SHORT CURRICULUM VITAE

KHALID OUFDOU

I- PERSONAL DATA

Name	: Khalid OUFDOU
Birthday	: January 03, 1969 in Beni Mellal (Morocco)
Profession	: Teaching-searcher
Address	: Cadi Ayyad University, Faculty of Sciences-Semlalia, Laboratory of Biology and Biotechnology of Microorganisms, Labeled Research Unit-CNRST N°4, P.O. Box 2390 Marrakech 40 000, MOROCCO
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Family situation	: Married, three children
Languages	: French, English (Proficiency 6), Deutsch (A1 level)

II- EDUCATION

2000	Diploma of State Doctorate Es-Sciences, Microbiology and Biotechnology (**State Thesis**), University Cadi Ayyad (UCA)
1994	High studies diploma of third cycle : D.E.S., Microbiology and Environment, UCA
1991	Certificate of Deep Studies : C.E.A., Treatment and valorization of wastewater in agriculture, Agronomic and Veterinary Institute Hassan II, (IAV) Rabat, and UCA
1990	The Bachelor's degree (Licence) Es-Sciences in Plant Biology (**BV_4**)
1986	Baccalaureate diploma Sciences, Tarik Ibn Ziad School, El Ksiba, Beni Mellal

III- PEDAGOGIC ACTIVITIES :

Teaching of :

***** Microbiology :

- Semesters 3 and 6 of Bachelor (Second and third years of Bachelor's degree = Bac +3)

* Microbial biotechnologies applied to agriculture and the Environment

- Master "Microbial Biotechnologies and agrosciences"
- Master "Fertilizer Science and Technology" at UM6P
- Master "Applied Microbiology" (Master = Bac + 5)
- Master "Biotechnologies, Protection and Valorization of Plant Resources"
- Master "Engineering Sanitation and Environment Management"
- Professional Bachelor: "Sciences and Technologies of the sanitation of liquid and solid wastes: LP STAD" (Since 2014)

***** Cellular Biology : Semester 1 of Licence (First year of Licence's degree = Bac +3)
Semester 1 of Bachelor (First year of Bachelor's degree = Bac +4)

Coordination of :

- Coordinator of the Excellence Bachelor: "Technologies of Treatment and valorization of Liquid and Solid Wastes" (VALDEC) (FSSM) (since 2023)
- Coordinator of the Professional Bachelor: "Sciences and Technologies for the Sanitation of Liquid and Solid Waste" (LP-STAD) (FSSM) (2020-2022)
- Vice-coordinator of the Professional Bachelor: "Urban sanitation management (LP-GAMU)", 2009-2014 (FSSM, UCA).
- Coordinator of the Master "Applied Microbiology", 2015-2017 (FSSM, UCA).
- Vice-coordinator of the Master "Microbial biotechnology for development (BMSD), 2011-2013 (FSSM, UCA)

IV- TOPICS OF RESEARCH :

Microbial Biotechnologies applied to agriculture and the environment:

- Symbiotic relationships rhizobacteria-plants under environmental stress conditions (salinity, phosphorus deficiency, heavy metals, cyanotoxins …) and Biofertilizers.
- Environmental pollutions of aquatic and soils ecosystems and bioremediation.

V- MAIN PUBLICATIONS (since 2015) :

* Slimani A., Raklami A., Benmrid B., **Oufdou K.**, Meddich A. (2023). Salt-tolerant plant growth-promoting rhizobacteria mitigate salinity in barley by improving photosynthetic capacity, antioxidant activity, and soil fertility. Biologia, DOI: 10.1007/s11756-023-01541-0 (IF: 1.5).

* Slimani A., **Oufdou K.**, Meddich A. (2023). Intercropping and co-inoculation of beneficial microorganisms of soils improve drought tolerance in barley and alfalfa plants. Gesunde Pflanzen. DOI: 10.1007/s10343-023-00949-7 (IF: 3.2).

* **Oufdou K.**, Raklami A., Pajuelo E., Bargaz A., Saghir Khan M., Bousserrhine N., Carrasco López J.A. (2023). Editorial: Rhizospheric microbiota-plant interactions: A bioremediation strategy for inorganic pollutants. Frontiers in Microbiology, 14: 1174634. https://doi.org/10.3389/fmicb.2023.1174634 (IF: 6.064).

* Redouane E.M., Tazart Z., Lahrouni M. Mugani R., Elgadi S., Zine H., El Amrani Zerrifi S., Haida M., Martins J.C., Campos A., **Oufdou K.**, Vasconcelos V., Oudra B. (2023). Health risk assessment of lake water contaminated with microcystins for fruit crop irrigation and farm animal drinking. Environmental Science and Pollution Research. https://doi.org/10.1007/s11356-023-27914-1 (IF: 5.8).

* Raklami A., Quintas-Nunes F., Nascimento F.X., Jemo M., **Oufdou K.**, Syed A., Bahkali A.H., Verma M., Nafis A. (2023). Assessing the growth-promoting traits of actinobacteria spp. isolated from *Cleome africana*: Implications on growth and root enhancement of *Medicago sativa*. Journal of King Saud University. https://doi.org/10.1016/j.jksus.2023.102722 (IF: 3.8).

* Ouhaddou R., Ben-Laouane R., Lahlali R., Anli M., Ikan C., Boutasknit A., Slimani A., **Oufdou K.**, Baslam M., Ait Barka E., Meddich A. (2022). Application of indigenous rhizospheric microorganisms and local compost as enhancers of lettuce growth, development, and salt stress tolerance. Microorganisms, 10, 1625. https://doi.org/10.3390/microorganisms10081625 (IF: 4.5).

* Slimani A., Raklami A., **Oufdou K.**, Meddich A. (2023). Isolation and characterization of PGPR and their potential for drought alleviation in barley plants. Gesunde Pflanzen. 75(3):377-391. DOI: 10.1007/s10343-022-00709-z (IF: 3.2).

