

Jihene HELLAL

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- Born in 19/05/1976 in Tunis, Single.



Doctor Veterinary Specialist in Veterinary Medical Biology

DIPLOMAS & CERTIFICATES

- **From 1995 to 2001:** Diploma of Doctorate in Veterinary Medicine from the National Veterinary Medicine School –Sidi Thabet, Tunisia.
- **27 July 2010:** Diploma of Specialist in Veterinary Medical Biology obtained after 4 years of residency at the National Veterinary from the Medicine School –Sidi Thabet, Tunisia.
- **Session 2010 – 2011:** Diploma of Postgraduate Studies in Clinical Microbiology from the Faculty of Pharmacy of Monastir, Tunisia.
- **Session 2011 – 2012:** Certificate of additional study in Statistics and Epidemiology from the Faculty of Medicine of Tunis, Tunisia.
- **Since 10 June 2014:** Certification by WHO as International Trainer in Biological Risk Management in Laboratories.
 - - **Theme:** Biorisk Management Advanced Trainer.
- **Since 09 Dec. 2015:** Internal evaluator of Quality Management System within Higher Education Institutions.
- **Since 03 June 2016:** Biosafety Officer in laboratories, Certified by Elizabeth R. Griffin Foundation on behalf of the U.S. State Department Biosecurity Engagement Program (BEP).
- **05 Avril 2017 :** Certification in shipping infectious substances class 6.2 International Air Transport Association (IATA).

- **06 January 2020:** Member of the North African Biorisk Management Trainers Network with SANDIA National Laboratories (USA) on behalf of the US Defense Threat Reduction Agency (DTRA).
- **01 Oct. 2021:** Professional Certification in Biorisk Management by the International Federation of Biosafety Associations (IFBA).
- **February 2023:** Certification as an African Regional Subject Matter Expert (Af-RSME) – Biorisk Management for the Regional Training and Certification Program for Biosafety and Biosecurity Professionals of Africa CDC.
- **26 May 2023:** Certification as an Assessor for institutions handling high risk pathogens by African Society for Laboratory Medicine (ASLM).
- **05 August 2024:** Certification as a Professional (Level 1) on Selection, Installation and Certification of Biological Safety Cabinet (BSC) under the Regional Training and Certification Program of Biosafety and Biosecurity Program of Africa CDC.
- **05 September 2024:** Part of ASLM's pre-qualified suppliers list as an Individual Consultant on Biosafety and Biosecurity.

PROFESSIONAL EXPERIENCES

- **13 March 2006 – 13 March 2010:** Resident at the National Veterinary Medicine School –Sidi Thabet, Tunisia.
 - - **Specialty:** Veterinary Medical Biology
- **15 June 2011 – Today:** Veterinary biologist at the IRVT (Veterinary Research Institute of Tunisia): I am the head for the serology laboratory for the official control of regulated diseases of ruminants and poultry.
 - I'm the Biosafety/Biosecurity Advisor of the IRVT, National trainer on Biorisk Management (BRM) and also member of North African BRM trainers' network of SANDIA National Laboratories. I participate as a trainer on Biosafety, Biosecurity and BRM training programs of labs staff and field veterinarians inside the country. I teach students on the Biosafety,

Biosecurity and BRM module at the University. I also contribute as a trainer on Biosafety, Biosecurity and BRM in many training sessions in 3 regions of Africa and MENA region. I have been the Chair of the Northern African Biosafety and Biosecurity Technical Working Group of Africa CDC for two years (2023 – 2024).

- **28 Oct. 2016 – 07 Nov. 2021**: Regional Veterinary Inspector at IRVT under the Ministry of Agriculture, Fisheries and Water Resources.
- **08 Nov. 2021 – Today**: Divisional Veterinary Inspector at the IRVT under the Ministry of Agriculture, Fisheries and Water Resources.

PRACTICAL TRAINING

- **March 1997**: Internship at the Pasteur Institute of Tunis (3rd year of higher education).
 - - **Theme**: Experimentation and research at the Laboratories of medical analysis.
- **August 2006**: Practical training in Medical Parasitology at the Pasteur Institute of Tunis.
 - - **Theme** : Direct, serological and molecular diagnostic techniques for parasitic diseases.
- **1th Feb – 15 March 2008**: Practical training at the Aziza Othmana Hospital in Tunis, in the laboratory of biological hematology.
 - **Theme** : Biological hematology techniques.
- **30 May - 15 July & 15 - 30 Sep. 2008**: Practical training at the Laboratory of Biochemistry of the Rabta Hospital of Tunis.
 - **Theme** : Clinical biochemistry techniques.
- **17 June - 12 Sept. 2008** : Practical training in Food Microbiology of the Departmental Laboratory of the Côte d'Or in Dijon, France.

- - **Theme:** Bacteriological diagnostic techniques for foodborne illnesses and the detection of antibiotic residues in meat.
- **19 January - 18 April 2009 :** Practical training in Bacteriology at the Laboratory of Microbiology of the Hospital Charles Nicolle of Tunis.
 - - **Theme:** Bacteriological diagnostic techniques for urinary, genital, neonatal infections, tuberculosis, brucellosis and Resistance to antibiotics.
- **27 July - 14 August 2009:** Practical training in Virology at the Veterinary Microbiology Research Laboratory, at the Pasteur Institute of Tunis.
 - - **Theme:** Virological diagnostic techniques (direct, serology and molecular biology) of viral infections in poultry and rabies.
- **17 August - 12 Sept. 2009:** Practical training in Laboratories of the Department of Animal Health at the Institute of Veterinary Research of Tunisia
 - - **Theme:** Microbiological diagnostic techniques (bacteriology, serology, virology and molecular biology) of viral and bacterial infections in animals.
- **27 Oct. 11 – 30 Dec. 11:** Practical training in Laboratory of medical entomology at the Pasteur Institute of Tunis.
 - - **Theme:** Practice of molecular biology techniques: DNA extraction, conventional PCR, real time PCR, Reverse line blot.
- **05 Oct. 12 – 28 Dec. 12 :** Practical training at the ANSES Virology Unit - Laboratoire de Lyon (France) as part of the 1st year of a PhD.
 - - **Theme:** Practice of virological diagnostic techniques for Rift Valley Fever.
- **18 Nov. 13 – 13 Dec. 2013 :** Practical training at the ANSES Virology Unit - Laboratoire de Lyon (France) as part of the 2nd year of PhD.
 - - **Theme:** Practice of virological and molecular diagnostic techniques for Rift Valley Fever.

- **19 - 23 Sept. 2016:** Practical training at l'Institut Zooprofessionnel Sperimentale della Sicilia – Palermo.
 - - **Theme:** Training course on serological, bacteriological and molecular diagnosis of brucellosis.
- **02 – 06 Dec. 2024:** Practical training at ANSES Animal Health laboratories in France (Maisons-Alfort, Paris and Goustranville, Normandie)
 - - **Theme:** Complement Fixation Tests for Glanders and Dourine diagnosis.

TRAINING COURSES – WORKSHOPS - SEMINARS

- **14 & 15 April 2006:** Participation in 23th Maghrebian Veterinarian Congress
 - - **Theme:** The contribution of veterinary health surveillance to upgrading livestock production.
- **25 June 2008:** Habilitation of the official research method for antibiotic residues in meat, in the Department of Food Microbiology of the Departmental Laboratory of the Côte d'Or in Dijon, France.
- **11 Sep. 2008:** Participation in training at the Departmental Laboratory of the Côte d'Or in Dijon, France.
 - - **Theme:** Introduction to Quality Assurance.
- **11 Sep. 2008:** Participation in training at the Departmental Laboratory of the Côte d'Or in Dijon, France.
 - - **Theme:** Training in hygiene and safety of personnel.
- **15 - 16 October 2008:** Participation in the training organized by the General Directorate of Veterinary Services in collaboration with the National School of Veterinary Medicine of Sidi Thabet, Tunisia.
 - **Theme:** Sampling and laboratory analysis.

- **18 - 20 Nov. 2008:** Participation in the workshop of Practical Training on Animals of Laboratory, organized by the Tunisian Association of the sciences of Laboratory animals in Tunisia.

