

Dr. Haleema Sadia

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Areas of competence

I have a good background of Chemistry, Molecular/Cellular Biology, Gene expression and especially Genetics. I have competence with the modern chemistry and molecular biology techniques like, Spectrophotometry, Potentiometry, ELISA, DNA fingerprinting, PCR, Sequencing and Genotyping, RT PCR, Cloning, Immunohistochemistry and Phylogenetics.

Lab Experience

- ❖ Genotyping and Sequencing
- ❖ **Have three years experience to operate all latest Genetic Analyzers (ABI, 3100, 3730) with latest software of Sequencing and Genotyping (Gene mapper, V4.0).**
- ❖ Have two years' experience of commercial Sequencing and Genotyping and provided this facility to different Research Institutes of Pakistan.
- ❖ Complete analysis of poultry diet, including, Fat / Oil, Ash Moisture, Fiber, Protein, Protein Solubility In KOH, Crude Protein, Pepsin Digestible Protein, Type and Size of Charge on Amino Acids (Alanine, Aspartic Acid and Lysine), Fractionation of serum proteins by electrophoresis and Molecular Energy of a sample.
- ❖ **Cation, anion and element analysis:**
Silica, Salt, Cellulose, Lignin, copper, iron Calcium, Zinc, Manganese, NH₃, Urea, Chlorine, Cynide in fodder Sample, Phosphorous and available Phosphorous in feed., Determination of lamda max of a given solution, Urease activity of products derived from Soya bean, Moisture percentage in Molasses, Vit-C in a given solution.

Instrumentation Skills:

Jieldal Apparatus, Dean and stark assembly, Flame Photometer, pH meter, Conductometer, Spectrophotometer, Polarimeter, Soxhator, Sequencer (ABI), Real time PCR machines (Bio Rad) like, Miniopticon and T100 Thermal Cycler, EZ Imaging system, Criterion Cell, Transblot turbo system, Protean xi XL System, Mini Protean Tetra cell, TC 10 cell counter (Bio Rad) and Rotor gene 6000, Real Time PCR machine (Corbett Life Science) and other basic tools to assist in analysis and preparation of samples related to chemistry and molecular biology.

Molecular Biology Skills:

DNA & RNA isolation and purification, Standard PCR & its various modifications, Gene expression by Real Time PCR. Multiplex PCR, DNA sequencing, DNA and protein homology analysis, Western/Northern/Southern blotting, Agarose & Polyacrylamide gel electrophoresis (PAGE) and image documentation, Single strand confirmation polymorphism (SSCP), ELISA, Spectrophotometry and HCV diagnostics.

Bioinformatics and Computer Skills:

Genotyping data analysis by GeneScan & Genotyper Softwares, Chromas, BLAST, Multiple Alignment Clustal W, Primer Designing by Primer 3, Oligo calci, POPGENE , Bio Edit , Swiss prot, Neb cutter, MEGA , CLC Sequence viewer and use of different Computerized Databases- OMIM, MGI, NCBI, UCSC genome browsers.

Past Research Topics

- ❖ Determination of Sulphate ion in river, tap and canal water and their comparison with different industrial waste water , “Sulphure lake” from Balakot and other springs from Northern areas by turbidimetry and other different classical as well as instrumental methods practically performed by labs of PCSIR (Pakistan Council Of Science And Industrial Research).
- ❖ **Genetic characterization of Pakistani goat and sheep breeds by mitochondrial D-loop and Cytochrome *b* gene sequencing and SNPs identification (M.Phil).**
- ❖ **Karyotyping for determination of chromosomes in Buffalo genome.**

