PUBLIC SELECTION FOR ONE FULL PROFESSOR PURSUANT TO ART. 18, SUBSECTION 1, OF ITALIAN LAW 240/2010 IN THE ACADEMIC RECRUITMENT FIELD "AGRICULTURAL CHEMISTRY, AGRICULTURAL GENETICS AND PEDOLOGY" (07/E1 CHIMICA AGRARIA, GENETICA AGRARIA E PEDOLOGIA) – ACADEMIC DISCIPLINE "AGRICULTURAL GENETICS" (AGR/07 GENETICA AGRARIA) AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES - PLANT SCIENCES RESEARCH CENTER, IUSSED BY RECTOR' DECREE NO. 557 OF AUGUST, 1, 2023, PUBLISHED ON THE SITE OF THE MINISTRY OF EDUCATION, UNIVERSITY AND RESEARCH ON AUGUST, 1, 2023, NOTICE OF WHICH WAS PUBLISHED IN THE GAZZETTA UFFICIALE - 4° SERIE SPECIALE "CONCORSI ED ESAMI" NO. 60 DATED 08/08/2023.

FINAL REPORT

On 2024, February 2, at 4:45 p.m., the Committee met to review the selection process for the recruitment of one full professor in the Academic Recruitment Field "Agricultural chemistry, Agricultural genetics and Pedology" (07/E1) - Academic Discipline AGR/07 "Agricultural genetics" at the Academic Faculty of Experimental and Applied Sciences – Plant Sciences Research Center at the Sant'Anna School, nominated by Rector' decree No. 655 dated 02/10/2023 that consists of:

- Prof. Gianni Barcaccia, Full Professor of the Academic Recruitment Field 07/E1 "Agricultural chemistry, Agricultural genetics and Pedology" at the University of Padova;

- Prof. Amalia Barone, Full Professor of the Academic Recruitment Field 07/E1 "Agricultural chemistry, Agricultural genetics and Pedology" at the University of Napoli Federico II;

- Prof. Hermann Bürstmayr, Full Professor at the Universitat fur Bodenkultur (Boku);

- Prof. Andrea Cavallini, Full Professor of the Academic Recruitment Field 07/E1 "Agricultural chemistry, Agricultural genetics and Pedology" at the University of Pisa, designated expert by the Plant Sciences Research Center;

- Prof. Bettina Haussmann, Adjunct Professor at the Hohenheim University;

The Committee completed its work on the following days:

Preliminary meeting: November 3, 2023, via teleconference;

Second meeting: November 21, 2023, via teleconference;

Third meeting: January 22, 2024, via teleconference;

Fourth meeting, February 2, 2024, in Pisa (except for Prof. Amalia Barone, via teleconference).

The Committee held a total of 4 meetings, and began its work on November 3, 2023, and concluded it on February 2, 2024.

In the preliminary meeting, the Committee nominated the President and Secretary. It was noted in the minutes that each member had declared that they had no kinship or affinity up to the fourth degree inclusive with each other.

The Committee established the date by which their work would be concluded, the criteria with which the publications the curricula and teaching activities of the candidate were to be evaluated and decided to ask the candidates to hold a lecture.

In the second meeting the Committee examined the list of the candidates and was noted in the minutes that each member had declared that they had no kinship or affinity up to the fourth degree inclusive with the four candidates.

In the third meeting the Committee examined the publications, the CVs and the teaching activity of the candidates.

One of the candidates communicated his withdraw on February 1, 2024.

In the last meeting the Committee assisted to candidates' lectures, then, unanimously, declared that the winner of the selection was Prof. Matteo Dell'Acqua.

The individual and collegiate judgments expressed are attached to this report (Annex 1).

Read, approved and signed.

Prof. Gianni Barcaccia
Prof. Hermann Bürstmayr
Prof. Bettina Haussmann
Prof. Andrea Cavallini

Candidate: Matteo Dell'Acqua

Individual Assessment by Prof. Gianni Barcaccia

Prof. Matteo Dell'Acqua is a young but highly rated scientist, well known by the national Agricultural Genetics community, and an emerging figure internationally. He obtained the MSc in Biodiversity and Evolution at the University of Milan in 2010 (first-class honors) and the PhD in Agrobiodiversity at the Scuola Superiore Sant'Anna of Pisa in 2014 (first-class honors). He was recruited and has worked for a decade with continuity at the Scuola Superiore Sant'Anna, initially as Post-doc researcher from 2014 to 2017, then as Assistant Professor (RTDA) from 2017 to 2018 and as Tenure-track Assistant Professor (RTDB) from 2018 to 2021. Since 2021 he is Associate Professor in Agricultural Genetics (SSD AGR/07) at the Scuola Superiore Sant'Anna, where currently he is also Coordinator of the Center of Plant Sciences and Responsible for university orientation of the Agricultural Sciences and Biotechnology section.

As far as his teaching activity is concerned, the candidate reports several university courses, of which about half as responsible teacher and the remaining hold as co-teacher (both within MSc courses and PhD courses), all referred to the AGR/07 academic discipline, with an average of about 4 courses per year. In addition, he refers to have given 11 seminars for MSc and PhD students. He reports to have supervised the thesis of 9 BSc and MSc students, and 11 PhD students. He also reports to have joined several board commissions for the evaluation of both PhD applications and PhD programs.

Regarding scientific research, he has performed original research programs with excellent results, intensity, and temporal continuity on the fields of crop plant genetics and genomics, quantitative trait genetics, molecular characterization of plant genetic resources, multiparental populations, and data-driven analyses.

He reports to have been involved or to be currently involved in the organization, coordination, and cooperation of several research projects, including international and national research initiatives funded by the EU (two Horizon 2020 programs and one Erasmus+), and the Italian Ministry of Research and International Cooperation (one PRIN 2023 as Coordinator, one PRIN 2021 as RU leader, two MAECI, two PNR, one PRIMA 2020-2023 and one PNRR National Center AGRITECH 2022-2026 as RU member, etc.). Considering his young academic age, the overall activity of research funding in competitive grants as well as the scientific responsibility in research projects are certainly outstanding.

His participation as a speaker in national and international conferences for both selected oral communications and invited lectures is very good: he reports many talks and seminars in international and national scientific congresses, conferences, and meetings. He has also received as many as 8 awards for his scientific work, mainly at national level.

Since his first publication in 2013, the total number of research articles published in peer-reviewed journals is equal to 37 (on average, 3.4 per year), with more than 1,000 citations and H-index of 19 (source Scopus-January 2024). In terms of scientific authorship and individual contribution, he appears to have a prominent role as first or last author in more than 50% of these indexed research articles. Overall, his scientific production meets high or very high standards and is continuous over years. Considering the 20 selected publications, all are characterized by originality, methodological rigor, high or very high scientific quality (total IF = 143), and tight consistency with the AGR/07 sector. For 17 of these publications (85%), his leading role is evident as first or last author.

Overall, based on his curriculum and documented academic activity, despite his young academic age, I consider Prof. Matteo Dell'Acqua, a highly rated faculty with a relevant track record, well known in the national scientific community and an emerging figure internationally. He has shown a very strong motivation to accomplish professional goals as well as an outstanding personal ability to carry out teaching programs and fund-raising campaigns, along with an exceptional attitude to manage in person his own research projects and collaborative networks, and to convert them into

highly valuable scientific publications, for which his main role as author contribution is always well recognizable. In conclusion, he appears totally qualified for the position of Full Professor in the Academic Discipline of Agricultural Genetics and a highly recommendable candidate for the Scuola Superiore Sant'Anna.

