

RESUME

Name: Inês J. Seabra

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Command of Languages: English (fluent); Portuguese (native); Spanish (listening and reading excellent, speaking and writing good).

1. Academic Qualifications

- 2011, Ph.D. in Chemical Eng. (Chemical Processes), Univ. Coimbra, Portugal.
- 2001, M.S. in Biomedical Eng. (Radiation and Image Proc.), Univ. Coimbra, Portugal.
- 1992, B.S. in Chemical Eng. (top 2% of the year), Univ. Coimbra, Portugal.

2. Academic Positions

- Full Teaching Professor, Lehigh Univ., USA, Bioeng. Dept., Aug. 2023–present.
- Professor of Practice, Lehigh Univ., USA, Bioeng. Dept., Aug. 2020–August 2023.
- Visiting Professor, Lehigh Univ., USA, Bioeng. Dept., USA, Aug. 2018–Aug. 2020.
- Associate Professor, Coimbra College of Agriculture, Portugal, May 2011–Jul. 2018.
- Research Visiting Scholar, Chemical and Biomolecular Eng. Dept., Rice Univ., Houston, USA, Aug. 2016–May 2017.
- Lecturer, Coimbra College of Agriculture, Oct. 1998–May 2011.
- Teaching Assistant, Chemical Eng. Dept., Univ. Coimbra, Dec. 1991–Sept. 1993.

3. Administrative Experience

1. Department Chair, Department of Food Science and Technology, Coimbra College of Agriculture, Portugal, Jun. 2014–Jun. 2016.

2. Director of Undergraduate Studies, Food Quality, Coimbra College of Agriculture, Portugal, Aug. 2010–Oct. 2016.
3. Director of Undergraduate Studies, Food Technology, Coimbra College of Agriculture, Portugal, Sept. 2017–Jul. 2018.

4. Expertise and Research Interests

My research is mostly focused on the use of “green”, sustainable, safe, biomimetic and environmentally-friendly processes for the development of value-added products, materials and applications. My discoveries target the development of pharmaceutical, drug delivery, nutraceutical, agricultural, and biomedical applications and include the use of the following techniques: supercritical fluids (namely supercritical carbon dioxide); aqueous ethanolic-based solvent systems; and natural-based polymers and phytochemicals obtained from renewable sources (e.g. vegetable raw materials and agro-industrial residues). I am also interested in the encapsulation of those extracted compounds in nano/micro polymer particles for different delivery purposes such as medical and agricultural ones.

5. R&D Projects

Aplicaciones Industriales de los Taninos Vegetales, Catholic Univ., Rio Grande do Sul / Brazil. Funded by Ibero-American CYTED network, 2006-2008.

Bioactive wound dressings prepared by supercritical impregnation with natural drugs obtained from Amazonian species, Univ. Coimbra. Funded by Portuguese FCT, 2007-2009.

BioNIO – Bioactive natural ingredients from Opuntia spp. Valorisation of plants from Alentejo, New Univ. Lisbon. Funded by Portuguese FCT, 2009-2011.

EcoVector - New eco-friendly approaches for the biomanagement of the pinewood nematode vector at Eurasia. Funded by Portuguese FCT, 2016-2018.

Co-PI: *2Bio4cartilage - Integrated intervention program for prevention and treatment of cartilage lesions*. Funded by Portuguese FCT, 2017-2019.

Co-PI: *SoSValor - Sustainable Solutions for the Valorisation of Plant Natural Products and Industrial Waste*. Funded by Portuguese FCT, 2017-2019.

6. Courses Lectured

At the University of Coimbra:

- Laboratorial Practices I (tutorials, BS in Chemical Eng., lectured once, 1991-1992)
- Laboratorial Practices II (tutorials, BS in Chemical Eng., lectured once, 1992)
- System Dynamics (tutorials, BS in Chemical Eng., lectured once, 1992-1993)
- Automatic Process Control (tutorials, BS in Chemical Eng., lectured once, 1993)

At the Coimbra College of Agriculture:

