









#### ALLEGATO 2 AL DECRETO RETTORALE N. 10124 DEL 29 GIUGNO 2023

Public competition announcement for admission to the PhD programme in Agro-Food System of Università Cattolica del Sacro Cuore in the 39<sup>th</sup> cycle – Piacenza Campus

#### Art. 1

### **Opening**

For each PhD programme, for which an open competition is announced, the coordinator, duration, number of places on the course, number of scholarships, affiliated institutions, sites and calendar of competition examinations are indicated.

The number of scholarships may increase as a result of funding from public and private institutions, provided that the related agreement is signed within the date of expiration of the public announcement.

An increase in the number of available scholarships may result in an increase in the number of positions opened for public competition. Any further changes and / or additional information to the competition will be published on the site <a href="https://dottorati.unicatt.it/concorsi">https://dottorati.unicatt.it/concorsi</a>

The activation of the PhD programme and the related selection procedures are subjected to accreditation, the verification of the maintenance of requirements by Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR). The projects listed in Annex *sub* 1, which are linked to scholarships awarded pursuant to mm.dd. 117/23 and 118/23, are subjected to verification of eligibility by the Ministry of Universities and Research.

Coordinator: Prof. Paolo AJMONE MARSAN

<u>Duration</u>: 3 years

Positions: 45

Scholarship-based positions: 24

of which no. 14 scholarships under mm.dd. 117/23 and 118/23: see Article 2 of this notice;

of which no. 1 place with scholarship for the implementation of the research project 'Innovative biology - and biotechnology - based solutions for livestock, animal products and environmental sustainability', co-funded by Romeo and Enrica Invernizzi Foundation;

of which no.1 place with scholarship for the implementation of the research project 'Biostimulant-based integrated solutions for a sustainable agriculture under sub-optimal conditions':

of which no.1 place with scholarship for the implementation of the research project 'Potential improvements of fermented beverages through the application of process modeling approach', funded by Eugenio and Germana Parizzi Foundation;

of which no.1 place with scholarship for the implementation of the research project 'Rural Development in Low-Income Countries: Agricultural and Ethical Aspects', funded by Romeo and Enrica Invernizzi Foundation, Project C3S "Production of proper food: sufficient, safe and sustainable";

of which no.1 place with scholarship for the implementation of the research project '*Use of big data for sustainability in agriculture*', funded by Regione Emilia-Romagna (Regional Decree n. 509 - 3/04/2023), within the projects in the context of training projects for territorial research: technological, cultural, economic, and social transition towards sustainability - PR FSE+ 2021/2027;

of which no.1 place with scholarship for the implementation of the research project 'Sustainable renewable energy VALUE chains for answering FARMers' needs - VALUE4FARM', funded by European project HORIZON-CL5-2022-D3-02;

of which no.1 place with scholarship for the implementation of the research project 'Innovative and sustainable soil management for the vineyard ecosystem', co-funded by the project "NODES - Nord Ovest Digitale e Sostenibile" - Spoke 6 Primary Agro-Industry, and by the company VINIDEA – identification code ECS00000036 (CUP B43D21010950006).

For the 39<sup>th</sup> cycle, in addition to the no. 7 finalized scholarships, the University provides scholarships in the following scientific areas:

Biological-Agricultural area: no.2 scholarships

- research topic: Sustainable Plant Production;
- research topic: Agricultural and Food Economics.

Economic-Legal area: no.1 scholarship

- research topic: Economics, management and efficiency of the agro-food market.



Places reserved for the 'De Africa' project, financed by the Italian Episcopal Conference's Service for Charitable Interventions in the Third World, Università Cattolica del Sacro Cuore, through the University Centre for International Solidarity, E4Impact, a foundation committed to promoting social impact entrepreneurship programmes in Africa, and Uganda Martyrs University: 13

of which no. 1 place reserved for staff of the *Uganda Martyrs University*, Nkozi, Uganda, for the realisation of the project in "The Impact of Changes in Agro-Pastoral Practices on Crop-Livestock System Productivity and Adaptation to the Variable rainfall distribution in the Cattle Corridors East Africa Uganda";

of which no. 1 place reserved for staff of the of *Uganda Martyrs University*, Nkozi, Uganda, for the realisation of the project in "Assessing the contribution of household consumer dynamics to the sustainability of ecological organic agriculture systems in *Uganda*":

