# Rizwan Qaisar, MBBS, Ph.D.

# Department of Basic Medical Sciences, College of Medicine, University of Sharjah, United Arab Emirates.

## Cell: +971 50 867 5702, email: rqaisar@sharjah.ac.ae/rizzzq@gmail.com

### **Employment history:**

- Associate Professor (Physiology): College of Medicine, University of Sharjah, UAE (Jan 2024 to date).
- Assistant Professor (Physiology): College of Medicine, University of Sharjah, UAE (Jan 2019 Jan 2024).
- Research Assistant Member: Ageing and Metabolism Research Department, Oklahoma Medical Research Foundation, Oklahoma City, USA (June 2018 Jan 2019).
- Post-doctoral researcher: Ageing and Metabolism Research Department, Oklahoma Medical Research Foundation, Oklahoma City, USA (Aug 2015 May 2018).
- Post-doctoral researcher: Department of Molecular Medicine, University of Pavia, Italy (Sep 2012 June 2014).
- Senior Lecturer (Physiology): Khyber Medical University, Peshawar, Pakistan (April Sep 2012)
- Junior Lecturer (Physiology): Kohat University of Science & Technology, Kohat, Pakistan (April 2007 Jan 2008)

#### **Education:**

- Doctor of Philosophy (Ph.D.): Faculty of Medicine, Department of Clinical Neurophysiology, Uppsala University Hospital, University of Uppsala, Sweden (March 2012). (Title of Ph.D. thesis: "Myonuclear Organization and Regulation of Muscle Contraction in Single Muscle Fibers; Effects of Aging, Gender, Species, Endocrine Factors and Muscle Size")
- Bachelor of Medicine & Surgery (MBBS): Khyber Medical College, University of Peshawar, Pakistan (Dec 2005).

#### **Research Interests:**

- Sarcopenia, Ageing, Age-related diseases, Skeletal muscle, Biomarkers of sarcopenia, Sarcoplasmic reticulum, Neuromuscular junction, Oxidative stress, Regulation of muscle contraction, Myonuclei, Muscle stem cells, Bioenergetics.

#### **Teaching experience:**

- Muscle and multi-organ physiology for undergraduate medical and dental students and human biology for foundation year students at the University of Sharjah, UAE.
- 'Muscle Biology course' to undergraduate medical, nursing, and physiotherapy students on a yearly basis for four years at the University of Uppsala, Sweden.
- 'Geroscience' course emphasizes skeletal muscle aging for Ph.D. students at the University of Oklahoma Health Science Center in Oklahoma City, USA.
- Physiology of multiple body systems to undergraduate medical students at Khyber Medical University and Kohat University of Science & Technology in Pakistan.

#### **Research supervision:**

<u>Ph.D.:</u>

- "Modulating the gut microbiome with novel bacterial metabolites from hardy species using murine stress models.". University of Sharjah, UAE.

MSc (selected):

- "Pharmacological inhibition of endoplasmic reticulum stress prevents osteoporosis in a mouse model of hindlimb suspension.". University of Sharjah, UAE.
- "Mitigating SR stress as an intervention to disuse-induced muscle loss in a mouse model of hindlimb unloading.". University of Sharjah, UAE.
- "Distribution of myosin heavy chain isoforms in the hindlimb muscles of unloaded mice.". University of Pavia, Italy.

- "Effects of steroids-induced muscle damage on the distribution of myosin heavy chain isoforms in the rat skeletal muscle.". University of Pavia, Italy.
- "Characterization of myonuclear apoptosis in a rat intensive care model." University of Uppsala, Sweden. <u>Undergraduate (selected published work):</u>
- "The association of visceral adiposity with handgrip strength in community dwellers of the United Arab Emirates" (Advances in Biomedical and Health Sciences, 2023, DOI: 10.4103/abhs.abhs\_54\_22).
- "Is the myonuclear domain ceiling hypothesis dead?". (Singapore Medical Journal, 2021, DOI: 10.11622/smedj.2021103).
- "Relation of plasma high-density lipoprotein-cholesterol with sarcopenia in patients with chronic obstructive pulmonary disease.". (Indian J of Respiratory Care, 2022, DOI: 10.4103/ijrc\_62\_22).
- "Pulmonary rehabilitation reduces the sarcopenia phenotype in COPD.". (Indian J of Respiratory Care, 2022, DOI: 10.4103/ijrc\_20\_22).