- Unit Operations I (tutorials, BS in Food Eng., lectured 3 times, 1998-2001)
- Unit Operations II (tutorials, BS in Food Eng., lectured 3 times, 1998-2001)
- System Dynamics (tutorials, BS in Food Eng., lectured 3 times, 1998-2001)
- Automatic Process Control (tutorials, BS in Food Eng., lectured 3 times, 1998-2001)
- Transfer Phenomena I (tutorials, BS in Food Eng., lectured once, 2000-2001)
- Transfer Phenomena II (tutorials, BS in Food Eng., lectured once, 2000-2001)
- Unit Operations I (BS in Food Eng., lectured 5 times, 2001-2006)
- Unit Operations II (BS in Food Eng., lectured 5 times, 2001-2006)
- System Dynamics (BS and MS in Food Eng., lectured 14 times, 2001-2018)
- Automatic Process Control (BS and MS in Food Eng., lectured 14 times, 2001-2018)
- Introduction to Environmental Problems II (tutorials, BS in Environmental Eng., lectured 2 times, 2003-2005)
- Technological Practices I (BS in Biotechnology, lectured 8 times, 2007-2018)
- Project of Product (Technological Specialization Course in Food Quality, lectured 7 times, 2008-2018)
- Project of Product (BS in Food Eng., lectured 7 times, 2008-2018)
- Unit Operations in Biotechnology (BS in Biotechnology, lectured 8 times, 2008-2018)
- Food Analysis (BS in Food Eng., lectured 5 times, 2010-2018)
- Unit Operations II (BS in Food Eng., lectured 4 times, 2011-2018)
- Food Packaging (BS in Food Eng., lectured twice, 2015 and 2017)
- Biopolymers (MS in Biotechnology, lectured twice, 2015 and 2017)

At Lehigh University:

- BIOE 242 - Bioengineering Research (BS in Bioeng., lectured four times)
- BIOE 343 - Integrated Biotechnology Laboratory (BS in Bioeng., lectured six times)
- BIOE 20 - Bioeng. Sophomore Research Seminar (BS in Bioeng., lectured three times)
- BIOE 246 - Bioengineering Thermodynamics (BS in Bioeng., lectured three times)
- BIOE 025 - CAD for Bioengineers (BS in Bioeng., lectured four times)
- ENGR 005 - Introduction to Engineering Practice (1st year Eng. BS, lectured twice)
- BIOE 450 - Special Topics Scientific Review and Communication (Graduate Bioeng.)

7. Publications

Theses

1. **I.J. Seabra**, Immobilization of Proteases for Biomedical Applications. Master Thesis, School of Medicine, University of Coimbra, Portugal, 2001.
2. **I.J. Seabra**, Extraction of Valuable Compounds from Agro-Residues of Elder (*Sambucus nigra*), Pine (*Pinus pinaster*) and Tara (*Caesalpinia spinosa*). PhD Thesis, Chemical Eng. Dept., University of Coimbra, Portugal, 2011.

Book Chapters

1. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, Extracção fraccionada de taninos condensados de subprodutos de *Pinus pinaster* e *Sambucus nigra* L., in Aplicaciones Industriales de los Taninos Vegetales, Eds. E. Cassel, M.F. Vargas, E-book - CYTED and CNPq. EDIPUCRS, Porto Alegre, Brazil, 2007 (ISBN 978-85- 7430-674-2).
2. **I.J. Seabra**, M.E.M. Braga, P. Salgueiro, H.C. de Sousa, Extracção da casca de pinheiro (*Pinus pinaster*): influência de aditivos no solvente de extracção, in Aplicaciones Industriales de los Taninos Vegetales, Eds. E. Cassel, M.F. Vargas, E-book - CYTED and CNPq. EDIPUCRS, Porto Alegre, Brazil, 2008 (ISBN 978-85-7430-809-8).
3. A.M.A Dias, **I.J. Seabra**, M.E.M. Braga, M.H. Gil, H.C. de Sousa, Supercritical solvent impregnation of natural bioactive compounds in N-carboxybutyl chitosan and agarose membranes for the development of topical wound healing applications, in Technologies for Medical Sciences, 243-266, Springer, Netherlands, 2012 (ISBN: 978-94-007-4).
4. M.E.M. Braga, **I.J. Seabra**, A.M.A. Dias, H.C. de Sousa, Recent trends and perspectives for the extraction of natural products, in Natural Products Extraction: Principles and Applications, Eds: M. Rostagno, J. Prado. Royal Society of Chemistry, RSC Publishing, 2013 (ISBN: 978-1-84973-606-0).