Individual Assessment by Prof. Amalia Barone

Matteo Dell'Acqua is an Associate Professor in Agricultural Genetics (AGR/07) at the Scuola Superiore Sant'Anna di Pisa since 2021. Before that, he was PhD (2014) in Agrobiodiversity, post-doc fellow for three years, Assistant Professor (RTDA) in the years 2017-2018, then tenure-track Assistant Professor (RTDB) in the years 2018-2021.

As for **teaching activity**, supplementary teaching and service to students, the candidate taught in a high number of courses and modules for graduate and undergraduate students, all coherent with the Agricultural Genetics discipline; his teaching activity was intense and continuative starting from the year 2018. The candidate is also coordinator of a 5-days Seasonal School in "AGRIVED Climate resilient, biodiversity-based agriculture for sustainable development" for MSc and PhD students, to which he participates as teacher, as well. He was also member of International Committees for PhD defense and for applications to the PhD in Agrobiodiversity. He was invited speaker for various teaching seminars in different Universities, among which one at the PhD school in AgriGenomics (Boku, Wien). During these years, he tutored around ten graduate and undergraduate students, and supervised 11 PhD students.

As for the **scientific research** reported by the candidate, he contributed to many national and international projects, and was scientific coordinator for Sant'Anna School of two Horizon H2020, two PRIN, other international projects (one ERASMUS, one bilateral grant Italy-Israel, one funded by the Italian Cooperation), and one funded by a private company, evidencing a very high ability of fund raising in the last 7 years (since he started his activity as Assistant Professor). He therefore experienced very active international collaborations, also promoting and organizing workshops and seminars, and contributing to national and international conferences. During his career he also received honour and awards for his research activities, which also impacted to the release of two durum varieties for cultivation in Ethiopia.

Finally, he also participated to third mission and outreach events, and holds institutional positions at the SSSA, among which he is coordinator of the Centre of Plant Sciences and the promoter of the Sant'Anna special program AfricaConnect.

He reports to be editor of Communications Biology.

As for the **scientific production**, as a whole this is very good with 37 publications reported in the Scopus database, actually indexed with more than 1000 citations and a h-index 19 (at January 2024). All the scientific papers were published in the last 10 years in peer-reviewed journals with high relevance and impact for the AGR/07 SSD, thus revealing high intensity and temporal continuity of the production. All the 20 publications submitted for the evaluation showed originality, innovative methods and methodological rigor, are highly coherent with the AGR/07 sector and included 6 published in Journal of excellent level. In almost all cases, the candidate's contribution to the research carried out in partnerships evidenced a leading role as first or last author.

Overall, given the CV and list of publications submitted by Prof. Matteo Dell'Acqua, I believe that, despite his young academic age, the reported scientific and teaching activities are strongly indicative of his ability to manage research groups and train students from diverse background degree levels. Moreover, the topics addressed are highly consistent with the AGR/07 sector and demonstrate that the candidate could continue to promote innovative approaches to plant breeding.

Individual Assessment by Prof. Hermann Bürstmayr

Matteo Dell'Acqua is Associate Professor of Agricultural Genetics and Coordinator of the Center for Plant Sciences (with 9 professors) at the Scuola Superiore Sant'Anna (SSSA) since 2021. He focuses on four main topics: (a) forward genetics to accelerate crop improvement; (b) climate-resilient agriculture; (c) multi-parent (e.g. MAGIC) populations; (c) participatory methods in breeding. His career is very young but very impressive so far. He cooperates with international centers, e.g. CGIAR centers and research globally active partners.

My impression of Prof. Matteo Dell'Acqua's teaching activity is highly positive. His teaching work in terms of quality and quantity appears high and excellent. He covers a wide range of courses: more than 20 invited teaching seminars, 3 undergraduate courses (biodiversity, R programming, advanced genomics) and 5 graduate courses (R, genomics, agrobiodiversity, statistics). He was also coordinator of the seasonal school "AGRIDEV Climate-resilient, biodiversity-based agriculture for sustainable development". In the last five years, when he has had the opportunity to design courses himself, he has carefully combined teaching and research activities, combining lectures with practical exercises and critical reviews of the scientific literature. His attitude seems highly student centered and inclusive.

He supervised several undergraduate graduate students and 11 PhD students with an international background. He participated in several PhD defense committees and evaluated applications for PhD programs. Part of his mentorship is dedicated to long-term (career) planning for students and staff, reflecting his genuine care for people. He obviously expresses great responsibility to contribute to the education young of scientists.

Prof. Matteo Dell'Acqua is involved as coordinator and/or responsible in 9 international and national projects (funded by the EU, the Italian Ministry of Research, etc.). He has been responsible for many research projects as the main PI and cooperator in a lot more. His research is transdisciplinary and systemic. His productivity and success in terms of acquiring his own projects and participating in collaborative projects is not only exceptional for a young researcher at a university. He is very honest in his project lists, which projects are his own and in which he is involved as a cooperator. The funds acquired are impressive and unique and underline the very high qualification of the applicant.

The publication record is 37 scientific papers in international, indexed and peer-reviewed journals in the last 11 years (since 2013); 1067 citations and an h-index of 19. With four peer reviewed publications per year his output is slightly lower than that of the other applicants, but in relation to his young academic age it is outstanding. The topics he addresses in his work are new and topical, and in several cases he is a pioneer in his work. For example, the application of quantitative genetic approaches to participatory breeding is a unique and intelligent topic that, to my knowledge, has not been addressed by any other plant breeder. The topics he deals with are highly innovative in the field of agricultural genetics. Apart from the quality of his work, I particularly appreciate his open data policy. I also like the quality is more important than quantity approach.

Summary: Prof. Matteo Dell'Acqua seems to be perfectly qualified for the advertised position. His track record despite his young academic age, his high motivation makes him a unique and a highly suitable candidate.

Individual Assessment by Prof. Andrea Cavallini

Matteo Dell'Acqua is a young highly rated scientist, known in the international Genetics community. He obtained his PhD at the Scuola Superiore Sant'Anna (SSSA) in 2010 and, after 3 years as post-doc in SSSA, in 2017 he obtained the position of Assistant Professor (SSD AGR/07), then that of Tenure-track Assistant Professor and finally, in 2021, the position of Associate Professor in Agricultural Genetics at the SSSA in 2021, where he is at present Coordinator of the Center of Plant Sciences.

Despite his young academic age, Prof. Dell'Acqua's university **teaching activity** has been intense. Since 2018 he has held several courses as a teacher and others as a co-teacher, always related to SSD AGR/07, in some cases addressed to PhD students. Almost all of his teaching activity took place at the SSSA. He reports to have served as supervisor for 9 undergraduate and graduate theses and 11 PhD theses. He has been member of several committees for PhD defense and for the evaluation of applications to PhD Programs.

Concerning **research activity**, he participates as a coordinator and/or responsible in a number of international and national projects (funded by EU, Italian Ministry of Research, etc.). In the last ten years he reports to have been responsible of several projects.

The activity in scientific conferences is very good, considering his young academic age, with many oral communications and seminars in international and national scientific meetings. He has won awards for his scientific work. He has also patent activity.

His **scientific production** is of high level and continuous over time. From an analysis conducted on Scopus (January 2024), Prof. Dell'Acqua's publication activity is intense. The indicators highlight 37 papers included in the database, more than 1,000 citations and h-index of 19. These indicators are very good, especially with reference to the year of the first indexed publication (2013). Thirty-seven papers have been published in the last 10 years, in 20 of which he is first or last author.

