

PERSONAL INFORMATION

Stefano Pallotti



WORK EXPERIENCE

February 2020 – January 2022

Technical support in the estimation of breeding values for the genetic improvement project "Alashan Super-fine white Cashmere goat". Alashan, Inner Mongolia (China)

Academic year 2020 - 2021

PROFESSORE A CONTRATTO (professor on contract) Genetics and animal breeding (VE0007 - ZOOTECNICA GENERALE e MIGLIORAMENTO GENETICO). Anno Accademico 2020/2021 Corso: [LM-MV] MEDICINA VETERINARIA Percorso [PDS0-2017 - Ord. 2017] comune.

February 2020 – January 2022

Postdoctoral Researcher - School of Pharmacy - University of Camerino Via Gentile III Da Varano s/n 62032 - Camerino (MC) Italy
Topic: Study of the role of R-Spondin1,2,3,4 genes in telogen-to-anagen transition in cashmere goat skin biopsies and hair follicles.

January 2018 – June 2018

Research activity: Study of the candidate genes for the suri phenotype in alpaca (*Vicugna pacos*).

School of Bioscience and Veterinary Medicine, University of Camerino
Via Gentile III Da Varano, 62032 - Camerino (Italy)
Head of research team: Prof. Carlo Renieri

- Molecular biology research: isolation of DNA, RNA and proteins from various biological sources, primers design, gene cloning and plasmid extraction, RNA reverse transcription, PCR, RT-PCR, 5' and 3' RACE-PCR, qPCR, DNA gel electrophoresis cDNA library preparation, Western-blotting analysis. Bioinformatic analysis of the nucleotide sequences.

January 2018 – May 2018

Research activity: Monitoring of the tenso-structures in the Upper Maceratese farms affected by the 2016 earthquake.

School of Bioscience and Veterinary Medicine, University of Camerino
Via Gentile III Da Varano, 62032 - Camerino (Italy)
Head of research team: Prof. Annette Habluetzel

- Animal health check, quantification of parasite burden, tenso-structures state check, interviews breeders.

March 2018 – April 2018

Coordinator for the rural development project: "Hemp network: hemp multipurpose in the agriculture no food field."

School of Bioscience and Veterinary Medicine, University of Camerino
Via Gentile III Da Varano, 62032 - Camerino (Italy)

December 2013 – February
2018

Veterinary physician

"Del Leone" Veterinary Ambulatory
Viale Giacomo Leopardi, 59, 62032 Camerino (Italy)

- Internal medicine of small animals, exotic animals and unconventional animals (rodents and reptiles)

EDUCATION AND
TRAINING

February 2022 **Internship****SYNBIOTECH, Camerino (MC), Italy**

Training in genomic techniques: genomic library construction and illumina sequencing

March 2019 – April 2019

Technical management of the research project "Alashan Cashmere goat".
Alashan, Inner Mongolia (China)October 2018^a and October
2020^b**Nomination "Cultore della Materia"** (Subject Expert and Teaching Assistant) in "s.s.d. ^aAGR/17: Zootecnica generale e miglioramento genetico" (Genetics and animal breeding) and "s.s.d. ^bVET/06 – Parassitologia e malattie parassitarie degli animali (Veterinary parasitology and Parasitic Diseases)

School of Bioscience and Veterinary Medicine - University of Camerino (Italy)

Nov. 2014 - December 2017

PhD in LIFE AND HEALTH SCIENCES: ECOSYSTEMS AND BIODIVERSITY MANAGEMENT

International School of Advanced Studies - University of Camerino (Italy)

Thesis Title: Genetic of coat variation in alpaca, dog and cashmere goat: an approach by molecular, population and quantitative genetics studies.

Vote: Very Good

February 2017 – May 2017

Internship

NordGen institute, Ås (Norway)

Training in genomic techniques: use of high density 600K SNP genotyping array for chicken in order to carried out runs of homozygosity in five Norwegian laying hens breeds.