* Ouhaddou R., Ben-Laouane R., Slimani A., Boutasknit A., Anli M., **Oufdou K.**, Baslam M., Meddich A. (2022). Autochthonous biostimulants as a promising biological tool to promote lettuce growth and development under salinity conditions. Environmental Sciences Proceedings, 16, 41. https://doi.org/10.3390/environsciproc2022016041

* Tahiri A.I., Raklami A., Bechtaoui N., Anli M., Boutasknit A., **Oufdou K.**, Meddich A. (2022). Beneficial effects of plant growth promoting rhizobacteria, arbuscular mycorrhizal fungi and compost on lettuce (*Lactuca sativa*) growth under field conditions. Gesunde Pflanzen, 74(1), 219-235. 10.1007/s10343-021-00604-z (IF: 3.2).

* Raklami A., Meddich A., **Oufdou K.**, Baslam M. (2022). Plants-microorganisms-based bioremediation for heavy metal cleanup: recent developments, phytoremediation techniques, regulation mechanisms, and molecular responses. International Journal of Molecular Sciences, 23(9), 5031. 10.3390/ijms23095031 (IF: 6.208).

* Raklami A., Meddich A., Pajuelo E., Marschner B., Heinze S., **Oufdou K.** (2022). Combined application of marble waste, compost, marble waste, and beneficial microorganisms: Towards a cost-effective approach for restoration of heavy metals contaminated sites. Environmental Science and Pollution Research, 29:45683–45697. 10.1007/s11356-022-19149-3 (IF: 4.223).

* Tahiri A., Meddich A., Raklami A., Alahmad A., Bechtaoui N., Anli M., Göttfert M., Heulin T., Achouak W., **Oufdou K.** (2022). Assessing the potential role of compost, PGPR bacteria, and AMF in improving tomato plants growth, yield, fruit quality, and water stress tolerance. Journal of Soil Science and Plant Nutrition, 22, 743-764. https://doi.org/10.1007/s42729-021-00684-w (IF=3.9).

* Raklami A., Bechtaoui N., Tahiri A., Slimani A., Bargaz A., Meddich A., **Oufdou K.** (2021). Co-inoculation with rhizobacteria and mycorrhizae can improve wheat/faba bean intercrop performance under field conditions. Frontiers in Agronomy. 3:734923. doi: 10.3389/fagro.2021.734923.

* Alahyane H., Ouknin M., Alahyane A., Aboussaid H., **Oufdou K.**, El Messoussi S., Mounir A., Majidi L. (2022). Aphicidal activities of Moroccan *Bacillus thuringiensis* strains against cotton aphid (*Aphis gossypii*). Biointerface Research in Applied Chemistry, 12(3), 3348-3356. https://doi.org/10.33263/BRIAC123.33483356

* Redouane E., Mugani R., Lahrouni M., Martins J.C., El Amrani Zerrifi S., **Oufdou K.**, Campos A., Vasconcelos V., Oudra B. (2021). Role of rhizospheric microbiota as a bioremediation tool for the protection of soil-plant systems from microcystins phytotoxicity and mitigating toxin-related health risk. Microoganisms, 9, 1747. https://doi.org/10.3390/microorganisms9081747

* Raklami A., Oubane M., Meddich A., Hafidi M., Marschner B., Heinze S., **Oufdou K.** (2021). Phytotoxicity and genotoxicity as a new approach to assess heavy metals effect on *Medicago sativa* L.: Role of metallo-resistant rhizobacteria. Environmental Technology & Innovation. 24, 101833. DOI: 10.1016/j.eti.2021.101833 (Impact factor: 5.263).

* Bechtaoui N., Rabiu M.K., Raklami A., **Oufdou K.,** Hafidi M., Jemo M. (2021). Phosphate-dependent regulation of growth and stress management in plants. Frontiers in Plant Science. 12, 679916. doi: 10.3389/fpls.2021.679916 (IF=5.753).

* El Alaoui A., Raklami A., Bechtaoui N., El Gharmali A., Ouhammou A., Imziln B., Achouak W., Pajuelo E. **Oufdou K.** (2021). Use of native plants and their associated bacteria rhizobiomes to remediate-restore Draa Sfar and Kettara mining sites, Morocco. Environmental Monitoring and Assessment. 193, 232. https://doi.org/10.1007/s10661-021-08977-4 (IF= 1.903).

* Raklami, A., Tahiri, A. I., Bechtaoui, N., El Gharmali, A., Pajuelo, E., Baslam, M., Meddich, A., **Oufdou, K.** (2021). Restoring the plant productivity of heavy metal-contaminated soil using phosphate sludge, marble waste, and beneficial microorganisms. Journal of Environmental Sciences, 99, 210-221; doi: 10.1016/j.jes.2020.06.032 (IF= 4.302).

* Redouane E., Lahrouni M., Martins J.C., El Amrani Zerrifi S., Benidire L., Douma M., Aziz F., **Oufdou K.**, Mandi L., Campos A., Vasconcelos V., Oudra B. (2021). Protective role of native rhizospheric soil microbiota against the exposure to microcystins introduced into soil-plant system via contaminated irrigation water and health risk assessment. Toxins, 13, 118. https://doi.org/10.3390/toxins13020118

* Ouknin M., Alahyane H., Aboussaid H., Oufdou K., El Messoussi S., Costa J., Majidi L. (2021) Acaricidal Properties of Essential Oils from Moroccan Thyme Against Oriental Red Mite, Eutetranychus Orientalis (Klein) (Acari: Tetranychidae). Journal of Essential Oil Bearing Plants, 24:2, 329-341, DOI: 10.1080/0972060X.2021.1927854

* Benidire L., Lahrouni M., Daoui K., Fatemi Z.A., Göttfert M., **Oufdou K.** (2018). Phenotypic and genetic diversity of Moroccan rhizobia isolated from *Vicia faba* and study of genes that are likely to be involved in their osmotolerance. *Systematic and Applied Microbiology*, 41, 51-61.

