

Curriculum Vitae

Dre. khadidja SENOUCI-REZKALLAH

Personal Information

Title Dr.

Family Name SENOUCI-REZKALLAH

First Name khadidja

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Summary

Holder of PhD of Aix-Marseille III University in France, microbiology and molecular biology. I have done my master thesis and my PhD at The National Institute of Agronomic Research (INRA, Avignon), France. My thesis was on 'The physiological and molecular characterization of the acid stress response of *Bacillus cereus*' and more precisely on the bacterial metabolism and the regulation of the genes expression in acid stress response in prokaryotes by RT-quantitative PCR and proteomics to identify genes and thus mechanisms can be implicated on Acid Tolerance Response. I perform a screening a library of random mutant mutagens to identify other genes and mechanisms may be responsible of acid stress. Working under the supervision of Prof. Philippe Schmitt and Dr. Michel Jobin, which I have used to deepen and expand my research capabilities at the National Institute of Food Research INRA, Avignon, FRANCE.

After my PhD, I started my work as assistant professor- researcher at Mascara University, Algeria. My research focuses on the characterization of the response to acid and heat stress in bacteria responsible to food-borne illness (*E. coli*, *Staphylococcus aureus* and *B. subtilis*). The works on other areas of research help increase and deepen my knowledge in microbiology and molecular biology. I also worked on the antimicrobial activity of lactic bacteria on food-borne pathogens strains.

My job after my thesis allows me to have more experiences in student education, research and tutoring. I had pursuing a Postdoctoral Fellowship at Montreal University, Microbiology and Immunology Department. I have chosen this University because it's ranking among the top 100 universities in the world to perform a postdoctoral internship to further my experience in molecular biology. This fellowship is intended to provide the development of new target antibiotics by finding new factors that are important in the bacterial envelope assembly. The determination of the role of these new factors will permit to broaden our understanding of Gram-negative envelope biogenesis in order to identify new targets of antibiotics.

Actually, our team in Mascara University worked on bioelectricity generation and treatment of petroleum refinery effluent using microbial fuel cell technology,

Academic Formation

- **Postdoctoral research:** Montréal University **2013-2014**
Département de microbiologie, infectiologie et immunologie, Montréal, Canada.
Project title: The bioinformatic and phenotypic analysis of new factors that appear to be important for Gram-negative bacterial envelope assembly to identify new targets for antibiotics development.

- **Doctorate Degree (ph.D)** Microbiology and Molecular Biology **2006-2009**
Aix-Marseilles III University, Faculty of Saint - Jerome Marseille, France, INRA SQPOV UMR A408, Avignon, France.
Thesis Title: physiological and molecular Characterisation of acid tolerance response of *Bacillus cereus*.

- **Master 2** Microbiology and biochemistry **2005-2006**
Aix-Marseilles III University. Faculty of Saint - Jerome Marseille, France. INRA SQPOV UMR A408, Avignon, France.
Thesis Title: Characterisation of acid and heat tolerance response of *Bacillus cereus*.

- **License (DEA diploma)** **2001-2005**
Mustapha Stambouli University, Biology department. Mascara. Algeria.
Title: effect of aqueous extracts of medicinal plants on a pathogens bacterium.

- **Degree Type Bachelor's:** in life science and health. **1998-2001**
Bagdade Boumedien School, Mascara, Algeria.

Employment

Academic Work Experience

- **Lecturer Professor (maître de Conférence A),** **2016-2018**
Mascara University, Faculty of Science and Nature of Life. ALGERIA.

- **Teaching assistance of**
 - **General Microbiology, Food Microbiology and Yeasts and yeast-like organisms** courses in Microbiology, **Infectiology and Immunology** department, **Montreal University, CANADA. Winter 2014**

 - **Bacteriology course MCB 2992-A13** in Microbiology, **Infectiology and Immunology** department, **Montreal University, CANADA. Autumn (fall) 2013.**

- **Senior Lecturer (maître de Conférence B),** **2011 -2016**
Mascara University. Faculty of Science and Nature of Life. ALGERIA.

- **Assistant Professor (professeur assistant)** **2009-2011**
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Biologie SNV. Mascara University. ALGERIA.

Non-academic Work Experience

- Microbiologist

2005

Laboratory analyzes, Private Medical Sector. France.

Awards and Distinctions

Fellowship

Master-Doctorate (pHD)

2005 -2009

Ministry of Superior Education, microbiology and molecular biology. ALGERIA.

Other Sources of Funding

Project of the National Food Research (PNRA)

2007-2009

INRA, Avignon – FRANCE.

Research fund CRSNG, CANADA.

2013-2014

Language Skills

Language Read Write Speak Understand

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|------------|-----|-----|-----|-----|
| 1. Arabic | Yes | Yes | Yes | Yes |
| 2. French | Yes | Yes | Yes | Yes |
| 3. English | Yes | Yes | Yes | Yes |

Research and teaching activities

Research Discipline

- 1- Microbiology
- 2- Food Microbiology
- 3- Molecular Biology
- 4- Biochemistry.
- 5- Nutrition and Metabolism of bacteria.