November 2013

Veterinary License

School of Bioscience and Veterinary Medicine - University of Camerino (Italy)

October 2013

Master degree in Veterinary Medicine

School of Bioscience and Veterinary Medicine - University of Camerino (Italy)

Thesis Title: Genetic improvement of fiber production in the Inner Mongolia Cashmere Goat.

Vote: 102/110

September 2010 – September
2011**Erasmus project**

Facultad de Veterinaria UNEX , Avda. de la Universidad s/n, 10003 Cáceres (Spain).

July 2005

High school diploma (classical studies)

Liceo Classico "Costanza Varano" - Camerino (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)
Self-assessment

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C1 | C2 | C2 | C1 | C2 |
| Spanish | C1 | C2 | C2 | C1 | C1 |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user Common European Framework of Reference for Languages

Communication skills

During my PhD and post-doctoral experiences I gained good communication skills through lectures, seminars, writing papers and training more junior people.

Organizational / managerial skills

In June, 2017 I was one of the main organizer for the 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals.
In 2018 I was coordinator for the rural development project: "Hemp network: hemp multipurpose in the agriculture no food field."

Job-related skills

- **Molecular biology techniques:**
Isolation of DNA, RNA and proteins from various biological sources, primers design, gene cloning and plasmid extraction, RNA reverse transcription, PCR, RT-PCR, 5' and 3' RACE-PCR, qPCR, DNA gel electrophoresis cDNA library preparation, Western-blotting analysis. Bioinformatic analysis of the nucleotide sequences.
- **Genomics and bioinformatics:**
Good competences in the WGS analysis through the use of the main softwares such as Plink, SRAtoolkit, Samtools, IGV, GATK, SnpEff
- **Estimation of breeding values (EBV):**
Good competences in the estimation of breeding values through the use of the main softwares: MTDFREML and WOMBAT.
- **Genetics, genomics and population genetics** software:
(please see the software listed below in the "Digital skills" section)
- Good competences in **breeding, clinic and diagnostic techniques** including those applied for the identification of parasitic infections in small animals, exotic animals and unconventional animals (rodents and reptiles).
- Excellent skills in microlivestock breeding and reproduction: mainly terrestrial invertebrates (cockroaches, grasshoppers, crickets, reduviidae, beetles, phasmids, arachnids, ants, mealworm...). Owner of a small breeding of such species.
- Good competences in collection, classification and preparation of insects and arachnids specimen.
- Good skills in safely handling of poisonous insects and arachnids.

Digital skills

| SELF-ASSESSMENT | | | | |
|------------------------|-----------------|------------------|-----------------|-----------------|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Proficient user | Proficient user | Proficient user | Proficient user | Proficient user |

Levels: Basic user - Independent user - Proficient user

Digital competences - Self-assessment grid

▪ Operating system:

Excellent skills with Windows os., Mac os. and Unix o.s.

▪ General software and Genetic analysis software:

Microsoft office package; Geospiza FinchTV; GenAlEx; Excel microsatellite toolkit; PHYLIP software; STRUCTURE; Endog 4.8; GENEPOP.; ARLEQUIN; Plink software; R studio ; Admixture; SRAToolkit; Samtools; IGV; GATK; SnpEff; MTDFREML; WOMBAT.