* Benidire L., El Khalloufi F., **Oufdou K.**, Barakat M., Tulumello J., Ortet P., Thierry H., Achouak W. (2020). Phytobeneficial bacteria improve saline stress tolerance in *Vicia faba* and modulate microbial interaction network. Science of the Total Environment, 729, 139020. doi:10.1016/j.scitotenv.2020.139020 (IF : 6.551).

* Raklami A., El Gharmali A., Ait Rahou Y., **Oufdou K.**, Meddich A. (2020). Compost and mycorrhizae application as a technique to alleviate Cd and Zn stress in *Medicago sativa*. International Journal of Phytoremediation, 23 (2), 190-201. doi: 10.1080/15226514.2020.1803206 (IF : 2.528).
* Ben-Laouane R., Baslam M., Ait-El-Mokhtar M., Anli M., Boutasknit A., Ait-Rahou Y., Toubali S., Mitsui T., **Oufdou K.**, Wahbi S., Meddich A. (2020). Potential of Native Arbuscular Mycorrhizal Fungi, Rhizobia, and/or Green Compost as Alfalfa (*Medicago sativa*) Enhancers under Salinity. Microorganisms, 8, 1695. doi:10.3390/microorganisms8111695 (IF : 4.167).
* Ben-laouane R., Ait-elmokhtar M., Anli M., Boutasknit A., Ait Rahou Y., Raklami A., **Oufdou, K.**, Wahbi S., Meddich A (2020). Green compost combined with mycorrhizae and rhizobia: A strategy for improving alfalfa growth and yield under field conditions. Gesunde Pflanzen, 1-15. https://doi.org/10.1007/s10343-020-00537-z (IF : 0.738)
* Anli M., Baslam M., Tahiri A., Raklami A., Symanczik S., Boutasknit A., Ait-elmokhtar M., Ben-laouane R., Toubali S., Ait Rahou Y., Ait Chitt M., **Oufdou K.**, Mitsui T., Hafidi M., Meddich A. (2020). Biofertilizers as strategies to improve photosynthetic apparatus, growth, and drought stress tolerance in the date palm. Frontiers in Plant Science, 11:516818. doi: 10.3389/fpls.2020.516818 (IF : 4.402).
* Boutasknit A., Anli M., Tahiri A., Raklami A., Ait-El-Mokhtar M., Ben-Laouane R., Ait Rahou Y., Boutaj H., **Oufdou K.**, Wahbi S., El Modafar C., Meddich A. (2020). Potential effect of horse manure-green waste and olive pomace-green waste composts on physiology and yield of garlic (*Allium sativum* L.) and soil fertility. Gesunde Pflanzen, 72, 285–295. https://doi.org/10.1007/s10343-020-00511-9 (IF : 0.738).
* Bechtaoui N., Raklami A., Benidire L., Tahiri A., Meddich A., Göttfert M., **Oufdou K.** (2020). Effects of PGPR co-inoculation on growth, phosphorus nutrition and phosphatase/phytase activities of faba bean under different phosphorus availability conditions. Polish journal of environmental studies, 29 (2), 1-9. doi: 10.15244/pjoes/110345 (IF : 1.186).
* Toubali, S., Tahiri, A., Anli, M., Symanczik, S., Boutasknit, A., Ait-El-Mokhtar, M., Ben-Laouane, R., **Oufdou K.**, Ait-Rahou Y., Ben-Ahmed H., Jemo M., Hafidi M., Meddich A. (2020). Physiological and biochemical behaviors of date palm vitroplants treated with microbial consortia and compost in response to salt stress. Applied Sciences, 10, 8665. doi:10.3390/app10238665 (IF : 3.044).
* Alahyane H., Aboussaid H., Atibi Y., Ait Babahmad R., **Oufdou K.**, El Messoussi S. (2020). Chemical composition and acaricidal activities of *Jatropha curcas* extract against oriental red mite, *Eutetranychus orientalis* (Acari: Tetranychidae). Journal of Animal and Plant Sciences 30(5), 1163-1171. https://doi.org/10.36899/JAPS.2020.5.0133 (IF : 0.233).
* Raklami A., **Oufdou K.**, Tahiri A., Mateos-Naranjo M., Navarro-Torre S., Rodríguez-Liorente I.D., Meddich A., Redondo-Gómez, S. Pajuelo, E. (2019). Safe cultivation of *Medicago sativa* on metal polluted soils of semi-arid regions assisted by heat- and metallo-resistant PGPR. Microorganisms, 7 (7), 212. doi: 10.3390/microorganisms7070212 (IF : 4.167).
* Raklami A., Bechtaoui N., Tahiri A., Anli M., Meddich A., **Oufdou K.** (2019). Use of rhizobacteria and mycorrhizae consortium in the open field as a strategy for improving crop nutrition, productivity and soil fertility. Frontiers in Microbiology, 10: 1106. https://doi.org/10.3389/fmicb.2019.01106 (IF : 4.259).
* Bechtaoui N., Raklami A., Tahiri A., Benidire L., Meddich A., Göttfert M., **Oufdou K.** (2019). Characterization of plant growth promoting rhizobacteria and their benefits on growth and phosphate nutrition of faba bean and wheat. Biology Open, 8 (7), bio043968. doi:10.1242/bio.043968 (IF : 1.962).
* Bechtaoui N., El Alaoui A., Raklami A., Benidire L., Tahiri A., **Oufdou K.** (2019). The impact of intercropping and co-inoculation with strains of plant growth-promoting rhizobacteria on phosphorus and nitrogen concentrations and yield of durum wheat (Triticum durum) and faba bean (*Vicia faba*). Crop and Pasture science, 70 (8), 649-658. https://doi.org/10.1071/CP19067 (IF : 1.330).
* Redouane E.M., El Amrani Zerrifi S., El Khalloufi F., **Oufdou K.**, Oudra B., Lahrouni M., Campos, A., Vasconcelos, V. (2019). Mode of action and fate of microcystins in the complex soil-plant ecosystems. Chemosphere, 225, 270-281. doi: 10.1016/j.chemosphere.2019.03.008 (IF : 5.778).
* El Alaoui A., Bechtaoui N., Benidire L., El Gharmali A., Achouak W., Daoui K., Imziln B., **Oufdou K.** (2019). Growth and heavy metals uptake by *Vicia faba* in mining soil and tolerance of its symbiotic rhizobacteria. Environment Protection Engineering, 45, 83-96. doi: 10.5277/epe190107 (IF : 0.616).

