

CURRICULUM VITAE

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Education

- **Agricultural Engineer**
Option: **Food Technology and Agro-Industries**
Institute of Agronomy, Mostaganem, Algeria.
- **Master of Sciences**
Option: **Food Sciences & Human Nutrition.**
National Institute of Agronomy, El-Harrach, Algiers, Algeria.
- **Doctor of Sciences (Doctorate) in Agricultural Sciences**
Option: **Food Sciences & Nutrition.**
National Agronomic Institute, El-Harrach, Algiers, Algeria.
- **Doctor of Agriculture (PhD).**
Option: **Plant & Crop Sciences.**
Kagoshima University, Kagoshima, Japan.

Editorial Board of International Scientific Journals

- *FOOD.*
- *FRESH PRODUCE.*
- *FRUIT, VEGETABLE AND CEREAL SCIENCE AND BIOTECHNOLOGY.*
- *MEDICINAL AND AROMATIC PLANT SCIENCE AND BIOTECHNOLOGY.*
- *REVIEW AND RESEARCH IN BIOSCIENCES.*
- *THE OPEN AGRICULTURE JOURNAL.*
- *THE OPEN HORTICULTURE JOURNAL.*
- *AGRICULTURE AND BIOLOGY JOURNAL OF NORTH AMERICA.*
- *RECENT PATENTS ON FOOD, NUTRITION & AGRICULTURE.*
- *JOURNAL OF FOOD TECHNOLOGY & PROCESSING.*
- *JOURNAL OF AGRICULTURAL SCIENCE AND TECHNOLOGY*
- *OnLine JOURNAL OF BIOLOGICAL SCIENCES*
- **Serial Editor:** *POTATO series. FRUIT, VEGETABLE AND CEREAL SCIENCE AND BIOTECHNOLOGY Journal.*
- **Serial Editor:** *CITRUS Series. TREE AND FORESTRY SCIENCE AND BIOTECHNOLOGY Journal.*
- **EDITOR:** *AGRICULTURAL SCIENCE RESEARCH JOURNAL*

Scientific and Professional Membership

- 1- Member of the International Society of Horticultural Science (**ISHS**).
- 2- Chair, SERT (Roots and Tubers Section), **ISHS**.
- 3- Member of the Executive Committee, **ISHS**,
- 4- Member of the Jamaican Society for Agricultural Sciences (**JAGRIS**).
- 5- Member of the Japanese Society of Applied Glycoscience (**JSAG**).
- 6- Member of the Natural History Society of Jamaica (**NHSJ**).
- 7- Member of the Caribbean Academy of Sciences (**CAS**).

- 8- Member of the International Society of Rare Sugars (**ISRS**).
- 9- Member of the International Association of Ecology (**INTERCOL**).
- 10- Invited Member of the Society of Chemical Industry (**SCI**, UK).
- 11- Member of the "Science Advisory Board" (**SAB**), USA.
- 12- Scientific Consultant of Gerson Lehmand Group (USA).
- 13- Scientific Expert of the United Nation Development Program (UNDP).
Regions: Africa and Mediterranean Zones.

PUBLICATIONS

(from 2006)