- **23 - 27 March 2009:** Participation in the training organized by the Research Laboratory "Resistance to Antimicrobials" in collaboration with the Colleague of Infectious Diseases, Parasitology-Mycolology and Microbiology and the Tunisian Society of Infectious Pathology, in Tunisia.
 - **Theme:** Bacterial taxonomy.

- **28 - 29 May 2009:** Participation in the training organized by the Research Laboratory "Resistance to Antimicrobials" in collaboration with the Colleague of Infectious Diseases, Parasitology-Mycolology and Microbiology and the Tunisian Society of Infectious Pathology, in Tunisia.
 - - **Theme:** Interpretative reading of the antibiogram.

- **20 - 21 & 22 Sept. 2010:** Participation in the international symposium organized by Pasteur Institute of Tunisia.
 - - **Theme:** TUBERCULOSIS: Application of genetics and genomics-based tools for diagnosis, drug susceptibility testing and epidemiology.

- **19 Nov. 2010:** Participation in the training workshop organized by the Tunisian Society of Clinical Biology at the La Rabta Hospital Center, Tunis.
 - - **Theme:** Dermatophytis / Dermatophytis.

- **03 - 04 Dec. 2010** : Participation in the training workshop organized by the Tunisian Society of Clinical Biology, in Tunisia.
 - - **Theme:** Quality management in laboratories.
- **23 - 24 April 2012** : Participation in the training session organized at the Veterinary Research Institute of Tunisia, jointly by FAO and the Directorate General of Veterinary Services, in Tunisia.
 - - **Theme:** Safety of laboratory personnel
- **25- 27 April 2012** : Participation in the training session organized at the Veterinary Research Institute of Tunis, jointly by FAO and the Directorate General of Veterinary Services, in Tunisia.
 - - **Theme:** Laboratory diagnostic techniques for avian viral diseases.
- **14 & 15 June 2012** : Participation in the training session organized at the Veterinary Research Institute of Tunis, jointly by FAO and the Directorate General of Veterinary Services, in Tunisia.
 - - **Theme:** Surveillance of avian influenza (HPAI) and Poultry diseases.
- **March - June 2013** : Participation in the post-graduate education program organized at the National Observatory of New and Emerging Diseases.
 - - **Theme:** : Introduction to statistical analysis of data.
- **2 – 10 June 2014** : Participation in the training of biosafety instructors in laboratories, organized by The World Health Organization
 - - **Theme:** : Biorisk Management Advanced Trainer Programme.

- **25 – 27 Feb. 2015 :** Participation in the training session organized at the Veterinary Research Institute of Tunis, jointly by ANSES Maisons-Alfort, France.
 - - **Theme:** : Biosafety in the FMD laboratory.

- **18 - 27 March 2015:** Participation in the Spring School organized by Pasteur Institute of Tunis.
 - - **Theme:** : "Probabilities and Statistics that apply".

- **From 05 to 07 May 2015 :** Participation in a workshop organized by the Jordanian University of Science and Technology in collaboration with Georgia University, in Irbid, Jordan.
 - - **Theme:** The use of Immuno-histochemistry to Diagnose Transboundary Animal Disease (TADs) in the Middle East and North Africa (MENA).

- **April - May 2015 :** Successful follow-up of an online course (MOOC) proposed by the Virchow-Villermé Center and distributed by the FUN platform.
 - - **Theme:** Control of epidemic emerging infectious diseases.

- **19 – 23 Oct. 2015 :** Participation in the PAQ P.H.A.R.E Capacity Building Project for the "Program for the harmonization of administration, research and teaching at Tunis El Manar University". Strand 3 Part 1 of the action PAQ-CG 01/2014.
 - - **Theme:** Definition of management systems: Application to the UTM and its establishments. Part 1: "Development of a Quality Management System in accordance with the requirements of the ISO 17024 and IWA 2 standards with the aim of harmonizing the processes of the institutions of the UTM".

- **02 – 06 Nov. 2015:** Participation in the PAQ P.H.A.R.E Capacity Building Project for the "Program for the harmonization of administration, research and teaching at Tunis El Manar University". Strand 3 Part 2 of the action PAQ-CG 01/2014.
 - - **Theme:** Definition of management systems: Application to the UTM and its establishments. Part 2: "Conducting practical workshops for the preparation and development of specific dashboards".

- **30 Nov.- 04 Dec. 2015 :** Participation in the PAQ P.H.A.R.E Capacity Building Project for the "Program for the harmonization of administration, research and teaching at Tunis El Manar University". Strand 4 Part 1 of the action PAQ-CG 01/2014.
 - - **Theme:** Deployment of the quality approach within the UTM and its institutions. Part 1: "Implementation of the QMS according to the defined process and the established schedules".

- **23 Nov. - 25 Nov. 2015 & 07 - 09 Dec. 2015 :** Participation in the PAQ PHARE capacity-building project in the "Program for the harmonization of administration, research and teaching at Tunis El Manar University", in the training course "Internal Evaluation of Management Systems Of Quality within the institutions of higher education. Requirement and tool for continuous improvement ". Part 4 of the action PAQ-CG 01/2014.
 - - **Theme:** Internal evaluator of Quality Management System within Higher Education Institutions ".

- **11 & 12 Dec. 2015 :** Participation in the PAQ PHARE capacity building project in the "Program for the harmonization of administration, research and teaching at Tunis El Manar University", in the training course "Internal Evaluation of Management Systems Of Quality within the institutions of higher education. Requirement and tool for continuous improvement ". Part 4 of the action PAQ-CG 01/2014.

- - **Theme:** Planning of the Internal Quality Management System Assessor within the Institutions of Higher Education ".

- **13 Nov. - 13 Dec. 2015** : Follow-up of an elearning course organized by the IZS Abruzzoe Molise "G. Caporale "in Teramo, Italy.
 - - **Theme:** : African horse sickness.

- **13 Nov. - 13 Dec. 2015** : Follow-up of an elearning course organized by the IZS Abruzzoe Molise "G. Caporale "in Teramo, Italy.
 - - **Theme:** : Rift Valley Fever.

- **14 - 19 Dec. 2015** : Participation in the PAQ PHARE capacity-building project in the "Program for the harmonization of administration, research and teaching at Tunis El Manar University", in the training course "Internal Evaluation of Management Systems Of Quality within the institutions of higher education. Requirement and tool for continuous improvement ". Strand 4 Part 4 of the action PAQ-CG 01/2014.
 - - **Theme:** Methodology for the exploitation of the results of the internal quality management system evaluator within the institutions of higher education ".

- **27 - 28 Feb. 2016**: Participation in the training held by MS Consulting in Tunis.
 - - **Theme:** Advanced MS Excel 2010 (Level 3)

- **16 - 17 March 2016** : Participation in a GEMP workshop organized by the CNVZ and the DGSV in collaboration with the FAO in Tunisia
 - - **Theme:** Strengthen preparedness for response to animal health emergencies.

- **From 04 to 15 April 2016:** Participation in the training: the 2016 Elizabeth R. Griffin Biorisk Management Training Course Sponsored by the U.S. State Department Biosecurity Engagement Program (BEP) in Casablanca, Morocco.
 - - **Theme:** MENA Advanced Biosafety Officer Training (Session 1).

- **23 May – 03 June 2016 :** Participation in the training: the 2016 Elizabeth R. Griffin Biorisk Management Training Course Sponsored by the U.S. State Department Biosecurity Engagement Program (BEP) in Casablanca, Morocco.
 - - **Theme:** MENA Advanced Biosafety Officer Training (Session 2).

- **06 - 08 April 2017:** Participation in the training in the 1st Annual Biorisk Management Symposium MENA Regional Network (BIORIM – Tunisia 2017) organized by the Tunisian association of biosafety and environmental education.
 - - **Theme:** Shipping and transport of biological agents: A certificate course.

- **From 15 to 17 April 2017:** Participation in the training organized by League of Arab States in Egypt in the frame of the control of transboundary diseases in MENA region.
 - - **Theme:** Brucellosis laboratory diagnosis.

- **07 July 2017:** Participation in the webinar organized by the U.S. State Department Biosecurity Engagement Program (BEP).
 - - **Theme:** Animal biosafety practices I.

