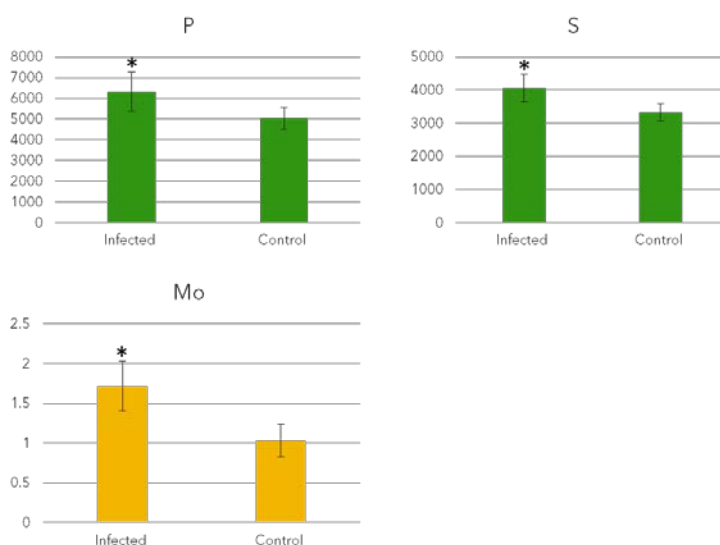


## BSc/MSc student internship in plant pathology

### The effect of different elemental nutrient concentrations on late blight lesion development in potato

Element measurements using ICP-MS showed significantly higher amounts of the elements Phosphorus (P), Sulfur (S), and Molybdenum (Mo) in potato leaves infected with the potato late blight causing pathogen *Phytophthora infestans* compared to non-infected leaves (Figure 1). In this project the aim will be to test the effect of different concentrations of these elements applied to the growing plants on the lesion development when leaves are challenged with *P. infestans*. In this project you will learn how to amplify *in vitro* plants, grow potato plants and maintaining pathogen cultures, make different element concentration containing fertilizers, and how to do whole plant and/ or detached leaf assays with *P. infestans*. Depending on the length of the internship the student will be involved in the literature review and protocol development process. Due to the time it takes to amplify, grow and plant potato plants, the project is not suitable for short internships. The minimum internship time would be 3 months.



**Figure 1** ICP-MS measurements of P, S and MO in ppm comparing *P. infestans* infected and control cv. Désirée potato leaflets