


<i>Ph.D.</i>	Sofia Bertacca	
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Orcid ID	https://orcid.org/0000-0002-0353-7642	
Location	Department of Agricultural, Food, and Forest Sciences (SAAF), Viale delle Scienze, Building 5, “C” Entry.	
Profile	<ul style="list-style-type: none"> - Bachelor’s Degree in Agro-Engineering, Università degli Studi di Palermo, 2018 - Master’s Degree in Agricultural Production and Technologies, Università degli Studi di Palermo, 2020 - Ph.D. in Biodiversity in Agriculture and Forestry (XXXVI Cycle), 2024 	
Expertise	<ul style="list-style-type: none"> -Detection and diagnosis of plant diseases, with a focus on plant viruses and virus-like entities. -Proficient in biological indexing, serological tests (DAS-ELISA, DTBIA, LF), and molecular techniques (PCR, RT-PCR, RT-qPCR, LAMP). -Extensive knowledge of the ecology and epidemiology of plant viruses and virus-like entities. -In-depth understanding of the biogeography and epidemiology of plant viruses. -Virus disease management, including prevention and control strategies. 	
Tutor	Prof. Salvatore Davino	
Co-tutor	Prof.ssa Annalisa Marchese	
Thesis topics	Ecology of virus and virus-like diseases that affect olive trees in the Mediterranean Basin	
Research interests	<p>My primary research interests encompass the identification and detection of plant pathogens, with a particular focus on viruses and virus-like pathogens. I am dedicated to studying their prevention and control to effectively manage their introduction and spread. Additionally, I am deeply intrigued by the molecular mechanisms underlying plant diseases, especially the interactions between hosts and pathogens. My research also includes the investigation of the geographical origins and movements of these pathogens, utilizing biogeography and epidemiology to understand their distribution patterns.</p> <p>One of my key objectives is to mitigate the economic and environmental impact of plant diseases. To achieve this, I am committed to developing and implementing environmentally sustainable strategies that not only prevent disease outbreaks but also promote long-term agricultural health. Through my research, I aim to contribute to the advancement of plant pathology and support the agricultural sector in adopting innovative and sustainable disease management practices.</p>	
Link to publications	1. Caruso, A. G., Tortorici, S., Davino, S., Bertacca, S. , Ragona, A., Verde, G. L., Biondi, A., Noris, E., Rizzo, R. & Panno, S. (2024). The invasive tomato pest Tuta	

absoluta can transmit the emergent tomato brown rugose fruit virus. *Entomologia Generalis*. 10.1127/entomologia/2024/2119

2. Panno, S., Ragona, A., **Bertacca**, S., Agrò, G., Yahyaoui, E., Dimauro, B., Caruso, A. G. & Davino, S. (2024). Outbreak of tomato fruit blotch virus in the most relevant tomato greenhouse production area of Sicily. *Journal of Plant Pathology*, 1-1. <https://doi.org/10.1007/s42161-024-01623-1>
Link IRIS: <https://hdl.handle.net/10447/639558>
3. Caruso, A. G., Ragona, A., Agrò, G., **Bertacca**, S., Yahyaoui, E., Galipienso, L., Rubio, L., Panno, S. & Davino, S. (2024). Rapid detection of tomato spotted wilt virus by real-time RT-LAMP and in-field application. *Journal of Plant Pathology*, 1-16. <https://doi.org/10.1007/s42161-024-01613-3>
Link IRIS: <https://hdl.handle.net/10447/639562>
4. Ontañón, C., Ojinaga, M., Larregla, S., Zabala, J. A., Reva, A., Losa, A., Heribia R., **Bertacca**, S., Sanahuja, E., Alfaro-Fernández, A., Font-San Ambrosio, M. I., Corachán, L., Pallás, V. & Sánchez-Navarro, J. Á. (2023). Molecular analysis of a Spanish isolate of chili pepper mild mottle virus and evaluation of seed transmission and resistance genes. *European Journal of Plant Pathology*, 1-18. <https://doi.org/10.1007/s10658-023-02765-1>
.
5. Caruso, A. G., **Bertacca**, S., Ragona, A., Agrò, G., Font-San-Ambrosio, M. I., Alfaro-Fernández, A., Sánchez, R.E., Panno, S. & Davino, S. (2023). Detection by Sensitive Real-Time Reverse Transcription Loop-Mediated Isothermal Amplification of Olive Leaf Yellowing Associated Virus and its Incidence in Italy and Spain. *Horticulturae*, 9(6), 702. <https://doi.org/10.3390/horticulturae9060702>.
Link IRIS: <https://hdl.handle.net/10447/621454>
6. Caruso, A. G., Ragona, A., **Bertacca**, S., Montoya, M. A. M., Panno, S., & Davino, S. (2023). Development of an In-Field Real-Time LAMP Assay for Rapid Detection of Tomato Leaf Curl New Delhi Virus. *Plants*, 12(7), 1487. <https://doi.org/10.3390/plants12071487>.
Link IRIS: <https://hdl.handle.net/10447/621455>
7. Caruso, A. G., **Bertacca**, S., Ragona, A., Matić, S., Davino, S., & Panno, S. (2022). Evolutionary Analysis of Grapevine Virus A: Insights into the Dispersion in Sicily (Italy). *Agriculture*, 12(6), 835. <https://doi.org/10.3390/agriculture12060835>
Link IRIS: <https://hdl.handle.net/10447/584035>
8. Caruso, A. G., **Bertacca**, S., Parrella, G., Rizzo, R., Davino, S., & Panno, S. (2022). Tomato brown rugose fruit virus: A pathogen that is changing the tomato production worldwide. *Annals of Applied Biology*. <https://doi.org/10.1111/aab.12788>.
Link IRIS: <https://hdl.handle.net/10447/569651>
9. Caruso, A. G., **Bertacca**, S., Ragona, A., Matić, S., Davino, S., & Panno, S. (2022). Epidemiological Survey of Grapevine Leafroll-Associated Virus 1 and 3 in Sicily (Italy): Genetic Structure and Molecular Variability. *Agriculture*, 12(5), 647. <https://doi.org/10.3390/agriculture12050647>.
Link IRIS: <https://hdl.handle.net/10447/584034>
10. **Bertacca**, S., Caruso, A. G., Trippa, D., Marchese, A., Giovino, A., Matic, S., Noris, E., Font San Ambrosio M.I., Alfaro, A., Panno, S. & Davino, S. (2022). Development of a Real-Time Loop-Mediated Isothermal Amplification Assay for the Rapid Detection of Olea Europaea Geminivirus. *Plants*, 11(5), 660. <https://doi.org/10.3390/plants11050660>.
Link IRIS: <https://hdl.handle.net/10447/545144>