- **11 to 13 July 2017:** Participation in the workshop with a Regional Table Top exercise for countries of MENA region in Tunisia, organized by OIE.
 - - **Theme:** Veterinary Services and law Enforcement: Protecting people, protecting economies, protecting animal resources, preserving our future with biosafety and biosecurity.
- **19 July 2017:** Participation in Online Training in biosafety organized by International Federation of Biosafety Associations (IFBA).
 - - **Theme:** : Reverse Safety Issues : « Are you sure this makes us safer ? »
- **21 July 2017:** Participation in the online Practical Training Exercise organized by the U.S. State Department Biosecurity Engagement Program (BEP)
 - - **Theme:** Analyzing and Managing Risks in Life Sciences Research
- **13 September 2017:** Participation in the webinar organized by the U.S. State Department Biorisk Engagement Program (BEP)
 - - **Theme:** : Animal biosafety practices II.
- **22 September 2017:** Participation in the webinar organized by the U.S. State Department Biorisk Engagement Program (BEP)
 - - **Theme:** : Laboratory Biosecurity.
- **17 November 2017:** Participation in a training workshop organized by the Tunisian Society of Microbiology in Hammamet, Tunisia.
 - - **Theme:** : Quality Control in Molecular Biology: from starting materials to results: Quantity, purity and distribution.

- **From 28 to 30 Nov. 2017:** Participation in the International meeting kick off organized in Tunis by Robert Koch Institute, Germany in collaboration with the Ministry of Public Health, the Ministry of the Interior, the Ministry of Defense and German Cooperation, in Tunisia.
 - - **Theme:** German-Tunisian Security-cooperation against biological threats.
- **12-13 Dec. 2017:** Participation in The International workshop organized in Tunis by Gryphon Scientific Organization in collaboration with Pasteur Institute of Tunisia and The Tunisian Association for Biosafety and Environmental Education (ATB2E), in Tunisia.
 - - **Theme:** Biorisk Management Roundtable and Tabletop Exercise.
- **From 05 to 23 Feb. 2018:** Participation in the 8th International Training Programme for Developing Countries organized by National Institute of training for Standardization (Bureau of Indian Standards) in Noida, New Delhi, India.
 - - **Theme:** Laboratory Quality Management: Requirements of Accreditation Standards 17025 and 15189, and laboratory auditing.
- **03 & 04 May 2018:** Participation in the Training organized by Hippra University in Tunisia.
 - - **Theme:** Theoretical and practical school on necropsy and simpling for Bursal Infectious Disease of poultry.
- **From 09 to 30 July 2018:** Participation in The Biosafety and Biosecurity training Course- Global (BBTC-Global), a remote-based course presented through an on-line interactive Learning Management System (LMS), in collaboration with ABSA International.
 - **Theme:** Animal session:
 - Large Animal Facilities and Containment

- ABSL-2 Research in the Field
 - ABSL-3 Research with Multiple Animal Species/Multiple Agents.
 - Biosafety and Biosecurity in the Animal Facility
 - Infection Control in Veterinary Hospitals: Why bother?
 - Prion Diseases
- **5 - 6 Nov. 2018:** Participation in two-day workshop, organized by The Tunisian Association for Biosafety and Environmental Education (ATB2E), Gryphon Scientific, and Merrick & Company, in Tunis.
 - - **Theme:** "Biosecurity Norms, Practices, and Multistakeholder Efforts".
 - **From 19 Nov. to 14 Dec. 2018 :** Participation in the International Courses organised by Thailand International Cooperation Agency (TICA) in collaboration with Mahidol University, in Thailand.
 - **Theme:** The Principle Concept and Practice of One Health for Emerging Disease Management.
 - **From 24 to 28 March 2019 :** Participation in the workshop organized by Sandia National Laboratories operated for the US Department of Energy by National Technology and Engineering solutions of SANDIA in collaboration with U.S. Agency for Defense and Threat Reduction, in Morocco.
 - **Theme:** MENA Regional Network Trainer Development Program.
 - **From 13 to 20 April 2019 :** Participation in the 5th advanced training session organized Florida University in collaboration with US Soybean Export Council, in Florida, USA.

- **Theme:** Poultry diseases, clinical and laboratory diagnosis.
- **From 10 to 14 June 2019:** Participation in the workshop organized by Sandia National Laboratories operated for the US Department of Energy by National Technology and Engineering solutions of SANDIA on behalf of the U.S. Agency for Defense and Threat Reduction, in Morocco.
 - **Theme:** Biorisk Management Advanced Trainer Workshop (ATW)
- **From 22 to 26 July 2019:** Participation in the international training organized by the Ministry of the Environment and Local Affairs in collaboration with The Eastern Mediterranean Public Health Network (EMPHNET), Global Health Development (GHD) of Jordany and National Centre for Disease Control of libya, in Tunis.
 - **Theme:** Biorisk Management Training for Public and Animal Health Laboratories.
- **26 Sept. 2019:** Participation in the training of trainers organized by CNVZ in collaboration with The National Veterinary Services School of France, in Tunis.
 - **Theme:** Fight against antibiotic resistance.
- **From 14 to 18 October 2019:** Participation in the workshop organized by Sandia National Laboratories operated for the US Department of Energy by National Technology and Engineering solutions of SANDIA in collaboration with U.S. Agency for Defense and Threat Reduction, in Morocco.
 - **Theme:** Biorisk Management Trainers – Reunion Event Cohorts 1 & 2.

- **From 25 to 29 Nov. 2019:** Participation in the international training organized by the Ministry of the Environment and Local Affairs in collaboration with The Eastern Mediterranean Public Health Network (EMPHNET), Global Health Development (GHD) of Jordan and National Centre for Disease Control of Libya, in Tunis.
 - **Theme:** Biorisk Management Training of Trainers for Public and Animal Health Laboratories.

- **07 April 2020:** Participation in the trainings online organized by the National University Center for Scientific and Technical Documentation in collaboration with ELSEVIER.
 - **Themes:**
 - How to refine my search on Science Direct to speed up the discovery of relevant literature.
 - How to collaborate with authors? How can I find funding?

- **09 April 2020:** Participation in the trainings online organized by the National University Center for Scientific and Technical Documentation in collaboration with ELSEVIER.
 - **Theme:** How do I use the different operators to filter search results on ScienceDirect or Scopus?

- **10 April 2020:** Participation in the training online organized by the National University Center for Scientific and Technical Documentation in collaboration with ELSEVIER.
 - **Theme:** How do you choose a magazine to publish in ?

- **13 April 2020:** Participation in the training online organized by the National University Center for Scientific and Technical Documentation in collaboration with ELSEVIER.
 - **Theme:** What can I do on ScienceDirect other than download PDFs of the articles I'm interested in ?

- **12 August 2020:** Participation in the training online organized by SANDIA National Laboratories
 - **Theme:** ISO 35001: 2019 Biorisk Management for Laboratories and other related organizations.

- **14 & 16 Oct. 2020:** Participation in the virtual course organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Biorisk Communications : Tailoring Information for Diverse Institutional Stakeholders.

- **15 October 2020:** Participation in the virtual course organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Managing the Potential for Human Failure Through Biosafety Critical Task Analysis - The Pirbright Institute.

- **12 & 19 Oct. 2020:** Participation in the virtual course organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Animal Research for Biosafety Professionals – Part 1.

- **From 4 to 6 Nov. 2020:** Participation in the virtual 63rd Annual Biosafety and Biosecurity Conference organized by ABSA International (The American Biological Safety Association).

- **From 25 to 29 January 2021:** Participation in the training Workshop organized by FAO for assessors of the assessment tool of the FAO surveillance systems (SET tool).
 - **Theme:** Introduction of the "biological threat" module.
- **1st and 8th Feb. 2021:** Participation in the virtual Workshop organized by Africa Centres for Disease Control and Prevention (AFRICA CDC).
 - **Theme:** The Africa CDC Initiative to Strengthen Biosecurity and Biosafety: Northern Africa Technical Whorkshop.
- **From 2 to 4 Feb. 2021:** Participation to the virtual USDA ARS 6th International Biosafety and Biocontainment Symposium organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Emerging Biorisk Challenges in Agriculture.
- **27 July 2021:** Participation in the online training organized by l'Instituto Zooprofilattico Sperimentale del Mezzogiorno, Terramo (Italy), in the frame of the Project ERFAN Enhancing Research for Africa Network
 - **Theme:** Bovine Tuberculosis Eradication Plan.
- **28 July 2021:** Participation in the online Information Days organized by OIE in the framework of the Project ERFAN Enhancing Research for Africa Network
 - **Theme:** Detection of *Kebsiella pneumoniae* from different matrices, AMR and NGS.