Books – Special Issues

- 1- **Benkeblia, N;** and Shiomi, N. (Eds.). (2006). Advances in postharvest technology for horticultural crops. **Vol. 1. Research Signpost Publisher**, Kerala, 392 p.
- 2- Shiomi, N, **Benkeblia, N.** Onodera, S. (Eds.). (2007). Recent advances in fructooligosaccharides Research. **Research Signpost Publisher**, Kerala, 395 p.
- 3- **Benkeblia, N.** (Guest-Editor) (2007). **Special Issue 1: Natural biological compounds and food preservation. FOOD 1(1), GSB Publisher**, Isleworth (UK), Pp. 111-241.
- 4- **Benkeblia, N.** and Tennant, P. (Guest Editors) (2008). **Special Issue: Potato 1. Fruit, Vegetable and Cereal Science and Biotechnology 2(1), GSB Publisher**, Isleworth (UK), Pp 1-155.
- 5- **Benkeblia, N.** and Tennant, P. (Guest Editors) (2008). **Special issue Citrus 1. Tree and Forestry Science and Biotechnology, GSB Publisher**, Isleworth (UK), **2(1)**, Pp. 1-144.
- 6- Tennant, P. and **Benkeblia, N.** (Guest Editors) (2009). **Special issue: Potato 2. Fruit, Vegetable and Cereal Science and Biotechnology, GSB Publisher**, Isleworth (UK), **3(1)**, Pp. 1-139.
- 7- Tennant, P and **Benkeblia, N.** (Guest Editors) (2009). **Special issue Citrus 2. Tree and Forestry Science and Biotechnology, GSB Publisher**, Isleworth (UK), **3(1)**, Pp. 1-169.
- 8- Tennant, P. and **Benkeblia, N.** (Guest Editors) (2009). **Special issue Citrus 3. Tree and Forestry Science and Biotechnology. GSB Publisher**, Isleworth (UK), **3(2)**, Pp. 1-142.
- 9- **Benkeblia, N.** (Editor). (2009). Advances in postharvest technology for horticultural crops. **Vol. 2. Research Signpost Publisher**, Kerala, 265 p.
- 10- **Benkeblia, N.** and Shiomi N (2009). **Special Issue: 6th International Fructan Symposium Proceedings. Dynamic Biochemistry, Process Biotechnology and Molecular Biology, GSB Publisher**, Isleworth (UK), Pp. 1-101.
- 11- Lazar, E. E. and **Benkeblia, N.** (Editors). (2010). Environmentally friendly alternatives for maintaining postharvest quality or controlling decay. **Stewart Postharvest Review, issue 3(4)**.
- 12- **Benkeblia, N.** (2011). Proceedings of the First International Symposium on Tropical Horticulture. *Acta Horticulturae* **894**. ISHS, Leuven, 272 p.
- 13- **Benkeblia, N.** (2011). Sustainable agriculture and new biotechnologies. **CRC Press**, Boca Raton (FL), 534 p.
- 14- **Benkeblia, N.** (2012). Omics technologies: Tools for food sciences. **CRC Press**, Boca Raton (FL), ([in press](#)).

Chapters in Books

- 15- **Benkeblia, N;** Shiomi, N. (2006). Postharvest metabolism of carbohydrates in onion bulb. In: Advances in postharvest technology for horticultural crops. **N. Benkeblia**, and N. Shiomi (Eds.). **Research Signpost Publisher**, Kerala, pp. 351-373.
- 16- Shiomi, N, **Benkeblia, N,** Onodera, S, Osaki, M. (2007). Metabolism of fructooligosaccharides in asparagus roots and spears. In: Recent advances in fructooligosaccharides Research. N. Shiomi, **N. Benkeblia** and S. Onodera (Eds.). **Research Signpost Publisher**, Kerala, 213-230.
- 17- **Benkeblia, N.** (2008). The physiology of dormancy of onion bulb *Allium cepa*. In: Hamantaranjan, A. (Ed.). *Advances in Plant Physiology. An International Treatise Series*. Vol. 10. **Scientific Publisher**, Jodhpur, pp. 233-244.
- 18- **Benkeblia, N.** (2009). Postharvest biology and technologies of *Allium* crops. In: Advances in postharvest technology for horticultural crops. **N. Benkeblia** (Ed.). **Vol. 2. Research Signpost Publisher**, Kerala, pp. 229-250.

- 19- Nakamura T, Okazaki K, **Benkeblia N**, Wasaki W, Watanabe T, Matsura H, Uchimiya H, Komatsu S and Shinano T. (2010). Metabolomics Approach in Soybean. In: Genetics, Genomics, and Breeding of Soybean. Bilyeu K, Ratnaparkhe M. B and Kole C (Eds.). **CRC Press**, Boca Raton, FL, pp. 313-330.
- 20- **Benkeblia, N.** (2011). The omic technologies mining for food production systems and sustainable agriculture. In: Sustainable agriculture and new biotechnologies. **N. Benkeblia** (Ed.). **CRC Press**, Boca Raton (FL), pp. 117-146.
- 21- **Benkeblia, N.** (2011). Fructooligosaccharides in *Allium* species. In: Edible Fiber Components: Nutrition and Application in Functional Foods. L. Niba (Ed.). **CRC Press**, Boca Raton (FL) (**in press**).
- 22- **Benkeblia, N**, Tennant P. F, Jawandha, S. K. and Gill, P. S. (2011). Preharvest factors affecting fruits quality after harvest. In: Postharvest Biology and Technology of Tropical and Sub-Tropical Fruits. E. M. Yahia and J. K. Brecht (Eds.). **Woodhead Publishing**, Cambridge, (**in press**).
- 23- Emanuel, M. A. and **Benkeblia, N.** (2011). Ackee fruit *Blighia sapida* L. In: Postharvest Biology and Technology of Tropical and Sub-Tropical Fruits. E. M. Yahia and J. K. Brecht (Eds.). **Woodhead Publishing**, Cambridge, (**in press**).
- 24- Droby S, Wisniewski M. and **Benkeblia N.** (2011). Postharvest pathology and strategies for decay control. In: Postharvest Biology and Technology of Tropical and Sub-Tropical Fruits. E. M. Yahia and J. K. Brecht (Eds.). **Woodhead Publishing**, Cambridge, (**in press**).
- 25- **Benkeblia, N.** (2012). Metabolomics and food science: Concepts and serviceability. In: Sustainable agriculture and new biotechnologies. **N. Benkeblia** (Ed). **CRC Press**, Boca Raton (FL), (**in editing**).