The **publications** presented are on average of very good quality in terms of originality, methodological rigor, and consistency with the SSD AGR/07; they are published in journals of very high and, in 6 out of 20 cases, excellent level. Dr. Dell'Acqua's position in the list of authors evidences in all but three cases a leading role (first or last author). The presented publications concern innovative themes and focus mainly on molecular quantitative genetics and genomics, often in relation to participative breeding in Africa.

Based on his curriculum, and despite his young academic age, Prof. Dell'Acqua's teaching, research and academic activities are huge, showing a strong motivation and a great ability to accomplish all academic tasks required to a full professor. Hence, I consider Prof. Matteo Dell'Acqua a fully suited candidate to the position of Full Professor at the Scuola Superiore Sant'Anna.

Individual Assessment by Prof. Bettina Haussmann

Career: Prof. Matteo Dell'Acqua, ‹   ›, serves since 2021 as Associate Professor in Agricultural Genetics and Coordinator of the center of Plant Sciences (with 9 professors) at the Scuola Superiore Sant'Anna (SSSA). In this position, he focuses on four major themes: (1) Forward genetics to accelerate crop improvement; (2) Climate-ready agriculture; (3) Development and analysis of multi-parental crop populations; and (4) Data-driven participatory breeding methods (combining state-of-the-art genomics and socio-economic techniques with farmers' experiences and knowledge). Before 2021, Prof. Matteo Dell'Acqua held positions as Tenure-track Assistant Professor, Assistant Professor (starting in 2017), post-doctoral researcher and PhD student, all at SSSA, but with stays up-road and embedded in international collaborations. He is extremely well networked with CGIAR centers, and research partners in USA, Europe, Asia, and Africa, which is also reflected by his present activity as Promoter of the SSSA's special program "AfricaConnect".

Course work: Prof. Matteo Dell'Acqua has largely outperformed the required number of formal teaching duties during the various steps of his career, reflecting his high motivation to train others. His teaching activities cover a wide diversity of courses including more than 20 invited teaching seminars, 3 undergraduate courses (Biodiversity, R programming, advanced genomics), and 5 graduate courses (R, Genomics, agrobiodiversity, statistics). He also served as coordinator of the Seasonal School "AGRIDEV Climate resilient, biodiversity-based agriculture for sustainable development". In the last five years, with the opportunity to design courses himself, he carefully connected teaching and research activities, and blended lectures with hands-on exercises and critical reviews of scientific literature.

Supervision of students: Prof. Matteo Dell'Acqua supervised 9 undergraduate and graduate students, as well as 11 PhD students with international background. Furthermore, he participated in several PhD defense committees and evaluated applications to PhD Programs. Part of his mentoring work is dedicated to long-term (career) planning for students and staff, reflecting his genuine caring for people. He states to "feel the responsibility to contribute to training the next generation of scientists".

Research: Prof. Matteo Dell'Acqua participates as a coordinator and/or responsible in several international and national projects (funded by EU, Italian Ministry of Research, etc.). In the last ten years he reports to have been responsible of 9 research projects. While being a geneticist by training, Prof. Matteo Dell'Acqua follows a systemic approach, considering not only the crop, but also the climate in which the crop grows, and the culture of the people who grow that crop. In doing so, he follows a transdisciplinary approach pivoting on crop genetics and investigating the interactions between genomics, agronomy, climate science and socioeconomics. This also includes a critical re-thinking of his own objectives and making a constant effort to reach out of his comfort zone to bring new skills in his crop geneticist's background and to reflect these skills in the group of people that work with him. His reflections about issues of epistemic injustice, that can be eminent in research applied to development, can be considered as very valuable. The fact that he did win already eight awards for his work underlines the international appreciation of his work.

Publications. By 12th January 2024, according to Scopus, Prof. Matteo Dell'Acqua had 37 scientific papers in international, indexed and peer-reviewed journals over the last 11 years (since 2013); 1067 citations and an h index of 19. He features as first author in four papers and as corresponding author in 16 papers, reflecting his leadership in the reported research. He published with a total of 217 different co-authors, illustrating his huge network. In the past five years, he implemented open-access publications including raw data, making his research fully accessible. He states to quality over quantity of publications. The publications are original, rigorous in terms of methodology, and they link genetics and modern tools with participatory breeding.

Summary: Given the documentation received, Prof. Matteo Dell'Acqua seems extremely well qualified for the announced position. With his motivation to teach and to reach impact, with his transdisciplinary approach, and his consciousness about cultural issues in research for development, he seems a unique, highly recommendable candidate for SSSA. This initial impression will have to be confirmed with the lecture to be given on 2nd February 2024.

Candidate: Id 1372583

Individual Assessment by Prof. Gianni Barcaccia

. is a relatively young but highly rated scientist, well known by the national Agricultural Genetics community. He obtained the MSc in Agricultural Sciences at the University of Pisa in 2002 and the PhD at the Scuola Superiore Sant'Anna of Pisa in 2006, where he was then recruited and worked as post-doc researcher in 2007-2008. He continued as post-doc researcher at UC Davis, USA in 2009-2010 and at the SSSUP in 2010-11. From 2011 to 2018 he was Assistant Since 2019 he is Associate Professor (BIO/18 General Genetics sector)

Regarding his teaching activity, most of it is related to courses of plant genomics and genetics. In particular, the candidate reports nearly 30 university courses (including both BSc and MSc courses), of which about half as responsible teacher and the other half as co-teacher, none hold within PhD courses (some of them are not referred to the AGR/07 academic discipline), with an average of about 2 courses per year. He reports to have supervised the thesis of 12 BSc and 1 MSc students, along with 4 PhD students. He also reports to have joined some board commissions for the evaluation of both PhD applications and PhD programs.

His research activity includes several topics and is mainly related to the following areas: valorization, restoring and characterization of crop biodiversity, identification and functional characterization of tissue-specific miRNAs involved in plant-mycorrhiza interactions and physiological responses to abiotic stresses linked to environmental changes; clarification of the molecular and physiological mechanisms underlying transgenerational memory in plants under abiotic stresses related to climate change; identification of genes and physiological mechanisms involved in the response and tolerance to environmental stresses through molecular biology and bioinformatics; biotechnological approaches for the identification of genes linked to environmental stress tolerance, adaptation and production quality in crops.

He reports to have been involved or to be currently involved in the organization and coordination of 4 research projects, including 2 international (EU-PRIMA-LEGUMED and EU-EPICATCH), 1 national (Foreign Affairs Ministry), and 1 funded by a local bank. Considering his academic career, the overall activity of research funding in competitive grants and scientific responsibility in research projects is relatively good. Moreover, he reports a US patent (disease detection in plants) and declares to be founder of the research and service company "Environmental hEredity and Evolution Consulting" (e3C).

His participation as a speaker in national and international conferences for both oral communications and invited lectures is very good: he reports 20 selected talks (14 international plus 6 national meetings) and 6 invited seminars. He also reports the participation to boards of 5 scientific meetings.

Since his first publication in 2007, the total number of research articles published in peer-reviewed journals is equal to 103 (on average, 6.1 per year), with more than 2,500 citations and H-index of 24 (source Scopus-January 2024). In terms of scientific authorship and individual contribution, he

appears to have a prominent role as first or last author in more than 50% of these indexed research articles. Overall, his scientific production meets good or high standards and is continuous over years. Considering the 20 selected publications, all are characterized by originality, methodological rigor, very good or high scientific quality (total IF = 116), and consistency with the AGR/07 sector. For all these publications (100%), his leading role is evident as first or last author.