Driving licence B

ADDITIONAL INFORMATION

Publications

- Huang, J., Liang, Z. S., **Pallotti, S.**, Ranson, J. M., Llewellyn, D. J., Zheng, Z. J., King, D. A., Zhou, Q., Zheng, H., & Napolioni, V. (2021). PAGEANT: personal access to genome and analysis of natural traits. *Nucleic acids research*, gkab1245. Advance online publication. <https://doi.org/10.1093/nar/gkab1245>.
- Napolioni, V., Bianconi, F., Potenza, R., Carpi, F. M., Ludovini, V., Picciolini, M., Tofanetti, F.R., Bufalari, A., **Pallotti, S.**, ... & Vannucci, J. (2021). Genome-wide expression of the residual lung reacting to experimental Pneumonectomy. *BMC genomics*, 22(1), 1-15. DOI: 10.1186/s12864-021-08171-3
- Saravanaperumal, S. A., **Pallotti, S.**, Pediconi, D., Renieri, C., & La Terza, A. (2021). Exon-1 skipping and intron-1 retaining by alternative splicing of the c-KIT gene encodes a novel splice variant in the skin of Merino sheep (*Ovis aries*). *Molecular Biology Reports*, 48(5), 4987-4994. <https://doi.org/10.1007/s11033-021-06486-8>
- Huang J., **Pallotti S.**, Zhou Q., Kleber M., Xin X., King D., Napolioni V.
PERHAPS: Paired-End short Reads-based HAPlotyping from next-generation Sequencing data.
Briefings in Bioinformatics, 2020 Dec 8:bbaa320. doi: 10.1093/bib/bbaa320. Epub ahead of print. PMID: 33285565.
- Pallotti S.**, Chandramohan B., Pediconi D., Nocelli C., La Terza A., Renieri C.
Interaction between the Melanocortin 1 Receptor (MC1R) and Agouti Signaling Protein Genes (ASIP), and their association with black and brown coat color phenotypes in Peruvian alpaca.
Italian Journal of Animal Science, 19:1,1508-1512, DOI: 10.1080/1828051X.2020.1850216
- Pallotti, S.**, Pacheco, C., Valbonesi, A., & Antonini, M. (2020). A comparison of quality of the fleece and follicular activity between sheared and non-sheared yearling alpacas (*Vicugna pacos*). *Small Ruminant Research*, 106243.
- Pallotti, S.**, Riganelli, S., Antonini, S., Valbonesi, A., & Renieri, C. (2020). Estimates of non- genetic effects for measures of hunting performance in short-haired and rough-haired Italian hound. *Italian Journal of Animal Science*, 19(1), 439-446.
- Pallotti, S.**, Valbonesi, A., Yujie, L., Jiyuan, Y., Peirong, T., & Antonini, M. (2020). Postnatal development of the skin follicle population in the chinese alashan left banner white cashmere goat. *Small Ruminant Research*, 106087.
- Pallotti, S.**, Valbonesi, A., Yujie, L., Peirong, T., Sarti, F. M., Mancinelli, A. C., & Antonini, M. (2020). Changes in fleece characteristics of yearling Chinese Alashan Left Banner White Cashmere goat. *Small Ruminant Research*, 182, 1-4.
- Pazzaglia, I., Mercati, F., Antonini, M., Capomaccio, S., Cappelli, K., Dall'Aglio, C., ... **Pallotti, S.**, Pediconi, D., & Renieri, C. (2019). PDGFA in Cashmere Goat: A Motivation for the Hair Follicle Stem Cells to Activate. *Animals*, 9(2), 38.
- Esposti, R., Habluetzel, A., Matricardi, G., **Pallotti, S.** (2019) Dai pascoli alla tavola. la redditività della filiera zootecnica locale, tra differenziazione e diversificazione, in: NUOVI SENTIERI DI SVILUPPO PER L'APPENNINO MARCHIGIANO DOPO IL SISMA DEL 2016, *Ancona*. ISSN 1721-5269; ISBN 978 88 3280 083 8
- Pallotti, S.**, Pediconi, D., Subramanian, D., Molina, M. G., Antonini, M., Morelli, M. B., ... & La Terza, A. (2018). Evidence of post-transcriptional readthrough regulation in FGF5 gene of alpaca. *Gene*. DOI: 10.1016/j.gene.2018.01.006
- Pallotti, S.**, La Terza, A., De Cosmo, A., Pediconi, D., Pazzaglia, I., Nocelli, C., & Renieri, C. (2017). Genetic variability of the short-haired and rough-haired Segugio Italiano dog breeds and their genetic distance from the other related Segugio breeds. *Italian Journal of Animal Science*. DOI: 10.1080/1828051X.2017.1317221
- Pallotti, S.**, Wang, J., Tang, P., Antonini, M., Lou, Y., Pieramati, C., Valbonesi, A., & Renieri, C. (2017). Variability of fibre quality on Chinese Alashan Left Banner White Cashmere goat. *Italian Journal of Animal Science*. DOI: 10.1080/1828051X.2017.1350121

Peer reviewer for:

Frontiers in Genetics - Livestock Genomics

BioTechniques

Journal of Agricultural Science and Technology (Tarbiat Modares University, Faculty of Agriculture)

Scientific Reports

Presentations and Conferences

Seminar speaker: INTRODUCTION TO DOG GENOMICS.