- **From 31 May to 09 Sept. 2021:** Participation on training webinars organized by IZCAM C. caporale TERAMO in the framework of the Project ERFAN Enhancing Research for Africa Network
 - **Theme:** Detection of *Salmonella spp.* According to ISO 6579-1: 2017.
- **From 25 to 27 Oct. 2021:** Participation in the virtual 64rd Annual Biosafety and Biosecurity Conference organized by ABSA International (The American Biological Safety Association)
- **10 Nov. 2021:** Participation in a webinar organized by WHO Public Health Laboratories
 - **Theme:** Biological Risk Assessment Tools.
- **11, 12 Oct - 1, 2 Nov. 15, 16 Nov. and 29, 30 Nov. 2021 :** Participation on training webinars organized by Sandia National Laboratories (SNL), on behalf of the US Department of State (USDOS), with subject matter experts (SMEs) in counter violent extremism, human vulnerability, and insider threat.
 - **Theme:** Assessment and mitigation of human vulnerabilities/insider threat in biological facilities.
- **From 27 January to 31 March 2022 :** Participation in a series of virtual training sessions within the framework of the OIE Biological Risk Management (BRM) Standards Implementation Project in North African Regional Veterinary Laboratories. This project is established by the OIE in collaboration with the SANDIA National Laboratories of the USA and sponsored by the U.S. Department of State Biosecurity Engagement Program (BEP).

- **23 – 24 March 2022:** Attendance of the workshop organized by Centre National de Veille Zoosanitaire of Tunisia with the European Union in Tunisia.
 - **Theme:** Risks of emerging and transboundary animal diseases.
- **25 - 29 April 2022:** Attendance of a virtual training on Antimicrobial Resistance organized by Health and Food Safety – European Commission.
- **16 - 19 May 2022:** Participation in a workshop organized by the INTERPOL within the framework of the Project of building resilience to Agroterrorism and Agrocime established by FAO, OIE and INTERPOL in Tunisia.
 - **Theme:** The regional command and control structure for agro-terrorism.
- **12 – 16 June 2022:** Participation in the North Africa Biorisk Managemet Trainers Network: RNAT Workshop organized by SANDIA National Laboratories (USA) in Rabat, Morocco.
- **26 June 2022:** Participation in the online dialogue organized by IZCAM C. caporale TERAMO in the framework of the Project ERFAN Enhancing Research for Africa Network
 - **Theme:** Writing a scientific paper.
- **20 – 22 Sept. 2022:** Participation in the workshop organized by the Center for Global Health Science and Security Georgetown University Medical center and Global Health Development/The Easter Mediterranean Public Health Network (GHD/EMPHNET), in Tunis, Tunisia.

- **Theme:** Building Multisectorial and Cross-border Networks for the Surveillance, Detection and Response to Priority Transboundary Zoonotic Diseases Workshop.
- **03 - 07 Oct. 2022:** Participation in the Africa One-Health Network Inaugural Workshop (AfOHNet) in Ghana.
- **05 Oct. 2022:** Participation in the workshop organized by African Genetic Biocontrol Consortium in Accra, Ghana.
 - **Theme:** Understanding emerging Genetic Biotechnologies: Status of Development in Africa.
- **11 – 13 Oct. 2022:** Participation in the Biorisk Management Trainer's Forum organized by SANDIA National Laboratories (USA), in Milwaukee, Wisconsin, USA.
- **14 Oct. 2022:** Participation in the course organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Keeping it going: Maintaining and Improving a Select Agent Program over the Long Term.
- **15 Oct. 2022:** Participation in the course organized by ABSA International (The American Biological Safety Association)
 - **Theme:** Engineering for the Biosafety Professional - Part I.
- **16 Oct. 2022:** Participation in the course organized by ABSA International (The American Biological Safety Association) at Milwaukee, Wisconsin, USA.
 - **Theme:** Advanced BSL 3 Facility Operations.

- **From 17 to 19 Oct. 2022:** Participation in the 65rd Annual Biosafety and Biosecurity Hybrid Conference organized by ABSA International (The American Biological Safety Association) at Milwaukee, Wisconsin, USA.
- **19 Nov. 2022:** Completion of the virtual course organized by GBAC Academy (Global Biorisk Advisory Council), USA.
 - **Theme:** The GBAC STAR 20 Elements.
- **11 Jan. 2023:** Completion of the virtual course organized by GBAC Academy (Global Biorisk Advisory Council), USA.
 - **Theme:** Introduction to Integrated Audits & Inspections.
- **12 Jan. 2023:** Completion of the virtual course organized by GBAC Academy (Global Biorisk Advisory Council), USA.
 - **Theme:** Infectious Disease Awareness in the Workplace: COVID-19 Considerations.
- **12 Jan. 2023:** Completion of the virtual course organized by GBAC Academy (Global Biorisk Advisory Council), USA.
 - **Theme:** Chain of Infection Basics.
- **13 Jan. 2023:** Completion of the virtualcourse organized by GBAC Academy (Global Biorisk Advisory Council), USA.
 - **Theme:** Basics of Risk Assessment.
- **23 Jan. 2023:** Participation on a training organized by Centre National de Veille Zoosanitaire (CNVZ)
 - **Theme:** Risk analysis in animal Health.

- **01 - 03 Feb. 2023:** Participation in the Regional Training Course on Verification and Calibration of Biosafety Cabinets in Diagnostic Laboratories TN-RAF5082-2000271 held in Seibersdorf, Austria, organized by the International Atomic Energy agency (IAEA) through the Joint FAO/IAEA Centre of Nuclear Techniques in Food and Agriculture in Vienna.
- **09 - 10 Feb. 2023:** Participation in the workshop on Applied Biorisk and biosafety Gap Assessment organised by Gryphon scientific in Baltimore, USA
- **23 Feb. 2023:** Participation in workshop organized by GIZ in Tunis.
 - **Theme:** Biological threats in agriculture.
- **17 april – 02 May 2023:** Participation in a virtual course on Global Health Security organized by Geneva Centre for Security Policy.
- **From 22 to 26 May 2023:** Certification for a virtual training held by African Society for Laboratory Medicine (ASLM).
 - **Theme:** Regulatory and Certification Framework for institutions handling high risk pathogens Assessor.
- **06 June 2023:** Participation in workshop organized by Ministry of Health in collaboration with USAID and World Bank in Tunis
 - **Theme:** Self assessment Phase in the frame of the project: MENA Region Diagnostic Network Assessment.
- **From 22 May to 19 June 2023:** Certification for virtual training organized by Centre National de Veille Zoosanitaire (CNVZ)
 - **Theme:** Epidemiological surveillance in animal Health.

- **12 – 13 & 14 Dec. 2023:** Attendance of ASLM 2023 6th Biennial Conference (African Society for Laboratory Medicine) in Cape Town, South Africa.

- **22 – 24 Jan. 2024:** Certification for training workshop organized by Health Security Partners (HSP) and the Libyan National Committee for Biosafety & Bioethics (LNCBB) and funded by the Biosecurity Engagement Program (BEP) of the US. Department of State, in Tunis, Tunisia.
 - - **Theme:** Establishing National Biosecurity Framework for Laboratories.

- **28 – 29 February 2024:** Participation in the Regional stakeholder workshop on Laboratory Biosafety and Biosecurity in Africa, organized by FAO and sponsored by DTRA, in Accra, Ghana.
 - **Theme:** Pathogen prioritization and Biosafety and Biosecurity (BS&S) assessment using the Laboratory Mapping Tools – Safety (LMT-S) in Veterinary labs.