Overall, based on his curriculum and academic activity in terms of both teaching programs and research initiatives,   appears suitable for the position of Full Professor at the Scuola Superiore Sant'Anna, although his scientific background is not fully consistent with the AGR/07 academic discipline.

Individual Assessment by Prof. Amalia Barone

.   . is Associate Professor in Genetics (BIO/18)   since 2019. Before that, he was PhD (2006) at Sant'Anna School, post-doc fellow from 2007 to 2011, Assistant Professor in the years 2011-2018 at the

As for **teaching activity**, supplementary teaching and service to students, the candidate taught in a high number of courses of Bachelor and Master degree level, at the
          , most of them coherent with the AGR/07 SSD, starting in the year 2012 and showing high intensity and continuity. The candidate also gave a cycle of lessons at the University

During these years, he supervised the thesis of 13 Bachelor or Master students, and of 4 PhD students. He participated in PhD Boards and has been member of committees for PhD thesis evaluation and access.

As for the **scientific research** reported by the candidate, he coordinated 2 international (LEGU-MED, EPI-CATCH) and one national projects (RESILIENT HUMMUS), one financed by Fondazione Lucca (VEGLUPM-10), and participated to the EU COST PLANTED as working group member. During the years, he had international collaborations with various groups where he was hosted as visiting scientist and was very active in presenting his results at congresses, scientific conferences, workshops. In addition, he participated to the organization of scientific meetings and seminars, of international training schools. Finally, he owners a US patent "Disease detection in plants" and was founder of a research company named "Environmental heredity and evolution consulting".

He reports to be editor of 8 peer-reviewed journals.

As for the **scientific production**, the whole production started in the year 2007 and is very good with 103 publications reported in the Scopus (at January 2024) database, with more than 2500 citations and a h-index 24. The production showed a high temporal continuity and good scientific level, since most papers were published in peer-reviewed journals, in most cases relevant but not completely coherent with the AGR/07 SSD. All the 20 publications submitted for the evaluation showed originality, innovative methods and methodological rigor, were published in in Journal of high level, in two cases excellent. In all cases the candidate contributed to the research carried out in partnerships as first or last author.

Overall, given the CV and list of publications submitted by   , I believe that the candidate is suitable to hold the position of full professor in the AGR/07 field, although his scientific background is not always consistent with the AGR/07 academic discipline.

Individual Assessment by Prof. Hermann Bürstmayr

          , currently Associate Professor of Genetics ⟨
since 2019 has been active in a range of academic institutions, '   (2011-2018), the Scuola Superiore Sant'Anna (SSSA, 2007-2009 and 2010-2011), UC Davis (2009-2010), and as Technical Support Specialist in the United Kingdom (2006-2007) and spent research stays at further institutes (Cyprus University of Technology, and the University of Bern).

His main research topics are: (a) biodiversity of legumes; (b) microRNAs; (c) epigenetics; (d) genes and physiological mechanisms involved in stress; (e) biotechnological approaches to understand plant responses to stress and adaptation.
          's teaching covers genetics, genomics, molecular evolution, and biotechnology. He seems a well experienced academic teacher in genetics and genomics topics.

He mentions that eh combines theory with practical examples and involves student centered teaching methods.

. was supervisor of Bachelor and Master (13) and PhD theses (4). He was a member of committees for the defense of doctoral theses and for the evaluation of applications for PhD programs, and supervised 6 post-docs.

has published 103 scientific peer-reviewed papers since 2007; 2591 citations and an h-index of 24. With more than 6 published papers per year, he is the most productive among all candidates, and this is a very impressive publication output considering his relatively young academic age. This high output is possibly due to his main focus being more on research than on teaching. He is a member of the editorial board of 8 journals and co-owner of a patent. He states that he is "among the 10-15 top researchers with Italian affiliation" in his research topics. Due to his excellent networks, the coordination of various EU COST actions and his work as a visiting scientist, he enjoys a high international reputation in the field of genetics and epigenetics and in the study of the molecular responses of crops to environmental stress in the context of climate change. Though, in several aspects, his research topics are more in the area of basic research and somewhat further removed from the implementation of breeding and application than the topics of the other candidates.

Summary: is a highly qualified candidate, fulfills the necessary qualifications, with a strong focus on genetics, genomics, epigenetics and biotechnology research. His main research focus is a bit further away from breeding application than the other candidates.

Individual Assessment by Prof. Andrea Cavallini

. is a quite highly rated scientist, known in the international Genetics community. He obtained his PhD at the Scuola Superiore Sant'Anna (SSSA) in 2006 and, after 4 years as post-doc in SSSA and at UC-Davis, in 2011 he obtained the position of Assistant Professor (SSD AGR/07); then, in 2019, he obtained the position of Associate Professor in General Genetics (SSD BIO/18)

university **teaching activity** has been quite intense. Since 2012 he has held several courses as a teacher and many others as a co-teacher, in the last years related to SSD BIO/18. His teaching activity took place at the Universities ,. He reports to have served as supervisor for 13 undergraduate and graduate theses and 4 PhD theses. He has been member of a few committees for PhD defense and for the evaluation of applications to PhD Programs.

Concerning **research activity**, he participates as a coordinator and/or responsible in a few international and national projects (funded by EU, Italian Ministry of Foreign Affairs and by a Bank). In the last ten years he reports to have been responsible of 4 research projects.

The activity in scientific conferences is intense, with many oral communications and seminars in international and national scientific meetings. He reports also one patent and the foundation of one research and service company.

His **scientific production** is of high level and continuous over time. From an analysis conducted on Scopus (at January 2024), s publication activity is very intense. The indicators highlight 103 papers included in the database, more than 2,500 citations and h-index of 24. These indicators are very good, especially with reference to the year of the first indexed publication (2007). Notably, 85 papers have been published in the last 10 years, in 53 of which he is first or last author.

The **publications** presented are on average of very good quality in terms of originality, methodological rigor, and consistency with the SSD AGR/07; they are published in journals of very high and, in 2 out of 20 cases, excellent level. s position in the list of authors evidences in all cases a leading role (first or last author). The presented publications focus mainly on the molecular bases of the response to different biotic and abiotic stresses in several crops.

Although is didactic and scientific experiences are not fully consistent with the AGR/07 scientific sector, the activities reported by are numerous, and with an impressive number of publications per year. Overall, based on his curriculum and research activity, I consider a suited candidate to the position of Full Professor at the Scuola Superiore Sant'Anna.

Career: .   , serves since 2019 as Associate Professor in
Genetics   . Before, he worked for 7 years as Assistant Professor at
                          (2011-2018), founded a research company (2016), worked in three Post-Doc
positions at the Scuola Superiore Sant'Anna (SSSA, 2007-2009 and 2010-2011) and at UC Davis
(2009-2010), and as technical support specialist in the UK (2006-2007). He also worked in a total of
11 visiting scientist positions at UC Davis, University of Crete, Cyprus University of Technology, and
University of Bern. Focal areas include (1) Legume crop biodiversity; (2) Characterization of tissue-
specific miRNAs involved in plant-mycorrhiza interaction and physiological responses to abiotic
stresses linked to environmental changes; (3) Clarification of the molecular and physiological
mechanisms underlying transgenerational memory in plants under abiotic stresses related to climate
change; (4) Identification of genes and physiological mechanisms involved in the response and
tolerance to environmental stresses through molecular biology and bioinformatics techniques; 5)
Biotechnological approaches (including genome editing) for the identification of genes linked to
environmental stress tolerance, adaptation and production quality in crops. These are all themes
relevant to the position under consideration.

