

PUBLIC SELECTION FOR ONE TENURE-TRACK – PROBATIONARY, ASSISTANT PROFESSOR (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 PARAGRAPH 3 LETTER B, AS FORMULATED BEFORE THE ENTRY INTO FORCE OF THE LAW 79/2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CROP SCIENCE RESEARCH CENTER IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 434 OF JUNE 21, 2023.

MINUTE OF THE THIRD MEETING

The Evaluation Committee for the selection of one tenure-track – probationary, assistant professor (ricercatore a tempo determinato) for the Academic Recruitment Field “Agronomy and Field, Vegetable, Ornamental Cropping” (SC 07/B1) – Academic Discipline “Agronomy and Field Crops” (SSD AGR/02) at the Academic Faculty of Experimental and Applied Sciences – Crop Science Research Center of the Sant’Anna School of Advanced Studies - Pisa pursuant to Italian Law No. 240/2010, Art. 24 paragraph 3 letter B, as formulated before the entry into force of the Law 79/2022, appointed by Rector’s decree No. 586 of September, 6, 2023, consists of:

- Prof. Mariana Amato, Full Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the University of Basilicata;
- Prof. Marco Bindi, Full Professor of the Academic Recruitment Field 07/B1 “Agronomy and Field, Vegetable, Ornamental Cropping” at the University of Florence, designated member by the Crop Science Research Center;
- Prof. Jan Jansa, Full Professor at the Czech Academy of Sciences.

The Committee convened for the third time on December 13, 2023, at 9 a.m. Prof. Marco Bindi was in the Building in Via Santa Cecilia, 3, Pisa in the meeting Room at the second floor. Whereas, the other two members convened on teleconference from the following locations:

Prof. Mariana Amato located in her office in Potenza, email address: mariana.amato@unibas.it

Prof. Jan Jansa located in his office in Prague, email address: jansa@biomed.cas.cz

The draft of the following minute was agreed on and approved by the members of the Committee.

The President ascertained that all the members of the Committee were present, and he declared the session open.

The President took note that each member of the Committee has received the link to access online to the application of the candidates and have examined the documents they have submitted.

The president informs the other members that the candidate Dr. Malek Khaled Mahmoud Marian has informed the offices of his withdrawal from the selection procedure (note no. 26291 of 12 December 2023). Therefore, the committee will only assess the documentation submitted by Dr. Elisa Pellegrino.

The Commission then carries out a collegial examination of the documentation and draws up a brief summary of the qualifications, curriculum and scientific production of the candidate.

The named assessment is annexed to and form an integral part of the present minute (Annex No. 1).

At 10:00 the Committee completed the examination of the documents supplied by the candidate and ascertained that the candidate Dr. Elisa Pellegrino is present.

The President identifies the candidate (identification form is Annex No. 2 to these minutes).

The Committee notes that in addition to the candidate, no other interested party is present.

The President invites candidate Dr. Elisa Pellegrino to hold her seminar to ascertain the knowledge of English language and then starts the interview about her qualifications, publications, and research experience. The research proposal is also illustrated and discussed.

At the end of the interviews the Committee invited the candidate to leave the meeting room and continue the meeting.

Then, after a thorough debate, the Committee assigned the scores to the qualifications, to each publication submitted by the candidate and to the overall consistency of the scientific production, on the basis of the criteria defined in the preliminary meeting of Committee. The scores assigned are listed in Annex No. 3.

Thereafter the Committee summarised the scores assigned to the candidate.

Name and surname	Application number	Qualifications	Publications	Overall consistency of the scientific production	Final score
Elisa Pellegrino	1322565	28.1	27.4	8	63.5

On the basis of the scores obtained, the Committee declared Dr. Elisa Pellegrino winner of the selection.

Therefore, the Committee declared the work finished and decided that the President will send a signed copy of this minutes to Staff Office together with the declaration of approval by the other member of the Committee convened on teleconference. This declaration forms an integral part of this agreed minute.

The meeting was adjourned at 13:30.