Teaching Activities

Courses Taught (Licence and Master degrees)

- General Microbiology
- Bacteriology
- Microbiological analyzes
- Food Microbiology
- Techniques microbiological controls.
- General Microbiology

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- Molecular Biology
- systematic Procaryotic
- Microorganisms-host interaction

Supervisory Activities

- **Principial supervisor training post-graduation Master 2** **2015-2016**
- Characterization of the antagonistic effect of lactic acid bacteria towards a pathogenic strains responsible for food poisoning.
- **Principal Supervisor training graduation DEA license in microbiology 2011-2011**
Characterization of the response to acid and heat stress in bacteria responsible for food poisoning.
- **Internship graduation license LMD** **2010-2012- 2015-2016**
Medical training of microbiological analyzes

CONTRIBUTIONS AND STATEMENTS

Membership of Scientific Societies

- Federation of European Microbiological Societies (**FEMS**).
- American society of microbiology (**ASM**).
- Canadian society of microbiology (**CSM**).
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Presentation of papers at scientific conferences

- 1- Khadidja SENOUCI-REZKALLAH, Fatiha DILMI, Lakhdar BELABID, Februry 12-14, 2018. 2018 ASM BIOTHREATS, Baltimore, Maryland, USA. **Peptidoglycan (pg) Synthesis disruption in Δ marcB mutant induces the Lipid Carrier Und-p Biosynthesis In *Escherichia coli* Cells.**
- 2- Fatiha DILMI ^{1,2}, Khadidja SENOUCI-REZKALLAH¹, Abdelwaheb CHIBANI², Februry 12-14, 2018. 2018 ASM BIOTHREATS, Baltimore, Maryland. USA. **Characterization of Hydrocarbon Degrading and Biosurfactants- Producing Bacteria from Oil Polluted Soil.**
- 3- Khadidja SENOUCI-REZKALLAH: December 5th, 2017. **Rendez-vous Génomique Québec 2017.** [Amphithéâtre du Centre de Conférence BMO, CHU Sainte-CV.](#) Dr. khadidja SENOUCI-REZKALLAH (phD)

[Justine](#)

3175 Côte-Sainte-Catherine, Montréal.

- 4- Khadidja SENOUCI-REZKALLAH, Fatiha DILMI, Lakhdar BELABID, October 18-19, 2017. Global Applied Microbiology Conference and Expo, Microbiology 2017, Toronto, Ontario, CANADA. **Peptidoglycan (PG) synthesis interruption in $\Delta mrcB$ mutant disturbs the bacterial envelope assembly and induces the ECA biosynthesis in *Escherichia coli* cells.**
- 5- Fatiha DILMI, Khadidja SENOUCI-REZKALLAH, Abdelwaheb CHIBANI, October 18-19, 2017. Global Applied Microbiology Conference and Expo, Microbiology 2017, Toronto, Ontario, CANADA. **Isolation and Characterization of oil degrading bacteria from contaminated soil at oil ARZEW refinery.**
- 6- Khadidja SENOUCI-REZKALLAH, Catherine PARADIS-BLEAU, May 30-June 2, 2015, 115th General Meeting, American Society for Microbiology. New Orleans, Louisiana. USA. **Bacterial cell wall assembly arrest by conserved inner membrane protein (ElyC) affect oxidative stress response in *E. coli*.** 1169, H-Genetics and Molecular Biology.
- 7- Khadidja SENOUCI-REZKALLAH, Catherine PARADIS-BLEAU, May 30-June 2, 2015, 115th General Meeting, American Society for Microbiology. New Orleans, Louisiana. USA. **Conserved inner membrane protein (YcbC) mutation induces the over- expression of genes encoded for Entebacterial Commun Antigen (ECA).** 2055, H-Genetics and Molecular Biology.
- 8- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT-**June 21-25, 2015, 8th International Conference on Gram-Positive Microorganisms, 18th International Conference on Bacilli, Montecatini Terme, Italy. Adaptative response of *Bacillus cereus* cells upon exposure to low pH involve ATPase activity in pH_i maintenance**
- 9- Khadidja SENOUCI-REZKALLAH, Catherine PARADIS-BLEAU, **July 27, August 1, 2014**, International Union of Microbiological Societies (IUMS 2014) – XIVth International Congress of Bacteriology and Applied Microbiology. **Conserved inner membrane protein (YcbC) mutation induces the over- expression of genes encoded for Entebacterial Commun Antigen.**