## Honors and Awards

- Awarded the Irene Diamond fund/AFAR Post-doctoral Transition Award in Aging by the American Federation for Aging Research (AFAR) (USD 120,000 for two years).
- Awarded the Targeted grant by the University of Sharjah, UAE, for the project on "Mitigation of SR stress as an intervention to disuse-induced muscle loss" (AED: 200,000 for two years).
- Awarded a Competitive grant by the University of Sharjah, UAE, for the project on "Restoring the interface between SR and mitochondria to boost muscle mass in disuse-induced muscle atrophy" (AED: 80,000 for two years).
- Awarded a Competitive grant by the University of Sharjah, UAE, for the project on "Mesenchymal Stem Cells transplant as an intervention to ameliorate disuse-induced muscle atrophy in hindlimb unloaded mice" (AED: 120,000 for two years).
- Awarded a Competitive grant by the University of Sharjah, UAE, for the project on "Circulating biomarkers of muscle health in elite runners" (AED: 80,000 for two years).
- Awarded the Seed grant by the University of Sharjah, UAE, for the project on "Targeting SR stress and redox imbalance in myoblast culture" (AED: 40,000 for two years).
- Member American Association of Aging
- Member American Physiological Society

## Patent

<u>Treatment for age- and oxidative stress-associated muscle atrophy and weakness</u> <u>Inventors:</u> Holly Van Remmen, Rizwan Qaisar <u>Publication date:</u> 2021/03/25

Patent Office: US

## Application number: 16970607

- Description: The present invention includes methods and compositions for treating skeletal muscular atrophy caused by a defect in the function of one or more sarco/endoplasmic reticulum Ca 2+-ATPase (SERCA) pumps comprising: identifying a subject having muscular atrophy caused by a defect in the function of the one or more SERCA pumps and providing the subject with an adequate amount of an activator that enhances activity of the one or more SERCA pumps.
- US Patent APP: 16/970, 607, 2021

## **Editorial Work for Journals**

- Guest Editor, *Scientific Reports* Journal (Impact Factor = 5.51, Scopus SJR ranking = Q1)
- Guest Editor for the special issue of *Frontiers in Physiology* Journal (Impact Factor = 4.13, Scopus SJR ranking = Q1) on "Skeletal muscle in age-related diseases: from molecular pathogenesis to potential interventions". The final editorial for this issue can be found <u>here</u>.
- Editorial Board Member, *Khyber Medical University Journal* since July 2013.

## **Referee for Journals**

 Acta Physiologica, Scientific Reports, BMC Musculoskeletal Disorders, Experimental Gerontology, Histochemistry and Cell Biology, International Journal of General Medicine, Clinical Sciences, Journal of Men's Health, Annals of Biomedical Engineering, and Equine Veterinary Journal.

## **Referee for Granting Agencies**

- University College London, UK
- Swiss National Science Foundation, Switzerland
- University of Sharjah, United Arab Emirates