THE COMMITTEE
The President

ANNEX 1

PUBLIC SELECTION FOR ONE TENURE-TRACK – PROBATIONARY, ASSISTANT PROFESSOR (RICERCATORE A TEMPO DETERMINATO) WITH FULL TIME TEMPORARY CONTRACT PURSUANT TO ITALIAN LAW NO. 240/2010, ART. 24 PARAGRAPH 3 LETTER B, AS FORMULATED BEFORE THE ENTRY INTO FORCE OF THE LAW 79/2022, AT THE ACADEMIC FACULTY OF EXPERIMENTAL AND APPLIED SCIENCES AND THE CROP SCIENCE RESEARCH CENTER IN THE ACADEMIC RECRUITMENT FIELD “AGRONOMY AND FIELD, VEGETABLE, ORNAMENTAL CROPPING” (SC 07/B1) – ACADEMIC DISCIPLINE “AGRONOMY AND FIELD CROPS” (SSD AGR/02), ISSUED BY RECTOR’S DECREE 434 OF JUNE 21, 2023.

CANDIDATE: Elisa Pellegrini

Qualifications

Dr. Pellegrino obtained an M.Sc. Degree in Agricultural Sciences and Technologies at the UNIPI, Italy (110/110 magna cum laude = with honours) in 2003.

Afterwards, she started her research activity as a PhD student in Sustainable Crop Production Systems ("Scienza delle Produzioni Vegetali Eco-Compatibili") also at the University of Pisa, obtaining the title of PhD in 2008 with a thesis on: Mycorrhiza for sustainable management of agro-ecosystems. Field studies on molecular and functional biodiversity of native and inoculated arbuscular mycorrhizal fungi.

Dr. Pellegrino has been involved in national (26 projects) and international (11 projects) projects both as PI (7 national and 1 international) and as participant (19 national and 10 international). In addition, she also participated in the development and activities of research networks at international (1 network on the effect of climate change and soil management on microbial diversity and functionality) and national level (1 network on bacterial diversity and functionality).

Dr. Pellegrino has participated in national and international congresses both as an invited speaker (11 international congress and 2 national) and as a speaker (13 international congress and 9 national).

At university teaching level, Dr. Pellegrino has worked as a lecturer and tutor. In particular, she has been a lecturer at the Scuola Superiore Sant'Anna for a total of 24.5 CFU from the academic year 2019-20. While previously, also at the Scuola Superiore Sant'Anna, she has been a tutor in practice for a total of 15 CFU in the academic years from 2013-14 to 2018-19.

In these years she has also tutored both MSc (4 students) and PhD (9 students) students. She has also acted as Supervisor of BSc and MSc theses (5 students).

Finally, in 2017 she obtained the National Scientific Habilitation as Associate Professor in Agronomy and Field Crops 07/B1 - AGR/02.

Curriculum

Dr. Pellegrino's curriculum shows she has past or ongoing collaborations with academic research groups, spin-offs, enterprises or consultants in Italy and internationally like in Europe (e.g. CSIC-Spain, UC Louvain Belgium), the U.K. (University of Edinburgh), America (UTN-Ecuador, CERES-Chile), Australia, Africa (CIMMYT Zimbabwe, ICRISAT, CGIAR) in research fields corresponding to her scientific production, and she declares a strong commitment to future research on agronomic techniques oriented towards sustainable management and bioremediation through the soil biotic component, and optimization of the weed community and the use of nano-fertilizers.

Dr. Pellegrino has worked in the evaluation of projects at the national (National evaluation of quality VQR) and international level (e.g. Horizon 2020 or PRIMA or the British Ecological Society Review College).

After her Ph.D., she has also attended training courses on statistics, meta-analysis, and molecular and genome sequencing techniques. She has served in the organization of scientific meetings and events

as a member of the scientific committees for national and international symposia and workshops (e.g. the Conference of the European Society of Agronomy (ESA) in Geneva in 2018, where she was also moderator of a scientific session).

Regarding academic activity Dr. Pellegrino was a member of the PhD board in Agrobiosciences and Agrobiodiversity from 2019 to 2022), member of the ethics committee and of the evaluation committee of teaching activities, and of selection committees at the Scuola Superiore Sant'Anna, Pisa. She is a member in the Italian and of the European Society of Agronomy, the British Ecological Society and others, and has been visiting scientist for short periods from 1 to 3 weeks in international institutions. Dr. Pellegrino is editor for *Frontiers in Plant Science*, and has served as referee for more than 20 journals among which the “European Journal of Agronomy”, “Plant and Soil”, “Agriculture, Ecosystems and Environment”.