* Ben Laouane R., Meddich A., Bechtaoui N., **Oufdou K.**, Wahbi S. (2019). Effects of arbuscular mycorrhizal fungi and rhizobia symbiosis on the tolerance of *Medicago sativa* to salt stress. Gesunde Pflanzen, 71(2), 135-146. https://doi.org/10.1007/s10343-019-00461-x (IF : 0.738).
* Alahyane H., El Alaoui A., Abousaid H., Aimrane A., Atibi Y., **Oufdou K.**, El Messoussi S. (2019). Biological activity of some native *Bacillus thuringiensis* Berliner strains against *Eutetranychus orientalis* (Klein) (Acari: Tetranychidae). Applied Ecology and Environmental Research, 17(2), 1967-1977. DOI: http://dx.doi.org/10.15666/aeer/1702_19671977 (IF : 0,712).
* Taoufiq K., Faghire M., Tahrouch S., Nejmeddine M., Göttfert M., **Oufdou K.**, Hatimi A. (2018). Screening and molecular identification of endophytic bacteria isolated from legumes nodules and roots cultivated in Acacia rhizosphere soils collected in an arid region, Tata-Akka in South of Morocco. *Indian Journal of Natural Sciences*, 9, 14910-14919.
* R'zina Q., Saadaoui N., Lahrouni M., Almoussayd M.Y., Saadani Hassani O., Rida S., **Oufdou K.**, Fares K. (2018). Co-composting of poultry manure with carbonation lime: monitoring of physicochemical and microbiological parameters. *Sugar Industry*, 143(8), 1-8.
* Benidire L., Lahrouni M., El Khalloufi F., Göttfert M., **Oufdou K.** (2017). Effects of *Rhizobium leguminosarum* inoculation on growth and mineral assimilation in *Vicia faba* plants under salinity stress. Journal of Agricultural Science and Technology, 19, 889-901.
* Meliani A., Bensoltane A., Benidire L., **Oufdou K.** (2017). Plant Growth-Promotion and IAA secretion with *Pseudomonas fluorescens* and *Pseudomonas putida*. Research & Reviews: Journal of Botanical Sciences, 6 (2), 16-24.
* Wahbi S., Prin Y., Thioulouse J., Sanguin H., Baudoin E., Maghraoui T., **Oufdou K.**, Leroux C., Galiana A., Hafidi M., Duponnois R. (2016). Impact of wheat/faba bean mixed cropping or rotation systems on soil microbial functionalities. Frontiers in Plant Science, 7. http://dx.doi.org/10.3389/fpls.2016.01364.
* El Khalloufi F., **Oufdou K.**, Bertrand M., Lahrouni M., Oudra B., Ortet P., Barakat M., Heulin T., Achouak W. (2016). Microbiote shift in the *Medicago sativa* rhizosphere in response to cyanotoxins extract exposure. Science of the Total Environment, 539: 135-142.
* Wahbi S., Maghraoui T., Hafidi M., Sanguin H., **Oufdou K.**, Prin Y., Duponnois R., Galiana A. (2016). Enhanced transfer of biologically fixed N from faba bean to intercropped wheat through mycorrhizal symbiosis. Applied Soil Ecology, 107: 91-98.
* Lahrouni M., **Oufdou K.**, El Khalloufi F., Benidire L., Albert S., Göttfert M., Caviedes M.A., Rodriguez-Llorente I.D., Oudra B. and Pajuelo E. (2016). Microcystin-tolerant *Rhizobium* protects plants and improves nitrogen assimilation in *Vicia faba* irrigated with microcystins containing waters. Environmental Science and Pollution Research, 23(10):10037-10049.
* **Oufdou K.**, Bechtaoui N., El Alaoui A., Benidire L., Daoui K., Göttfert M. (2016). Symbiotic rhizobacteria for improving of the agronomic effectiveness of phosphate fertilizers. Procedia Engineering, 138: 325-331.
* Maghraoui T., Bechtaoui N., Galiana A., Wahbi S., Duponnois R., Hafidi M., Daoui K., Fatemi Z.A., de Lajudie P., **Oufdou K.** (2016). Effect of inoculation by Moroccan rock phosphate-solubilizing rhizobia, versus phosphorus fertilization, on the growth and the phosphorus uptake by *Vicia faba*. Pakistan Journal of Agricultural Sciences, 53 (4), 817-826.
* Wahbi S., Prin Y., Maghraoui T., Sanguin H., Thioulouse J., **Oufdou K.**, Hafidi M., Duponnois R. (2015). Field application of the mycorrhizal fungus *Rhizophagus irregularis* increases the yield of wheat crop and affects soil microbial functionalities. American Journal of Plant Sciences, 6: 3205-3215.
* Lahrouni M., **Oufdou K.**, El Khalloufi F., Pajuelo E., Oudra B. (2015). Impact of cyanobacterial toxins (microcystins) on growth and root development of *in vitro Vicia faba* cultures. International Journal of Innovation and Applied Studies, 12 (3): 542-551.
* Lahrouni M., **Oufdou K.**, Oudra B. (2015). Occurrence of cyanobacteria producing toxins in irrigation freshwaters: which impacts on crop quality and public health? Journal of Materials and Environmental Sciences, 6 (10): 2986-3001.
* Daoui K., Karrou M., Mrabet R., Fatemi Z., **Oufdou K.** (2015). Faba bean fertilization in Morocco. Better Crops with plant foods (Publication of the International Plant Nutrition Institute : IPNI), 99 (4): 12-13.