WORKSHOPS/CONFERENCES AND SYMPOSIUMS

- ❖ Lahore Bio-Forum 2006” organized by The Twin Center for Molecular Biology, University of the Punjab, Lahore, Pakistan. Mar. 13-15, 2006.
- ❖ “BINASIA-Pakistan National Workshop” organized by CEMB, Ministry of Education and Ministry of Science & Technology, Government of Pakistan. Mar. 11-12, 2006.
- ❖ “Lahore Bio-Forum 2008” organized by The Twin Center for Molecular Biology, University of the Punjab, Lahore, Pakistan. Mar. 22th-28th, 2008.
- ❖ National Workshop on “Techniques in Transgenics” (02 September, 2008) at University of Veterinary and Animal Sciences, Lahore
- ❖ National Conference on “Prion Diseases: A Threat to Livestock and Humans in Pakistan” (20 May 2008) at University of Veterinary and Animal Sciences, Lahore.
- ❖ **International Semmering Vaccination Symposium, Baden, Austria. 23-26 April 2009. Poster presented about Epidemiology of Tuberculosis.**
- ❖ National Conference on Recent trends in Livestock Genomics 24-25 June, 2009. Deptt of Molecular Biology & Biotechnology University of Veterinary and Animal Sciences Lahore.

- ❖ 6TH Asian Buffalo Congress about Livestock and Agriculture, 6th Asian Buffalo Congress held at Hotel Pearl Continental, Lahore 27-30 October, 2009.
- ❖ National conference on Animal Forensics and Finger Printing.
- ❖ National Exhibition and Seminar on Molecular Biology and Biotechnology, October 20-21, 2010, UVAS LHR.
- ❖ 1st Annual HCV Symposium, NCVI, National University of Science and Technology, Islamabad, 10-11 Feb, 2011.
- ❖ National Conference on “Nanotechnology- Its applications in Animal Production and Health” organized by Institute of Biochemistry and Biotechnology. UVAS, Lahore. 16th-17th April 2012.
- ❖ National Symposium “SAFE BLOOD TRANSFUSION PRACTICES” 4th January 2014 INMOL hospital. Organized by: Department of Blood Bank Services and Clinical Pathology Labs, Institute of Nuclear Medicine and Oncology, Lahore (INMOL).
- ❖ **BBMS14 “Building Bridges in Biomedical Sciences 2014 Conference” The Sixth Edition. Organized by a committee of graduate students from the University of Cambridge, meeting based at Robinson College, University of Cambridge 7th March 2014.**
- ❖ **BSP Meeting “BRITISH SOCIETY FOR PARASITOLOGY” Spring Meeting, Autumn Symposium, meeting based at Robinson College, University of Cambridge, UK, 6th-9th April 2014.**
- ❖ **Chemical Safety Course “Occupational Health and Safety Service” presented by the Dr. M Vinnell, held on 1May 2014 at the Mill Lane Lecture Rooms, University of Cambridge, UK.**
- ❖ **Cambridge Immunology PhD and Postdoc Day, 29th May, 2014 and Sainsbury Laboratory, Cambridge University – Bateman street - CB2 1NN University of Cambridge - UK.**
- ❖ **Cambridge Infectious Diseases Conference, Early Career Researcher Day, 13th June 2014, Trinity Hall, University of Cambridge, UK. Also presented my PhD research work in this conference.**
- ❖ Hands on training on Real Time PCR, 17th-18th September, 2014 conducted at quality operation Laboratory (QOL) University of Veterinary and Animal Sciences Lahore. **Worked as an organizer.**
- ❖ Hands on training on Real Time PCR, 17th-18th September, 2014 conducted at quality operation Laboratory (QOL), University of Veterinary and Animal Sciences Lahore. **Worked as Trainer**
- ❖ One day awareness and research Symposium on Diabetes and related Metabolic Disorders held on 20th November 2014. Organized by Health Biotechnology Division. National Institute of Biotechnology and Genetic Engineering, Faisalabad.
- ❖ **Pakistan-US Science and Technology Cooperation Program Biostatistical Consulting Center. Biostat Workshop on Data Analysis & Proposal Development.** December 22-27, 2014. With the assistance of Department of State, Jackson state University and Department of State, University of Veterinary and Animal Sciences, Lahore. Venue: Conference Hall.
- ❖ **Two day workshop on “Scientific Proposal Writing” held on 19th to 20th February** organized by Department of Parasitology, University of Veterinary and Animal Sciences, Lahore.
- ❖ **One Day meeting on “Youth Development Summits”, held on 8th March, 2015.** Organized by Lahore School of Management Sciences, Lahore.