She has conducted a wealth of outreach (“terza missione”) activities with many actions towards stakeholders such as farmers, producers’ organizations or the general public, students of primary and secondary schools, technicians and experts in research and development or training and communication in the fields of fertilization, biofortification, biostimulants, biodiversity, soil conservation, climate change. In addition to scientific publications, she has published papers in technical journals and newsletters and features in dissemination multimedia works.

Publications

The presented papers provide overview of a remarkable research efforts made to describe indigenous arbuscular mycorrhizal (AM) fungal and also other microbial communities in differently managed field soils (particularly with respect to introduction of conservation agriculture practices), and to understand basis of AM functioning with respect to acquisition and transport towards the plants of nutrients such as zinc, and tracing inoculants and their effects in various systems including a field realm. All the publications appeared in well recognized (Q1) journal, and part of them even in elite journals like *New Phytologist* and *Soil Biology and Biochemistry*, with the applicant (Dr. Pellegrino) often being the first, last and/or corresponding author. Different author teams on the different papers document intensive collaborations of the applicant with other research groups around the globe.

Whereas few of the papers provided mechanistic insights into the underlying processes, a significant part of the published research took merely descriptive approach. This may also be the reason why, although some of the papers attracted significant attention of fellow researchers and are often cited, others are close to the average of citation scores for the respective journals. Together with the fact that the reported research covers an unusually broad range of aspects, systems, and processes, it invites the thoughts whether more focus/specialization and long-term coherency would, on a long run, return higher visibility and recognition in the research field. This could potentially also increase the bibliometric parameters of the applicant like H-index, which currently (according to Scopus) is 21, for a period of 18 years of publication history.

ANNEX 3

Please insert the detailed scores

QUALIFICATIONS - maximum score of 30, allocated as follows:

Letter	Criteria	Breakdown of scores	Description for each criteria	Score
A	PhD or equivalent, awarded in Italy or abroad	up to a maximum of 2 points, divided as follows: - 2 points for pertinent PhD; - 1 point for partially pertinent PhD; - 0 point for non-pertinent PhD.	Ph.D. in Sustainable Crop Production Systems ("Scienza delle Produzioni Vegetali Eco-Compatibili") at the University of Pisa (UNIFI), Italy. Thesis title: Mycorrhiza for sustainable management of agro-ecosystems. Field studies on molecular and functional biodiversity of native and inoculated arbuscular mycorrhizal fungi.	2
B	teaching activities at university level in Italy or abroad	up to a maximum of 6 points, divided as follows - university courses: up to a maximum of 0.7 points per academic year; - practices: 0.3 points per academic year; - acting as supervisor or co-rapporteur: PhD/PhD thesis 1.0 points; Master's degree thesis 0.5 point; Bachelor's degree thesis 0.2 points.	Courses: A.A. 2023/2024: 4 courses at the Scuola Superiore Sant'Anna (5 CFU) A.A. 2022/2023: 4 courses at the Scuola Superiore Sant'Anna (6 CFU) A.A. 2021/2022: 4 courses at the Scuola Superiore Sant'Anna (5 CFU) A.A. 2020/2021: 4 courses at the Scuola Superiore Sant'Anna (4.5 CFU) A.A. 2019/2020: 3 courses at the Scuola Superiore Sant'Anna (4 CFU) Practices: A.A. 2018/2019: 1 courses at the Scuola Superiore Sant'Anna (1 CFU) A.A. 2017/2018: 1 courses at the Scuola Superiore Sant'Anna (2 CFU) A.A. 2016/2017: 2 courses at the Scuola Superiore Sant'Anna (3 CFU) A.A. 2015/2016: 1 courses at the Scuola Superiore Sant'Anna (1 CFU) A.A. 2014/2015: 1 courses at the Scuola Superiore Sant'Anna (1 CFU) A.A. 2013/2014: 3 courses at the Scuola Superiore Sant'Anna (7 CFU) Supervisor BSc and MSc Thesis n. 5 Assigned tutor of Master students n. 4 Assigned tutor of PhD students n. 9	6
C	documented training or research activities carried out in qualified institutes in Italy or abroad	up to a maximum of 10 points, divided as follows - for each year of postgraduate research and training activity abroad 1 point, in Italy 0.75 point.	Assistant Professor (Ricercatore a tempo determinato di tipo A, RTDA) in Agronomy and Field Crops at the Scuola Superiore Sant'Anna (SSSA; Pisa, Italy) "Settore concorsuale 07/B1" and "Settore disciplinare AGR/02". 4 years and 5 months (up to october 2023) Permanent Technician at the Scuola Superiore Sant'Anna (Pisa, Italy) (category D). 5 years and 11 months. Postdoctoral research fellows at the Scuola Superiore Sant'Anna (SSSA; Pisa, Italy) and at the University of Pisa, Italy. 5 years and 6	10