## List of Publications (Chronological order):

For my profile on Google Scholar, please click here

- Archives of Geriatrics and Gerontology Plus. (accepted for publication), (IF =), Scopus, SJR () <u>Association of neuromuscular disjunction with cachexia in patients with gynecological cancers</u> <u>Qaisar R</u>, Hussain S, Karim A, Ahmad F
- Biochime. (accepted for publication), (IF = 3.9), Scopus, SJR (Q2) <u>Natural compound screening predicts novel GSK-3 isoform-specific inhibitors</u> Ahmad F, Gupta A, Marzook H, Woodgett J, Saleh M, <u>Qaisar R</u>
- 3. Respiratory Investigations. doi.org/10.1016/j.resinv.2024.04.014, (IF = 3.1), Scopus, SJR (Q2) <u>Plasma levels of Neurofilament light chain correlate with handgrip strength and sarcopenia in patients with</u> <u>chronic obstructive pulmonary disease</u> <u>Qaisar R,</u> Hussain S, Burki A, Karim A, Muhammad T, Ahmad F
- Archives of Medical Research. doi.org/10.1016/k.arcmed.2024.102998, (IF = 7.7), Scopus, SJR (Q1) <u>Metformin improves sarcopenia-related quality of life in geriatric adults: a randomized controlled trial</u> <u>Qaisar R,</u> Karim A, Muhammad T, Iqbal MS, Ahmad F
- Asian J of Social Health & Behavior. doi.org/10.4103/shb.shb\_377\_23, (IF = 9.72), Scopus, SJR (Q1) <u>Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome Knowledge among Followers of</u> <u>Various Religions in India</u> Karim A, <u>Qaisar R</u>, Khalid A, Ahmad F, Hussain MA
- Calcified Tissue International. doi.org/10.1007/s00223-024-01211-6, (IF = 3.94), Scopus, SJR (Q1)
   <u>Probiotics supplements improve the sarcopenia-related quality of life in older adults with age-related</u>
   <u>muscle decline</u>
   <u>Qaisar R,</u> Burki A, Karim A, Iqbal MS, Ahmad F
- 7. The Lancet. doi.org/10.1016/S0140-6736(24)00476-8. (IF = 168.5), Scopus, SJR (Q1) Global age-sex-specific mortality. Life expectancy, and population estimates in 204 countries and territories and 811 subnational locations, 1950-2021, and the impact of the COVID-19 pandemic: a comprehensive analysis for the Global Burden of Disease Study 2021 Multiple authors
- Archives of Medical Research. doi.org/10.1016/j.arcmed.2024.102988, (IF = 7.7), Scopus, SJR (Q1)
   <u>Biomarkers of Physical and Mental Health for Prediction of Prediction of Parkinson's disease: A population-based study from 15 European countries</u>
   Hussain M, <u>Qaisar R</u>, Franzese F, Alsaad S, Alkahtani S
- 9. Drugs and Aging, doi.org/10.1007/s40266j-024-01111-2, (IF = 3.35), Scopus, SJR (Q1)

Lipid-lowering medications are associated with reduced sarcopenia-related quality of life in older adults with hyperlipidemia

Qaisar R, Imran M. Khan, Karim A, Muhammad T, Ahmad F

- 10. The Aging Male. doi.org/10.1080/13685538.2024.2325146. (IF = 2.48), Scopus, SJR (Q2) Association between handgrip strength and Metabolic Syndrome in relation to gender and adiposity among middle aged and older Saudi populations Alkahtani S, Alshammari G, Alzuwaydi A, Alfuhaid A, Al-Masri A, Qaisar R, Habib S
- 11. Scientific Reports. doi.org/10.1038/s41589-024-54944-7. (IF = 5.51), Scopus, SJR (Q1) Pharmacological inhibition of endoplasmic reticulum stress mitigates osteoporosis in a mouse model of hindlimb suspension Al-Daghestani H, Qaisar R, Al Kawas S, Ghani N, Rani A, Azeem M, Hasnan HK, Kassim NK, Samsudin R
- 12. Cells. doi.org/10.3390/cells13020174. (IF = 6), Scopus, SJR (Q1) Towards understanding the development of breast cancer – the Role of RhoJ in the obesity microenvironment Bou Malhab L, Nair V, Qaisar R, Pintus G, Abdel-Rahman W
- 13. Respiratory Medicine. doi.org/10.1016/j.rmed.2023.107510 (IF = 4.58), Scopus, SJR (Q1) Butyrate supplementation reduces sarcopenia by repairing neuromuscular junction in patients with chronic obstructive pulmonary disease Qaisar R, Karim A, Muhammad T, Ahmad F
- 14. Heliyon. doi.org/10.1016/j.heliyon.2023.e23592, (IF = 4), Scopus, SJR (Q1) Serum multi-omics analysis in hindlimb unloading mice model: Insight into systemic molecular changes and potential diagnostic and therapeutic biomarkers Ibrahim Z, Khan N, Qaisar R, Saleh M, Siddiqui R, Al-Hroub H, Giddey A, Soares N, Elmoselhi A
- 15. Life sciences. doi.org/10.1016/j.lfs.2023.122186, (IF = 6.78), Scopus, SJR (Q1) Targeting neuromuscular junction to treat neuromuscular disorders Qaisar R,
- 16. Quality of Life Research. doi.org/10.1007/s11136-023-03547-2, (IF = 4.18), Scopus, SJR (Q1) A leaky gut contributes to reduced sarcopenia-related guality of life (SarQoL) in geriatric older adults Qaisar R, MS. Iqbal, Karim A, Muhammad T, Ahmad F
- 17. Life Sci in Space Res. doi.org/10.1016/j.lssr.2023.09.003, (IF = 2.73), Scopus, SJR (Q2) Cardiovascular changes under the microgravity environment and the gut microbiome Siddigui R\*, Qaisar R\*, Al-Dahash K, Altelly AH, Elmoselhi A, Khan NA (\*, authors contributed equally)
- 18. J of Mol. Med. doi.org/10.1007/s00109-023-02373-w, (IF = 4.7), Scopus, SJR (Q1) GSK-3a aggravates inflammation, metabolic derangement and cardiac injury post-ischemia/reperfusion Ahmad F, Marzook H, Gupta A, Aref A, Patil K, Khan AA, Saleh M, Koch W, Woodgett J, Qaisar R
- 19. Life Sci in Space Res. doi.org/10.1016/j.lssr.2023.08.006 (IF = 2.73), Scopus, SJR (Q2) Enhancing microbial diversity as well as multi-organ health in hind-limb unloaded mice Shama S, Ranade A, **Qaisar R**, Khan NA, Tauseef I, Elmoselhi A, Siddiqui R
- 20. Heliyon. doi.org/10.1016/j.heliyon.2023.e19485, (IF = 4), Scopus, SJR (Q1) A leaky gut contributes to postural dysfunction in patients with Alzheimer's disease Qaisar R, Karim A, Iqbal MS, Ahmad F, Kamli H, Khamjan N
- 21. Archives of Medical Research. doi.org/10.1016/j.arcmed.2023.102890, (IF = 7.7), Scopus, SJR (Q1) Angiotensin receptor blockers restore skeletal muscle by stabilizing neuromuscular junction in patients with chronic obstructive pulmonary disease Qaisar R, Kamli H, Karim A, Muhammad T, Ahmad F, Shaikh A