Veterinary Medicine Department- School of Bioscience and Veterinary Medicine – University of Camerino (February 12, 2021).

Seminar speaker: POPULATION GENETICS IN DOG.

Veterinary Medicine Department- School of Bioscience and Veterinary Medicine – University of Camerino (May 31, 2018).

LOCAL ORGANIZERS for 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals.

Assisi, Italy (June 2017).

BIOLOGY AND GENETICS OF THE DOG'S COAT: COLOR AND STRUCTURE.

Theatre presentations: *inheritance of the color of the coat*.

Carried out in Chiaravalle(Italy), Auditorium Croce Gialla - via F.Ili Cervi, 1/A on 06 september 2014

GENETICS AND CLINIC OF THE DOG

Theatre presentation: *Genetic variability of the Segugio Italiano*.

carried out in Abitalia Tower Plaza Hotel - San Rossore – PISA (Italy) on 03 june 2016

Conference papers

Pallotti S., Pediconi D., Subramanian D., Molina M.G., Antonini M., Renieri C. and Laterza A.

Molecular characterization of fibroblast growth factor 5 (fgf5) gene in alpaca.

Book of Abstracts of the 66th Annual Meeting of the European Federation of Animal Science (2015) – 21, 396.

DOI: 10.3920/978-90-8686-816-2

Pallotti S., De Cosmo A. M., La Terza A., Pediconi D., Pazzaglia I., Nocelli C., Gubbiotti M. and Renieri C.

Genetic variability of the short-haired and long-haired Segugio Italiano.

Book of Abstracts of the 67th Annual Meeting of the European Federation of Animal Science (2016) – 22, 595.

DOI: 10.3920/978-90-8686-830-8

Pallotti S., Pediconi D., Dharaneedharan Subramanian, Molina M.G., Antonini M., Renieri C., La Terza A.

Alpaca FGF5: Post-transcriptional Readthrough regulation in Skin Biopsies.

Book of abstracts of the 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals (June 2017) – 59.

Pallotti S., Wang J., Tang P., Antonini M., Lou Y., Pieramati C., Valbonesi A., Renieri C.

Variability of fiber quality on Chinese Alashan Left Banner White cashmere goat.

Book of abstracts of the 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals (June 2017) – 62.

Pazzaglia I., Mercati F., Antonini M., La Terza A., Nocelli C., Pallotti S., Pediconi D., Renieri C.

Genetic basis of early activation of hair follicle in cashmere goat: an approach with candidate genes.

Book of abstracts of the 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals (June 2017) – 73.

Chandramohan B., Nocelli C., Pazzaglia I., **Pallotti S.**, Pediconi D., La Terza A., Renieri C.

Interaction of ASP and MC1R in black and brown alpaca.

Book of abstracts of the 7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals (June 2017) – 58

Poster

Pallotti S., Pediconi D., Subramanian D., Molina M.G., Antonini M., Renieri C. and Laterza A.
Molecular characterization of fibroblast growth factor 5 (fgf5) gene in alpaca.
66th Annual Meeting of the European Federation of Animal Science (2015). Warsaw, Poland .

Pallotti S., De Cosmo A. M., La Terza A., Pediconi D., Pazzaglia I., Nocelli C., Gubbiotti M. and Renieri C.
Genetic variability of the short-haired and long-haired Segugio Italiano.
67th Annual Meeting of the European Federation of Animal Science (2016) Belfast, U.K.