- **16 – 18 April 2024:** Participation in the training organized by the National Centre for Zoonoses Surveillance of Tunisia (CNVZ) with the collaboration of the University of Lyon (France), in Tunis.
 - **Theme:** Epidemiological data analysis and mapping using R - software.

- **19 – 20 Mai 2024:** Participation in the workshop organized by Gryphon Scientific and Human Link in Dubai.
 - **Theme:** Development of National policies on sharing of data, information and samples pertaining to infectious diseases in the Mena Region.

- **15 – 18 Juillet 2024**: Participation in the Workshop organized by the Department of Defense International Counterproliferation Program (USA), in Tunis.
 - **Theme:** Targeting Risk Management.

- **27 August 2024**: Completion of the virtual course held by FRONTLINE HEALTHCARE WORKERS SAFETY FOUNDATION.
 - - **Theme:** Dual Use and Research of Concern - 2023.

- **30 – 31 Oct. 2024**: Participation in the interministerial Workshop organized by the Medical laboratories Unit of Ministry of Health in collaboration with Robert Koch Institute, in Tunis.
 - - **Theme:** Biosafety / biosecurity and Governance.

- **From 04 to 06Nov. 2024**: Participation in the 67rd Annual Biosafety and Biosecurity Conference organized by ABSA International (The American Biological Safety Association) at Phoenix, Arizona, USA.

- **16 Dec. 2024**: Participation in the virtual event offered by International Experts Group of Biosafety and Biosecurity Regulators (Canada).
 - - **Theme:** Inspections and Inspector.

- **17 – 21 Feb. 2025**: Participation in the virtual International Training course for Safer Food around Food Safety and Risk Management held by Federal Office of consumer protection and Food safety.
 - **Theme:** "Veterinary drug residues, drug resistance, and zoonoses".

- **14, 15, 16 July 2025:** Participation in the national workshop organized by Ministry of Health in collaboration with the World Bank in Tunis.
 - **Theme:** Risks Statistical assessment (STAR).

SCIENTIFIC WORKS

- **07 - 09 Nov. 2008:** Presentation of an oral communication at the IV Scientific Days organized by the Tunisian Microbiology Society (STM):
 - **Theme:** The Premi-test: New test for the detection of antibiotic residues in meat.
- **31 October 2009:** Participation in the Vth Scientific Days organized by the Tunisian Society of Microbiology (STM) with:
 - **Presentation of an oral communication:**
 - **Theme:** The four Petri dishes method: Official method for the detection of antibiotic residues in meat in France.
 - **Presentation of an oral communication:**
 - **Theme:** Study of the colonization by methicillin-resistant *Staphylococcus aureus* of dogs admitted to the ENMV hospital.
- **December 2009:** Publication in the journal "Microbiologie Hygiène Alimentaire" of the African Association of Food Microbiology - Vol 21, N ° 62. December 2009.
 - **Theme:** Experience of the implementation of the Premi-test in a departmental veterinary laboratory in France.
- **November 2009 to March 2010:** Contribution to the research activity of the analysis laboratory, Epidemio-surveillance network ESST Ruminants, at the National School of Veterinary Medicine of

Sidi-Thabet (Participation in an oral communication at the 27th congress Maghreb

- **Theme:** Application of the ELISA technique in the control of the safety of bovine animals in relation to BSE.
- **10 – 11 April 2010:** Participation in the 27th Veterinary Maghreb Congress in Hammamet - Tunisia with:
 - **Presentation of an oral communication:**
 - **Theme:** Injury and bacteriological studies of the main causes of mortality in young sheep before weaning.
 - **Presentation of an oral communication :**
 - **Theme:** Contribution of autopsy in the epidemiological and lesional study of viral diseases of the young dog.
 - **Presentation of an oral communication:**
 - **Theme:** Application of ELISA in the control of the safety of bovine animals in relation to BSE.
 - **Participation in a poster communication:**
 - **Theme :** Prevalence of methicillin-resistant *Staphylococcus aureus* in dogs admitted for consultation at a university veterinary hospital in Tunisia.
 - **Contribution to a poster communication:**
 - **Theme :** Colonization by *Staphylococcus aureus* and *Staphylococcus pseudintermedius* of the mucous membranes of dogs admitted to consultation in a university veterinary hospital in Tunisia.

- **April 2010:** Publication in the national magazine El Baytary N ° 57-58, April 2010.
 - **Theme:** Practical conditions for the establishment in a food microbiology laboratory of an alternative method of screening for antibiotic residues in meat.

- **29 April 2014:** Participation by an oral communication in a scientific workshop organized by GIPAC and SSTMVA in Sfax, on the biosafety and the management of vaccination in poultry farming.
 - **Theme:** Control and monitoring of vaccination.

- **26 Nov. 2014:** Participation by an oral communication in a scientific workshop organized by SSTMVA in Hammamet.
 - - **Theme:** Results of the low pathogenic avian influenza vaccine trial.

- **6 Feb. 2015:** Publication in the revue Transboundary and Emerging Diseases. Transbound Emerg Dis. 2016 Dec; 63(6):658-674. Link Pubmed : <http://www.ncbi.nlm.nih.gov/pubmed/25655790>.
 - **Theme:** Identifying Areas Suitable for the Occurrence of Rift Valley Fever in North Africa: Implications for Surveillance.

- **5 May 2015:** Oral presentation at a training workshop organized by the Jordan University (Irbid, JORDAN) of Science and Technology, in collaboration with the University of Georgia (Athens, USA), Irbid (JORDAN).
 - **Theme:** Transboundary Animal Diseases Diagnosis in Tunisia.

- **17 June 2015 – Today:** Contribution, within the framework of a national committee for health monitoring of abortive diseases in sheep in the organized sectors (private and public), chaired by the CNVZ, to:
 - Drafting of a good practice guide for abortive diseases in ruminants.
 - Establishment of an epidemiological surveillance network for sheep abortive diseases in organized sectors (private and public).

- **10 Nov. 2016:** Presentation of a conference at the World Quality Day organized at the IRVT.
 - **Theme:** Veterinary analyzes and biosafety - From the field to the laboratory.

- **14 - 15 Dec. 2016:** Presentation of a communication at the 4th congress of GTV Tunisie.
 - **Theme:** Controlling enterotoxemia and sudden deaths in farms: the benefit of vaccination.

- **08 April 2017:** Presentation of a conference at the 1st Annual Biorisk Management Symposium MENA Regional Network (BIORIM – Tunisia 2017) organized by the Tunisian association of biosafety and environmental education.
 - **Theme:** How to assess biological risks in Veterinary laboratory? Experience at the veterinary research institute of Tunisia.

- **24 and 25 April 2017:** Participation with a poster communication, in the work of the International Scientific Conference on Environment and Agriculture organized by Journal of New Sciences in collaboration with ESA Mateur, IRESA, FNARC, ICARDA, and CNUDST, in Tunisia.
 - - **Theme:** Risk Analysis of the introduction of the Rift Valley Fever virus in Tunisia.

- **From 02 to 04 Nov. 2018:** Contribution to a communication in 5th international symposium of Poultry Sciences (SISA) in Constantina (Algeria).
 - **Theme:** Study of antibiotic sensitivity of *Salmonella non Typhi* from poultry in Tunisia.

- **02 May. 2019:** Presentation of a communication in 19th annual meeting for the Sahara and Sahel conservation in Tunisia.
 - **Theme:** Integrated healthy monitoring: Preliminary results on the antelope disease status in Tunisian National Parks.

- **13 May. 2019:** Presentation of a communication in the seminar organized by the Istituto of Zooprofilattico Sperimentale Della Sicilia in Palermo
 - **Theme:** Current situation of Brucellosis in Tunisia.

- **2019:** Contribution to the drafting of a 98-page OIE Technical Manual, Volume 12, 2019, ISBN 978-92-95115-02-6.
 - **Theme:** Brucellosis in Mediterranean countries: history, prevalence, distribution, current situation and attempts at surveillance and control.

- **09 July 2021:** Publication in Open Veterinary Journal (2021), Vol. 11(3): 337–341. Link Pubmed : <http://www.openveterinaryjournal.com>
 - **Theme:** Serological evidence of Rift Valley fever in domestic ruminants in Tunisia underlines the need for effective surveillance.