- 22. BMC Geriatrics. doi.org/10.1186/s12877-023-04233-1 (IF = 4.12), Scopus, SJR (Q1) <u>The quality of life in Alzheimer's disease is not associated with handqrip strength but with activities of daily</u> <u>living – a composite study from 28 European countries</u> <u>Qaisar R</u>, Hussain MA, Karim A, Ahmad F, Franzese f, Al-Masri a, Alsaad s, Alkahtani S
- 23. Future Trends in Education Post COVID-19 (book chapter). doi.org/10.1007/978-981-99-1927-7\_3 <u>Evaluation of the Hybrid Learning Model to Teach Human Physiology Experiments</u> Kamath D, <u>Qaisar R</u>, Karim A, Elmoselhi A, Mussa BM
- 24. Exp Biol & Med. doi.org/10.1177/15353702231198080, (IF = 4.3), Scopus, SJR (Q1) <u>Circulating H-FABP as a biomarker of frailty in patients with chronic heart failure</u> Ahmad F, Karim A, Khan J, <u>Qaisar R</u>
- 25. BBA- General Subjects. doi.org/10.1016/j.bbagen.2023.130422, (IF = 4.11), Scopus, SJR (Q1)
  <u>Suppression of endoplasmic reticulum stress reveres hindlimb unloading-induced hepatic cellular processes</u>
  <u>in mice</u>