* Benidire L., Daoui K., Fatemi Z.A., Achouak W., Bouarab L., **Oufdou K.** (2015). Effect of salt stress on germination and seedling of *Vicia faba* L. Journal of Materials and Environmental Sciences, 6 (3) : 840-851.

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	Toutes	Depuis 2018
Citations	2985	2129
indice h	33	26
indice i10	65	55

VI- PATENT :

* Sahlaoui T., Raklami A., Oufdou K. (2023). Agro-biotechnological solution based on the mixed formulation of clay, marble waste, compost, and agro-ecological plants for a sustainable approach to the rehabilitation of mining sites. Patent submitted to OMPIC (Office Marocain de la Propriété Industrielle et Commerciale). N° de dépôt de la demande: 63493, Date de dépôt : 30/11/2023.
* Bechtaoui N., El Alaoui A., Benidire L., Oufdou K. (2021). Bionoculum à base des souches de *Rahnella aquatilis* PGP30 et *Rhizobium* sp. RhOF57A sur l'amélioration du rendement et la nutrition phosphatée chez *Vicia faba*. Brevet publié par l'Office Marocain de la Propriété Industrielle et Commerciale (OMPIC). N° de dépôt de la demande : 43500, Date de dépôt : 24/10/2018. Date de publication du brevet : 31/08/2021.

VII- BOOK AND CHAPTERS IN BOOKS:

* **Guest Editor** of the Research Topic: Rhizospheric microbiota-plant interactions: A bioremediation strategy for inorganic pollutants. Frontiers in Microbiology: https://www.frontiersin.org/research-topics/35930/rhizospheric-microbiota-plant-interactions-a-bioremediation-strategy-for-inorganic-pollutants
* **Chapter in book**: Slimani A., Akensous F.Z., Oufdou K., Meddich A. (2023). Impact of Climate Change on Water Status: Challenges and Emerging Solutions. Springer International Publishing. Smol M., Vara Prasad M.N., Stefanakis A. Water in Circular Economy, pp. 03-20.
* **Chapter in book**: Meddich Abdelilah, Oufdou Khalid, Boutasknit Abderrahim, Raklami Anas, Tahiri Abdelilah, Ben-Laouane Raja, Ait-El-Mokhtar Mohamed, Anli Mohamed, Mitsui Toshiaki, Wahbi Said, Baslam Marouane (2019). Use of organic and biological fertilizers as strategies to improve crop biomass and yields and physicochemical parameters of soil. © Springer Nature Singapore Pte Ltd. 2020. Meena R.S. (ed.), Nutrient Dynamics for Sustainable Crop Production, pp. 247-288. https://doi.org/10.1007/978-981-13-8660-2_9
* **Chapter in book :** Bouizgarne B., **Oufdou K.**, Ouhdouch Y. (2015). Actinorhizal and rhizobial-legume symbioses for alleviation of abiotic stresses. N.K. Arora (ed.), Plant Microbes Symbiosis: Applied Facets, DOI 10.1007/978-81-322-2068-8_14, © Springer India.
* **Chapter in book : Oufdou K.**, Mezrioui N. (2012). Occurrence, Antibiotic Resistance and Pathogenicity of Non-O1 *Vibrio cholerae* in Moroccan Aquatic Ecosystems: A Review. Chapter in the Book : "Antibiotic Resistant Bacteria - A Continuous Challenge in the New Millennium". Dr. Maria Pana (Ed.), pp: 443-454. InTech. ISBN: 978-953-51-0472-8.
* **Chapter in book :** Martins D.S., Skouri W., Chermiti B., Aboussaid H., El Messoussi S., **Oufdou K.**, Carbonelli E., Sabater-Munoz B., Beitia F. (2010). Analysis of two larval-pupal parasitoids (Hymenoptera, Braconidae) in the biological control of *Ceratitis capitata* (Wiedemann) in Spanish Mediterranean areas. Proceedings of the 8th International Symposium on fruit flies of economic importance, Valencia. Sabater-Munoz B., Navaro Llopis V., Urbaneja Garcia A. (eds.), pp : 252-258. ISBN : 978-84-694-0577-2.

* **Chapter in book :** Lamrani Alaoui H., Mezrioui N., **Oufdou K.** (2009). Effect of solar disinfection and heating on the sensitivity of virulent multiple-antibiotic resistant and non virulent-sensible strains of non-O1 *Vibrio cholerae* and fecal coliforms isolated from Marrakesh groundwater. *Chapter in the Book "Arid Environments and wind erosion"*. Antonio Fernandez-Bernal, Mauricio Alberto de la Rosa (Editors), Nova Science Publishers, Inc. New York, USA. pp 345-354, ISBN 978-1-60692-411-2.
* **Book** : Aboussaid H., Oufdou K. (2016). *Bacillus thuringiensis* pour le contrôle des insectes ravageurs des plantes. "Éditions Universitaires Européennes", 2016. ISBN-13: 978-3-639-54348-3. ISBN-10: 3639543483. EAN:9783639543483.