- **12 June 2022:** Presentation of a communication in a workshop for the African Biorisk Management trainers' Network in Rabat, Morocco.
 - **Theme:** Lessons learned from One-Health training in Thailand in 2018.

- **07 Oct. 2022:** Presentation of a communication in the Africa One Health Network Inaugural Workshop (AfOHNet) in Accra, Ghana.
 - **Theme:** *Lawa Model*: A Thai One Health approach to control Zoonotic Diseases.

- **04 – 06 Nov. 2024:** Participation with a poster communication, to the 67rd Annual Biosafety and Biosecurity Conference organized by ABSA International (The American Biological Safety Association) at Phoenix, Arizona, USA.
 - **Theme:** Implementation of a biowaste management program at the biological laboratories of the faculty of Sciences of Bizerte, Tunisia.

- **03 Mai 2025:** Presentation of an oral communication in the scientific event "Elle 4.0" to celebrate the annual World day for Safety and Health at work and promote the prevention of accidents and diseases within biological laboratories at Faculty of Sciences of Bizerta, Tunisia.
 - **Theme:** Dynamics of the Tunisian network of BRM trainers from SANDIA National Laboratories in Africa.

ACTIVITIES AS A TRAINER & TEACHER

- **October – Nov. 2006:** Supervision of the practical work in biochemistry at ENMV, students in the 3rd year of the "Hygiene and animal health" course of the Ecole Supérieure d'Agronomie de Mateur (ESA-Mateur), Tunisia.
- **January - March 2007:** Supervision of the practical work in biochemistry at the ENMV for students in 1st year of the National School of Veterinary Medicine of Sidi-Thabet, Tunisia.
- **October 2007 – January 2008:** Supervision of the practical work in Hematology at ENMV, students in the 3rd year of the "Hygiene and Animal Health" course of the Ecole Supérieure d'Agronomie de Mateur (ESA-Mateur), Tunisia.
- **January - March 2010:** Contribution to the supervision of a thesis work in Anatomo-pathology at the National School of Veterinary Medicine of Sidi-Thabet, Tunisia.
 - - **Theme:** Lesional and bacteriological studies of the main causes of mortality in young sheep before weaning (Presentation of an oral communication in this theme at the 27th Maghreb Congress).
- **Session 2013/2014:** Teaching of the students in 1st year Master of Biosafety and Food Technology, at the School of Health Techniques of Tunis, Tunisia.
 - - **Theme:** Infectiology.

- **Session 2013/2014:** Participation in the supervision and evaluation of the internship of end of study prepared in the framework of the license applied in analytical and experimental biology and given to the Faculty of Sciences of Tunis.
 - - **Theme:** Enzyme-Linked Immunosorbent Assay indirect and Buffered antigen test for brucellosis in ruminants. Preliminary study and comparison between the two techniques.
- **07 - 08 April 2015:** Participation as a trainer in the training organized in Tunis by the Laboratory of Medical Biology Unit, in collaboration with the World Health Organization (WHO).
 - **Theme:** The management of biological risks in a laboratory of Medical Biology.
- **28 - 29 April 2015:** Participation as a trainer in the training organized in Tunis by the Laboratory of Medical Biology Unit, in collaboration with the World Health Organization (WHO).
 - **Theme:** The management of biological risks in a laboratory of Medical Biology.
- **25-26 May 2015:** Participation as a trainer in the training organized in Tunis by the Laboratory of Medical Biology Unit, in collaboration with the World Health Organization (WHO).
 - **Theme:** The management of biological risks in a laboratory of Medical Biology.
- **31 Jan. - 01 Feb. 2016:** Participation as a trainer in a training course for official veterinarians in Tunisia
 - **Theme:** Avian Influenza Highly Pathogenic H5N8. Sampling and biosecurity measures.

- **25 and 26 March 2017:** Participation as a trainer in a training course for Libyan veterinarians: The laboratory Training Workshop on Food and Mouth Disease Diagnosis, organized by par IRVT, EuFMD, FAO and EU in Tunisia.
 - - **Theme:** Biosafety and Biosecurity in FMDv Laboratory.
- **Session 2016/2017:** Participation in the supervision and evaluation of the internship of end of study prepared in the framework of the license applied in analytical and experimental biology and given to the Faculty of Sciences of Tunis.
 - **Theme:** Enzyme-Linked Immunosorbent Assay indirect and Fast slide agglutination for Mycoplasmosis in poultry. Preliminary study and comparison between the two techniques.
- **21 Jun - 21 July 2017:** Supervision of two trainees of the Higher Institute of Applied Biology of Tunis in the laboratory of Immunology - Official Control of the IRVT in Tunisia.
- **19 Sept. 2017:** Contribution as a trainer for the mandated veterinarians organized in Sidi Bourouis (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "Respect for biosecurity in health missions.
 - **Theme:** Biosafety basics in the field.
- **26 Sept. 2017:** Contribution as a trainer for the mandated veterinarians organized in Chott Mariem (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "Respect for biosecurity in health missions.
 - **Theme:** Biosafety basics in the field.
- **28 Sept. 2017:** Contribution as a trainer for the mandated veterinarians organized in Chebba (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "Respect for biosecurity in health missions".
 - - **Theme:** Biosafety basics in the field.

- **29 Sept. 2017:** Contribution as a trainer for the mandated veterinarians organized in Barroua (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "Respect for biosecurity in health missions.
 - - **Theme:** Biosafety basics in the field.
- **04 Oct. 2017:** Contribution as a trainer for the mandated veterinarians organized in Barroua (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "Respect for biosecurity in health missions.
 - - **Theme:** Biosafety basics in the field.
- **March to Oct. 2017:** Supervision and evaluation of an end-of-study internship memory prepared as part of the applied bachelor's degree in analytical and experimental biology at the Tunis Faculty of Science in Tunisia.
 - **Theme:** Enzyme-Linked Immunosorbent Assay indirect and rapid slide agglutination for Mycoplasmosis in poultry. Preliminary study and comparison between the two techniques.
- **30 October 2017:** Contribution as an instructor for the second Middle East North Africa (MENA) Advanced Biosafety Officer Training (ABOT) course run by the Elisabeth R. Griffin Foundation and sponsored by the U.S State Department Biorisk Engagement Program (BEP), in Agadir, Morocco.
 - **Themes:**
 - "Shipping – Intra and Inter-facility
 - "Arthropod containment and biorisk management
 - "Aquaculture biorisk management".
- **20 Dec. 2017:** Contribution as a trainer for a training session for the official veterinarians as part of a training program on camel pathologies organized by the DGSV in collaboration with the OIE, in Tunisia.
 - **Theme:** Dromedary sampling Quality and biosafety.

- **03 Mai 2018:** Participation as a trainer in a training course for veterinaries from Comor Islands: The laboratory Training Workshop on Food and Mouth Disease Diagnosis, organized by Arab Organisation of Agricultural Development (AOAD), in Tunisia.
 - **Theme:** Biosafety and Biosecurity in FMDv Laboratory.

- **10 - 14 Sept. 2018:** Contribution as an instructor for the 3rd Middle East North Africa (MENA) Advanced Biosafety Officer Training (ABOT) course run by the Elisabeth R. Griffin Foundation and sponsored by the U.S State Department Biosecurity Engagement Program (BEP), in Malta.
 - **Themes:**
 - "International Biorisk Management – Overview"
 - "Type of controls – Administrative & PPE"
 - "BioMedical Waste Management".

- **08 Nov. 2018:** Contribution as a trainer for the mandated veterinarians organized in Boussalem (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Technical and immunological characteristics of vaccines used in the national vaccination campaigns.

- **09 Nov. 2018:** Contribution as a trainer for the mandated veterinarians organized in Thibar (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Technical and immunological characteristics of vaccines used in the national vaccination campaigns.

- **Academic year 2019/2020:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - - **Theme:** Biosecurity – Biosafety and Biorisk management Module.