Ranade A, Khan A, Gul M, Suresh S, Qaisar R, Ahmad F, Karim A

- 26. J of Cardiovascular Pharmacology, doi.org/10.1097/FJC.000000000001445 (IF = 3.27), Scopus, SJR (Q2) <u>Statin therapy induces qut leakage and neuromuscular disjunction in patients with chronic heart failure</u> Ahmad F, Karim A, Khan J, <u>Qaisar R</u>
- 27. Respiratory Medicine. doi.org/10.1016/j.rmed.2023.107298. (IF = 4.58), Scopus, SJR (Q1) <u>Degradation of neuromuscular junction contributes to muscle weakness but not physical compromise in</u> <u>chronic obstructive pulmonary disease patients taking lipids-lowering medications</u> <u>Qaisar R,</u> Karim A, Muhammad T, Alkahtani S, Kamli H, Ahmad F
- 28. F1000Research. doi.org/10.12688/f1000research.133584.1 (IF = 2.95), Scopus, SJR (Q1) <u>The interface of dementia and physical disability; causative factors and associations in the elderly</u> <u>population from Pakistan: Evidence from the nationally representative cross-sectional Demographic and</u> <u>Health Survey (DHS) 2017-18 of Pakistan</u> Khalid A, Karim A, Ahmad F, <u>Qaisar R,</u> Hussain M.A,
- 29. F1000Research. doi.org/10.12688/f1000research.133585 (IF = 2.95), Scopus, SJR (Q1) <u>Time-related changes in the knowledge of HIV/AIDS among followers of various religions in India</u> Khalid A, <u>Qaisar R</u>, Ahmad F, Hussain M.A, Karim A
- 30. Journal of Alzheimer's disease. doi.org/10.3233/JAD-230201 (IF = 4.69), Scopus, SJR (Q1) <u>ACE inhibitors improve skeletal muscle by preserving neuromuscular junction in patients with Alzheimer's</u> <u>disease</u> Qaisar R, Karim A, Iqbal M.S, Alkahtani S, Ahmad F, Kamli H
- 31. Heliyon. doi.org/10.1016/j.heliyon.2023.e15293 (IF = 3.77), Scopus, SJR (Q1) <u>Circulating follicle stimulating hormone levels influence body growth in pre-menarcheal girls in a latitudedependent manner</u> Khalid A, <u>Qaisar R</u>, Hussain M, Karim A
- 32. Life Sciences. doi.org/10.1016/j.lfs.2023.121687 (IF = 6.78), Scopus, SJR (Q1) <u>RhoA/ROCK inhibition attenuates endothelin-1-induced glomerulopathy in the rats</u> Saleh M, Shaaban A, Talaat I, Elmougy A, Adra S, Ahmad F, <u>Qaisar R</u>, Elmoselhi A, Abu-Gharbieh E, El-Huneidi W, Eladl M, Shehatou G, Kafl H
- 33. Osteoporosis and Sarcopenia. doi.org/10.1016/j.afos.2023.03.008 (IF = 2.5)
   <u>The elusive role of myostatin signaling for muscle regeneration and maintenance of muscle homeostasis</u> Mitra A, <u>Qaisar R,</u> Bose B, Shenoy S
- 34. J of Mol Medicine. doi.org/10.1007/s00109-023-02296-6, (IF = 5.6), Scopus, SJR (Q1) <u>Nicotinamide riboside kinase-2 regulates metabolic adaptation in the ischemic heart</u>

Marzook H, Gupta A, Tomar D, Saleh M, Patil K, Semreen M, Hamoudi R, Soares N, Qaisar R, Ahmad F

- 35. Acta Astronautica. doi.org/10.1016/j.actaastro.2023.01.011, (IF = 2.95), Scopus, SJR (Q1) <u>Pharmacological inhibition of endoplasmic reticulum stress mitigates testicular pathology in a mouse</u> <u>model of simulated microgravity</u> Ranade A, Khan A, Gul M, Jose J, Ramachandran G, <u>Qaisar R,</u> Karim A, Ahmad F, Abdel-Rahman W
- 36. Exp Biol & Med. doi.org/10.1177/15353702231151980, (IF = 4.3), Scopus, SJR (Q1) <u>Plasma Galectin-3 and H-FABP correlate with poor physical performance in patients with congestive heart</u> failure