Pallotti S., Pediconi D., Dharaneedharan Subramanian, Molina M.G., Antonini M., Renieri C., La Terza A.
Alpaca FGF5: Post-transcriptional Readthrough regulation in Skin Biopsies.
7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals
(June, 2017). Assisi, Italy.

Pallotti S., Wang J., Tang P., Antonini M., Lou Y., Pieramati C., Valbonesi A., Renieri C.
Variability of fiber quality on Chinese Alashan Left Banner White cashmere goat.
7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals
(June, 2017). Assisi, Italy

Chandramohan B., Nocelli C., Pazzaglia I., Pallotti S., Pediconi D., La Terza A., Renieri C.
Interaction of ASP and MC1R in black and brown alpaca.
7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals
(June, 2017). Assisi, Italy.

Pazzaglia I., Mercati F., Antonini M., La Terza A., Nocelli C., Pallotti S., Pediconi D., Renieri C.
Genetic basis of early activation of hair follicle in cashmere goat: an approach with candidate genes.
7th European Symposium on South American Camelids and 3rd European Meeting on Fibre Animals
(June, 2017). Assisi, Italy.

Memberships

ASPA - Associazione per la Scienza e le Produzioni Animali (2021) (Animal Science and Production Association)
SIVAE - Società Italiana Veterinari Animali Esotici (2017) (Italian Exotic Animal Veterinary Association)
SCIVAC - Società Culturale Italiana Veterinari per Animali da Compagnia (2017) (Italian Companion Animal Veterinary Association)
SIVAR - Società Italiana Veterinari Animali da Reddito (2017) (Italian Large Animal Veterinary Association)
EAAP - European federation of animal science (2016)

Courses and workshop

ADVANCED COURSE OF STATISTICAL ANALYSIS FOR LIVESTOCK SCIENCE A.S.P.A.(Scientific Association of Animal Production).
Carried out in Environmental and Agricultural Science Department of Pisa University, Pisa (Italy), from 06 february to 10 february, 2017

Workshop: Communication, Collaboration, and Career Readiness.
Carried out at School of Advanced Studies - University of Camerino, May 22 to 25, 2017

STATISTICS AND DATA MANAGEMENT
Carried out at School of Advanced Studies - University of Camerino, from October 3 to 6, 2016

Genetic analysis of population structure using ENDOG programme.
carried out in School of Bioscience and Veterinary Medicine - University of Camerino, May 13, 2016.

Horizon 2020: workshop for young researchers
carried out at University of Camerino april 01,2016

BASIC COURSE OF STATISTICAL ANALYSIS FOR LIVESTOCK SCIENCE A.S.P.A.(Scientific Association of Animal Production).
Carried out in Environmental and Agricultural Science Department of Pisa University, Pisa (Italy), from 14 september to 18 september 2015

Seminars attended
2015 - 2017

Computer modeling of RNA structures and their biological functions
Construction and functional evaluation of a shuttle plasmid vector for Lactococcus lactis delivery genes into mammalian cells
My Genomics in Unicam.
DNA G-Quadruplexes: From Nucleic Acid Aptamers to Highly Ordered Supramolecular Structures.
The molecular genetics of hereditary colorectal cancers: a growing complexity.
Functional role of physical exercise on reactivation of adult neural stem cells.
Entomology seminars.
Traditional Medicine in Tanzania: The role of research to assure effective and safe practices in human and animal health care
How to present scientific results to the general public
How to write a scientific article for the general public
English for writing research papers.
How to get published.
Comportamento citazionale e valutazione della ricerca.
Proprietà intellettuale e comunicazione scientifica nella società dell'informazione.

Other academic contributions

CO-SUPERVISOR FOR THE MASTER DEGREE THESIS: "Inheritance of Suri in Alpaca"
Course: Master degree in Veterinary Medicine
candidate: Andrea Pio Sollazzo.
Supervisor: Prof. Carlo Renieri
academic year 2016/2017

Training of more junior people in the molecular biology laboratory.

Date and Signature

28/03/2022