Papers published in scientific journals with refereeing

1. **I.J. Seabra**, M.H. Gil, Cotton gauze bandage: a support for enzyme immobilization to use on anti-inflammatory treatment, Brazilian Journal of Pharmaceutical Sciences, 2007, 43 (4), 535-542.
2. M.E.M. Braga, R. Santos, **I.J. Seabra**, R. Facanali, M.O.M. Marques, H.C. de Sousa, Fractioned SFE of antioxidants from maritime pine bark, Journal of Supercritical Fluids, 2008, 47, 37-48.
3. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure fractioned extraction of anthocyanins from *S. nigra* L. pomace, Food and Bioprocess Technology: An International Journal, 2010, 3, 674-683.
4. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. Sousa, Effect of solvent (CO₂/EtOH/H₂O) on the fractionated enhanced solvent extraction of anthocyanins from elderberry pomace, Journal of Supercritical Fluids, 2010, 54, 145-152.
5. A.T. Serra, **I.J. Seabra**, M.E.M. Braga, M.R. Bronze, H.C. de Sousa, C.M.M. Duarte, Processing cherries (*Prunus avium*) using supercritical fluid technology. Part 1- Recovery of extract fractions rich in bioactive compounds, Journal of Supercritical Fluids, 2010, 55, 184-191.
6. A.M.A. Dias, **I.J. Seabra**, M.E.M. Braga, M.H. Gil, H.C. de Sousa, Supercritical solvent impregnation of natural bioactive compounds in N-carboxybutyl chitosan membranes for the development of topical wound healing applications, Journal of Controlled Release 2010, 148, e21-e56.
7. L. Durães, A. Moutinho, **I.J. Seabra**, B.F.O. Costa, H.C. de Sousa, A. Portugal, Characterization of iron(III) oxide/hydroxide nanostructured materials produced by sol-gel technology based on the Fe(NO₃)₃·9H₂O-C₂H₅OH-CH₃CH₂O system, Materials Chemistry and Physics, 130, 548-560, 2011.
8. A.M.A. Dias, M.E.M. Braga, **I.J. Seabra**, P. Ferreira, M.H. Gil, H.C. de Sousa, Development of natural-based wound dressings impregnated with bioactive compounds and using supercritical carbon dioxide, International Journal of Pharmaceuticals, 408, 9-19, 2011.

9. J. Sánchez Martín, J. Beltrán de Heredia, **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Adsorbent derived from *Pinus pinaster* tannin for cationic surfactant removal. *Journal of Wood Chemistry and Technology*, 32, 23-41, 2012.
10. A.M.A. Dias, P. Santos, **I.J. Seabra**, R.N.C. Júnior, M.E.M. Braga, H.C. de Sousa, Spilanthol from *Spilanthes acmella* flowers, leaves and stems obtained by selective supercritical carbon dioxide extraction, *Journal of Supercritical Fluids*, 61, 62-70, 2012.
11. **I.J. Seabra**, A.M.A. Dias, M.E.M. Braga, H.C. de Sousa, High pressure solvent extraction of maritime pine bark: Study of fractionation, solvent flow rate and solvent composition. *Journal of Supercritical Fluids*, 62, 135-148, 2012.
12. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Statistical mixture design investigation of CO₂-EtOH-H₂O high pressure extractions from tara seed coat. *Journal of Supercritical Fluids*, 64, 9-18, 2012.
13. A.M.R.C. Alexandre, A.M.A. Dias, **I.J. Seabra**, A.A.T.G. Portugal, H.C. de Sousa, M.E.M. Braga, Biodiesel obtained from supercritical carbon dioxide oil of *Cynara cardunculus* L., *Journal of Supercritical Fluids*, 68, 52-63, 2012.
14. **I.J. Seabra**, R.B. Chim, P. Salgueiro, M.E.M. Braga, H.C. de Sousa, Influence of Solvent Additives on the Aqueous Extraction of Tannins from Pine Bark: Potential Extracts for Leather Tanning, *Journal of Chemical Technology and Biotechnology*, 93, 1169-1182, 2018.
15. **I.J. Seabra**, M.E.M. Braga, R.A. Oliveira, H.C. de Sousa, Two-step high pressure solvent extraction of walnut (*Juglans regia* L.) husks: scCO₂ + CO₂/ethanol/H₂O, *Journal of CO₂ Utilization*, 34, 375-385, 2019.
16. M.C. Gaspar, H.C. de Sousa **I.J. Seabra**, M.E.M. Braga, Environmentally-safe scCO₂ *P. pinaster* branches extracts: composition and properties, *Journal of CO₂ Utilization*, 37, 74-84, 2020.
17. M. Vallejo, R. Cordeiro, P.A.N. Dias, C. Moura, M. Henriques, **I.J. Seabra**, C.M. Malça, P. Morouço, Recovery and evaluation of cellulose from agroindustrial residues of corn, grape, pomegranate, strawberry-tree fruit and fava. *Bioresources and Bioprocessing*, 8, 25, 2021.
18. M. Bordalo, **I.J. Seabra**, A.B. Silva, A.P. Terrasso, C. Brito, M. Serra, M.R. Bronze, C.M.M. Duarte, M.E.M. Braga, H.C. de Sousa, A.T. Serra. Using High-Pressure Technology to Develop Antioxidant-Rich Extracts from Bravo de Esmolfe Apple Residues. *Antioxidants (Basel)*, 10(9), 1469, 2021.
19. J. Loureiro, S.P. Miguel, **I.J. Seabra**, M.P. Ribeiro, P. Coutinho. Single-Step Self-Assembly of Zein Honey–Chitosan Nanoparticles for Hydrophilic Drug Incorporation by Flash Nanoprecipitation. *Pharmaceutics*, 14, 920, 2022.