- **24 – 25 Sept. 2019:** Participation as a facilitator in the workshop organized by the Laboratory of Clinical Virology at the Pasteur Institute of Tunis.
 - **Theme:** Development, Evaluation, Validation and Communication of Standard Operating Procedures (SOPs).
- **From 02 to 04 Oct. 2019:** Contribution as a trainer in the training of mandated veterinarians organized by the National Centre for Zoosanitary Surveillance within the framework of the agreement with the Regional Commission for Agricultural Development in Tatatouine.
 - **Theme:** Biosafety and biosecurity in the field in border areas.
- **05 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Sidi Bourouis (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.
- **06 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Boussalem (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.
- **07 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Thibar (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.
- **13 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Chott Mariem (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.

- **14 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Mahdia (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.
- **15 Nov. 2019:** Contribution as a trainer for the mandated veterinarians organized in Sfax (Tunisia) by the National Center of Zoosanitary Surveillance as part of the training "vaccination in health missions.
 - **Theme:** Antibiotics and antimicrobial resistance.
- **Academic year 2020/2021:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - - **Theme:** Biosecurity – Biosafety and Biorisk management Module.
- **From 1 to 5 Nov. 2021:** Participation as a co-trainer for the Central Africa Regional Foundational Training organized by SANDIA Laboratories in Libreville, Gabon.
 - **Theme:** Biorisk Management, Biosafety and biosecurity.
- **23 & 24 Nov. 2021:** Training of the staff of the IRVT on :
 - **Theme:** The management of SOPs.
- **03 Dec. 2021:** Training of the staff of the IRVT on :
 - **Theme:** Management of biological and chemical waste.
- **Academic year 2021/2022:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.

- **Theme:** Biosecurity – Biosafety and Biorisk management Module.
- **Academic year 2021/2022:** Teaching of the students in 1st year Master of Biotechnology, course: Microbes and infections in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Biosecurity – Biosafety, Biorisk management and bioethics' Module.
- **Academic year 2021/2022:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Animal infectious diseases' Module.
- **07 April 2022:** Achievement of "Bronze Level " completion in the GBRMC trainers' Registration & Certificate Program.
 - **Theme:** The use of GBRMC material elaborated by Sandia National Laboratories for Biorisk Management trainings.
- **17 and 24 Feb. 2022:** Participation as a co-trainer at a virtual training event organized by SANDIA National Laboratories and OIE to implement the OIE Standards for BRM. This training is run for Veterinary laboratory leaders in Algeria, Mauritania, Morocco and Tunisia.
 - **Theme:** The mitigation measures of the biorisks in laboratories.
- **02 Dec. 2022:** Training of the staff of the IRVT on :
 - **Theme:** Decontamination.
- **09 Dec. 2022:** Training of the staff of the IRVT on :
 - **Theme:** Biosafety cabinets

- **Academic year 2022/2023:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Biosecurity – Biosafety and Biorisk management Module.

- **Academic year 2022/2023:** Teaching of the students in 1st year Master of Biotechnology, course: Microbes and infections in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - - **Theme:** Biosecurity – Biosafety, Biorisk management and bioethics' Module.

- **Academic year 2022/2023:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Animal infectious diseases' Module.

- **28 April 2023:** Participation as a co-trainer in the scientific Biorisk Management Club's event "Elle 2.0" to celebrate the annual World day for Safety and Health at work and promote the prevention of accidents and diseases within biological laboratories at Faculty of Sciences of Bizerta, Tunisia.
 - **Theme:** How to use biosafety cabinets ?

- **From 24 to 28 July 2023:** Participation as a co-trainer for the East Africa Biorisk Management trainers' Network organized by SANDIA National Laboratories in Dar Es Salam, Tanzania.
 - **Themes:**
 - Engineering controls (Biosafety cabinets)
 - Shipping of infectious substances

- **07 Dec. 2023:** Participation as a facilitator in the scientific Workshop organized by the BRM Club at Faculty of Sciences of Bizerta, Tunisia.
 - **Theme:** Biowaste Management: Strategies & Effectiveness
- **Academic year 2023/2024:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Biosecurity – Biosafety and Biorisk management Module.
- **Academic year 2023/2024:** Teaching of the students in 1st year Master of Biotechnology, course: Microbes and infections in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Biosecurity – Biosafety, Biorisk management and bioethics' Module.
- **Academic year 2023/2024:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Animal infectious diseases' Module.
- **17 & 18 Feb. 2024:** Participation as a trainer and organizer of a training workshop with all the SANDIA Tunisian Biorisk Management trainers Network, in Tunis, Tunisia.
 - **Theme:** 2 day Regional Mitigation Strategies Implementation Workshop
- **28 April 2024:** Participation as a trainer in the scientific Biorisk Management Club's event "Elle 3.0" to celebrate the annual World day for Safety and Health at work and promote the prevention of accidents and diseases within biological laboratories at Faculty of Sciences of Bizerta, Tunisia.
 - **Theme:** Bioethic, DURC, code of conduct.

- **24 & 25 Juin 2024:** Participation as a trainer on a training workshop on behalf of SANDIA National Laboratories, in Medicine Faculty of Sousse, Tunisia.
 - **Theme:** 2 day Biorisk Management Workshop.
- **Academic year 2024/2025:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Biosecurity – Biosafety and Biorisk management Module.
- **Academic year 2024/2025:** Teaching of 3rd year students Bachelor of Biotechnology, course: Control and Exploitation of Microorganisms (CEM) in The Higher Institute of Applied Biotechnological Sciences of Tunis.
 - **Theme:** Animal infectious diseases' Module.
- **From 18 to 22 Nov. 2024:** Participation as a co-trainer for the East Africa Biorisk Management trainers' Network organized by SANDIA National Laboratories in Mauritius.
 - **Theme:** Sharing experiences with Biorisk Management trainings.
- **Academic year 2024/2025:** Member of the steering committee and trainer on the complementary studies course for Public Health laboratory staff organized by the Higher School of health techniques and science of Tunis.
 - **Theme:** Biorisk management in medical laboratories.
- **From 06 Jan. to 05 Feb. 2025:** Training of 2 lab technicians from Laboratoires Veterinaire of Bohicon an Parakou, Benin within the framework of the International Atomic Energy Agency technical cooperation project "Strengthening the capacities of National

Veterinary Laboratories for the Early Warning, Control and Prevention of Outbreaks of Animal and Zoonotic Diseases (AFRA).

- **Theme:** Serological Diagnosis of Brucellosis and Good laboratory practices.
- **03 Mai 2025:** Participation as a trainer in the scientific Biorisk Management Club's event "Elle 4.0" to celebrate the annual World day for Safety and Health at work and promote the prevention of accidents and diseases within biological laboratories at Faculty of Sciences of Bizerta, Tunisia.
 - **Theme:** Network of BRM Trainers in Tunisia: potential to be exploited.
- **01 - 05 Sept. 2025:** Facilitation of a five day regional training and certification programme for biosafety and biosecurity, Biorisk Management – Level 1 - National Public Health Laboratory with Africa CDC, for East Africa in Dar Essalam, Tanzania.
 - **Theme:** Mitigation measures, Engineering control and Shipping of infectious substances.
- **30 Sept. – 03 Oct. 2025:** Participation as a trainer in a training session organized by the Ministry of Health with the collaboration of Robert Kock Institute in Faculty of Pharmacy of Monastir, Tunisia.
 - **Theme:** Certified training on BRM for regional laboratories (Biosafety cabinets and Decontamination).

SCIENTIFIC PROJECTS

- **3 Sept. 2012 – Today:** Contribution as a PhD researcher, to the scientific project CMCU code: 12G0815 as part of a PHC-Utique research program. Project of collaboration between IRVT and ANSES – Lyon, France.
 - **Theme:** Serological, molecular and epidemiological study of the Rift Valley fever virus in Tunisia.
- **April 2013 – End of 2014:** Contribution to the Project of the General Directorate of Veterinary Services in the framework of its national program for the surveillance of Avian Influenza.
 - **Theme:** Establishment of the vaccine trial protocol for low pathogenic Avian Influenza H9N2.
- **March 2016 – 2020:** Contribution to the Project ARIMNet BrucMedNet2
 - - **Theme:** Bacteriological, serological and molecular studies and characterization by MLVA of *Brucella* in the Mediterranean basin.
- **From 9 to 25 Feb. 2021:** Participation to the Regional Consultative virtual Meeting organized by Africa Centres for Disease Control and Prevention : Initiative to Strengthen Biosecurity and Biosafety in the Africa Region
 - **Theme:** Regional Biosafety and Biosecurity Legal Framework.
- **7 and 8 Sept. 2021:** Participation, as technical working group member, to Africa CDC Regional Training and Certification Program for Biosafety and Biosecurity Experts: Virtual Regional Consultative Meeting.
- **2023 - 2024:** National focal point of the One-health project, organized by Global Implementation Solution (GIS) and sponsored by the Biosecurity Engagement Program of the US, in Tunis. The

coordination is between, animal health, public health and military services.