of which no. 1 place reserved for staff of the *The Catholic University of Zimbabwe*, Harare, Zimbabwe, for the implementation of the research project in "*Reviewing the catalytic nature of agriculture technology in leap frogging sustainable development of rural economies*";

of which no. 1 place reserved for staff of the *Kwame Nkrumah University of Science* and *Technology (KNUST)*, Kumasi, Ghana, for the implementation of the research project in "Ameliorative effects of melatonin on BPS-induced defects on the hypothalamic pituitary testicular axis of F1 ashanti black pigs";

of which no. 1 place reserved for staff of the *Haramaya University*, Dire Dawa, Ethiopia, for the implementation of the research project in "*Economic and Public Health Assessment of food insecurity, food safety and inflation problem in central Ethiopia, focus on Addis Ababa*";

of which no. 1 place reserved for staff of the of *University of Malawi*, Zomba, Malawi, for the implementation of the research project in "*Profiling Amino Acids and Fatty Acids of commonly consumed fish in Malawi: fresh, sun-dried, solar tent dried and parboiled Engraulicypris sardella (Usipa); fresh, sun-dried and smoked Lethrinops gossei (Chisawasawa) and fresh, smoked and sun dried Tilapia (Chambo)*";

of which no. 1 place reserved for staff of the *University of Makeni*, Makeni City, Sierra Leone, for the implementation of the research project in "Climate change impacts on agricultural product production and marketing in developing countries: The case of Sierra Leone";

of which no. 1 place reserved for staff of the *Kumi University*, Kumi, Uganda, for the implementation of the research project in "*The impact of climate change on aquaculture production in Uganda*";

of which no. 1 place reserved for staff of the Ambo University, Ambo, Ethiopia, for the implementation of the research project in "Evaluation of late blight and potato tuber



moth on different potatoes varieties and their control at West Shoa of Oromia Region, Ethiopia";

of which no. 1 place reserved for staff of the *Valley View University*, Accra, Ghana, for the implementation of the research project in "*Innovation strategy and firm performance: an empirical study of Agribusiness SMEs in Ghana*";

of which no. 1 place reserved for staff of the *Horseed International University*, Mogadiscio, Somalia, for the implementation of the research project in "*The detection, prevalence, epidemiological factor and molecular characterization of infectious bronchitis virus in commercial layers and indigenous chickens in selected areas"*;

of which no. 1 place reserved for staff of the Sunyani Technical University, Sunyani Ghana, for the implementation of the research project in "Precision agriculture and digital technology: exploring the potential of precision agriculture techniques, remote sensing, Internet of Things (IoT), and Big Data Analytics to optimize resource management, decision-making and yield prediction in Agri-Systems";

of which no. 1 place reserved for staff of the *University of Energy and Natural Resources*, Sunyani Ghana, for the implementation of the research project in "Aquaculture sustainability certification and implications on marketing performance in selected regions in Ghana".

## Places without a scholarship: 8

- no. 7 places for the Biological-Agricultural area;
- no. 1 places for the Economic-Legal area.

Information: https://dottorati.unicatt.it/agrisystem

## Calendar of examinations:

Result of the evaluations of qualifications to access the oral exam:

- Monday, September 25<sup>th</sup>, 2023.

## Oral exam:

Economic-Legal area panel:

- Thursday, September 28<sup>th</sup>, 2023, 10:00 a.m. (Law department meeting room).

Biological-Agricultural area panel:

- Thursday, September 28<sup>th</sup>, 2023, 9.00 a.m. (room 12);
- Friday, September 29<sup>th</sup>, 2023, 9.00 a.m. (room Consiglio).



## Art. 2 Scholarships ex mm.dd. 117/23 e 118/23

As reported an article 1, scholarship pursuant to mm. dd. 117/23 and 118/23 (from the National Recovery and Resilience Programme – PNRR) are detailed in Annex *sub* 1.

The availability of scholarships depends on the following types:

- m.d. 118/23: scholarships for the development of research on digital and environmental transition issues, on PNRR topics (digitisation, innovation, competitiveness, culture and tourism; green revolution and ecological transition; sustainable mobility; education and research; inclusion and cohesion; health), within the public administration, on cultural heritage issues;
- m.d. 117/23: scholarships envisaged within innovative PhD pathways, responding to the innovation needs of the companies and regional territories concerned.