- ❖ **One Day research on “Cutting-Edge Techniques in “Molecular Research held on 12th March, 2015.** Organized by Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore.
- ❖ **Three Day training workshop on “Research Methodologies and Paper Writing” held on March 16-18, 2015,** organized by Department of Physics, Allama Iqbal Open University, Islamabad.
- ❖ One day Training on Real time PCR results for Real Time Patient Management organized by Ahmad Ramzy from Global Marketing held on **28th October, 2015 at CAMB, UoP, Lahore.**
- ❖ Three Day Symposium on “ Advances in Molecular Biology of Plants and Health Sciences” organized by Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, held on **30th-31st December 2015.**
- ❖ One Day workshop on “Hands on training on analysis of Biological data using R” organized by Department of Biosciences, Virtual University of Pakistan, held on 05th January 2016.
- ❖ Five day Conference on 8th “International Cancer Surgery Conference” **held on 1-5, February, 2016** at Emerald Hall, Pearl Continental Hotel, Lahore-Pakistan.
- ❖ Two days Summit on 5th Invention and Innovation Summit **2016 held on 2-3 March, 2016** at Punjab University, Lahore.
Certificate of appreciation and participation in CAMB Annual Sports Gala 2016, held on **7th to 11th March, 2016.**
 - ❖ Certificate of participation and an award for securing 1st position in apple eating Competition (Apple), held on **7th to 11th March, 2016.**
 - ❖ One day pre-conference Seminar on persuasions in metabolic disorders held on **March 15th, 2016,** University of agriculture Faisalabad And I presented an oral talk in this seminar, the topic was “ Mitochondrial Diseases”.
 - ❖ Two day congress on “International Livestock, Dairy and Poultry Congress” organized at Expo centre, Lahore on **16th-17th March, 2016,** organized by livestock Department.
 - ❖ Two day training workshop on Quantitative analysis using “SPSS & AMOS” held on **24th -25th March 2016** organized by “National university of Modern Languages” Islamabad.
 - ❖ Two day workshop entitled “Project formulation workshop” held on **March 30-31, 2016** at Government, College, University, Lahore, Organized by Pakistan Science foundation, Islamabad.
 - ❖ Three day workshop on “Basic Bioinformatics” **held on 19th -21st April, 2016** at Bahaudin Zakaryia University, Multan.
 - ❖ Two day workshop on “Patent and paper writing workshop” organized by the university of Peshawar, by department, of Physical Chemistry; Venue: Nathia Galli, held on **30th-31st May, 2016.**
 - ❖ Two days “International Livestock Genomics conference” organized by Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore, It was held on **30th-31st May, 2016.**
 - ❖ One day Symposium on “ Potential Impact of Genetic Testing and Counseling” held on 04th August, 2016.
 - ❖ One day lecture on chromatography at PC hotel, Lahore on 11th, August, 2011 organized by Merck, Lahore, Pakistan.

- ❖ One day National workshop on “Organic Food and Health: Avenues of Innovation and Entrepreneurship” held on 29th August, 2016, at University of Management and Technology, Lahore.
- ❖ Two day Workshop on “ Ethics in Research and Clinical Practice Workshop, CBEC, SIUT Karachi, held on 19th-20th September, 2016 at University of Health Sciences, Lahore.

Awards/Scholarships/papers

- ❖ **Staff Training Program on “Computer Basics, Office Automation, Web, Networking and Computer maintenance”, I.T. Centre, University of the Punjab, Lahore, Pakistan.**
- ❖ **Won a competitive Scholarship awarded by International Semmering Vaccination Symposium Vienna, Austria-23-26 April 2009.**
- ❖ **Best student Award during Master studies.**
- ❖ **Won a third prize in flex competition at National Exhibition and Seminar, October 20-21, 2010, UVAS, LHR.**
- ❖ Short training in cloning and gene expression from NCVI NUST from 1st July- 31st August 2011(Paid).
- ❖ Have taken a short hand training on CFX96,384,Miniopticon Real time PCR machines, EZ gel documentation, western blotting by stain free technology, Criterion cell, Mini Protean tetra cell, Transblot turbo instrument, T100 Touch Thermocycler, TC10 Cell counter (9TH October-15th October conducted by Bio Rad Laboratories at Sharjah.
- ❖ Short training in Chemistry & Molecular Biology, Lab of Prof. Gottfried Koehler, MFPL, University of Vienna, Austria Subjects: Chemistry & Molecular Biology. April-May 2009.
- ❖ I have presented a part of my PhD thesis in a Cambridge Infectious Disease Conference on 13th June, the topic was “Gene Expression analysis of Cyclooxygenase-2 gene in different Feline and Canine tumours”.
- ❖ **First Prize** on poster presentation on a topic” Characterization of Pakistani goats and sheep breeds by cytochrome b gene and D-loop region of Mitochondrial DNA, in “International Livestock Genomics conference” organized by Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore, It was held on **30th-31st May, 2016.**
- ❖ **Third Prize** on poster presentation on a topic” Mitochondrial Cytochrome b gene based Phylogeny on Lohi and Thalli sheep breeds of Pakistan in “International Livestock Genomics conference” organized by Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore, **It was held on 30th-31st May, 2016.**