			<p>months.</p> <p>Research fellow at the University of York, UK. 5 months.</p> <p>Total: 20 years and 10 months as Postgraduated researcher in Italy and 5 months as Postgraduated researcher abroad (UK)</p>	
D	project activities as regards the academic recruitment fields where applicable	<p>up to a maximum of 6 points, divided as follows</p> <ul style="list-style-type: none"> - for organisation, direction and coordination: <ul style="list-style-type: none"> o 2 points for each international project; o 0.5 points for each national project; - for participation: <ul style="list-style-type: none"> o 0.5 points to international projects; o 0.2 points for national projects. 	<p>Principal Investigator: 7 National project and 1 International Project</p> <p>Participant: 19 National projects and 10 International projects</p>	6
E	organization, management and coordination – or participation – in national and international research groups	<p>up to a maximum of 2 points, divided as follows</p> <ul style="list-style-type: none"> - for organisation, direction and coordination: <ul style="list-style-type: none"> o 1 points for each international research group; o 0.5 points for each national research group; - for participation: <ul style="list-style-type: none"> o 0.4 points to international research group; o - 0.2 points for national research group. 	<p>Participation at 1 international network</p> <p>Participation at 1 national network</p>	0.6
F	participation as a speaker in national and international conferences	<p>up to a maximum of 2 points, divided as follows</p> <ul style="list-style-type: none"> - 0.5 points for each international congress as invited speaker; - 0.3 points for each national congress as invited speaker; - 0.2 points for each oral contribution to an international congress; - 0.1 points for each oral contribution to a national congress. 	<p>Invited speaker at International congress n. 11</p> <p>Invited speaker at National congress n. 2</p> <p>Speaker at International congress n. 13</p> <p>Speaker at National congress n. 9</p>	2

G	national and international awards for research activities	up to a maximum of 2 points, divided as follows: - 1.5 points per National Scientific Habilitation to PA; - 0.4 point for each international award/recognition; - 0.2 points for each national award/recognition;	4/04/2017-valid until 04/04/2028: National Scientific Habilitation as Associate Professor in Agronomy and Field Crops 07/B1 - AGR/02	1.5
	Total			28.1

PUBLICATIONS - maximum score of 32

n.	Paper	Autors	Journal	Year	originality, innovation, methodological rigor and relevance maximum 0.5	coherence of each publication with the academic recruitment field maximum 0.5	scientific relevance of each journal maximum 0.25	analytical determination of the individual contribution of the researcher maximum 0.75	TOTALE
1	Establishment, persistence and effectiveness of arbuscular mycorrhizal fungal inoculants in the field revealed using molecular genetic tracing and measurement of yield components.	Pellegrino E., Turrini A., Gamper H. A., Cafà G., Bonari E., Young J. P. W., Giovannetti M.	New Phytologist	2012	0.4	0.5	0.25	0.75	1.9
2	Enhancing ecosystem services in sustainable agriculture: Biofertilization and biofortification of chickpea (<i>Cicer arietinum</i> L.) by arbuscular mycorrhizal fungi.	Pellegrino E., Bedini S.	Soil Biology and Biochemistry	2014	0.2	0.5	0.25	0.75	1.7

3	Responses of wheat to arbuscular mycorrhizal fungi: A meta- analysis of field studies from 1975 to 2013.	Pellegrino E., Öpik M., Bonari E., Ercoli L.	Soil Biology and Biochemistry	2015	0.25	0.5	0.25	0.75	1.75
4	Agricultural abandonment in Mediterranean reclaimed peaty soils: Long-term effects on soil chemical properties, arbuscular mycorrhizas and CO2 flux.	Pellegrino E., Bosco S., Ciccolini V., Pistocchi C., Sabbatini T., Silvestri N., Bonari E.	Agriculture, Ecosystems and Environment	2015	0.4	0.5	0.25	0.75	1.9
5	Phylogenetic and multivariate analyses to determine the effect of agricultural land-use intensification and soil physico-chemical properties on N-cycling communities in drained Mediterranean peaty soils.	Ciccolini V., Bonari E., Ercoli L., Pellegrino E.	Biology and Fertility of Soils	2016	0.3	0.5	0.25	0.75	1.8
6	Strong increase of durum wheat iron and zinc content by field-inoculation with arbuscular mycorrhizal fungi at different soil nitrogen availabilities.	Ercoli L., Arduini I., Schuessler A., Pellegrino E.	Plant and Soil	2017	0.5	0.5	0.15	0.75	1.9
7	Impact of genetically engineered maize on agro-environmental traits: a meta-analysis of 21 years of field data.	Pellegrino E., Bedini S., Nuti M., Ercoli L.	Scientific Reports	2018	0.35	0.5	0.15	0.75	1.75

