on the system of polysaccharides from *Adenocystis utricularis*, a brown seaweed from Patagonian shores with possible pharmaceutical and industrial application”, University of the Patagonia. Qualified as Outstanding. Acted as Director.
- Diego A. Navarro, September 2008. “Development of methods for the analysis of sulfated galactans. Application to the system of xylogalactans from the red seaweed *Jania rubens* (Corallinales)”, University of Buenos Aires. Qualified as outstanding. Acted as Director.
- María D. Raffo Benegas, March 2013. “Constitution of the cell wall upon maturity on-tree of Bartlett pears, and its modification by sunlight incidence. Consequences of the treatments with 1-methylcycloproene”, University of Buenos Aires. Qualified as outstanding. Acted as Director.
- María F. Basanta, March 2013. “Chemical and functions study of pectins and crossing glycans from the cell wall of Pronoideae”, University of Buenos Aires. Qualified as outstanding. Acted as Director.
- Melissa Rabanal Atalaya, April 2015. “Study of the system of polysaccharides from the Brown seaweed *Dictyota dichotoma* and its antiviral activity” (director Dr. Ricardo M. Gómez), Univeristy of La Plata. Qualified as outstanding. Acted as codirector.
- Vanina A. Cosenza, September 2015. “Galactans from *Hypnea musciformis*. Structure, properties and modifications”, University of Buenos Aires. Qualified as outstanding. Acted as Director.
- Mónica Becerra, May 2016. “Retrieval of products with pharmaceutical interest biosynthesized by brown seaweeds of the shores of the San Jorge Gulf” (director Dr. María L. Flores), University of the Patagonia. Qualified as Outstanding. Acted as codirector.
- Enrique Andrés Del Vigo, March 2021. “Regioselectivity O3/O4 in glycosidation reactions. Glycosyl acceptors becoming from D-galactose, D-glucose and D-allose. Experimental and theoretical study”, University of Buenos Aires. Qualified as outstanding. Acted as Director.

Other theses:

- Silvia B. Colavecchia, May 1996. Bachelor in Biology Thesis “Chemical and histochemical study of the cotyledons of the legume seed *Lathyrus odoratus* L.”, qualified as Outstanding.
- Gloria Salato, October 2012. M. Sc. Thesis, “Modifications in the composition of the cell wall of fruits of sweet cherry (*Prunus avium* L.): incidence of ontogeny and cultivar”, Octubre 2012, University of Buenos Aires. Qualified as outstanding. Acted as Director.

6. Assistance to industry

Several agreements for assistance and chemical determinations of seaweed and plant extracts, through the University of Buenos Aires and the National Research Council, for industries and academic sites:

- Retrieval of chondroitin
- Determination of molecular weights
- Analysis of fucoidans
- Determination of constituent monosaccharides
- Analysis of pentosan sulfates

7. Conferences

At the national level: 13
At the international level:

- "Structure of seaweed polysaccharides", Georgia State University, Dept. of Chemistry, 1986.
- "Applications of NMR spectroscopy to the structural analysis of carrageenans" in the Minisymposium "Structure of seaweed polysaccharides", Valdivia, Chile, 1995.
- "GC Separation and quantitation of enantiomeric sugars as diastereomeric 1-amino-1-deoxyalditols", at the Third International Glycobiology Symposium, San Diego, USA, 1995.
- "Análise de polissacarídeos. Métodos experimentais e calculos de mecânica molecular". Universidad Federal de Paraná, Curitiba, Brazil, 1997.
- "Modelagem molecular aplicada a carboidratos". Universidad Federal de Paraná, Curitiba, Brazil, 1998.
- "Modelado molecular. Aplicaciones a productos naturales: disacáridos y lactonas de 5 miembros". Invited conference at the X Simposio Latinoamericano de Farmacobotánica y VII Simposio Argentino de Farmacobotánica, Comodoro Rivadavia, Argentina, 2001.
- "Influence of sulfation and orientation of the hydroxyl groups in the potential surfaces of disaccharides using MM3". Invited conference at the XXXI Reuniao Anual de la Sociedade Brasileira de Bioquímica e Biologia Molecular, Caxambú (MG), Brazil, 2002.
- "Applications of molecular modeling to natural products". Invited conference at the V Symposium and Exposition of the Latin-American and Caribbean Section of the AOAC International, Lima, Peru, 2003.
- "Conformation of the five-membered ring in 3,6-anhydrogalactose derivatives". 235th American Chemical Society National Meeting – Spring 2008, New Orleans, Louisiana, 2008.
- "Some contributions of modeling to carbohydrate chemistry". Invited speaker, 26 International Carbohydrate Symposium, Madrid, Spain, 2012.
- "Structural determination of polysaccharides from renewable sources". University of Chemistry and Technology, Dept. of Carbohydrates and Cereals. Prague, Czech Republic, 2019.
- "Workshop - CIHIDECAR". University of Chemistry and Technology, Dept. of Carbohydrates and Cereals. Prague, Czech Republic, 2019.
- "Red seaweed galactans: discovery of a new sugar and other developments", "keynote lecture" in the 15th International Conference on Polysaccharides-Glycoscience, Prague, Czech Republic, 2019.