Ahmad F, Karim A, Khan J, **Qaisar R** 

- 37. Redox Biol. doi.org/10.1016/j.redox.2022.102550, (IF = 11.79), Scopus, SJR (Q1) <u>Neuronal deletion of MnSOD in mice leads to demyelination, inflammation and progressive paralysis that</u> <u>mimics phenotypes associated with progressive multiple sclerosis</u> Bhaskaran S, Kumar G, Thadathil N, Piekarz K, Mohammed S, Lopez S, <u>Qaisar R,</u> Walton D, Brown J, Murphy A, Smith N, Saunders D, Beckstead M, Plafker S, Lewis T, Towner R, Sathyaseelan D, Richardson A, Axtell R, Van Remmen H
- 38. Experimental Gerontology. doi.org/10.1016/j.exger.2022.112034, (IF = 4.25), Scopus, SJR (Q2) <u>Elevated plasma CAF22 are incompletely restored six months after COVID-19 infection in older men</u> Karim A, Muhammad T, Iqbal M, <u>Qaisar R,</u>
- Life. doi.org/10.3390/life12111865, (IF = 3.77), Scopus, SJR (Q2)
   <u>Effect of microgravity on the gut microbiota bacterial composition in a hindlimb unloading model</u> Khan NA, <u>Qaisar R</u>, Siddiqui R, Al-Harbi A, Alfahemi H, Elmoselhi A
- 40. Life Sciences doi.org: 10.1016/j.lfs.2022.121150, (IF = 6.78), Scopus, SJR (Q1)
   <u>Plasma zonulin correlates with cardiac dysfunction and poor physical performance in patients with chronic heart failure</u>
   Ahmad F, Karim A, Khan J, <u>Qaisar R,</u>
- Scientific Reports. doi.org: 10.1038/241598-022-22385-9, (IF = 5.51), Scopus, SJR (Q1)
   <u>Hindlimb unloading induces time-dependent disruption of testicular histology in mice</u>
   Karim A, <u>Qaisar R</u>, Azeem M, Jose J, Ramachandran G, Ibrahim Z, Elmoselhi A, Ahmed F, Abdel-Rahman W, Ranade A,
- Int J Mol Sci. doi.org: 10.3390/ijms.231912039 (IF = 6.20), Scopus, SJR (Q1) <u>Nanomedicine for Treating Muscle Dystrophies: Opportunities, Challenges, and Future Perspectives</u> Ahmad Z, <u>Qaisar R</u>
- 43. Frontiers in Physiology doi.org: 10.3389/fphys.2022.1056479, (IF = 4.56), Scopus, SJR (Q1)
   <u>Skeletal muscle in Age-related Diseases: From Molecular Pathogenesis to Potential Interventions</u> Pravatiyar M, <u>Qaisar R</u>
- 44. Life, doi.org: 10.3390/life 1201301, (IF = 3.77), Scopus, SJR (Q2)
   <u>The role of 4-phenyl butyric acid in gut microbial dysbiosis in a mouse model of simulated microgravity</u> Khan S, <u>Qaisar R,</u> Khan NA, Tauseef I, Siddiqui R
- 45. Neuroscience research, doi.org: 10.1016/j.neures.2022.08.004 (IF = 3.30), Scopus, SJR (Q1) <u>Elevated plasma zonulin and CAF22 are correlated with sarcopenia and functional dependency at various</u> <u>stages of Alzheimer's disease</u> Karim A, Iqbal M, Muhammad T, Ahmad F, <u>Qaisar R</u>
- 46. Life sciences in space research, doi.org: 10.1016/j.issr.2022.06.005 (IF = 2.08), Scopus, SJR (Q2) <u>Suppression of endoplasmic reticulum stress prevents disuse muscle atrophy in a mouse model of</u> <u>microgravity</u>

Ibrahim Z, Ramachandran G, El-Huneidi W, Elmoselhi A, Qaisar R

47. NPJ microgravity doi.org: 10.1038/s41526-022-00211-w (IF = 4.37), Scopus, SJR (Q1)

#### Mitigating sarcoplasmic reticulum stress limits disuse-induced muscle loss in hindlimb unloaded mice

Khan AA, Gul MT, Karim A, Ranade A, Azeem M, Ibrahim Z, Ramachandran G, Nair V, Ahmad F, Elmoselhi A, Qaisar R

48. J of Cardiology. doi.org: 10.1016/j.jjcc.2022.06.006 (IF = 3.15), Scopus, SJR (Q1) <u>A multistrain probiotic reduces sarcopenia by modulating WnT signaling biomarkers in patients with</u> <u>chronic heart failure</u> Kaim A Mahammad J. Shah L Khan L Osian P.