Candidates who are awarded scholarships pursuant to m.d. 118/23, undertake to:

- spend periods of study and research in companies or research centres of a minimum of 6 months and a maximum of 12 months (except for programmes on PNRR topics, m.d. 118/23, Art. 7);
- spend periods of study and research abroad of a minimum of 6 months and a maximum of 18 months. The period may be extended up to a maximum to 18 months pursuant to Art. 9, para. 3 of Ministerial Decree 226/21.

Candidates who are awarded scholarships pursuant to m.d. 117/23, undertake to:

- spend study and research periods in companies or research centres of a minimum of 6 months and a maximum of 18 months;
- spend periods of study and research abroad of a minimum of 6 months and a maximum of 18 months. The period may be extended up to a maximum to 18 months pursuant to Art. 9, para. 3 of Ministerial Decree 226/21.

#### Art. 3

## **Admission requirements**

PhD programmes are open, without age or nationality restrictions, to those who hold a specialised or graduate degree, or a degree awarded in accordance with the educational regulations prior to the entry into force of Italian Ministerial Decree, of 3 November 1999, No 509, as amended and supplemented, or a suitable foreign qualification.



Applications may also be submitted by those who will obtain the above mention qualification, in Italy or abroad, referred to in the first paragraph by October 31<sup>st</sup>, 2023.

### Art. 4

## **Application form**

Candidates who intend to participate in the competition must submit an application to the Rector of Università Cattolica del Sacro Cuore by Thursday, September 14<sup>th</sup> 2023.

The application form is available online at <a href="https://dottorati.unicatt.it/concorsi">https://dottorati.unicatt.it/concorsi</a> until 12.00 p.m. (local time) on the expiration date of the present public announcement.

In the application form, to be filled in online only, available in Italian and English, candidates shall precisely declare under their responsibility:

- which finalized scholarship or favourite research area they intend to compete for;
- the intention to compete only for a place without a scholarship;
- their personal information: surname, first name, fiscal code (for Italian nationals only), date and place of birth, citizenship, residence and domicile elected for the purposes of the competition;
- for graduate students: university degree, date it was obtained and name of the conferring university;
- for undergraduate students: university degree, candidates are studying towards, expected date it will be obtained and name of the conferring university (whether in Italy or abroad);
- foreign languages known.

On pain of exclusion, candidates must complete their application with the following documents – upload format .pdf or .jpg:

- detailed curriculum vitae (only English version);
- for graduate students: a copy of the Master's degree document with final mark and exam transcripts, and exam transcripts (Italian or English version);
- undergraduates: certified proof of enrolment a Master's degree programmes with exam transcripts (Italian or English version);
- a motivational letter, only English version (max. 30 lines), indicating reasons for application, expectations and fields of interest;
- a research project, only English version (max. 2,000 words), indicating topic, hypotheses and methodology deemed most suitable for the development of a research project in the selected curriculum. The project must be countersigned by a university professor or researcher in national or international scientific institutions. In the



absence of countersignature, a letter of introduction, only English version, by university professors or researchers in national or international scientific institutions has to be included in the application;

- copy of an identification document, duly signed;
- card-size photograph;
- for students with a qualification obtained or to be obtained abroad in NON-EU countries: translation, legalisation and Declaration of Value required at the offices of the Italian Consulate/Embassy in the country where the qualification was obtained or will be obtained. EU students may submit the Diploma Supplement of their home university as an alternative to the Declaration of Value.

Applications may further contain – upload format .pdf or .jpg:

- certification of any other qualification, such as postgraduate and specialisation degrees, obtained in Italy or abroad, with exam transcripts;
- a copy of any other qualification deemed useful for the purposes of assessment, and a list thereof on unstamped paper;
- a list, on unstamped paper, of publications deemed relevant for the purposes of assessment, and a copy of the publications that candidates intend to make known to the Panel.

Applications may further contain any of the following certificates attesting English language knowledge:

- BEC (Business English Certificates);
- British Chamber of Commerce:
- CAE (Certificate in Advanced English);
- CPE (Certificate of Proficiency in English);
- IELTS (International English Language Testing System);
- TOEFL (Test of English as a Foreign Language).