Research articles

- 26- Shiomi, N; **Benkeblia, N** and Onodera, S. (2006). Fructooligosaccharides accumulation in stamens and carpels during flowering and seed maturation of onion bulbs *Allium cepa* L. var. Hyusan. *Canadian Journal of Plant Science* **86**: 269-278.
- 27- **Benkeblia, N**; and Shiomi, N. (2006). Hydrolysis kinetic parameters of DP 6, 7, 8 and 9~12 fructooligosaccharides of onion bulb tissues. Effect of temperature and storage time. *Journal of Agricultural and Food Chemistry* **54**: 2587-2792.
- 28- Shiomi N; **Benkeblia, N**; Onodera S; Yoshihira, T; Kosaka, S; and Osaki M. (2006). Fructan accumulation in wheat stems during kernel filling under varying nitrogen fertilization. *Canadian Journal of Plant Science* **86**: 1027-1035
- 29- **Benkeblia, N** (2006). The effect of exogenous ethylene, auxin, cytokinin and gibberellin on sprouting of dormant and non-dormant onion bulbs. *Agricultural and Marine Sciences* **11**: 1-6.
- 30- **Benkeblia, N**; Shiomi, N; and Osaki, M. (2007). Kinetics and hydrolysis parameters of total fructooligosaccharides of onion bulbs: Effects of temperature regimes and cultivar. *Journal of Food Biochemistry* **31**: 14-27.
- 31- Shiomi, N; **Benkeblia, N**; Onodera, S; Takahashi N, Fujushima M, Yoshihira T, Kosaka S. (2007). Saccharides and fructooligosaccharides contents, and invertase, 1-KHE, 1-SST, 1-FFT and 6G-FFT activities in green asparagus spears during storage: effect of temperatures and spear portion. *Journal of Applied Glycoscience* **54**: 187-194.
- 32- **Benkeblia, N**; Shinano, T and Osaki, M. (2007). Metabolite Profiling and Assessment of Metabolome Compartmentation of Soybean Leaves using Non-Aqueous Fractionation and GC-MS Analysis. *Metabolomics* **3**: 297-305.
- 33- Takahashi, N; Fukushi, E; Onodera, S; **Benkeblia, N**; Nishimoto, T; Kawabata, J and Shiomi, N. (2007). Three novel oligosaccharides synthesized using *Thermoanaerobacter brockii* kojibiose phosphorylase. *Chemistry Central Journal* **1**: 1-8.
- 34- **Benkeblia, N**; Yoshida, N; Ooi, Y; Nagamine, N; Onodera, S and Shiomi, N. (2007). Variations of carbohydrate content and invertase activity in green and white asparagus spears - effects of spear length and portion. *Acta Horticulturae* **776**: 459-464.
- 35- Shiomi, N; **Benkeblia, N**; Onodera, S; Fujishima, M and Nagamine, T. (2008). Assessment of saccharides and fructooligosaccharides across leaf-bases during bulb development of onion *Allium cepa* L. *Acta Agronomica Hungarica* **56**: 21-31.
- 36- Kudo, K., Onodera, S., Takeda, Y., **Benkeblia, N.** and Shiomi, N. (2009). Antioxidative activities of some peptides isolated from hydrolyzed potato protein extract. *Journal of Functional Food* **1**: 170-176.
- 37- Fujishima, M; Furuyama, K; Ishihuro, Y; Onodera, S; Fukushi, E; **Benkeblia, N**; Shiomi, N. (2009). Isolation and structural analysis in vivo of newly synthesized fructooligosaccharides in onion bulbs tissues (*Allium cepa* L.) during storage. *International Journal of Carbohydrate Chemistry*, **1**: 1-9.