Papers in conference proceedings with refereeing

1. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure extraction of antioxidants from elderberry byproducts with CO₂ and H₂O. VII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design 2006. Morelia, Mexico, October 21-25, 2006. Proceedings and CD-rom.
2. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure fractionated extraction of anthocyanins from *Sambucus nigra* L. byproducts. VII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design 2006. Morelia, Mexico, October 21-25, 2006. Proceedings and CD-rom.
3. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, Extracting anthocyanins from *Sambucus nigra* L. byproducts. Prosciba 2007 - I Conferência Iberoamericana de Fluidos Supercríticos. Iguassu Falls, Brazil, April 10-13, 2007. Proceedings and CD-rom.
4. R. Santos, M.E.M. Braga, **I.J. Seabra**, H.C. de Sousa, Fractionated SFE of maritime pine bark (*Pinus pinaster*). Prosciba 2007 - I Conferência Iberoamericana de Fluidos Supercríticos. Iguassu Falls, Brazil, April 10-13, 2007. Proceedings and CD-rom.

5. **I.J. Seabra**, O. Gomes, M.E.M. Braga, H.C. de Sousa, Extraction kinetics of maritime pine (*Pinus pinaster*) bark by HPE using CO₂+EtOH. 11th European Meeting on Supercritical Fluids. Bellaterra, Spain, May 4-7, 2008. Proceedings and CD-rom.
6. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, Fractioned HPE from elderberry pomace. 11th European Meeting on Supercritical Fluids. Bellaterra, Spain, May 4-7, 2008. Proceedings and CD-rom.
7. R.A. Oliveira, **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Valorization of *Juglans regia* L. fruits through fractioned supercritical fluid extraction. VIII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design - Equifase 2009. Praia da Rocha, Portugal, October 17-21, 2009. Proceedings and CD-rom.
8. **I.J. Seabra**, M.E.M. Braga, R.A. Oliveira, P.B. Goyzueta, H.C. de Sousa¹, Tara seed coats extraction using CO₂-EtOH-H₂O high pressure homogeneous solvent mixtures. VIII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design - Equifase 2009. Praia da Rocha, Portugal, October 17-21, 2009. Proceedings and CD-rom.
9. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Separation of volatile fractions from elder flowers by supercritical CO₂ extraction. Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids, April 4-9, 2010, Natal, Brazil. Proceedings and CD-rom.
10. M.E.M. Braga, **I.J. Seabra**, A.A. Dias, P. Ferreira, J.T. Liberal, J.M. Gaspar, M.H. Gil, A.F. Ambrósio, R. Carvalho Júnior, H.C. de Sousa, Anti-inflammatory activity of jucá (*Caesalpinia ferrea*). Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids. Natal, Brazil, April 4-9, 2010. Proceedings and CD-rom.
11. A.M.A. Dias, **I.J. Seabra**, M.E.M. Braga, R.N.C. Júnior, H.C. de Sousa, SFE and ESE of Jambu (*Acmella oleracea*) main bioactive compounds. Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids. Natal, Brazil, April 4-9, 2010. Proceedings and CD-rom.
12. A.M.A. Dias, **I.J. Seabra**, M.E.M. Braga, M.H. Gil, H.C. de Sousa, Supercritical solvent impregnation of natural bioactive compounds in N-carboxybutyl chitosan membranes for the development of topical wound healing applications. 11th European Symposium on Controlled Drug Delivery, Egmond aan Zee, Amsterdam, The Netherlands, April 7-9, 2010. Proceedings (ISBN 978-90-365-3007-1).
13. A.M.R.C. Alexandre, A.M.A. Dias, **I.J. Seabra**, A.A.T.G. Portugal, H. C. de Sousa, M. E. M. Braga, Biodiesel obtained from supercritical carbon dioxide oil extracts of *Cynara cardunculus* L., 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
14. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Application of a statistical mixture design in the pressurized solvent extraction from tara seed coats, 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
15. A.M.A. Dias, P. Santos, **I.J. Seabra**, R N.C. Júnior, M.E.M. Braga, H.C. de Sousa, Activity of Extracts Obtained from the Flowers, Leaves and Stems of *Spilanthes oleracea* (Jambú) Using High Pressure Extraction, 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
16. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Application of a statistical mixture design in the pressurized solvent extraction from tara seed coats, ChemPor 2011, 11th International Chemical and Biological Eng. Conference, Lisbon, Portugal, September, 5-7, 2011.
17. A.M.R.C. Alexandre, A.M.A. Dias, **I.J. Seabra**, A.A.T.G. Portugal, H.C. de Sousa, M.E.M. Braga, Biodiesel obtained from supercritical carbon dioxide oil extracts of *Cynara cardunculus* L., ChemPor 2011, 11th International Chemical and Biological Eng. Conference, Lisbon, Portugal, September, 5-7, 2011.
18. N.A. Gañán, F. Bombaldi, A. Alexandre, A.M.A. Dias, **I.J. Seabra**, J. Zygadlo, E. Brignole, M.E.M. Braga, H. C. de Sousa, Anti-inflammatory activity of *Chelidonium majus* extracts obtained by scCO₂, 10th International Symposium on Supercritical Fluids, San Francisco, CA, USA, May 13-16, 2012.

19. M.C. Gaspar, H.C. de Sousa, **I.J. Seabra**, M.E.M. Braga, Extracting the natural insecticide abietadiene from *P. pinaster* branches using scCO₂, International Symposium on Supercritical Fluids, Antibes-Juan-les-Pins, France, April 22-25, 2018.

8. Presentations

Lectures

1. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure extraction of antioxidants from elderberry byproducts with CO₂ and H₂O. VII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design 2006. Morelia, Mexico, October 21-25, 2006.
2. **I.J. Seabra**, M.E.M. Braga, M.T. Batista, H.C. de Sousa, High pressure extraction of antioxidants from elderberry byproducts. Workshop in Pharmaceutical and Biomedical Sciences, "Search for Drugs from Natural Sources", Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal, October 30, 2008.
3. A.M.R.C. Alexandre, A.M.A. Dias, **I.J. Seabra**, A.A.T.G. Portugal, H. C. de Sousa, M. E. M. Braga, Biodiesel obtained from supercritical carbon dioxide oil extracts of *Cynara cardunculus* L., 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
4. **I.J. Seabra**, Flash nanoprecipitation, Chemical and Biomolecular Eng. Department, Rice University, May 2017.
5. F.M. Santos, C.I.C. Galhano, P.C.O. Castro, M.E.M. Braga, **I.J. Seabra**, Avaliação da actividade nematocida de extractos aquosos de resíduos de fava, II Congresso nacional das Escolas superiores Agrárias, Elvas, Portugal, November 16-18, 2017.
6. **I.J. Seabra**, R.A. Oliveira, M.E.M. Braga, H.C. de Sousa, Potencial da extracção a alta pressão para valorização de resíduos de noz, II Congresso nacional das Escolas superiores Agrárias, Elvas, Portugal, November 16-18, 2017.
7. M.C. Gaspar, H.C. de Sousa, **I.J. Seabra**, M.E.M. Braga, Extracting the natural insecticide abietadiene from *P. pinaster* branches using scCO₂, International Symposium on Supercritical Fluids, Antibes-Juan-les-Pins, France, April 22-25, 2018.
8. P.A.N. Dias, C. Mesquita, M. Henriques, C. Galhano, A. Veloso, C. Malça, P. Morouço, **I.J. Seabra**, Extraction of cellulose microfibrils from corncob waste for innovative biomedical applications, 5th International ISEKI Food Conference, Stuttgart, Germany, July 3-5, 2018.