Karim A, Muhammad T, Shah I, Khan J, Qaisar R

- 49. Life Sciences. doi.org: 10.1016/j.ifs.2022.120703 (IF = 6.78), Scopus, SJR (Q1) <u>SARS-CoV-2-infection induced growth factors play differential roles in COVID-19 pathogenesis</u> Gupta A, Jayakumar M, Saleh M, Kannan M, Halwani R, <u>Qaisar R</u>, Ahmad F
- 50. Archives of Gerontology and Geriatrics. doi.org: 10.1016/j.archger.2022.104721 (IF = 3.25), Scopus, SJR (Q1) <u>A multistrain probiotic improves handqrip strength and functional capacity in patients with COPD: a</u> <u>randomized control trial</u> Karim A, Muhammad T, Iqbal MS, <u>Qaisar R</u>
- 51. The FASEB Journal. doi.org: 10.1096/fasebj.2022.36.S1.R4388 (IF = 5.19), Scopus, SJR (Q1) <u>Pharmacological inhibition of ER stress mitigates testicular pathology in hind-limb unloaded mice</u> Ranade A, <u>Qaisar R,</u> Khan AA, Karim A, Gul MT, Azeem M, Jose J, Ramachandran G, Ibrahim Z, Nair VA, Elmoselhi A, Hassan WA
- 52. Exp Biol n Med. doi.org: 10.177/15353702221102117 (IF = 2.69), Scopus, SJR (Q1) <u>TFP1 and FXII negatively and S100A8/A9 and Cystatin positively correlate with D-Dimer in COVID-19</u> Gupta A, <u>Qaisar R,</u> Halwani R, Kannan M, Ahmad F
- 53. Int J Mol Sci. doi.org: 10.3390/ijms.23084408 (IF = 6.20), Scopus, SJR (Q1) <u>Synergistic anti-angiogenic effect of combined VEGFR kinase inhibitors, Lenvatinib, and Regorafenib: A</u> <u>therapeutic potential for breast cancer</u> Bajbouj K\*, <u>Qaisar R\*,</u> Alshura MA\*, Ibrahim Z, Alebaji MB, Al Ani AW, Janajrah HM, Bilalaga MB, Omara AI, Abou Assaleh RS, Saber-Ayad M, Elmoselhi AB. (\*, authors contributed equally)
- 54. Scientific Reports. doi.org: 10.1038/s41598-022-09511-3 (IF = 4.99), Scopus, SJR (Q1) <u>A comparison of international and national references to measure the prevalence of stunting in Pakistani</u> <u>school-age girls</u> <u>Qaisar R, Karim A.</u>
- 55. J of Orthopedic Research. doi.org: 10.1002/jor.25323 (IF = 3.49), Scopus, SJR (Q2) <u>The role of disrupted iron homeostasis in the development and progression of arthropathy</u> Karim A, Bajbouj K, <u>Qaisar R</u>, Hall A, Hamad M
- 56. Acta Astronautica. 2022, doi: 10.1016/j.actaastro.2022.03.008 (IF = 2.41), Scopus, SJR (Q1) <u>Hind-limb unloading in rodents: Current evidence and perspective</u> Hawliczek A, Brix B, Al Mutawan S, Alsuwaidi H, Du Plessis S, Gao Y, <u>Qaisar R</u>, Siddiqui R, Elmoselhi A, Goswami N
- 57. Spectroscopy Santa Monica. doi.org:10.2139/ssrn.3968037 (IF = 1.91) <u>Density functional model of the Raman spectra for the seminiferous tubules of hindlimb unloaded mouse</u> Azeem M, <u>Qaisar R,</u> Karim A, Ranade A, Elmoselhi A
- 58. Frontiers in Cell & Develop. Biol 2022, doi:10.3389/fcell.2022.821014 (IF = 6.68), Scopus, SJR (Q1) <u>Iron overload induces oxidative stress, cell cycle arrest and apoptosis in chondrocytes</u> Karim A, Bajbouj K, Shafarin J, <u>Qaisar R</u>, Hall A, Hamad M
- 59. Clinical Science (Long). 2022, doi:10.1042/CS20210964 (IF = 6.12), Scopus, SJR (Q1) <u>Nicotinamide riboside kinase-2 inhibits JNK pathway and limits dilated cardiomyopathy in mice with</u> <u>chronic pressure overload</u> Shahzadi SK, Marzook H, <u>Qaisar R</u>, Ahmad F

Relationship of haptoglobin phenotypes with sarcopenia in patients with congestive heart failure Karim A, Muhammad T, Shah I, Khan J, Qaisar R,

- 61. J Mol Neurosci. 2022, doi:10.1007/s12031-022-01970-7 (IF = 3.44), Scopus, SJR (Q2) Evaluation of sarcopenia using multiple biomarkers of the neuromuscular junction in Parkinson's disease Karim A, Iqbal M.S, Muhammad T, Qaisar R,
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<u>What determines myonuclear domains size?</u> <u>Qaisar R</u>, Larsson L