- "Atypical sulfated galactans from *Schizymenia dubyi*", "keynote speaker" at the 17th International Conference on Polysaccharides-Glycosciences, Prague, Czech Republic, 2021 (remote).

8. Other issues

- Member of the Jury for various appointments of teachers and researchers at the University of Buenos Aires.
- Member of the Jury for various appointments of Professors at the Universities of: Patagonia, Río Negro, Nacional del Sur, Rosario, Córdoba, and Río Cuarto.
- Member of the reviewing commitees of various Ph. D. Theses: D.A.Murgida (University of Buenos Aires, 1997), S.M.Leit (University of Buenos Aires, 1998).,C.L.O.Petkowicz: (University of Paraná, Brasil, 1998), R.Agusti: (University of Buenos Aires, 1999), L.Bertello (University of Buenos Aires, 2000), G.García (University of Buenos Aires, 2002), H.Chludil (University of Patagonia, 2003), K.Mariño (Univeristy of Buenos Aires, 2005), M.Mangione (University of Rosario, 2006), M.Maya (University of Buenos Aires, 2007), V.Justribó (University of Rosario, 2008), R.V.Gómez (University of Buenos Aires, 2009), V.Edelsztein (University of Buenos Aires, 2010), E.Repetto (University of Buenos Aires, 2010), J.Calvar (University of Buenos Aires, 2013), M.J.Castro (University of South, 2015), M.Martínez (University of Buenos Aires, 2015), A.Casoni (University of South, 2018), D.Fidalgo (University of Buenos Aires, 2019), M.Del Fueyo (University of Buenos Aires, 2019), B.Biscussi (University of South, 2020), A.Cano (University of Buenos Aires 2022).
- Reviewer of papers appearing at *Anales de la Asociación Química Argentina*, *Carbohydrate Research*, *Phytochemistry. Proceedings of the International Seaweed Symposium. Revista Argentina de Microbiología, Journal of Computational Chemistry, Journal of Chemical Theory and Computation, Journal of Carbohydrate Chemistry, Journal of Molecular Structure, Journal of the American Chemical Society, Biomacromolecules, Environmental Toxicology and Pharmacology, Journal of Physical Chemistry B, Botanica Marina* (Berlin), *International Journal of Biological Macromolecules, Nucleic Acid Research, Journal of Physical Chemistry B, International Journal of Biological Macromolecules, Carbohydrate Polymers, Organic and Biomolecular Chemistry, Physical Chemistry – Chemical Physics, Phytotherapy Research, New Journal of Chemistry, Chemical Reviews, Journal of Applied Phycology, Molecules, Cellulose, Chemical Physics, Biomass and Bioenergy, Food Chemistry.*
- Member of the Editorial Board of *Carbohydrate Research*, 2005-2017.
- Konex Prize "Diploma al Mérito" 2023, in the área Organic Chemistry. Prize announced on May 2023, to be given in September.