8	Interaction Between Conservation Tillage and Nitrogen Fertilization shapes prokaryotic and fungal diversity at different soil depths: evidence from a 23-year field experiment in the Mediterranean Area.	Piazza G, Ercoli L., Nuti M., Pellegrino E.	Frontiers in Microbiology	2019	0.25	0.5	0.15	0.75	1.65
9	Long-term conservation tillage and nitrogen fertilization effects on soil aggregate distribution, nutrient stocks and enzymatic activities in bulk soil and occluded microaggregates.	Piazza G., Pellegrino E., Moscatelli M. C., Ercoli L.	Soil and Tillage Research	2020	0.25	0.5	0.25	0.25	1.25
10	Field inoculation of bread wheat with <i>Rhizophagus irregularis</i> under organic farming: variability in growth response and nutritional uptake of eleven old genotypes and a modern variety.	Pellegrino E., Piazza G., Arduini I., Ercoli L.	Agronomy	2020	0.3	0.5	0.15	0.75	1.7

11	Direct transfer of zinc between plants is channelled by common mycorrhizal network of arbuscular mycorrhizal fungi and evidenced by changes in expression of zinc transporter genes in fungus and plant.	Cardini A., Pellegrino E., Declerck S., Calonne-Salmon M., Mazzolai B., Ercoli L.	Environmental Microbiology	2021	0.5	0.5	0.25	0.75	2.0
12	Eukaryotes in soil aggregates across conservation managements: Major roles of protists, fungi and taxa linkages in soil structuring and C stock.	Pellegrino E., Piazza G., Helgason T., Ercoli L.	Soil Biology and Biochemistry	2021	0.25	0.3	0.25	0.75	1.55
13	Microbiome structure and interconnection in soil aggregates across conservation and conventional agriculture allow to identify main prokaryotic and fungal taxa related to soil functioning.	Pellegrino E., Gaia Piazza, Helgason T., Ercoli L.	Soil Biology and Biochemistry	2022	0.25	0.4	0.25	0.75	1.65
14	Multiple Arbuscular Mycorrhizal Fungal Consortia Enhance Yield and Fatty Acids of <i>Medicago sativa</i> : a Two-Year Field Study on Agronomic Traits and Tracing of Fungal Persistence.	Pellegrino, E., Nuti M., Ercoli, L.	Frontiers in Plant Science	2022	0.2	0.3	0.15	0.75	1.4

15	Conservation agriculture practices lead to diverse weed communities and higher maize grain yield in Southern Africa.	Mhlanga B., Ercoli L., Thierfelder C., Pellegrino E.	Field Crops Research	2022	0.25	0.5	0.25	0.75	1.75
16	Occurrence and diversity of arbuscular mycorrhizal fungi colonising off-season and in-season weeds and their relationship with maize yield under conservation agriculture.	Mhlanga B., Ercoli L., Piazza G., Thierfelder C., Pellegrino E.	Biology and Fertility of Soil	2022	0.25	0.5	0.25	0.75	1.75
									27.4

OVERALL SCIENTIFIC PRODUCTIVITY – maximum score of 8

<p>The candidate has published 130 national and international scientific articles, book chapters and editorials (academic age 16 years). Forty-three of these are in Scopus-indexed journals, with a citation count of 1,700 and an h-index of 21. Thus, the overall production is excellent in terms of both originality and editorial placement. The continuity of production is also very good with at least 1 article per year in Scopus-indexed journals since 2008. Finally, with regard to the coherence of publications with the scientific sector, there has been a progressive alignment with the agronomic approach of the topics examined by the candidate.</p>	8
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