	<p>11. Panno, S., Davino, S., Caruso, A. G., Bertacca, S., Crnogorac, A., Mandić, A., Noris, E. & Matić, S. (2021). A Review of the Most Common and Economically Important Diseases That Undermine the Cultivation of Tomato Crop in the Mediterranean Basin. <i>Agronomy</i>, 11(11), 2188. https://doi.org/10.3390/agronomy11112188. Link IRIS: https://hdl.handle.net/10447/533951</p> <p>12. Panno, S., Caruso, A. G., Bertacca, S., Matic, S., Davino, S. & Parrella, G. (2021). Detection of parietaria mottle virus by RT-qPCR: An emerging virus native of Mediterranean area that undermine tomato and pepper production in Southern Italy. <i>Frontiers in Plant Science</i>, 1792. https://doi.org/10.3389/fpls.2021.698573. Link IRIS: https://hdl.handle.net/10447/533953</p> <p>13. Panno, S., Caruso, A. G., Bertacca, S., Pisciotta, A., Lorenzo, R. D., Marchione, S., Matic, S. & Davino, S. (2021). Genetic Structure and Molecular Variability of Grapevine Fanleaf Virus in Sicily. <i>Agriculture</i>, 11(6), 496. https://doi.org/10.3390/agriculture11060496. Link IRIS: https://hdl.handle.net/10447/521573</p> <p>14. Davino, S., Caruso, A. G., Bertacca, S., Barone, S., & Panno, S. (2020). Tomato brown rugose fruit virus: Seed transmission rate and efficacy of different seed disinfection treatments. <i>Plants</i>, 9(11), 1615. https://doi.org/10.3390/plants9111615. Link IRIS: https://hdl.handle.net/10447/471684</p>
International Mobility	<p>Erasmus+ at UPV Universitat Politècnica de València (UPV), València – 2020</p> <p>Research internship abroad as part of the doctoral program the Plant Virology Group, Instituto Agroforestal Mediterráneo (UPV) – 2020</p>

“Io sottoscritto, **Sofia Bertacca**, autorizzo l'Università degli Studi di Palermo nell'esercizio delle sue funzioni istituzionali, ai sensi dell'art. 97 della legge in materia di diritto di autore (legge n. 633 del 22 aprile 1943), all'utilizzo dell'immagine relativa alla mia persona, alla sua riproduzione su qualsiasi supporto tecnico e/o multimediale conosciuto e futuro, alla sua diffusione su qualsiasi piattaforma web dell'Università, vietando altresì l'utilizzo dell'immagine di cui sopra in contesti che ne pregiudichino la dignità personale ed il decoro. Sono informato che la posa, l'utilizzo, la riproduzione, la diffusione di tale immagine è da considerarsi effettuata a titolo gratuito. Sono consapevole delle dichiarazioni rese e sollevo dunque l'Università degli Studi di Palermo da qualsiasi pretesa e/o azione anche di terzi”.

Palermo, 08/07/2024

Firma

F.to Sofia Bertacca