The application will only be complete and valid after:

- having uploaded all mandatory documents and any optional documents;
- having paid the selection fee of € 100.00 (non-refundable) to be paid *online*;
- downloading the application file, which will be generated automatically by the system;
- uploading the .pdf file of the application itself on the portal.

Applicants are asked to confirm what they have submitted at each step by clicking on the 'continue' icon, at the bottom right corner.

As proof of the validity of the application, the candidate will receive a confirmation *e-mail* from the PhD Office.



In the event of non-receipt of the *e-mail*, the candidate will have to log back into the portal to complete the procedure and finalise the application.

The University reserves the right to adopt, even after the competition examinations have been held, measures for the exclusion of candidates who do not meet the requirements or who have not complied with the provisions of the notice of competition.

Applicants with disabilities, for the purposes of the competition, must specify in their application the aid required in relation to their disability, pursuant to Italian Law No. 104 of 5 February 1992.

### Art. 5

## Admission to PhD programmes

The admission examinations consist in the assessment of candidates' qualifications and an oral examination.

In relation to the qualities ascertained, the Panels assign each candidate max. 60 points for each of the two examinations.

Only candidates obtaining a minimum score of 40/60 in the assessment of qualifications are admitted to the oral examination.

For this purpose, the following elements will be evaluated:

- degree relevant to the areas relating to the doctorate, degree mark or average marks for undergraduates at the time of evaluation of qualifications, achievement of masters degrees, participation in higher education university courses, internships and traineeships consistent with the chosen research address, research grants and scholarships, publications in national and international journals relating to the agrofood sector, work and collaboration experiences in applied research at universities and public or private bodies (score up to 30/60);
- research project, motivational letter and certifications related to the knowledge of the English language as per the previous art. 4 (score up to 30/60).

The oral examination consists in the assessment of candidates' knowledge of the general aspects of the topics of interest of the PhD Programme and research area chosen, as well as aptitude to scientific research.

The oral examination is passed with a minimum score of 40/60.

The interview in English will take place in person at the Piacenza campus in Via Emilia Parmense 84.

Candidates unable to take the oral exam at the Piacenza campus may request, by the deadline of the competition, to sit the oral exam through Microsoft Teams, by sending an e-mail to agrisystem-pc@unicatt.it explaining the request.

The candidate can be excluded if not available found on the agreed day and time.



Università Cattolica del Sacro Cuore shall bear no responsibility if any technical reasons prevent the effective conduction of the interview.

Candidates are admitted to the PhD Programme according to the two final merit-based ranking lists of each Research Area, until coverage of the number of positions opened has been completed, with the exclusion of the positions funded by «finalized scholarships» for which dedicated merit-based ranking lists shall be drawn.

Candidates applying for a «finalized scholarship» who result to be eligible but do not win the competition, will be inserted, based on their scoring, in the general ranking list of their reference area, so as to compete for other scholarships or for a position without scolarship.

The "finalized scholarships" may not be assigned to candidates competing for positions different from those related to the finalized scholarship.

The non-finalized scholarships and the positions without scholarship that, for lack of eligible candidates or due to forfeiture, are not assigned in a Research Area, may be assigned to candidates of the other Research Area based on their ranking.

In order to be allowed to take the examinations, candidates must show a valid identification document pursuant to Art. 35, second Paragraph, of Presidential Decree no. 445 of December 28<sup>th</sup>, 2000 (identity card, driving license, passport).

#### Art. 6

#### **Examination Panels**

Two Examination Panels for admission to the PhD Programme in Agro-Food System shall be appointed: one for the Biological-Agricultural Area and one for the Economic-Legal Area. Each Examination Panel will consist of three tenured academics, to whom no more than two (also foreign) experts from institutions and public and private research institutes may be added. The Examination Panels shall be appointed by the Rector, upon the proposal of the Teaching Panel.

The composition of the Panels will be published, after the expiration date of the present public announcement, at <a href="https://dottorati.unicatt.it/examination-board">https://dottorati.unicatt.it/examination-board</a>

### Art. 7

## **Results of the competition**

The Examination Panels shall arrange separate comparative evaluations of qualifications and separate final merit rankings. Specific comparative evaluations and merit rankings shall be arranged for each "finalized scholarship".