Posters

1. **I.J. Seabra**, M.T.P. Batista, H.C. de Sousa, Supercritical CO₂ and CO₂+ethanol extraction of antioxidants from elderberry (*Sambucus nigra* L.) byproducts. Chempor 2005 - 9th International Chemical Eng. Conference. Coimbra, Portugal, September 21-23, 2005.
2. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure fractioned extraction of anthocyanins from *Sambucus nigra* L. byproducts. VII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design 2006. Morelia, Mexico, October 21-25, 2006.
3. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, High pressure extraction of antioxidants from elderberry byproducts with CO₂ and H₂O. VII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design 2006. Morelia, Mexico, October 21-25, 2006.
4. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, Extracting anthocyanins from *Sambucus nigra* L. byproducts. Prosciba 2007 - I Conferência Iberoamericana de Fluidos Supercríticos. Iguassu Falls, Brazil, April 10-13, 2007.
5. R. Santos, M.E.M. Braga, **I.J. Seabra**, H.C. de Sousa, Fractioned SFE of maritime pine bark (*Pinus pinaster*). Prosciba 2007 - I Conferência Iberoamericana de Fluidos Supercríticos. Iguassu Falls, Brazil, April 10-13, 2007.

6. **I.J. Seabra**, O. Gomes, M.E.M. Braga, H.C. de Sousa, Extraction kinetics of maritime pine (*Pinus pinaster*) bark by HPE using CO₂+EtOH. 11th European Meeting on Supercritical Fluids. Bellaterra, Spain, May 4-7, 2008.
7. **I.J. Seabra**, M.E.M. Braga, M.T.P. Batista, H.C. de Sousa, Fractioned HPE from elderberry pomace. 11th European Meeting on Supercritical Fluids. Bellaterra, Spain, May 4-7, 2008.
8. R.A. Oliveira, **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Valorization of *Juglans regia* L. fruits through fractioned supercritical fluid extraction. VIII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design - Equifase 2009. Praia da Rocha, Portugal, October 17-21, 2009.
9. **I.J. Seabra**, M.E.M. Braga, R.A. Oliveira, P.B. Goyzueta, H.C. de Sousa, Tara seed coats extraction using CO₂-EtOH-H₂O high pressure homogeneous solvent mixtures. VIII Iberoamerican Conference on Phase Equilibria and Fluid Properties for Process Design - Equifase 2009. Praia da Rocha, Portugal October 17-21, 2009.
10. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Separation of volatile fractions from elder flowers by supercritical CO₂ extraction. Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids. Natal, Brazil, April 4-9, 2010.
11. M.E.M. Braga, **I.J. Seabra**, A.A. Dias, P. Ferreira, J.T. Liberal, J.M. Gaspar, M.H. Gil, A.F. Ambrósio, R. Carvalho Júnior, H.C. de Sousa, Anti-inflamatoray activity of jucá (*Caesalpinia ferrea*). Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids. Natal, Brazil, April 4-9, 2010.
12. A.M.A. Dias, **I.J. Seabra**, M.E.M. Braga, R.N.C. Júnior, H.C. de Sousa, SFE and ESE of jambu (*Acmella oleracea*) main bioactive compounds. Prosciba 2010 - II Iberoamerican Conference on Supercritical Fluids. Natal, Brazil, April 4-9, 2010.
13. A.M.A. Dias, **I.J. Seabra**, M.E.M. Braga, M.H. Gil, H.C. de Sousa, Supercritical solvent impregnation of natural bioactive compounds in N-carboxybutyl chitosan membranes for the development of topical wound healing applications. 11th European Symposium on Controlled Drug Delivery, Egmond aan Zee. Amsterdam, The Netherlands, April 7-9, 2010.
14. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Application of a statistical mixture design in the pressurized solvent extraction from tara seed coats, 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
15. A.M.A. Dias, P. Santos, **I.J. Seabra**, R N.C. Júnior, M.E.M. Braga, H.C. de Sousa, Activity of Extracts Obtained from the Flowers, Leaves and Stems of *Spilanthes oleracea* (Jambú) Using High Pressure Extraction, 13th EMSF, European Meeting on Supercritical Fluids, Den Hague, The Netherlands, October 9-13, 2011.
16. **I.J. Seabra**, M.E.M. Braga, H.C. de Sousa, Application of a statistical mixture design in the pressurized solvent extraction from tara seed coats, ChemPor 2011, 11th International Chemical and Biological Eng. Conference, Lisbon, Portugal, September 5-7, 2011.
17. A.M.R.C. Alexandre, A.M.A. Dias, **I.J. Seabra**, A.A.T.G. Portugal, H.C. de Sousa, M.E.M. Braga, Biodiesel obtained from supercritical carbon dioxide oil extracts of *Cynara cardunculus* L., ChemPor 2011, 11th International Chemical and Biological Eng. Conference, Lisbon, Portugal, September 5-7, 2011.
18. A.T. Serra, M. Bordalo, **I.J. Seabra**, M.R. Bronze, A.P. Terasso, C. Brito, M.E.M. Braga, M. Serra, H.C. de Sousa, C.M.M. Duarte, Recovery of antioxidant compounds from Bravo de Esmolfe apple variety using high pressure technology, EMSF2017, 16th European Meeting on Supercritical Fluids, Lisbon, Portugal, April 25-28, 2017.
19. I. Rocha, I. Rodrigues, **I.J. Seabra**, Nematicidal potential of aqueous extracts of strawberry tree leaves and flowers, Green Extraction of Natural Products III Edition, Bari, Italy, November 12-13, 2018.
20. S. Barbosa, **I.J. Seabra**, M. Braga, M. Henriques, Cristina Galhano, Faba bean (*Vicia faba*) pod: a waste or an ecofriendly nematicide?, XII CIBIA 2019, Faro, Portugal, July 1-4, 2019.