Course work: was involved in teaching diverse themes including
Genomics, (Agricultural) Genetics, Advanced Genetics, Molecular evolution, and Biotechnologies
Applied to Plant Genetic Improvement at both MSc and BSc levels. He underlines the importance to
guide students to the solution of scientific questions and to find their own answers, instead of
handing them the answer. He also mentions the importance of combining theory with hands-on
experience.

Supervision of students: served as supervisor for 13 undergraduate and
graduate theses and 4 PhD theses. He has been member further committees for PhD defense and
for the evaluation of applications to PhD Programs. He also advised 6 Post-docs. Overall, he is
"strongly committed to research, but considers teaching to be an essential part of his academic
career".

Research: coordinated four diverse research projects (LEGU-MED,
Resilient Hummus, and VEGLUPM-10), and served as group member in a 5th project on genome
editing in plants. His research focuses on legume crops in relation to biodiversity-based agriculture,
climate change adaptation (drought and heat stress), and epigenetics. As coordinator of the EPI-
Catch and group member of PLANTED initiatives (both belong to the EU COST program), he is
extremely well networked with more than 45 research institutes in 27 countries. It also means that
he travels a lot.

Publications: By 12th January 2024, according to Scopus,   had 103
scientific papers in international, indexed and peer-reviewed journals over the last 17 years (since
2007); 2591 citations and an h index of 24. He serves as editorial board member in 8 journals, and
also co-owns 1 patent (related to host biomarkers usable for early detection of Huanglongbing
disease in Citrus). He underlines and gives evidence (Scopus data) that he is "among the 10-15 top
researchers with Italian affiliation" in his research themes. Due to his excellent networks,
coordination of different EU COST Actions and activities as visiting scientist, he has a high
international reputation in the sector of genetics and epigenetics and in the study of crop molecular
responses to environmental stress linked to climate change.

Summary: is equally a highly qualified candidate for the position under
consideration at SSSA. I just have the impression, that he is more interested in his own professional
development and reputation, than in promotion of others (students), as expressed in the statement "I
know that it is sometimes a challenge to meet the needs of my students and my own needs as a
researcher, but I have been able to find an effective balance".

Candidate: .   Id13645AA

has an excellent research activity track record in terms of number, quality, and editorial collocation of his scientific products, being consequently very well known by the national and international Agricultural Science community. He obtained the MSc in Agricultural Sciences in 1990 at the Catholic University of the Sacred Heart in Piacenza, and the Specialization in Plant Biotechnology at the University of Pisa in 1994. From ·.   he has worked as Researcher at the   . From 2002 he is Associate Professor (AGR/02 Agronomy sector) at   From 2014 to 2017 he has been

As far as his teaching activity is concerned, the candidate reports about 30 university courses as responsible teacher, including some refereed to the SSD AGR/07 - Agricultural Genetics and some others related to the SSD AGR/02 - Agronomy, plus several courses hold as co-teacher, with an average of about 2 courses per year. His teaching activity was relatively intense but mainly concentrated in the years 2002-2014. Moreover, several of the academic courses are related to Agronomy and Herbaceous Crops (AGR/02 academic discipline), hence not coherent with Agricultural Genetics (AGR/07 academic discipline). In the last 10 years, once assumed the positions of   , he no longer carried out any teaching activity, exception made for seminars given to PhD students of the STEBA Doctorate (Food and Agricultural Science, Technology and Biotechnology) of the University   He reports to have supervised more than 50 BSc and MSc theses, and 19 PhD theses. Moreover, he has been member of many committees for the evaluation of PhD applications and theses.

Regarding scientific research, his records include many research activities with excellent results, intensity, and temporal continuity on the fields of crop plant genetics and genomics for plant breeding, with particular reference to cereals. In the last years, he focused on the fine dissection of the genetic basis of cold resistance in cereals, including not only durum wheat, but also rice, corn, and common wheat. He promoted the application of the three-year multidisciplinary research plan, on six supply chain research objectives, that are based on skills ranging from genetics, applied genomics and genetic improvement, to agronomic sciences, biochemistry, food technologies.

He reports to have bred and participated to the development of 6 cultivars, patented 1 innovative digestate-based fertilizer, and designed and developed 2 databases.

He reports to have served as Coordinator and/or Responsible in many international, national, and regional research projects (funded by EU, Italian Ministry of Agriculture, Italian Ministry of Research, Italian Ministry of Foreign Affairs, etc.). In particular,   ., he reports to have coordinated or to have been responsible of at least 17 research projects. Considering his scientific career and institutional leadership, the overall activity of research funding in competitive grants and scientific responsibility in research projects is excellent and continuous, especially in the last 10 years.

His participation as a speaker in national and international conferences for both invited lectures and seminars is good: he reports oral communications in 5 international and 4 national scientific congresses and meetings. He has also been component of scientific boards in 3 international and 11 national congresses and meetings.

Since his first publication in 1993, the total number of research articles published in peer-reviewed journals is very high, 130 (on average, 4.3 per year), with more than 4,700 citations and H-index of 37 (source Scopus-January 2024). In the last ten years, he got published as many as 63 research articles, however in terms of scientific authorship and individual contribution, he appears to have a prominent role as first or last author in just 26% of these indexed research articles. Overall, his scientific production is excellent, meets high or very high standards and is continuous over years. Considering the 20 selected publications, all are characterized by originality, methodological rigor, high or very high scientific quality (total IF = 150), and consistency with the AGR/07 sector. For 11 of these publications (55%), his leading role is evident as first or last author or corresponding author.

Overall, based on his curriculum and scientific record,   is certainly a highly rated scientist, well known by the national and international scientific community. His long institutional career supports both the intense research activity and the solid scientific production, with many publications of high or very high quality. Nevertheless, his teaching activity seems very often not consistent with the AGR/07 sector and, more importantly, totally missing in the last 10 years, since he left the university to start his carrier as .

, being so forced to quit his teaching activity. In conclusion, his curriculum is consistent with the position of director of an agricultural research institute and only partially fits the position under consideration at the Scuola Superiore Sant'Anna.

Individual Assessment by Prof. Amalia Barone

from 2017 to today is
and since 2002 to today also Associate Professor (AGR/02, Agronomy sector) at the 'from 2017 on leave). Before that, he specialized in Plant Biotechnology at the University of Pisa (1992-1994) and was researcher at '

As for **teaching activity**, supplementary teaching and service to students, the candidate taught in a very high number of courses within Bachelor and Master Degrees starting from the year 2002 till the year 2014, but many courses belong to the sector AGR/02, so are not really coherent with the discipline. He also gave two seminars for PhD students in the years 2022 and 2023. During these years, the candidate has been supervisor or co-supervisor of 30 bachelor, 27 master, and 19 PhD students, evidencing a highly intense service to students. At the University   he also coordinated one BSc and one MSc degree course, besides the Doctoral School in Agri-Food Science, Technologies and Biotechnologies, and ERASMUS exchanges. He was member of many committees for PhD access and thesis evaluation.

