Alvar Pascual García



Vienna, Austria
+43 677 631 408 446
pascualgarciaallvar@gmail.com
www.linkedin.com/in/alvar-pascual-garcía-194538242
github.com/Alvar56

Biotechnologist (MSc, BOKU Vienna) with 18 months of hands-on wet-lab research at the Gregor Mendel Institute (Vienna BioCenter), BOKU and Quality Control in food industry. Based in Vienna and available from 01.01.2027.

Core Competencies

- **Molecular biology**: molecular cloning (GreenGate, Golden Gate-based modular cloning), PCR, agarose gel electrophoresis, DNA extraction, sequence verification, plasmid construction and analysis (SnapGene), bacterial transformation (*E. coli* DH5α, *Agrobacterium* GV3101).
- **Plant biology**: *Arabidopsis thaliana* cultivation and handling, transgenic line generation by floral dipping, seedling treatment and herbicide-response assays, root-length phenotyping and root-growth inhibition assays.
- **Microscopy & image analysis**: confocal microscopy, Huygens deconvolution, FIJI/ImageJ length measurements.
- **Microbiology & quality control**: food-safety microbiological testing of meat, surface and water samples (Salmonella detection), automated TEMPO microbial counting, culture media preparation, gluten and phosphate testing, sample management (iLab), laboratory hygiene and equipment sterilization.
- **Computational & structural biology**: molecular docking (AutoDock Vina), structural visualization (ChimeraX), AlphaFold models, FATCAT structural alignment.
- **Software**: SnapGene, Huygens, FIJI/ImageJ, AutoDock Vina, ChimeraX, iLab, MS Office (Word, Excel, PowerPoint, Outlook).
- **Languages**: Spanish (native), English (working professional level, B2 Cambridge-certified, daily working language at GMI 01/2025–06/2026), German (A1, ZIB Training course 03–06/2026, actively learning).
- **Driving licence**: Class B.

Education

University of Natural Resources and Life Sciences, Vienna (BOKU) — **Vienna, Austria**
MSc in Biotechnology — *2024–2026*

Thesis: "Non-canonical autophagy in *Arabidopsis thaliana*." Thesis successfully defended. Core courses include Cell and Molecular Biology I, Laboratory Course in Molecular Biology II, Practical Course in Biochemistry II, Bioprocess Engineering I, Engineering of Biotechnological Production Facilities, Cell Factories, Quality Management in Biotechnology, Applied Mathematics and Biostatistics, and Patent Law and Strategic Patent Management.

Universidad de Castilla-La Mancha (UCLM) — **Spain**
BSc in Biochemistry (honours in cell biology) — *2020–2024*

Thesis: "CCR5 receptor modeling and molecular docking in therapeutic targets." Curriculum including Genetic Engineering and Biotechnology, Molecular Physiology of Plants, Immunology, Enzymology, and Bioethics, Biosafety and Quality Control.

Professional Experience

Gregor Mendel Institute (GMI), Vienna BioCenter, then Groß/Valenzuela Lab, BOKU **Vienna, Austria**
Research Assistant *01/2025–06/2026*

- Cloned protein candidates via GreenGate, transformed *E. coli* DH5α, extracted and sequence-verified DNA, then transformed *Agrobacterium* GV3101 and generated transgenic *Arabidopsis* lines by floral dipping.
- Performed confocal microscopy of root tips in 5-day-old seedlings under different treatments, deconvolved images in Huygens and measured root length in FIJI/ImageJ.
- Carried out herbicide-response assays in *Arabidopsis* to evaluate plant responses, supported by molecular docking predictions (AutoDock Vina, ChimeraX).
- Supported the transfer of ongoing work from Yasin Dagdas's group at GMI (working for postdoc Jose Julián Valenzuela) into the newly independent Groß/Valenzuela lab at BOKU after Dagdas relocated to Heidelberg.

BOKU **Vienna, Austria**
Structure-Based Virtual Screening and Experimental Validation (MSc thesis side-project) *2026*

- Screened structural analogues of the cellulose synthase inhibitor ES20-1 against the CESA6 catalytic domain with AutoDock Vina, using cryo-EM, crystal and AlphaFold references cross-validated by FATCAT alignment.
- Validated the top predictions experimentally in an *Arabidopsis* Col-0 root-length inhibition assay; the best docking score (-8.9 vs. -8.0 kcal/mol for ES20-1) did not translate into root-growth inhibition, a clear negative result showing docking scores did not predict activity for this compound set.

Campofrío Food Group **Burgos, Spain**
Quality Control *06/2023–09/2023*

- Managed meat, surface and water samples with iLab and prepared them for microbiological analyses, including Salmonella detection.
- Operated automated TEMPO systems for microorganism counting, prepared culture media, and ran gluten and phosphate tests.
- Maintained laboratory hygiene and sterilized equipment in a routine food-safety testing laboratory.

Congresses & Scientific Events

Ubiquitin & Friends Symposium, SFB "Targeted Protein Degradation" **Vienna, Austria**
Early-Career Researchers Organizing Committee *04/2026*

- Contributed to the organization and logistics of a two-day international symposium (proteostasis, targeted protein degradation, autophagy), University of Vienna / Max Perutz Labs, Vienna BioCenter.
- Designed the event booklets.

References

Available upon request.