The results of the evaluation of the qualifications for admission to the oral exam shall be notified to participants from **Monday**, **September 25**<sup>th</sup>, **2023**, via online publication at:

https://dottorati.unicatt.it/results

https://dottorati.unicatt.it/agrisystem

#### Art. 8

## Admission to the PhD Programme

Candidates are admitted to the PhD Programme according to their ranking until coverage of the number of positions has been completed. Should successful candidates withdraw before the beginning of the Programme, the positions will be covered by the candidates next in line in the ranking.

Provided that they are successful in the admission examinations, research fellows holding grants may be admitted to a PhD Programme as supernumerary in the positions without scholarship, retaining their grant, upon condition that the PhD Programme in which they enroll refers to the same scientific area of research for which they are enjoying their grants.

By virtue of the signed agreement, the doctoral students in the Ph.D. Programme will have the opportunity to join the "Double Doctorate Programme" in Agro-Food System organised by Università Cattolica del Sacro Cuore, and in Ciencias de Recursos Naturales organised by Universidad de La Frontera (Temuco, Chile). Students admitted to the "Double Doctorate Programme" will receive advanced training through the teaching programme of Dottorado y Magíster en Ciencias de Recursos Naturales of Universidad de La Frontera, and they will have to spend at least six months at this university.

#### Art. 9

## **Enrolment**

The winners of the competition must complete enrolment within 5 days starting from the day following the one in which the related email with the invitation will be received, by accessing the following website: <a href="https://iscrizioni.unicatt.it/iscrizioni/">https://iscrizioni.unicatt.it/iscrizioni/</a>

To obtain a Visa, applicants, after completing the registration procedure, must register on the following website: <a href="www.universitaly.it">www.universitaly.it</a> and follow the indicated procedure.



#### **Art. 10**

## Scholarships and contributions

Tuition fees for the Programme at Università Cattolica del Sacro Cuore are set out annually by the Board of Directors.

PhD students are required to pay tuition fees annually amounting to  $\in$  1.516,00, to be paid into three instalments: the first (of  $\in$  516.00) upon enrolment, the second (of  $\in$  500.00) by February 28<sup>th</sup>, and the third (of  $\in$  500.00) on June 30<sup>th</sup> each year.

For Italian Law, the enjoyment of a scholarship to attend the PhD Programme is compatible with other income earned, also on a regular basis, in the calendar year of the scholarship, provided that such income does not exceed the amount of the scholarship itself. Should these income limits be surpassed, the scholarship shall be revoked for the year in question. For the verification of the income limits, scholarship assignees shall annually declare the income earned and notify exceeding of the prescribed limit.

Scholarships are awarded for one year and are renewed on condition that the PhD student has completed the programme of activities planned for the previous year.

The amount of the scholarship, paid in monthly instalments, is € 16,243.00 per year, before social security charges. The scholarship is subjected to the payment of social security contributions (INPS separate management) pursuant to Art. 2, Paragraph 26, of the Italian Law 335 dated of August 8<sup>th</sup>, 1995, and subsequent amendments. The scholarship is exempt from local income tax and personal income tax (IRPEF).

The scholarship amount shall be increased by max. 50 percent, for a period not over 12 months, if the PhD student is authorised by the Teaching Panel to conduct research abroad.

Starting from the first year, to each PhD student, with or without a scholarship, is granted a sum covering research activities in Italy and abroad amounting to 10% of the annual gross amount of the scholarship, equal to 0.44.

Those who have previously, even partially for another PhD course, benefited from it may not be eligible for a doctorate scholarship.

### **Art. 11**

### **Public employees**

Current legislation on leave of absence or special leave applies to public employees admitted to the PhD Programme.



### **Art. 12**

### Rights and duties of PhD students

PhD students are required to regularly follow the activities envisaged for their training and to devote themselves with full commitment to individual and guided study programmes and to carrying out the research activities assigned by the Board of Professors. PhD students are also required to read the Code of Ethics of Università Cattolica and to respect its principles and aims.

### **Art. 13**

#### **Public disclosure**

This public announcement is published on the website of Università Cattolica del Sacro Cuore at <a href="https://dottorati.unicatt.it/concorsi">https://dottorati.unicatt.it/concorsi</a> on the Euraxess European website and on the Ministry of Universities and Research website.

#### Art. 14

### **Final provisions**

This public announcement was originally written in Italian and has been translated into English for easy reference only. The Italian version will be considered definitive for any questions of interpretation.