VIII- PROJETS OF RESEARCH :

- Responsible of the Moroccan-German project financed by "The Alexander von Humboldt Foundation (AvH)", Germany: "Role of rhizobacteria-mycorrhizae-plants symbioses on the improvement of soil quality polluted by mine discharges » (2022-2024).
- Responsible of the project PPR2/2016/42-CNRST: **"**Agro-biotechnology for the bioremediation of soils polluted by heavy metals " (2016-2019).
- Responsible of the Moroccan-German project (BMBF n°01DH12051, PMARS n°12-20): **"**Molecular characterization of the symbioses rhizobia-*Vicia faba* L. tolerant towards osmotic stress in Marrakech region (Morocco)**"** (2013-2015).
- Responsible of the French-Moroccan project PRAD N° 11-01 : **"**Study of the adaptation of rhizobial symbioses bean (*Vicia faba*) and pea (*Pisum sativum*) to salt and water stresses: varietal behavior and physiological and molecular characterization of tolerance**"** (2011-2013).
- Responsible of the Moroccan-French project TOUBKAL/16/ 21– CAMPUS FRANCE : 34717WA: **"**Potential of bacterial-plant symbioses in the rehabilitation of soils polluted by mining discharges**"** (2016-2018).
- Responsible of the Mediterranean project MISTRALS-ENVIMED : **"**Sustainable agro-biotechnological solutions to the environmental problem of soil contamination by heavy metals**"** (2015-2016).
- Member of the Project FABATROPIMED (Agropolis Fondation Project n° 1001-009)**:** Ecological services of legumes for nitrogen and phosphorus bio-geochemical cycles and C sequestration in cereal cropping systems in Africa and the Mediterranean basin. 01st December 2010 – 31 March 2015. Responsible of WP3 : "Symbiotic and rhizospheric interactions".
- Responsible of the Morocan-Spanish project N° Al/035873/11: **"**Impact of contamination of irrigation water on agricultural production in the region of Marrakech. Sustainable biotechnological solutions to an environmental problem and impact on public health**"** (2012).
- Responsible of the Morocan-Spanish project N° C/031521/10 : **"**Bilateral approach to the problem of environmental pollution of irrigation water and its effects on agricultural production and sustainable economic development**"** (2011).
- Responsible of the Tunisian-Moroccan project N° 11/TM 20 : **"**Development of biopesticides used to control lepidopteran insect pests of agriculture in Tunisia and Morocco: *Tutta absoluta* and *Spodoptera littoralis***"** (2011 et 2012).
- Responsible of the Morocan-Spanish project n° A/018163/08 and n° A/025374/09: "Selection and molecular characterisation of autochtonous strains of rhizobia nodulated common bean (*Phaseolus vulgaris* L.) and tolerant to salt stress, isolated in Marrakech-Tensift-Al Haouz region (Morocco)" (2009 and 2010).

- ⇨ Member of the Morocan-Spanish project n° A/017408/08: "Agrophysiological and molecular characterization of the tolerance of common bean (*Phaseolus vulgaris*)-rhizobia symbiosis to water stress (2009).
- ⇨ Membre of the Morocan-Spanish projects n° A/3595/05 et n° A/5033/06: **"**Agrophysiological characterization of the tolerance of common bean(*Phaseolus vulgaris*)-rhizobia symbiosis to phosphorus deficiency**"** (2007 and 2008).
- ⇨ Member of the French-Moroccan project PRAD N° 06-08 : **"**Adaptation of the common bean (*Phaseolus vulgaris*)-rhizobia symbiosis to phosphore deficiency : behaviour of varieties and physiological characterization (2006-2008).
- ⇨ Responsible of the Morocan-Spanish projects n° A/5318/06 et n° A/9056/07 : "Research of *Bacillus thuringiensis* strains with insecticidal activity against *Ceratitis capitata*" (2007 and 2008).
- ⇨ Responsible of the **IFS** project (International Foundation for Science) (3rd grant) **n° F/2826-3F** : "Effets of cyanotoxines on rhizobia and their symbiotic association with legume plants" (02/10/2008 to 30/05/2012).
- ⇨ Member of the Morocan-Spanish project n° A/016386/08 : "Parasitoïdes and biological control against the mediterranean fly; *Ceratitis capitata*" (2009).
- ⇨ Responsible of the project **IFS** reneweled (International Foundation for Science) (2nd grant) **n° F/2826-2** (2nd grant): "Antibiotics released by Cyanobacteria : Ecological and sanitary aspects" (03/03/2003 to 03/03/2007).
- ⇨ Member of the project Morocco-Spain cooperation N° 6 P/2000 : "Actinomycetal bacteria of specific moroccan habitats producing antibacterial and/or antifungal activities : Biological characterization and structural study of released antibiotics" *(2000-2001)*.
- ⇨ Member of the project CNCPRST-MOROCCO / ICCTI-PORTUGAL : Morocco-Portugal cooperation : "Toxicology and toxinology of bloom cyanobacterial strains in different aquatic systems" (*2000-2003*).
- ⇨ Member of the project; Scientific and Technology Research, N° 5/2000 Morocco-Tunisia cooperation : "Screening of actinomycetes bacteria (including scarce strains) producing substances of antibacterial and/or antifungal activities : biochemistry, characterization of products and molecular study of genes involved in biosynthesis ways" *(2000-2002)*.
- ⇨ Member of the project PROTARS N° P1T1 / 36 : "Selection and valorisation of micro-algae of alimentary and medical interest" (*2001-2004*).
- ⇨ Member of the project PROTARS N° P1T2 / 21 : "Production of antibacterial and/or antifungal activities by Actinomycetal bacteria of Moroccan habitats : biological characterization of activities and structural pharmacological studies of released antibiotics *(1999-2002)*.
- ⇨ Responsible of the project **IFS** (International Foundation for Science) **N° F/2826-1** (1st grant): "Antibiotics released by Cyanobacteria : Ecological and sanitary aspects" (16/11/1998 to 30/11/2001).

IX- AWARDS :

* DAAD fellowship (Deutscher Akademischer Austauschdienst): "Effects of the osmotolerant symbiotic rhizobia isolated from Morocco on the improvement of faba bean growth: enzymological approaches and rhizosphere interactions". " Stay of 3 months on 2010 in the Helmholtz Zentrum München, German Research Center for Environmental Health, Department of Environmental Sciences, Research unit Microbe-Plant Interactions, Neuherberg, München, GERMANY.