- 38- **Benkeblia, N** and Shiomi, N. (2009). Variation of fructooligosaccharide contents, invertase, 1-SST, 1-FFT and 6G-FFT activities in green asparagus spears stored under different temperature regimes. *Fresh Produce* **3**: 44-50.
- 39- Ishiguro, Y; Ueno, K; Abe, M; Onodera, S; Fukushi, E; **Benkeblia, N** and Shiomi, N. (2009). Isolation and structural determination of reducing fructooligosaccharides newly produced in stored edible burdock. *Journal of Applied GlycoScience* **56**: 159-164.
- 40- Yojiro, I, Shuichi, O, **Benkeblia, N.** and Shiomi, N. (2010). Variation of sucrose hydrolase, 1-kestose hydrolase, inulin hydrolase, 1-SST and 1-FFT in burdock root stored under different temperatures. *Postharvest Biology and Technology* **52**: 232-238.
- 41- Yojiro, I, Shuichi, O, Taiki, Y, Shinichi, K, **Benkeblia, N.** and Shiomi, N. (2010). Variation of 1-kestose, nystose and higher fructooligosaccharides in burdock root stored under different temperature regimes. *Agriculture and Biology Journal of North America* **1(4)**: 491-494.
- 42- **Benkeblia, N** and Shiomi, N. (2010). Variation of fructooligosaccharide contents, invertase, 1-KHE, 1-SST, 1-FFT and 6G-FFT activities in green asparagus spears stored at 10 °C. *Acta Horticulturae* **877**: 1309-1316.
- 43- **Benkeblia, N.** (2010). Determination of respiratory parameters of onion bulbs (*Allium cepa* L.) under total anoxia. *Acta Horticulturae* **876**: 351-354.
- 44- Steen, S; **Benkeblia, N** and Cohen, J. (2010). Effects of the plant growth regulator, Stimulate™, on some postharvest qualities of tomato grown in greenhouses in Jamaica. *Acta Horticulturae* **877**: 275-278.
- 45- Yojiro, I, Ueno, K, Shuichi, O, **Benkeblia, N.** and Shiomi, N. (2011). Variation of inulobiose and inulooligosaccharide polymers in burdock root stored under different temperature regimes. *Journal of Food Composition and Analysis* **24**: 398-401.
- 46- Rose, P. and Benkeblia, N. (2011). Plants of horticultural importance in Jamaica and the Caribbean region: Botany and distribution. *Acta Horticulturae* **894**: 57-64.
- 47- Boyd, F. A. H. and **Benkeblia, N.** (2011). A Description of the floral biology operative within *Pimenta dioica* (L.) Merr. *Acta Horticulturae* **894**: 83-88.
- 48- Emanuel, M. A. and **Benkeblia, N.** (2011). Processing of ackee fruit (*Blighia sapida* L.): Present and future perspectives. *Acta Horticulturae* **894**: 211-214.
- 49- Emanuel, M. A. and **Benkeblia, N.** (2011). Variation of color, total and reducing sugars in “cheese” and “butta” ackee (*Blighia sapida*) varieties during five “on tree” ripening stages. *Acta Horticulturae* **894**: 231-234.
- 50- Emanuel, M. A. and **Benkeblia, N.** (2011). Variation of reducing and total sugars, total phenolics content and chlorophylls in june plum (*Spondias dulcis*) during “on tree” ripening. *Acta Horticulturae* **894**: 243-246.
- 51- **Benkeblia, N.** (2011). Role of horticulture in agriculture development and food security in Jamaica. *Acta Horticulturae* ([in press](#)).
- 52- Emanuel, M. A. and **Benkeblia, N.** (2011). Variation of color, reducing and total sugars, total Phenolics and chlorophylls in carambola (*Averrhoa carambola*) during five “on tree” ripening stages. *Acta Horticulturae* ([in press](#)).
- 53- **Benkeblia, N.** (2011). Accumulation of total and reducing sugars in the green leaves and bulb tissues during growing and bulbing of onion (*Allium cepa* L.). *Acta Horticulturae* ([in press](#)).
- 54- Emanuel, M. A. Robinson, D. and **Benkeblia, N.** (2011). Biodiversity comparison of conventional and fair trade banana farming agricultural systems in Dominica. *Acta Horticulturae* ([in press](#)).

Review articles

- 55- **Benkeblia, N** and Shiomi, N. (2006). Fructooligosaccharides of Edible Alliums: Occurrence, Chemistry and Health Benefits. *Current Nutrition and Food Science* **2**: 181-191.
- 56- **Benkeblia, N** and Lanzotti, V. (2007). Thiosulfinates and their utilization in food preservation. *FOOD* **2**: pp. 111-241.
- 57- **Benkeblia, N.** (2007). Phenolic compounds of *Allium* species, Occurrence and chemistry. *Research & Reviews in Bioscience* **1**: 27-35.
- 58- **Benkeblia, N.**, Alexopoulos, A.A., Passam, H.C. (2008). Physiology and biochemistry regulation of dormancy and sprouting in potato tuber (*Solanum tuberosum* L.). *Fruit, Vegetable, and Cereal Science and Biotechnology* **2**: 54-68.
- 59- Lazar E. E., Jobling, J. J. and **Benkeblia, N.** (2010). Postharvest disease management of horticultural produce using essential oils: today's prospects. *Stewart Postharvest Review* **3**: 15-24. doi: 10.2212/spr.2010.3.15.

