Invited Speakers Short Academic CV

PD Dr. Manuela Nagel
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Short Biography

EDUCATION

- Post-doctoral thesis (Habilitation) (2019): Maintenance of plant genetic resources – towards an understanding of seed deterioration; University of Hohenheim

- PhD thesis (2011): Seed survival in genebanks –genetic and biochemical aspects of seed deterioration in barley, University of Gottingen

- MSc thesis (2007): Longevity of seeds stored under ambient conditions (Langlebigkeit von Saatgut unter ambienten Lagerungsbedingungen), University of Gottingen

EMPLOYMENT HISTORY (optional section)

- 01 Apr 2021 to current: Lecturer at University of Lublin, Poland

- 19 Oct 2019 to current: Lecturer (Privatdozent, PD) at University of Hohenheim

- 01 Jan 2016 to current: Head of Cryo and Stress Biology working group, IPK Gatersleben, permanent

POSTDOCTORAL TRAINING (optional section)

- Long-term preservation of plant genetic resources, focussing on potato, mint, barley, wheat, oilseed rape

- Survival strategies of meristematic tissues, seeds, pollen in extreme environments

- Plant stress physiology: free radicals, antioxidants and redox signalling

- Biochemical markers of cell viability, seed quality and dormancy

- Lipid peroxidation, fats and fatty acids

- Quantitative mapping

10 most important PUBLICATIONS / BOOKS

1. Panis, B., Nagel, M., and Van Den Houwe, I. (equal contribution, 2020). Challenges

and prospects for the conservation of crop genetic resources in field genebanks, in in vitro collections and/or in liquid nitrogen. Plants 9, 1634.https://doi.org/10.3390/plants9121634

2. Tikhenko, N., Alqudah, A.M., Borisjuk, L., Ortleb, S., Rutten, T., Wu, D.D., Nagel, M., Himmelbach, A., Mascher, M., Roder, M.S., Ganal, M.W., Sehmisch, S., Houben, A., and Borner, A. (2020). DEFECTIVE ENDOSPERM-D1 (Dee-D1) is crucial for endosperm development in hexaploid wheat. Communications Biology 3. https://doi.org/10.1038/s42003-020-01509-9

3. Stock, J., Bräutigam, A., Melzer, M., Bienert, G.P., Bunk, B., Nagel, M., Overmann, J., Keller, E.R.J., and Mock, H.-P. (2020). The transcription factor WRKY22 is required during cryo-stress acclimation in Arabidopsis shoot tips. Journal of Experimental Botany.https://doi.org/10.1093/jxb/eraa224

4. Impe, D., Reitz, J., Köpnick, C., Rolletschek, H., Börner, A., Senula, A., and Nagel, M. (2020). Assessment of Pollen Viability for Wheat. Frontiers in Plant Science 10.10.3389/fpls.2019.01588

5. Wiebach, J., Nagel, M., Borner, A., Altmann, T., and Riewe, D. (2019). Age-dependent loss of seed viability is associated with increased lipid oxidation and hydrolysis. Plant Cell Environment. https://doi.org/10.1111/pce.13651

6. Nagel, M., Seal, C.E., Colville, L., Rodenstein, A., Un, S., Richter, J., Pritchard, H.W., Börner, A., and Kranner, I. (2019). Wheat seed ageing viewed through the cellular redox environment and changes in pH. Free Radical Research 53, 641-654. https://doi.org/10.1080/10715762.2019.1620226

7. Nagel, M., Alqudah, A.M., Bailly, M., Rajjou, L., Pistrick, S., Matzig, G., Börner, A., and Kranner, I. (2019). Novel loci and a role for nitric oxide for seed dormancy and pre-harvest sprouting in barley. Plant Cell and Environment 42, 1318-1827. https://doi.org/10.1111/pce.13483

8. Köpnick, C., Grübe, M., Stock, J., Senula, A., Mock, H.-P., and Nagel, M. (2018). Changes of soluble sugars and ATP content during DMSO droplet freezing and PVS3 droplet vitrification of potato shoot tips. Cryobiology 85, 79-86 https://doi.org/10.1016/j.cryobiol.2018.09.005.

9. Nagel, M., Kranner, I., Neumann, K., Rolletschek, H., Seal, C.E., Colville, L., Fernandez-Marin, B., and Börner, A. (2015). Genome-wide association mapping and biochemical markers reveal that seed ageing and longevity are intricately affected by genetic background and developmental and environmental conditions in barley. Plant Cell and Environment 38, 1011-1022 https://doi.org/10.1111/pce.12474.

10. Nagel, M., and Börner, A. (2010). The longevity of crop seeds stored under ambient conditions. Seed Science Research 20, 1-12. https://doi.org/10.1017/S0960258509990213

PROFESSIONAL AFFILIATIONS

Leibniz-Insitute of Plant Genetics and Crop Plant Research (IPK), Corrensstraße 3, OT Gatersleben, 06466 Seeland