Evaluation of Applicants for Professor Position in Forest Genetics

Assessments of Eligibility, Position Required Skills and Other Qualifications

Applicant Name	Eligibility	Position Required Skills	Other Qualifications
Borralho Nuno,	Ph.D. 1992 In Forest Genetics Lecture at Tasmania Director of R&D in forest genetics and breeding programs Consultant in genetics and breeding Eligible	• Excellent knowledge in breeding theory, quantitative genetics and statistics; • Strong background in Eucalyptus genetics and breeding programs; • Experience in breeding strategy development / implementation in Eucalyptus & pine species • Good publication records early in forestry related international referred journals but not recently due to the job nature with companies • Experience in using molecular techniques for guiding breeding; • Limited teaching experience, mostly short courses and student advising • Not much external funding grants or records	Strong administrative experience and skills; Experience in leading activities and collaboration with other scientists Strong practical experience with forest industries and R&D activities Good international collaboration and activities
Finkeldey Reiner	Ph.D. 1993 In Forest Genetics Scientist, Professor, and Dean at Gottingen U Eligible	• Strong background in population and ecological genetics in forest trees • Strong molecular background in adaptation, biodiversity and ecological studies; • Strong publication records in some excellent international journals in biology related fields; • Strong teaching experience for both undergraduate and graduate levels • Strong external research grants and funding • Limited experience in breeding theory and quantitative genetics • Limited experience with practical breeding programs, field experience and seed orchard production;	Strong academic experience in university as faculty and also administrator Strong experience in international collaboration and joint activities Limited experience in working with forest industry and practical tree improvement programs

Fries Anders	Ph.D. 1987 Forest Genetics Research assistant Field geneticist Researcher, SLU Eligible	• Strong background in progeny testing, , data collection, propagation, provenance testing and other practical tree breeding experience; • Good knowledge and experience in seed orchard issues and participated in molecular markers to study the pollination pattern in seed orchards • Good publication records in practical international and regional journals; • Limited external grants and funding • Limited teaching experience, mostly short-courses and student advising	Excellent understanding and experience with forest research in Sweden Excellent working experience with forest industries and government agencies. Familiar with SLU and UPSC
Ingvarsson Pär	Ph.D. 1997 In Ecological Botany Docent, Umea University Eligible	• Strong background in plant biology, botany and ecology • Excellent knowledge in population genetics and adaptation of aspen species • Excellent molecular marker experience, laboratory skills and functional genomics; • Strong teaching experience in both undergraduate and graduate courses • Good publication records in biology and evolution related international journals • Limited external funding experience • Limited experience with tree breeding and seed orchard production issues;	Familiar with SLU Strong laboratory research Research focus on aspen genetics and adaptation studies Good international collaboration and activities
Kleinschmit Jörg	Ph.D. 2004 In forestry Scientist, German forest research station Not Eligible	• Experience in general tree genetics and resource management • Some molecular background • Limited publication records, mostly local journals or reports • Limited external funding or experience • Limited teaching experience • No much experience with tree breeding programs and seed orchard production issues	Good international experience and collaboration. Very limited academic experience Too junior to be considered for a professor position

Rohde Antje	Ph.D. 1998 In Biotechnology Post-doc, scientist and group leader, Research Institute, Belgium Eligible	• Strong background in genetics, tree biotechnology and molecular biology • Excellent publication records in some excellent international referred journals in biology and related fields; • Some teaching experience but not strong • Limited experience in breeding program and quantitative genetics • Limited field experience and seed orchard production;	Multi-languages Some management experience; Good coordinating experience and organization skills
Wang Xiao-Ru	Ph.D. 1992 In Forest Genetics Associate professor, SLU Eligible	• Extensive forest genetics research using the latest molecular methods • Strong expertise in population genetics, evolution biology and molecular biology, hybrid pine and fungal genetics • Excellent publication records in highly regarded international referred journals. • Excellent external funding records from various sources • Some course teaching experience and strong advising experience for graduate students and post-doc • Some early experience in practical breeding and seed orchard research	Strong academic experience with university Good contribution to the scientific community as associate editor and as journal reviewer Extensive international collaborators and activities. Familiar with SLU
Wu Harry X	Ph.D. 1993 In Forest Genetics Researcher, Project leader Lecture, MidSweden University Sweden Eligible	• Strong statistical and quantitative genetics background • Excellent experience in forest tree breeding and practical tree improvement programs • Research experience in breeding strategy and progeny testing, and recent wood quality research with the molecular methods • Good publication records in practical forest related international refereed journals and proceedings • Good external funding records from governments and industries • Limited experience in teaching formal university courses and some PhD advising experience	Good administrative skills Strong working experience with tree improvement programs and forest industry Good field working experience and experience in practical breeding programs R&D Program leader experience Strong international collaboration and activities