* AvH fellowship (Alexander von Humboldt) n° MRO 1151617 STP-2: "Molecular characterization of the symbiotic bacteria of legume plants tolerant against osmotic stress". Stays of 8 months (3 months on 2014, 2 months on 2015 and 3 months on 2016) in the Technische Universität Dresden, Institut für Genetik, Dresden, GERMANY.

X- SUPERVISION OF PhD THESES (IN PROGRESS) :

PhD candidate	Topic of research	Supervisors	Thesis supervised since
TAHIRI Abdel-ilah	Impacts des biofertilisants à base de PGPR, de champignons mycorhiziens à arbuscules (CMA) et de composts sur la tolérance des cultures aux contraintes biotiques et abiotiques	Supervisor: OUFDOU Khalid Co-supervisor: MEDDICH Abdelilah	November 2017
SLIMANI Aiman	Développement de biostimulants naturels pour l'amélioration de la tolérance des cultures associées face aux changements changements climatiques et à la pénurie alimentaire	Encadrant: MEDDICH Abdelilah Co-encadrant: OUFDOU Khalid	Janvier 2021
SAHLAOUI Tarik	Caractérisation et valorisation des symbioses rhizobactéries-plantes agroécologiques dans la réhabilitation des sols contaminés par les métaux lourds : une solution agro-biotechnologique	Encadrant: OUFDOU K. Co-encadrants: BARGAZ Adnane (UM6P) & RAKLAM Anas	Décembre 2023
BICHARA Lamia	Caractérisation et valorisation des endophytes bactériens isolés de l'argnanier	Encadrant: FAGHIRE Mustapha (UIZ) Co-encadrant: OUDOU Khalid	2018

XI- DOCTORAL THESIS DEFENDED :

- REDOUANE El Mahdi (2023). Contamination of crops with cyanobacterial toxins (microcystins): assessment of their health risk and phytotoxicity, and the role of rhizobacteria in protecting microcystin-affected agroecosystems. Thèse de Doctorat National, 132 p. Faculté des Sciences-Semlalia de Marrakech, 20 Mai 2023 (Co-Supervised).
- RAKLAMI Anas (2021). Potentialités de phytoremédiation assistée par les rhizobactéries, les mycorhizes et les amendements organo-minéraux : vers une approche de réhabilitation/restauration des sols contaminés par les métaux (cas de la mine Kettara, Marrakech). Thèse de Doctorat National, 236 p. Faculté des Sciences-Semlalia de Marrakech, 19 Juin 2020 (Supervised).
- BECHTAOUI Noura (2019). Sélection et caractérisation de bactéries symbiotiques pour l'amélioration de l'efficacité agronomique des phosphates naturels. Thèse de Doctorat National, 199 p. Faculté des Sciences-Semlalia de Marrakech, 12 Octobre 2019 (Supervised).
- TAOUFIQ Khadijattou (2019). Caractérisation et valorisation des endophytes bactériens isolés à partir du système racinaire de certaines plantes légumineuses cultivées dans des sols rhizosphériques des Acacia du sud du Maroc : région de Tata-Akka. Thèse de Doctorat National. Faculté des Sciences, Université Ibn Zohr, Agadir, 08 Février 2020 (Co-Supervised).
- ALAHYANE Hassan (2019). Contribution à la lutte intégrée contre l'acarien rouge oriental, *Eutetranychus orientalis* (Acari : Tetranychidae) ravageur des agrumes marocains. Thèse de Doctorat National, 199 p. Faculté des Sciences-Semlalia de Marrakech, 06 Mars 2020 (Co-Supervised).