Membership

Member of DPCC, Research Centre, King Edward Medical University, Lahore, Pakistan.

Papers/Books/Proceedings

International Proceedings

Haleema Sadia., (2009). Tuberculosis: epidemiology, natural history and vaccine Research. Vaccines in the light of immune therapy and therapeutic antibodies. 4th Semmering Vaccine Symposium: P-97.

Masroor Ellahi Babar*Tanveer Hussain, Haleema Sadia et al., (2011). Molecular Characterization, Evaluation and conservation of indigenous goat breeds of Pakistan, 8th Global conference on the conservation of animal genetic resources, **Tekirdag Turkiye** (4-8th October 2011), **p: 43-50.**

T. Hussain, A. Nadeem, A. Ali, M. Javed, H. Sadia, et al., (2012). Current Status and Future Prospects of Genomics work on Animal Genetic Resources of Pakistan. International Engagement in Genetics and Epigenetics: Responsible Bioscience for a Safe and Secure Society Dubai HealthCare City, **Dubai, UAE, March 29-30, 2012.**

M. E. Babar., T. Hussain, A. Nadeem, A. Ali, K. Abbas and H. Sadia. Indigenous Sheep Breeds of Pakistan as Reservoir of Genetic Diversity. 4th International Scientific Conference on Small Ruminant Production. **Sharm El Sheikh, Egypt.** Sept. 3-7. 2012.

Haleema Sadia (2014). **Cambridge Infectious Diseases Conference, Early Career Researcher Day, 13th June 2014, Trinity Hall, University of Cambridge, UK.** Also presented my PhD research work in this conference.

Yaser, M, Absar, A, Sadia, H, Ijaz, M, Mehmood, K, Farooq, M Comparative Physio-Chemical Characteristics of Milk in Pakistani Dairy Goats under Different Feeding Regimes. Accepted in conference "12th International Conference on Goats, which will take place in **Antalya, Turkey, 25 September 2016 - 30 September 2016.**

Published Abstracts Year 2016.

Haleema Sadia, Mukhtarullah, Riffat Mehboob, Kausar Malik, Johar Ali ,Amna Shafi, Ahmad Nawaz. Zika Virus, an Emerging Epidemic. Accepted for 2nd International conference (**October 20-21, 2016**) on ZONOSIS-2016, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan.

Haleema Sadia, Riffat Mehboob, Muhammad Idrees, Kausar Malik, Muhammad Ateeq, Tariq Nadeem, Amna Shafi, Ahmad Nawaz. Crimean-Congo Fever- a serious threat for public health. Accepted for the 2nd International conference (**October 20-21, 2016**) on ZONOSIS-2016, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan.

Haleema Sadia, Muhammad Idrees, Mukhtar Ullah, Kausar Malik, Maryum Javed, Tanveer Hussain, Masroor Elahi Babar. Genetic characterization of Goats and Sheep Breeds by Cytochrome b gene and D-loop region of Mitochondrial DNA. Published in International Livestock Genomic conference, **30-31, May 2016.**

Haleema Sadia, Muhammad Idrees, Asif Nadeem, Tanveer Hussain, Mukhtar Ullah, Shahzadi Javed, Kausar Malik, Masroor Ellahi Babar. Mitochondrial cytochrome b gene based phylogeny of Lohi and Thalli sheep breeds of Pakistan. Published in international livestock genomic conference, 30-31, May 2016.