21. C. Galhano, **I.J. Seabra**, S. Barbosa, P. Lorenzo, M. Henriques, Bio-innovative potential of Portuguese Beira Interior natural resources, 5th European Ecological Federation (EEF) Congress, Lisbon, Portugal, July 29 – August 2, 2019.
22. J. Domingues, D.F. Frazão, J. Raimundo, C.M.B.S. Pintado, M. Goulão, **I.J. Seabra**, F. Delgado, Essential oil of *Lavandula pedunculata* from Portugal: chemical profile and biological activities, 50th International Symposium on Essential Oils, Vienna, Austria, September 9-11, 2019.
23. C. Galhano, **I.J. Seabra**, M. Gaspar, S. Barbosa, P. Lorenzo, M. Henriques, Beira Interior endogenous plant species as potential source of innovative added value products, CNESA - Congresso Nacional das Escolas Superiores Agrárias, Viseu, Portugal, November 14-15, 2019.
24. C. Galhano, S. Barbosa, **I.J. Seabra**, M. Braga, M. Henriques, Could an agri-food be converted into a valuable environmentally friendly nematicide?, 7th International Congress of Nematology, Antibes Juan-les-Pins, France, May 1-6, 2022.

9. Awards

2011 – 1^o Prémio Nutrition Awards 2011 (Associação Portuguesa dos Nutricionistas/GCI), Categoria de Inovação e Desenvolvimento em Produtos e Serviços, com o trabalho: “Extracto de cereja obtido por tecnologia supercrítica - um agente quimioterapêutico natural para o cancro do cólon”, Ana Teresa Serra, Catarina M.M. Duarte, Ana A. Matias, Herminio C. de Sousa, Mara E. M. Braga, **Inês J. Seabra**, Maria do Rosário Bronze (IBET - Instituto de Biologia Experimental e Tecnológica e DEQ-FCTUC (Departamento de Engenharia Química da Universidade de Coimbra).

2022 – Richard P. Vinci Award for Educational Excellence, Rossin College of Engineering and Applied Science, Lehigh University.