As for the **scientific research** reported by the candidate, he coordinated or was responsible of more than 20 national and international projects, among which coordinator of one non-competitive institutional and four competitive national projects, responsible   . of three Horizon, one PRIN, one FIRB, two PON, and many bilateral projects. His research was also funded by banks and private companies. During the years, he had international collaborations with various groups, spent some periods abroad as visiting scientist, was invited for lectures and organized some international conferences. Finally, he reported activities of technology transfer, such as the participation to bred and co-invention of 6 cultivars, one patent of a fertilizer and two databases, as well as activities of third mission and public engagement.

He has been Director of an Interdepartmental Center ('   ,) and Deputy Director, then Director, for few months, of the Department of Life Science at the same University.

He reports to be editor of Frontiers in Plant Science and Euphytica.

As for the **scientific production**, he started to publish in peer-reviewed journals since 1990, and the reported a whole scientific production that included 216 publications in national and international journals and 16 in book chapters, many of these are not coherent with the sector AGR/07. The database Scopus (at January 2024) reports 130 publications (approximately half in the last ten years), with more than 4700 citations and h-index 37. The overall production showed a high temporal continuity and good scientific level. As for the 20 publications submitted for evaluation, their publication year ranged from 1993 to 2022, and only eight were published in the last 10 years; they were all coherent with the SSD AGR/07, showed originality and rigor in the methodologies, and were published in peer-reviewed relevant journals; in two cases excellent. The candidate position in the list of authors evidenced a leading role as first or last author in around 50% of cases.

Overall, given the CV and list of publications submitted by   I believe that the candidate has a well-established scientific and teaching career to hold the position of full professor, although his teaching activities were not always consistent with the AGR/07 field. His long academic age reflects his intense research activity and overall scientific production, which is also consistent with the position of director of a research institute held for the past nine years.

Individual Assessment by Prof. Hermann Bürstmayr

has been
since 2014. Previously (since 2002)
he was Associate Professor at the University   . From 1996 to 2002 he worked as a researcher at
When he was mainly active in university teaching (2003 – 2014), he taught various courses on agronomy, herbaceous plants, agricultural genetics, cereal production and biotechnology, among

others. The fundamentals of his teaching methodology include: providing appropriate learning material, participatory teaching approaches with discussion sessions and supporting students at all stages of their research. His role   did not allow him much classroom teaching since 2014.

By his account, he has supervised more than 50 Bachelor's and Master's theses and 19 doctoral theses. He was a member of many committees for access to doctoral studies and the assessment of dissertations. His main role as academic supervisor and teacher was thus mainly in guiding students through their thesis work and writing, but less on classroom teaching, particularly since 2014.

                          has been responsible for 17 research projects since 2014. His research focuses on (a) characterization of crop plant genetic resources; (b) analyzing the molecular makeup of complex traits relevant for genetic improvement; (c) research on adaptation of crops to climatic conditions; (d) plant physiology and management improving complex traits.

He has published 130 scientific papers in international, indexed and peer-reviewed journals since 1993; 4732 citations and an h-index of 37. With an average number of 4.3 publications per year his output is substantial. These indicators are good even in relation to the year of the first indexed publication. Sixty-two papers have been published in the last 10 years, in 16 of which he is first or last author. The high number of publications in recent years may be partly due to his role as head of a large institution.

Summary: is a highly rated scientist, with an impressive track record. His main strength is his experience as research manager and head of a large research center, in which he certainly developed excellent management and coordination skills.

Individual Assessment by Prof. Andrea Cavallini

                      is a highly rated scientist, well known in the international Genetics community. After his specialization diploma in Plant Biotechnology at University of Pisa in 1994, he obtained the position of Researcher at   in 1996. Since 2002, he is Associate Professor (AGR/02-Agronomy sector) at
Since 2014 he has been

                    s university **teaching activity** was intense, although concentrated mainly in the years 2002-2014. Since 2002 he has held a number of courses as a teacher and others as a co-teacher, in several cases in sectors attributable to the SSD AGR/02, in some cases addressed to PhD students. His teaching activity took place mainly at the University
            He has coordinated one BSc and one MSc degree courses. He reports to have served as supervisor for more than 50 undergraduate and graduate theses and 19 PhD theses. He has been member of many committees for PhD access and thesis evaluation.

Concerning his **research activity**, he reports of an intense activity as a coordinator and/or responsible in many international, national, and regional research projects (funded by EU, Italian Ministry of Agriculture, Italian Ministry of Research, Italian Ministry of Foreign Affairs, etc.). In the last ten years he reports to have been responsible of 17 research projects.

The activity in scientific conferences is good, with oral communications and seminars in international and national scientific meetings. He has won one award for his scientific work. He has also patent activity.

His **scientific production** is of a very high level and continuous over time. From an analysis conducted on Scopus (at January 2024),   s publication activity is very intense. The indicators highlight 130 papers included in the database, more than 4,700 citations and h-index of 37. These indicators are very good even with reference to the year of the first indexed publication (1993). Sixty-two papers have been published in the last 10 years, in 16 of which he is first or last author.

The publications presented are on average of very good quality in terms of originality, methodological rigor, and consistency with the SSD AGR/07; they are published in journals of very high and, in 2 out of 20 cases, excellent level.   's position in the list of authors evidences a leading role (first or last author) in 11 out of 20 papers. The presented publications focus mainly on the genetic bases of frost and drought tolerance in barley.

In summary, scientific curriculum of   : is of excellent reputation and puts him in a well-recognizable position at an international level; from the teaching point of view, however, his experience is not fully consistent with the themes of the AGR/07 sector and is limited to the first years of his career, having had to abandon frontal teaching :   , ten years ago. Based especially on his research activity, I consider :   suited to the position of Full Professor at the Scuola Superiore Sant'Anna.

Individual Assessment by Prof. Bettina Haussmann

Career:
                                                                      , since 2014. Before (since 2002) he was Associate Professor (Agronomy sector) at University   . From 1996 to 2002, he was employed as researcher at .
               , after he had obtained his diploma in Plant Biotechnology at University of Pisa in 1994.
Course work: was involved in University teaching mainly between 2003 and 2014, with diverse courses delivered on Agronomy, herbaceous crops, agricultural genetics, cereal production, Biotechnology, among other themes. The fundamentals of his teaching methodology include: Provision of proper learning material, participatory teaching approaches with discussion rounds, and support to students at all stages of their research.
Supervision of students: .   served as supervisor for more than 50 undergraduate and graduate theses and 19 PhD theses. He has been member of many committees for PhD access and thesis evaluation.
Research: In the last ten years, .   was responsible of 17 research projects. His research focuses on (1) Characterization and valorization of plant genetic resources in agriculture; (2) Identification of the genetic and molecular bases of complex characters relevant for genetic improvement; (3) Identification of genes involved in the adaptation of cultivated plants to current and future climatic conditions; (4) Crop physiology and management approaches to improvement of complex traits.
Publications: By 12th January 2024, according to Scopus, .   , had 130 scientific papers in international, indexed and peer-reviewed journals over the last 31 years (since 1993); 4732 citations and an h index of 37. These indicators are very good even with reference to the year of the first indexed publication. Sixty-two papers have been published in the last 10 years, in 16 of which he is first or last author.
Summary: '   is a highly rated scientist, but since he left the university and stopped teaching 10 years ago, he will have to re-proof his actual teaching ability in the lecture to be given on 2nd February 2024.

CANDIDATO Id 1375461

In data 01.02.2024   è stato esunto
al protocollo le rinuncia alla partecipazione
alla selezione del candidato Id 1375461.