Haleema Sadia, Muhammad Idrees Khan, Khalid Mahmood, Muhammad Yaser Khan, Amjad Ali, Amna Shafi. A1 β -casein: A hidden devil in the Milk. International Livestock and dairy Congress held on **16th-17th March, 2016** at Expo Centre, Lahore, Pakistan.

Publications (Total I.F 14.068).

Research publication in year 2016 (I.F. 12.116).

Baloch AH, Khosa AN, Bangulzai N, **Sadia H,** Ahmed M, Khan F, Jan M, Tareen M, Kakar MH, Shuja J, Naseeb HK, Ahmad J. The pattern of Invasive lobular carcinoma in the patients diagnosed with breast cancer from Balochistan. Accepted in Indian Journal of Cancer. Quarterly ISSN: 0019-509X.

Kausar Malik*, Khadija Asif, Ammara Jamil, AnamArshad, Muhammad Hamza Basit, Hafiza Samra Ambreen, Aleena Sumrin, Halima Sadia and Numrah Nisar. ROLE OF FAS IN APOPTOSIS. Bulletin of Environment, Pharmacology and Life Sciences. Website: www.beppls.com . 2016. Online ISSN 2277-1808. **I.F.0.971**

Kausar Malik*, Khadija Sabir, Naveera Shabir, Numrah Nisar, Muhammad HamzaBasit, Muhammad Idrees Khan, Hafiza SamraAmbreen, Aleena Sumrin and Halima Sadia.

CONTROVERSIES: STEM CELL RESEARCH. *Bulltin of Environment, Pharmacology and Life Sciences [BEPLS]. Website: www.bepls.com*
Online ISSN 2277-1808. I.F. 0.971.

Haleema Sadia, Saba Manzoor, Abdul Wajid, Muhammad Tayyab, Sehrish Firyal, Abu Saeed Hashmi, Zia Ullah Mughal, Asim Khalid Mehmood, Tahir Yaqub Ali Raza Awan, Muhammad Wasim

Feline Mammary tumors show altered COX-2 and BRCA1 expression. Accepted in Pakistan Journal of Zoology, Volume 47, NO6, 2016 pp-0-0, 2016. Ref NO: QPJZ-0254-2015. **I.F. 0.404.**

Andrea Strakova , Máire Ní Leathlobhair , Guo-Dong Wang , Ting-Ting Yin , Iiona Airikkala-Otter , Janice L. Allen , Karen M. Allum , Leontine Banske-Issa , Jocelyn L. Bisson , Artemio Castillo Domracheva , Karina F. de Castro , Anne M. Corrigan , Hugh R. Cran , Jane T. Crawford , Stephen M. Cutter , Laura Delgadillo Keenan , Edward M. Donelan , Ibikunle A. Faramade , Erika Flores Reynoso , Eleni Fotopoulou , Skye N. Fruean , Fanny Gallardo-Arrieta , Olga Glebova , Rodrigo F. Häfelin Manrique , Joaquim J. Henriques , Natalia Ignatenko , Debbie Koenig , Marta Lanza-Perea , Remo Lobetti , Adriana M. Lopez Quintana , Thibault Losfelt , Gabriele Marino , Inigo Martincorena , Simón Martínez Castañeda , Mayra F. Martínez-López , Michael Meyer , Berna Nakanwagi , Andriago B. De Nardi , Winifred Neunzig , Sally J. Nixon , Marsden M. Onsare , Antonio Ortega-Pacheco , Maria C. Peleteiro , Ruth J. Pye , John F. Reece , Jose Rojas Gutierrez , **Haleema Sadia , Sheila K. Schmeling , Olga Shamanova , Richard K. Ssuna , Audrey E. Steenland-Smit , Alla Svitich , Ismail Thoya Ngoka , Bogdan A. Viț ălaru , Anna P. de Vos , Johan P. de Vos , Oliver Walkinton , David C. Wedge , Alvaro S. Wehrle-Martinez , Mirjam G. van der Wel , Sophie A. Widdows on and Elizabeth Murchison. **Mitochondrial genetic diversity, selection and recombination in a canine transmissible cancer. published in elife journal 19-01-2016-SR-eLife-14552.** (citation: Strakova et al. eLife 2016;5:e14552): <https://elifesciences.org/content/5/e14552>. **I.F. 9.322.****