For all matters not expressly provided for in this notice, the provisions of Rector's Decree No. 8347 of 16 February 2022 shall apply: "Amendments to the 'Regulations for PhD programmes and PhD schools at Università Cattolica del Sacro Cuore'" and current regulations.

Further information can be obtained from the PhD Programmes Secretariat (office hours: Monday to Friday from 9.00 am to 12.30 pm), phone no. + 39 0523 599.476 / 493, or at agrisystem-pc@unicatt.it or at https://dottorati.unicatt.it/agrisystem.

The person in charge of the procedure for this call for applications is Dr Roberto BRAMBILLA, Director of Postgraduate Education and Research Partnership, Via Carducci 28/30, Milan (Italy).













## ANNEX sub. 1 Rectoral decree No. 10124 of 29<sup>th</sup> June 2023

Allocation of resources under the National Recovery and Resilience Plan (PNRR) to accredited pathways in the 39<sup>th</sup> cycle

As regards the public competition for the PhD program in the Agro-Food System of Università Cattolica del Sacro Cuore – Piacenza Campus, resources provided by the National Recovery and Resilience Plan (PNRR) are available for the following PhD program:

## PhD Programme in the AGRO-FOOD SYSTEM

(Coordinator: Prof. Paolo AJMONE MARSAN)

Duration: 3 years

## Places with scholarship pursuant to Ministerial Decree 118/23 (CUP J53C23001290001):

- no. 1 scholarship for the realisation of the research project on "Integrating plant biostimulants to increase resilience and sustainability in crops" under the topic "Digital and environmental transitions";
- no. 1 scholarship for the realisation of the research project on "Ecological and digital transition in the vineyard" under the topic "Digital and environmental transitions".

## Places with scholarship pursuant to Ministerial Decree 118/23 (CUP J53C23001300001):

- no. 1 scholarship for the realisation of the research project on "The administrative system and the function of taxation for the diffusion of medium and large agro-voltaic plants", under the topic "Public Administration".

# Places with scholarship pursuant to m.d. 117/23 (CUP J53C23001480008):

- no. 1 scholarship for the realisation of the research project on "Development of technics and technologies for sustainable food productions", co-financed by Capitelli F.lli Srl, Borgonovo Val Tidone (Pc);
- no. 1 scholarship for the realisation of the research project on "Evaluation of antimicrobial properties of natural botanical extracts in food application", co-financed by Layn Europe Srl, Savona;

- no. 1 scholarship for the realisation of the research project on "Development of botanical extracts to replace synthetic preservatives in dressings", co-financed by Layn Europe Srl, Savona;
- no. 1 scholarship for the realisation of the research project on "Mitigation of greenhouse gas and ammonia emissions of dairy farms with feeding strategies and manure treatments", co-financed by SOP Srl Società Benefit, Busto Arsizio (Va);
- no. 1 scholarship for the realisation of the research project on "Study of natural composts able to elicitate defense responses in agricultural crops", co-financed by UPL Italia srl, Cesena (Fc);
- no. 1 scholarship for the realisation of the research project on "Agro-ecological Improvements applied to integrated crops and animal husbandry in the Po Valley", co-financed by Pioneer Hi-Bred Italia Srl, Gadesco Pieve Delmona (Cr);
- no. 1 scholarship for the realisation of the research project on "Winter and spring cold hardiness in Hazelnut", co-financed by Ferrero Trading Lux S.A., Senningerberg (Luxembourg);
- no. 1 scholarship for the realisation of the research project on "Factors affecting the development and the commercialization of biopesticides in selected countries in Africa and the Middle East", co-financed by CropLife Africa Middle-East AISBL, Brussels;
- no. 1 scholarship for the realisation of the research project on "Development of the digital technology Block Chain for the agri-food companies", co-financed by EZ Lab srl, Padova;
- no. 1 scholarship for the realisation of the research project on "Circular Economy in the fruit and vegetable foodchain", co-financed by CE.DI.OR. srl, Milano;
- no. 1 scholarship for the realisation of the research project on "Identifying new materials and microorganisms displaying plant biostimulant activity: integration of agronomic and omic approaches", co-financed by ISA Innovations for Sustainable Agriculture R&D srl, Pavia.