CANDIDATE: Matteo DELL'ACQUA

INDIVIDUAL ASSESSMENT by Prof. Gianni Barcaccia

Matteo Dell'Acqua selected the lecture on "Maintenance and utilization of genetic resources in plant breeding for adaptation to climate change". His lecture was very well organized and presented in the frame of a frontal class lesson tailored to MSc students. In particular, the introduction and contextualization were excellent. Outstanding was the presentation and explanation of theoretical aspects and key elements, including case studies related to the use of genetic resources in crop plant breeding, with full coherence with the main body of the lecture. During the lecture, he continuously recalled fundamental concepts and basic milestones using effective thoughtful sentences to address and assist the audience in the reception of the main take-home messages. I express full appreciation for the teaching test of the candidate, and overall, I consider to be of excellent quality and clarity his lecture.

INDIVIDUAL ASSESSMENT by Prof. Amalia Barone

Prof. Matteo Dell'Acqua held his lesson on "Maintenance and Utilization of Genetic Resources in Plant breeding for Adaptation to Climate Change". He introduced very well the chosen topic in a program for a MSc Degree course of 6 CFU in Plant Biotechnology. He described the GWAS approach in a very clear way, detailing the different steps required by this strategy and linking it to aspects related to response to environmental stresses and to the use of genetic resources to dissect the quantitative traits under investigation. He was very convincing in tying the introductory phase of his lesson with the conclusions driven, and in explaining how the chosen topic could be linked to others in following lessons. Therefore, I consider the performance of prof. Dell'Acqua excellent for the clarity of exposition, even considering the English language, in defining a linear path from the beginning to the end of the lesson and framing the chosen topic in a more general overview of the course.

INDIVIDUAL ASSESSMENT by Prof. Hermann Burstmayr

The lecture was perfectly well set an embedded and explained in the MSc program. The structure of the lecture was very systematic and understandable for an MSc student. Slides were in very good quality and pedagogically very well organized, not overloaded but at the same time informative and the smart use of only a few animations makes them a perfect learning material. Voice and speed of presentation was very pleasant. In addition, the teacher allows open access to his teaching materials, which is very unique and seen highly positive. Overall the presented lecture perfectly fit the audience and the intended learning outcomes. Overall rating: excellent lecture.

INDIVIDUAL ASSESSMENT by Prof. Andrea Cavallini

The presentation of Prof. Matteo Dell'Acqua was referred to a MSc course in Genomics of Plant Genetic Resources for Future-Proof Agriculture. It was well structured, presented in a clear way and effective communication style. The content was well defined in relation to a MSc course audience and centered on the requirements of the title. All arguments were well integrated and explained. The language was very good and captivating for students and the slides prepared in an excellent way. The duration was 45 minutes as requested. Overall the quality of the lecture was very convincing. As a member of the Recruitment Committee of the Scuola Superiore Sant'Anna appointed as component of this Review committee, I was able by this presentation to have clear insights about the didactic capacity of Prof. Dell'Acqua, required for access to the roles of the School. In this respect, my overall assessment of Prof. Dell'Acqua's lecture is excellent.

INDIVIDUAL ASSESSMENT by Prof. Bettina Haussmann

Excellent lecture about the Utilization of plant genetic resources in breeding for climate change adaptation. The slides were very clear, and the content was well contextualized within a longer MSc course. The lecture was focused, explaining the principles of GWAS as a means to identify genotype-trait associations in plant genetic resources. It was a well-designed lecture, simplifying the topic to make it understandable but pointing to the complexity at the same time. It included concrete examples from the field (eg barley in Ethiopia). As a minor limitation, I thought the aspects of climate change adaptation could have been more explicit and go beyond early flowering as example for an adaptation trait. At the same time, the principles of GWAS as one tool for mining genetic resources became very clear.

In conclusion, the candidate can be considered as outstanding, excellent teacher for the Scuola Sant'Anna. The fact that he places all his lectures and related literature on a Git hub accessible to the students is an additional asset.

CANDIDATE: Id 1372593

INDIVIDUAL ASSESSMENT by Prof. Gianni Barcaccia

selected the lecture on "Gain by selection in plant breeding for adaptation to climate change". He organized and presented a seminar-like lecture focused on modern tools, methods and platforms for genomic selection, including an overview on the main -omics approaches. This lecture was properly tailored to MSc students in the frame of a frontal class lesson. However, his presentation was totally based on modern methods for genomic selection and no specification on conventional methods suitable for gain by selection in crop plant breeding was provided. Moreover, not always theoretical aspects and key elements were addressed, and the use of case studies was scanty in the main body of the lecture. My overall evaluation is sufficient in terms of both quality and clarity of the contents of his lecture.

INDIVIDUAL ASSESSMENT by Prof. Amalia Barone

held his lesson on "Gain by Selection in Plant Breeding for Adaptation to Climate Change", for a MSc degree class in Molecular Biotechnology. He fairly failed to focus on the main topic missing to describe what gain by selection implies in plant breeding and how to reach it by several approaches. Following a long introduction on the basic concepts of crop breeding and domestication, he gave an exhaustive overview of genomics platforms useful for improving the genomic selection approach, including probably too much information for a single lesson, and therefore not giving a clear example of how selection could be useful to reach a result for improving the response to climate change. Therefore, I consider the lesson not very good to explain to MSc level students how selection could be helpful to reach results to face climate changes, since the topic has not been developed in an exhaustive and clear manner.

INDIVIDUAL ASSESSMENT by Prof. Hermann Burstmayr

He described the course format and background of his students well. The candidate set the scene in terms of future adaptation well in the beginning. However, the main part of the lecture appeared a summary and listing of too many topics and trendy headlines with one or two slides per topic, but with little or no systematic connection and the overall pedagogical outline the intended learning outcome. The slides were mostly too busy and too full, often images copied from publications. Voice and speed were good. Students would get lost in such a lecture and most likely cannot put the different toolboxes in breeding into a meaningful context. The lecture would be o.k. for a seminar series or a similar event in order to stimulate discussion, but would not provide students with a sound knowledge base. Overall rating: below medium quality lecture.

INDIVIDUAL ASSESSMENT by Prof. Andrea Cavallini

The presentation of Prof. ⬛⬛⬛ was referred to a MSc course in Crop Genetic Improvement, but it seemed more a general overview of simplified genomic selection methodologies rather than a lecture on the effect of selection on plant breeding. Moreover, many topics were treated without considering that the audience would have to be composed of MSc students. Overall, the lecture seemed more a seminar for geneticists already aware of the exposed arguments. The language was good, but the slides were too many and plenty of data, and the target audience was not centered. The duration was a bit longer than requested. As a member of the Recruitment Committee of the Scuola Superiore Sant'Anna appointed as component of this Review committee, I was able by this presentation to have insights about the didactic capacity of ⬛⬛⬛, required for access to the roles of the School. In this respect, my overall assessment of ⬛⬛⬛ 's lecture is sufficient.

INDIVIDUAL ASSESSMENT by Prof. Bettina Haussmann

This lecture about "Gains by selection for adaptation to climate change" covered very many aspects in a rather superficial manner. It was partially confusing. It seemed to be more about genomic selection platforms than on gains by selection. Reference to climate change adaptation was made several times. I noticed the following specific issues: Breeding categories were not well presented (mentioning only pure lines, hybrids and multi-line mixtures). I found it also confusing that conventional selection under field conditions was labeled as a form of "indirect selection". This seemed incorrect to me.