- **Theme:** Development of a Strategic Plan to Strengthen Cross-Border Networks in Tunisia.
- **Since 12 December 2023:** Member of the Women's Network for the Global Partnership's Signature Initiative to Mitigate Biological Threats in Africa, created by the International Federation of Biosafety Associations (IFBA).

Expertise

- **Since 09 Dec. 2015:** Internal evaluator of Quality Management System within Higher Education Institutions.
- **Since 03 June 2016:** Biosafety Officer in laboratories, Certified by Elizabeth R. Griffin Foundation on behalf of the U.S. State Department Biosecurity Engagement Program (BEP).
- **06 January 2020:** Member of the North African Biorisk Management Trainers Network with SANDIA National Laboratories (USA) on behalf of the US Defense Threat Reduction Agency (DTRA).
- **01 Oct. 2021:** Professional Certified in Biorisk Management by the International Federation of Biosafety Associations (IFBA).
- **February 2023:** African Regional Subject Matter Expert (Af-RSME) – Biorisk Management for the Regional Training and Certification Program for Biosafety and Biosecurity Professionals of Africa CDC.
- **26 May 2023:** Assessor for institutions handling high risk pathogens by African Society for Laboratory Medicine (ASLM) and Africa CDC.

- **05 August 2024:** Certification as a Professional (Level 1) on Selection, Installation and Certification of Biological Safety Cabinet (BSC) under the Regional Training and Certification Program of Biosafety and Biosecurity Program of Africa CDC.
- **Since 05 September 2024:** Individual Consultant on Biosafety and Biosecurity with ASLM and Africa CDC.
- **Since 9 July 2021 - 2024:** National Coordinator of a One-health project organized by Gryphon Scientific with Human Link and supported by funding from the U.S. Department of State Biosecurity Engagement Program (BEP). This project is coordinated between Animal health and Public health services.
 - **Theme:** Developing a Framework for Regional, Multisectoral Sharing of Outbreak Information, Data, and Biological Samples in the Middle East and North Africa.
- **Since 28 August 2020 – Today:** Member of the technical Clinical Biology committee of the Tunisian Ministry of Health.
- **2022 :** National Coordinator of a project organized by SANDIA National Laboratories and WOAHA to implement the WOAHA Standards for Biorisk management in Veterinary laboratories in Algeria, Mauritania, Morocco and Tunisia.
- **From 2022 to 2024:** Contribution to the project of the Center for Global Health Science and Security Georgetown University Medical center and Global Health Development/The Eastern Mediterranean Public Health Network (GHD/EMPHNET).
 - **Theme:** Building Multisectoral and Cross-border Networks for Surveillance, Detection and Response to Priority Transboundary Zoonotic Diseases in Libya and Tunisia.

- **Since 01 Dec. 2022 - 2025:** National Focal point of the FAO Project
 - - **Theme:** Operationalization of One-health and Biosafety and Biosecurity in Africa.
- **2022 - 2025:** Member of the committee of experts on Animal Health of the Tunisian Ministry of Agriculture.
- **2023 - 2024:** Chair for the Northern African Biosafety and Biosecurity Technical Working Group of Africa CDC.
- **From 19 to 23 Feb. 2024:** Participation as the National focal point, coordinator and facilitator of a One-health workshop, organized by Global Implementation Solution (GIS) and sponsored by the Biosecurity Engagement Program of the US, in Tunis. The coordination is between, animal health, public health and military services.
 - **Theme:** Development of a Strategic Plan to Strengthen Cross-Border Networks in Tunisia.
 - *In the 2023-2024 period, I contributed as a national focal point to Global Implementation Solutions' project on the development of a strategic plan to strengthen cross-border networks in Tunisia. This project, sponsored by the U.S. State Department's Biosecurity Engagement Program (BEP), involved my role as the National Focal Point. As part of the project, I have organized and facilitated a workshop in 2024 at the national level. The primary activities that were carried out were as follows: The project has been initiated and the project file has been submitted to the Ministry of Agriculture's international cooperation department for official approval. The list of participants has been prepared through their respective administrations. The participants have been carefully chosen as key figures representing their respective institutions in accordance with the One Health concept. The file has been sent through diplomatic channels to the Ministry of Foreign Affairs and the Ministry of Agriculture. The logistics of the workshop has been supported. Communication with participants before the workshop has been facilitated, and I have facilitated the in-person workshop. I have submitted the post-event report to the sponsors by the end of the workshop.*
- **2024:** Contribution, as subject matter expert with Africa CDC, in the drafting and revision of the African guidance
 - **Theme:** A comprehensive guidance for listing and managing High consequence Agent and toxins (HCATS) including their bio-surveillance.

- **2024/2025:** Contribution, as subject matter expert with Africa CDC, for the domestication of the african guidance in Tunisia.
 - **Theme:** A comprehensive guidance for listing and managing High consequence Agent and toxins (HCATs) including their bio-surveillance in Tunisia.
- **Academic year 2024/2025:** Member of the steering committee and trainer on the complementary studies course for Public Health laboratory staff organized by the Higher School of health techniques and science of Tunis.
 - **Theme:** Biorisk management in medical laboratories.
- **From 31 March to 04 April 2025:** Participation as a SMEExpert in the Workshop run at the National Laboratory of the Ministry of Public Health, Cotonou, Benin.
 - **Theme:** Biorisk Assessment in Medical and Veterinary Laboratories using the BioRAM Tool.
 - *As the Subject Matter Expert on BRM with Africa CDC, I have played a pivotal role in the 2025 BIMVET project, funded by the US Elisabeth R. Griffin Foundation. This project aims to conduct a comprehensive risk assessment of laboratories related to biosafety and biosecurity in Benin. The assessment will empower these facilities to make informed decisions about the necessary mitigation measures for safe practices. My contribution to the project included leading a training workshop for 17 heads of laboratories. The objective of the workshop was to develop a methodology for laboratory professionals to assess biorisks in laboratories using the BioRAM assessment tool (from SNL) and to propose biorisk mitigation guidelines based on the assessment results. This methodology has been successfully implemented during the scheduled on-site Animal Health Laboratory visits at Bohicon and Parakou, and it will be disseminated and applied in all laboratories handling and storing high-risk pathogens in Benin. I have provided a post-event report to the sponsors as soon as the mission was completed.*
- **Since 30 July 2025:** ASLM ambassador in recognition of my commitment to advancing laboratory medicine, supporting ASLM's mission, and promoting quality diagnostics across Africa.

- **22 - 23 September 2025:** Assessment of the Viroly laboratory at the Public Health Institute within the Regulatory and Certification Framework for Institutions Handling High-Risk Pathogens and Toxins in Bamako, Mali.

OTHER ACTIVITIES

- **2022 - Today:** Registered in the National Council of the Order of Veterinary Doctors of Tunisia (CNOMVT) under number 874.
- **27 June 2016 – Today:** Member of the Tunisian association of biosafety and environmental education (ATB2E).
- **28 August 2012:** CMAS Level 1 Scuba Diving Certification.
- **23 Nov. 2014:** CMAS Level 2 Scuba Diving Certification.
- **05 December 2021:** CMAS Level 3 Scuba Diving Certification.
- **19 July 2022:** Diploma of English language B2 level from Bourguiba School of languages in Tunisia.
- **29 November 2022:** SSI Dive guide professional Certification.

LANGUAGES

- **Arab:** read, written and spoken.
- **French:** read, written and spoken.
- **English:** read, written and spoken.