Saleh Isam, Ronnebygatan	???? Not Eligible	• No meaningful information for evaluation	

Ranking of Applicants for Professor Position in Forest Genetics

My key evaluation criteria are based on the eligibility, required knowledge/skills (research leader supported with publication records and research funding, academic teaching and advising experience) and breeding related background described in the Position Announcement. Each applicant's eligibility to the appointment as Professor at SLU and major qualifications are summarized in the table above.

Given the applicant pool, I would recommend to eliminate these two applicants who are not eligible for the professor position (see the table for reasons):

Saleh Isam, Ronnebygatan
Kleinschmit Jörg

Among seven eligible applicants, I would rank them in two separate major categories based on their strongest qualifications: 1) Strong experience with breeding strategy, quantitative genetics, and experience with breeding program and 2) Strong scientific research and academic experience (more on molecular/biotechnology) with less operational breeding and operational experience. With the current applicant pool, the realistic problem is that there is no one person who would have all desirable qualifications. This type of rank is important depending on which aspect will be emphasized in the final decision. Individuals in each of the following two categories are ranked from the top down by their respective qualifications:

1) Ranked applicants with strongest experience in breeding strategy, quantitative genetics, and experience with breeding program:

    1. Borralho Nuno
    2. Wu Harry X
    3. Wang Xiao-Ru
    4. Fries Anders
    5. Finkeldey Reiner
    6. Ingvarsson Pär
    7. Rohde Antje

    The high ranking individuals in this category have a strong track record in designing breeding strategies and tree breeding programs. They should be effective in addressing specific questions concerning crossing of trees, seed orchards, genetic diversity of trees, adaptation of trees to climate and biotic factors, population ecology etc. They may also have the necessary knowledge and

apability to contribute to laboratory research in tree biology and molecular genetics, given that's the requirement of the job and with necessary resources.

2) Ranked applicants with strong scientific research and academic experience with less operational breeding and operational experience.

    1. Finkeldey Reiner
    2. Wang Xiao-Ru
    3. Rohde Antje
    4. Ingvarsson Pär
    5. Wu Harry X
    6. Borralho Nuno
    7. Fries Anders

    The high ranking individuals in this category already have a strong track record of research publications, external funding and leadership experience. While their strengths are clearly in academic (laboratory) experience and teaching/advising (not operational breeding programs), they may be able to learn working effectively with forest companies, government departments and other organizations about forest trees breeding, given that's the position requirement.

Final Assessment and Recommendation

Based on my knowledge and working experience with the Swedish forest genetics programs for the last 12 years, I know that SLU has now faculty with strong quantitative/ theoretical genetics background, and population/ molecular genetics background, but there is the lack of a leader in breeding strategy and practical tree breeding program. The Skogforsk on the other hand has strong researchers and leaders with practical breeding experience, management skills in genetic resources, applied quantitative genetics and operational tree improvement background. The third and also very important player, closely associate with these two, is UPSC that has the strongest research capacity in genetics, molecular biology and biotechnology among all forest genetics research organizations in the world as far as I know. Given these conditions, thus, the best choice from my personal view is somebody who can take advantage of all three and can provide necessary skills and leadership to link all three organizations together, e.g., a blend of scientific ability, breeding background and leadership skills. The following two would be my recommendation for the professor position in forest genetics:

Wang Xiao-Ru
Borralho Nuno

Bailian Li
Vice Provost and Professor of Forestry and Environmental Resources
North Carolina State University