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- 10- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT. **May 17-20, 2014:** 114th General Meeting, American Society for Microbiology. Boston, Massachusetts. USA (ASM 2014). **A combined physiological and transcriptional approach to reveal ATPase activity implication in *Bacillus cereus* ATCC 14579 growth at low pH, acid tolerance and internal pH maintenance.**
- 11- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT, **June 15 to 17, 2009:** Spore 2009 - Spore forming bacteria in food (Quimper, France).
Poster: **Heat and acid resistance depends on growth pH in the food-borne pathogen *Bacillus cereus* ATCC 14579.**
- 12- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT, **May 19 to 20, 2009** Network & cereus Clostridium (Avignon, France). Improving the acid resistance and internal pH homeostasis by amino acids in *B. cereus* ATCC14579.
- 13- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT, **December 11, 2008. Evaluation of PNRA project: new approach and new tools for studying the emergence of pathogenic bacteria in food chains.** Case of *Bacillus cereus* in non Sterilised products heat treated. The pathogenic bacterium *Bacillus cereus*, New knowledge and new tools for better Masters in Agri-Food Intoxications (IAA) (Avignon, France).
- 14- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT, **5 to 9 August 2008.** International Congress of Bacteriology and Applied Microbiology IUMS (Istanbul, Turkey): **Characterisation of the Acid Tolerance Response in *Bacillus cereus* ATCC14579.**
- 15- Khadidja SENOUCI-REZKALLAH, Michel P. JOBIN, Philippe SCHMITT, **22 to 27 June 2008** Doctoriales en Provence (La Baume-les-Aix-Marseille France): **Characterization of the response to acid stress in *Bacillus cereus* ATCC14579.**
- 16- Khadidja SENOUCI, Michel P. JOBIN, Philippe SCHMITT, **5 to 6 June 2008** XVI Symposium Doctoral School of Life Sciences and Health (Timone, Marseille, France): **Study of *Bacillus cereus* ATCC14579 Acid Tolerance Response Mechanisms.**
- 17- Khadidja SENOUCI, Michel P. JOBIN, Philippe SCHMITT, **21 to 22 April 2008** 3rd EUROPEAN SPORES CONFERENCE, Naples, Italy: **Characterization of the Acid Tolerance Response in *Bacillus cereus* ATCC14579.**

Scientific publication, PubMed Articles, Books

1. Fatiha Dilmi, Abdelwaheb Chibani, Khadidja SENOUCI- REZKALLAH. **Isolation and molecular identification of hydrocarbon degrading bacteria from oil-contaminated soil.** *International Journal of Biosciences*. Vol. 11, No. 4, p. 272-283, 2017. ISSN: 2220-6655 (Print), 2222-5234. <http://www.innspub.net/wp-content/uploads/2017/10/IJB-Vol-11-No-4-p-272-283.pdf>
2. Khadidja SENOUCI- REZKALLAH, Lakhdar BELABID, Michel P. JOBIN, Philippe SCHMITT. **Heat and acid resistance depend on growth pH in the food-borne pathogen *Bacillus cereus* ATCC 14579.** *International Journal Of Medical Science And Clinical Inventions*. Volume 3 issue 9, 2016, page no. 2150-2162 e-ISSN: 2348-991X p-ISSN: 2454-9576. <http://valleyinternational.net/index.php/our-jou/ijmsci>
3. Khadidja SENOUCI-REZKALLAH: **The Role of Elyc Protein in Protection Against Oxidative Stress in *E. coli* Cells.** *International Journal of Medical Microbiology and Tropical Diseases*, October-December, 2015; 1(1):13-23. <https://innovativepublication.com/journal-article-file/1230>
4. Khadidja SENOUCI-REZKALLAH: **Phenotypic and transcriptional analysis appear that bacterial cell wall assembly stop by conserved inner membrane protein (ElyC) gene disruption stimulates the enterobacterial common antigen (ECA) gene cluster transcription in *Escherichia coli*,** *Journal of Chemical and Pharmaceutical Research*, 2015, 7(10): 90-99. <http://jocpr.com/vol7-iss10-2015/JCPR-2015-7-10-90-99>. Pdf.
5. Khadidja SENOUCI- REZKALLAH, Michel P. JOBIN, Philippe SCHMITT: **Adaptive responses of *Bacillus cereus* ATCC14579 cells upon exposure to acid conditions involve ATPase activity to maintain their internal pH.** *Microbiologyopen*. 2015 Apr; 4(2): 313–322. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4398511/>.
6. Khadidja SENOUCI- REZKALLAH: **Caractérisation de la réponse au stress acide chez *Bacillus cereus* ATCC 14579. Étude physiologique et moléculaire de la réponse au stress acide et thermique chez *B. cereus*.** **Book: Presse Academique Francophone (paf) May 6 2014.** <http://www.amazon.ca/Caracterisation-Reponse-Stress-Bacillus>
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[Cereus/dp/3841621392/ref=sr_1_1/185-7216586-2926037?s=books&ie=UTF8&qid=1452106285&sr=1-1.](https://pubmed.ncbi.nlm.nih.gov/21356439/)

7. Khadidja SENOUCI- REZKALLAH, Philippe SCHMITT, Michel P. JOBIN: **Amino acids improve acid tolerance and internal pH maintenance in *Bacillus cereus* ATCC14579 strain.** *Food Microbiology* 2010. <http://www.ncbi.nlm.nih.gov/pubmed/21356439>