In conclusion, this was not a good lecture for students, but much more a relatively general seminar presentation.

CANDIDATE: ⬛⬛⬛

INDIVIDUAL ASSESSMENT by Prof. Gianni Barcaccia

⬛⬛⬛ selected the lecture on "Classical and modern breeding methods of selfing species for adaptation to climate change". He organized and structured the lecture in the frame of crop plant breeding actions for the adaptation of varieties to climate change and properly tailored his contents to MSc students. The outline of the lecture and the presentation of its main parts was based on both classical and modern plants breeding methods as expected. However, no comparison among listed methods (e.g. advantages/disadvantages, specificity in terms of applications or crop species, etc.) was addressed and, most importantly, no integration/combination of classical and modern breeding methods/approaches was considered. Last but not least, the lecture appeared unbalanced, given that as many as 35 minutes were dedicated to classical methods and only 10 minutes to modern methods, with lack of time for some of the prepared slides and the concluding remarks. Overall, I express appreciation for the contents of the lecture, and good is my evaluation of its quality and clarity.

INDIVIDUAL ASSESSMENT by Prof. Amalia Barone

⬛⬛⬛ held his lesson on "Classical and Modern Methods for Breeding Selfing or Outcrossing Species for Adaptation to Climate Change", for students of a MSc degree level in a course of Plant Breeding. He introduced in detail the overall programme in which this lesson would be included, specifying which topics had already been covered in previous lessons. He also specified that he chose to describe methods for autogamous plants. He gave a good introduction to the topics, starting to explain the selection gain expected from breeding work, but after that he listed in details many conventional breeding methods and then he began to list many modern methods, but he could not conclude all the topics in a 45 minutes lesson. He could have limited the description to some conventional and modern methods, trying to better link them and evidencing the advantages of using modern technologies combined with traditional approaches. Therefore, I would consider this lesson good in the approach, but not exhaustive for describing the integration of conventional and modern

selection methods, perhaps because the candidate tried to include all possible topics in only one lesson, thus losing clarity of presentation.

INDIVIDUAL ASSESSMENT by Prof. Hermann Burstmayr

He set the scene and background knowledge of the intended class well. He started with a good introduction and the first half of the lecture was of good quality and given in a systematic manner. However, in the second part a systematic and scholarly framework was largely absent. He went through a series of examples of modern breeding tools, but the systematic framing of these examples remained unclear. Though he is a researcher with excellent experience, and could therefore bring into his lecture numerous examples from his own research, this was only done a few times. Slides were partly good and partly too busy, but overall of good quality. Overall rating: medium quality lecture.

INDIVIDUAL ASSESSMENT by Prof. Andrea Cavallini

The presentation of   , referred to a MSc degree in Agricultural Sciences, was a general overview of classical and modern methods of plant breeding. Although the theme was centered on the proposed lecture title, the lecture was unbalanced between modern methods and classical methods, to which the candidate dedicated too much time. In fact, the duration of the lecture was too long. Moreover, a critical comparison between classical and modern methods was lacking and description on how modern methods can integrate classical methods was poor. The language was good, but the slides were too many and plenty of data. As a member of the Recruitment Committee of the Scuola Superiore Sant'Anna appointed as component of this Review committee, I was able by this presentation to have insights about the didactic capacity of   required for access to the roles of the School. In this respect, my overall assessment of   's lecture is good.

INDIVIDUAL ASSESSMENT by Prof. Bettina Haussmann

This lecture about Classical and modern methods for breeding selfing crop species for adaptation to climate change was also well contextualized within a broader MSc course. It made clear reference to traits important in changing climates. However, the candidate then focused too long on classical breeding methods, without integrating them in direct comparisons with modern breeding tools. At the end, the candidate run out of time and could not deliver the essential parts of the modern tools. This resulted in an unbalanced lecture. Overall, there were too many slides and poor time management. The overall evaluation of the lecture is medium.

ANNEX 3 – MINUTES OF THE FOURTH MEETING
COLLEGIAL ASSESSMENTS

The Committee considers the three candidates qualified and suitable in principle for the position at the Sant'Anna School, however distinctions on their profiles and abilities are evident.

Candidate: Matteo Dell'Acqua

Prof. Matteo Dell'Acqua has an excellent track record in terms of project acquisition and scientific output. He is very well connected to the national and international scientific community, including international research centers. His research topics address highly relevant and innovative themes in agricultural genetics, such as forward genetics, climate-ready agriculture, multiparental crop populations, and data driven participatory breeding methods. His research stays abroad and his engagement in research with colleagues in the Global South, the Americas and Europe made him gaining profound international experience. He follows an interdisciplinary approach by linking genetics and genomics with agronomy, climate science and social economics. Considering his young academic age, the overall activity of research funding is outstanding.
As for the 20 selected publications, all are characterized by high scientific quality, excellent authorship, and consistency with the Agricultural Genetics sector.
The lecture was of highest quality, he addressed clear learning outcomes and provided excellent learning materials including relevant scientific literature. His dedication to mentoring and supporting the next generation of researchers is commendable. He outperformed the required number of formal teaching duties. We rate Prof. Matteo Dell'Acqua as the best qualified candidate for the position.

Candidate (Id 1372593

The research activity of   includes several topics and is mainly related to modern approaches for studying genes and genomes in crop plants, with particular reference to abiotic stresses and adaptation linked to environmental changes. The overall activity of research funding in competitive grants and scientific responsibility in research projects is relatively good. His participation as a speaker in national and international conferences for both oral communications and invited lectures is good, especially in relation to his academic age.
The total number of research articles published in peer-reviewed journals is very high. In terms of scientific authorship and individual contribution, he appears to have a prominent role as first or last author in more than half of these indexed research articles. His scientific production meets good or high standards and is continuous over years. Considering the 20 selected publications, all are characterized by very good or high scientific quality, excellent authorship, and consistency with the Agricultural Genetics sector.
The documented teaching activity of the candidate .   . is very good and mainly related to courses of plant genetics and genomics, within both BSc and MSc academic courses. However, in his lecture   . demonstrated a medium-low teaching ability.
Overall, based on of his lecture, curriculum, and academic career in terms of both teaching and research activities, the evaluation of   . is good. His curriculum is qualified but not the best ranked for the position at the Scuola Superiore Sant'Anna.

Candidate .

                        has an excellent research activity track record in terms of number, quality, and editorial collocation of his scientific products, being consequently very well known by the national and international Agricultural Science community. Considering his scientific career and institutional leadership, the overall activity of research funding in competitive grants and scientific responsibility in research projects is excellent and continuous, especially in the last 10 years.

Overall, his scientific production is excellent, although individual authorship in the last 10 years is relatively low. Articles meet high or very high standards and the production is continuous over years. The 20 selected publications are characterized by high or very high scientific quality, and consistency with the AGR/07 sector. For 11 out of 20 publications, his leading role is evident.

His teaching activity was relatively intense but mainly concentrated in the years 2002-2014. Moreover, several of the academic courses are related to Agronomy and Herbaceous Crops, hence not coherent with Agricultural Genetics. In his lecture,   demonstrated medium/good teaching ability.

Overall, based on his curriculum and scientific carrier,   is certainly a highly rated scientist. Nevertheless, his teaching activity has not been always consistent with the AGR/07 sector. His curriculum is qualified but not the best ranked for the position at the Scuola Superiore Sant'Anna.