- BECHTAOUI Noura (2019). Sélection et caractérisation de bactéries symbiotiques pour l'amélioration de l'efficacité agronomique des phosphates naturels. Thèse de Doctorat National, 199 p. Faculté des Sciences-Semlalia de Marrakech, 12 Octobre 2019 (Supervised).
- EL ALAOUI Abdelkhalek (2018). Potentiel des bactéries et des plantes dans la réhabilitation des sols pollués par des rejets miniers de Draa Sfar et Kettara. PhD thesis, 173 p. Faculty of Sciences-Semlalia, Marrakech. December 21th, 2018 (Supervised).
- BENIDIRE Loubna (2017). Rôle des bactéries symbiotiques dans l'amélioration de la production agricole de *Vicia faba* L. sous stress salin. PhD thesis, 180 p. Faculty of Sciences-Semlalia, Marrakech. July 4th, 2017 (Supervised).
- MAGHRAOUI Tasnime (2016). Diversité génotypique et fonctionnelle des rhizobia associés aux cultures mixtes Fève-Blé en conditions limitantes de phosphore au Maroc. PhD thesis, 147 p. Faculty of Sciences-Semlalia, Marrakech. December 15th, 2016 (Supervised).
- WARDA Karima (2013). Incidence et pathologie de *Streptococcus pneumonae* dans la région de Marrakech. PhD thesis, 158 p. Faculty of Sciences-Semlalia, Marrakech. October 8th, 2013 (Supervised).
- LAHROUNI Majida (2013). Contamination des eaux d'irrigation par les toxines de cyanobactéries (microcystines) : Impact sur la symbiose rhizobia-plante légumineuse (*Vicia faba* L.). PhD thesis, 135 p. Faculty of Sciences-Semlalia, Marrakech. November 1st, 2013 (Co-supervised).
- EL KHALLOUFI Fatima (2012). Phytotoxicité induite par les cyanotoxines, effet des microcystines sur la croissance de *Solanum lycoperscium* et sur *Medicago sativa* et sa microflore rhizosphérique. PhD thesis, 145 p. Faculty of Sciences-Semlalia, Marrakech. October 6th, 2012 (Co-supervised).
- FAGHIRE Mustapha (2012). Rôle des microorganismes symbiotiques (cas de rhizobia) dans l'amélioration de la production agricole de *Phaseolus vulgaris* sous stress salin. PhD thesis, 93 p. Faculty of Sciences and Technics, Marrakech. June 30th, 2012 (Co-supervised).
- MANDRI Btissam (2012). Adaptation de la symbiose rhizobienne du haricot (*Phaseolus vulgaris*) à la déficience en phosphore. Caractérisation agrophysiologique de la tolérance et incidence sur la biodisponibilité du P. PhD thesis. Faculty of Sciences and Technics, Marrakech. June 2nd, 2012 (Co-supervised).
- BARGAZ Adnane (2012). Caractérisation Agrophysiologique et Biochimique de Symbioses Haricot (*Phaseolus vulgaris*)-Rhizobia Performantes pour la fixation Symbiotique de l'Azote sous Déficit en Phosphore. PhD thesis, 145 p. Faculty of Sciences and Technics, Marrakech. January 7th, 2012 (Co-supervised).
- ABOUSSAID Houda (2011). Contrôle biologique de la mouche méditerranéenne *Ceratitis capitata* (Wied.) (Diptera : Tephritidae) avec les biopesticides extraits de *Bacillus thuringiensis* et par des parasitoïdes hyménoptères. PhD thesis, 134 p. Faculty of Sciences-Semlalia, Marrakech. October 15th, 2011 (Supervised).
- HALLAM firdaouss (2011). Biodiversité et qualité des eaux souterraines des jbilet (région de marrakech) : Rôle des interactions entre les crustacés peracarides stygobies et la flore bactérienne d'interêt sanitaire. PhD thesis, 143 p. Faculty of Sciences-Semlalia, Marrakech. 8 January 8th, 2011 (Co-supervised).
- LAMRANI ALAOUI Hafsa (2008). Etude de la dynamique et de la pathogénicité de *Vibrio cholerae* non-O1 et d'autres bactéries d'intérêt sanitaire dans des eaux de puits de la région de Marrakech. PhD thesis, 213 p. Faculty of Sciences-Semlalia, Marrakech. June 19th, 2008 (Supervised).

XII- EXPERIENCE IN SCIENTIFIC EVALUATION:

- Scientific expert at the National Center of Research and Scientific Technics (CNRST) (2019-2023)
- Elected member of the "Scientific committee of Faculty of Faculty of Sciences Semlalia", Marrakech (2018-2020).

➢ Elected member of "the Council of Faculty of Sciences Semlalia, Marrakech" (2012-2014) :
- Member of the "Theses Committee (UFR)"
- Member of the "Commission of Research and Cooperation"
- Member of the "Pedagogical Commission"

➢ Elected member of the Council of Faculty of Faculty of Sciences Semlalia, Marrakech (2003-2005).

➢ **Chairman** of the first edition of the International congress: "Microbial Biotechnology for Development" (MICROBIOD 1). 02-05 November 2009, Marrakech – MOROCCO (www.ucam.ac.ma/microbiona).

➢ **Chairman** of the second edition of the International congress: "Microbial Biotechnology for Development" (MICROBIOD 2). 02-04 October 2012, Marrakech – MOROCCO (www.ucam.ac.ma/microbiona).

➢ **Chairman** of the international workshop: "Agrobiotechnology for the Bioremediation of soils polluted by Metals" (BIOREMET 2022), 25-26 May 2022, Marrakech – MOROCCO (www.ucam.ac.ma/microbiona).

➢ Reviewer in several internation scientific journals.

➢ **Associate Editor in "Frontiers in Microbiology" (Impact factor: 6.064) :** Research Topic "Rhizospheric Microbiota-Plant Interactions: A Bioremediation Strategy for Inorganic Pollutants" (2022). https://www.frontiersin.org/research-topics/35930/rhizospheric-microbiota-plant-interactions-a-bioremediation-strategy-for-inorganic-pollutants

➢ Reviewer of several PhD theses and Master degree.

➢ Member of recruitment committees of Assistant-Professor in Morocco (in 2009, 2010, 2012, 2013, and 2020).

➢ Member of the Committee for the prize for the best PhD doctoral thesis at FSSM, UCA (URF and CED systems): 2012 and 2013.

➢ Member of the Thesis Committe of the Faculty, FSSM, UCA (UFR Doctorate, State Doctorate, and Habilitation): Examination of 92 files of Doctorate defenses, State Doctorate and habilitation (January 2012-March 26, 2015).

XIII- OTHER ACTIVITIES:

➢ Vice-Head of the Biology Department (83 professors), Faculty of Sciences Semlalia, University Cadi Ayyad.

➢ Coordinator of the Excellence Bachelor "Technologies of Treatment and Valorization of liquid and solid wastes (VALDEC)" (since 2023)

➢ Coordinator of the Professional License (bachelor's degree) (LP-STAD) "Sciences and Technologies of the Sanitation of liquid and solid wastes (since 2020)

➢ Coordinator of the Master "Applied Microbiology" (2015-2017).

➢ President of the Moroccan Association of Microbial Biotechnology and Protection of Natural Resources (MICROBIONA) (2009-2013, 2019-2022, and 2023-2025) (www.ucam.ac.ma/microbiona).

➢ Co-responsible of the Professional License (bachelor's degree) (LP-GAMU): "Urban Sanitation Management" (2009-2014).

➢ Co-responsible of the Master "Microbial Biotechnology for Development" (2011-2013).

➢ Elected member of the Council of Biology Department, Faculty of Sciences Semlalia, Marrakech (2006 and 2007).

➢ Responsible of the Material Committee at the Biology Department (CMD) (2008 and 2009).

➢ Member of the Moroccan Association of Microbiology.