International Presentations

- 60- Shinano, T., Okazaki, K., **Benkeblia, N.**, Takebe, M. and Osaki, M. 2006. Comprehensive analysis of pleat leaf by GC-MS. International Symposium – How to sustain agrosphere, biosphere and geosphere. August 8, Sapporo (Japan) (Poster).
- 61- Takahashi, N., Takeda, H., Fukumori, Y., Onodera, S., Benkeblia, N., Shiomi, N. (2008). Effective method for 1-kestoe production using *Aspergillus japonicus*. 6th International Fructan Symposium, July 27-31, Sapporo (Japan) (Poster).
- 62- Fujishima, M., Shiomi, N., Benkeblia, N., and Onodera, S. (2008). Isolation and identification of inulooligosaccharides from stored onion bulbs. 6th International Fructan Symposium, July 27-31, Sapporo (Japan) (Poster).
- 63- **Benkeblia, N.** (2009). Determination of respiratory parameters of onion bulbs (*Allium cepa* L.) under total anoxia. 6th Controlled and Modified Atmosphere Research Conference, 4-7 April, Antalya (Turkey) (Poster).
- 64- **Benkeblia, N** and Shiomi, N. (2009). Variation of fructooligosaccharide contents, invertase, 1-KHE, 1-SST, 1-FFT and 6G-FFT activities in green asparagus spears stored at 10 °C. 10th International Postharvest Symposium, 8-12 April, Antalya (Turkey) (Poster).
- 65- Steen, S; **Benkeblia, N** and Cohen, J. (2009). Effects of the plant growth regulator, Stimulate™, on some postharvest qualities of tomato grown in greenhouses in Jamaica. 10th International Postharvest Symposium, 8-12 April, Antalya (Turkey) (Poster).
- 66- **Benkeblia, N.** (2010). Role of horticulture in agriculture development and food security in Jamaica. 28th International Horticultural Congress, 22-27 August, Lisbon, Portugal (Oral).
- 67- Emanuel, M. A. and **Benkeblia, N.** (2010). Variation of color, reducing and total sugars, total Phenolics and chlorophylls in carambola (*Averrhoa carambola*) during five “on tree” ripening stages. 28th International Horticultural Congress, 22-27 August, Lisbon, Portugal (Poster).
- 68- **Benkeblia, N.** (2010). Accumulation of total and reducing sugars in the green leaves and bulb tissues during growing and bulbing of onion (*Allium cepa* L.). 28th International Horticultural Congress, 22-27 August, Lisbon, Portugal (Poster).
- 69- Emanuel, M. A., Robinson, D. and **Benkeblia, N.** (2010). Biodiversity comparison of conventional and fair trade banana farming agricultural systems in Dominica. 28th International Horticultural Congress, 22-27 August, Lisbon, Portugal (Poster).
- 70- Steen, S, Cohen, J. E. and **Benkeblia, N.** (2010). Effects of the plant growth regulator “Stimulate” on the reproductive characteristics of tomato cultivated in greenhouse and open field in the tropics. 1st International Symposium on Tropical Horticulture, 22-26 November, Kingston, Jamaica (Oral).
- 71- Emanuel, M. A. and **Benkeblia, N.** (2010). Processing of ackee fruit (*Blighia sapida* L.): Present and future perspectives. 1st International Symposium on Tropical Horticulture, 22-26 November, Kingston, Jamaica (Oral).
- 72- Boyd, F. A. H. and **Benkeblia, N.** (2010). A Description of the floral biology operative within *Pimenta dioica* (L.) Merr. 1st International Symposium on Tropical Horticulture, 22-26 November, Kingston, Jamaica (Poster).
- 73- Emanuel, M. A. and **Benkeblia, N.** (2010). Variation of reducing and total sugars, total phenolics content and chlorophylls in june plum (*Spondias dulcis*) during “on tree” ripening. 1st International Symposium on Tropical Horticulture, 22-26 November, Kingston, Jamaica (Poster).
- 74- Emanuel, M. A. and **Benkeblia, N.** (2010). Variation of color, total and reducing sugars in “cheese” and “butta” ackee (*Blighia sapida*) varieties during five “on tree” ripening stages. 1st International Symposium on Tropical Horticulture, 22-26 November, Kingston, Jamaica (Poster).