WAGENINGEN
UNIVERSITY & RESEARCH

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To whom it may concern,

I am pleased to provide a positive evaluation of the PhD thesis entitled "Marker-Assisted selection of white lupin (Lupinus albus L.)" by András Patyi. The thesis is very well structured, comprehensive, and easy to read. The different chapters are logically organised, and the overall presentation provides a clear and coherent account of the research conducted. The thesis is also very well written, making the scientific results accessible and allowing the reader to follow the research questions, approaches, and conclusions throughout the work.

The experimental design is appropriate for the research questions addressed, and the methodologies employed are well chosen and adequately applied. In particular, the use of genome-wide association studies (GWAS) and genomic prediction (GP) provides a strong methodological basis for identifying the genetic factors underlying the traits of interest and for assessing their potential application in breeding.

The thesis focuses on two highly relevant traits in white lupin: resistance to anthracnose and alkaloid content, with particular attention to quinolizidine alkaloids (QAs). Both traits are of considerable importance for the development of improved white lupin varieties. Anthracnose resistance is essential for stable and sustainable production, while reducing alkaloid content is a key requirement for the development and wider adoption of sweet lupin varieties suitable for food and feed applications.

An important strength of the thesis is that it presents novel and relevant results, including the identification of new genetic markers that can contribute to the development of white lupin varieties with ultra-low alkaloid content. These findings represent a valuable contribution to our understanding of the genetic basis of these traits and, importantly, have clear potential for application in breeding programmes.

I am particularly pleased to see the continuity of the research presented in this thesis in a new EU project. This provides an excellent opportunity to further develop the results obtained during the PhD and to refine the tools available for breeding white lupin with improved anthracnose resistance and ultra-low alkaloid, particularly QA, content. Such continuity also demonstrates the relevance and potential impact of the research beyond the scope of the PhD itself.

Overall, this is a strong and well-executed PhD thesis that makes a valuable contribution to white lupin genetics and breeding. The research addresses relevant breeding challenges, applies appropriate and modern methodologies, and generates novel results with clear potential for practical application. I therefore consider the thesis to meet the standards expected of a PhD dissertation and recommend it positively.

As a minor point for improvement, the quality and resolution of some figures could be improved. For example, Figures 1 and 2 would benefit from higher definition to ensure that all details are clearly visible. This is, however, a minor presentation issue that does not affect the scientific quality of the thesis.

DATUM
20 September 2026

ONS KENMERK
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SUBJECT
**Evaluation PhD thesis András Patyi**

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Wageningen UR (Wageningen University and various research institutes) is specialised in the domain of healthy food and living environment.

Sincerely yours,



Prof. Dr. Luisa M. Trindade
Full Professor Bioresources Breeding and Genetics.
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