H. Sadia, S. Manzoor, A. Wajid, M. Tayyab, S. Firyal, A. S. Hashmi, T. Yaqub, Z. U. Mughal, A. K. Mehmood, A. R. Awan, K. Mahmood, M. Y. Khan, M. Wasim COX-2 and BRCA1 have altered expression profile in different canine tumors. Journal of Plant and Animal Sciences, volume 26, No1. 2016. ISSN: 1018-7081. **I.F. 0.448**

Publications in 2013-2014 (I.F. 1.952)

News Article of Ph.D Research work entitled “**A preliminary study on companion animals to combat different types of cancers**” on 20th March 2015 in “**Vet News and Views**”

News Article of Ph.D Research work entitled “**A preliminary study on companion animals to combat different types of cancers**” on 25th March 2015 in “**The Lahore Time**”.

M. E. Babar, T. Hussain H. Sadia et al. 2014.

Mitochondrial cytochrome b gene based phylogeny of lohi and thalli breeds of Pakistan. Journal of Animal and Plant Sciences. 24(4): 1018-7081. **I.F. 0.56**

Tanveer Hussain, Masroor Ellahi Babar, Haleema Sadia, et al., (2013).

Microsatellite Markers based Genetic Diversity Analysis in Damani and Nachi Goat Breeds of Pakistan, Pak Vet J, 33(4): 520-522. **I.F. 1.392**

PAPERS SUBMITTED

Abdul Wajid, Muhammad Wasim, Shafqat Fatima Rehmani, Andleeb Batool, Haleema Sadia, Saba Manzoor, Tasra Bibi, Asma Basharat, Tahir Yaqub, Muhammad. Complete genomic analysis of Newcastle Disease Virus of a recent panzootic isolated from vaccinated poultry flock in 2014 in Pakistan. Submitted in Pakistan Journal of Plant and Animal Sciences.

M.Yaser Khan, Haleema Sadia, M.Ijaz, M.Farooq, Absar Ahmad, Tariq Nadeem. Comparative Physio-chemical characteristics of Milk in Pakistan dairy goats under different feeding regims. Submitted in The Journal of Dairy Sciences.

M.Yaser Khan, M. Ijaz, Khalid Mehmood, Haleema Sadia, Absar Ahmad, M.Farooq. Comparative study on various reproductive parameters in Beetal and Dera Din Penah (DDP) goats under desert conditions. Submitted in Asian-Australasian Journal of Animal Sciences.

Haleema Sadia, Kausar Malik, Braira Wahid, Annam Shafqat, Ifrah Khalid, Maryam Abbas, Alishba Maryam, Muhammad Yasir Khan, Amjad Ali, Aleena Sumrin, Hamid Bashir, Muhmmad Bilal, Amna Shafi, Ahmad Nawaz, Riffat Mahboob. Developing a deeper insight into prostate cancer: review. Cancer Epidemeology` CANEP-D-16-00412.

Published Books:

My international book of M.Phil research work has been published in 2011 in VDM (Verlag, Dr. Muller). **Evolutionary Science and Species differentiation.**

Published Sequences

Total 99 Sequences have been submitted in NCBI

Forty nine haplotypes of complete D-loop and Cytochrome b region of **10 breeds** of Pakistani sheep have been submitted in NCBI with Accession numbers **JX235833 to JX235881.**

Fifty haplotypes of complete D-loop and Cytochrome b region of **10 breeds** of Pakistani Goat have been submitted in NCBI with Accession numbers **JX286539 to JX286588.**

Scholarships.

Won Indigenous Scholarship during my PhD awarded by Higher Education Commission Pakistan (HEC).

Won the IRSIP Scholarship for department of veterinary medicine, University of Cambridge, UK, awarded by Higher Education Commission Pakistan (HEC).

Grants:

1-Expression and mutational analysis of P53 gene in breast cancer patients of Pakistani Population. Accepted by Higher Education Commission, Pakistan-SRG-664. PI.

HEC approved Supervisor