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<u>Is functional hypertrophy and specific force coupled with addition of myonuclei? A single fiber</u> <u>study of myostatin knock-out and IGF-1 over-expressing mice</u> <u>Qaisar R</u>, Renaud G, Morine K, Barton ER, Sweeney H.L, Larsson L

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<u>Myonuclear domain size and 3D myonuclear organization in single muscle fibers from</u> <u>myostatin deficient or IGF1 overexpressing mice</u> <u>R. Qaisar</u>

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<u>Effects of ageing and gender on the spatial organization of nuclei in single human skeletal</u> <u>muscle cells</u>

A Cristea, R <u>Qaisar</u>, PK Edlund, J Lindblad, E Bengtsson, L Larsson. (\*, authors contributed equally)

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A Cristea, PK Edlund, J Lindblad, R Qaisar, E Bengtsson, L Larsson.

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<u>Acute Quadriplegic Myopathy: Underlying mechanisms, improved diagnostic methods and specific</u> intervention strategies

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<u>Myonuclear domain size and myosin isoform expression in muscle fibres from mammals</u> representing a 100,000 fold difference in body size

Liu JX, Höglund AS, Karlsson P, Lindblad J, Qaisar R, Aare S, Bengtsson E, Larsson L.

#### Seminars and conferences:

I presented my research work (speaker and/or poster) in following seminars and conferences.

- 22<sup>nd</sup> IAA Humans in Space Symposium "Together to Mars", Dubai, UAE (Nov 2019) <u>Targeting SR stress to mitigate disuse-induced muscle atrophy in simulated microgravity.</u> <u>R Qaisar</u>, Bajbouj K, Elmoselhi A
- NIA summer training course, Buck Institute, Novato, CA, USA (June 2017) <u>Defining the role(s) of ER stress in age- and oxidative stress-related skeletal muscle impairment.</u> <u>R Qaisar</u>.
- Experimental Biology Conference, San Diego, USA (April 2017) <u>Restoration of SERCA ATPase as an intervention to muscle atrophy and weakness.</u> <u>R Qaisar</u>, Bhaskaran S, Ranjit R, Sataranatarajan K, Premkumar P, Huseman K, H Van Remmen.
- Oklahoma Medical Research Foundation Retreat, Oklahoma City, USA (March 2017) <u>Restoration of SERCA ATPase as an intervention to muscle atrophy and weakness.</u> <u>R Qaisar</u>, Bhaskaran S, Ranjit R, Sataranatarajan K, Premkumar P, Huseman K, H Van Remmen.
- Oklahoma Medical Research Foundation Retreat, Oklahoma City, USA (March 2016) Oxidative stress-induced dysregulation of excitation-contraction coupling contributes to muscle weakness. R Qaisar, Bhaskaran S, Ranjit R, Riddle K, H Van Remmen
- 7Advance in Skeletal Muscle Biology in health and disease, University of Florida, USA (March 2017)
   8Oxidative stress-induced dysregulation of excitation-contraction coupling contributes to muscle weakness.
   R Qaisar, Bhaskaran S, Ranjit R, Riddle K, H Van Remmen.
- Oklahoma Medical Research Foundation Retreat, Oklahoma City, USA (March 2016) <u>Mechanism(s) of force deficit in mouse models of muscle specific deletion of CuZnSod1.</u> <u>R Qaisar</u>, Sataranatarajan K, Riddle K, H Van Remmen.
- American Aging Association, Marina Del Rey, LA, USA (2015) <u>Neuron specific reduction in CuZnSOD is not sufficient to initiate a full sarcopenia phenotype.</u> K Sataranatarajan, <u>R Qaisar</u>, C Davis, GK Sakellariou, A Vasilaki, Y Zhang, Y Liu, S Bhaskaran, A McArdle, M Jackson, SV Brooks, A Richardson, H Van Remmen.
- 9. IIM Conference, Siena, Italy (2014) <u>Quantitative and qualitative adaptations of muscle fibers to glucocorticoids.</u> <u>R Qaisar, MA Minetto, V Agoni, G Motta, E Longa, D Miotti, MA Pellegrino, R Bottinelli.</u>
- MyoAge workshop, Jyvaskyla, Finland (2011) <u>Contractile function and myonuclear organization in single fibers from monozygotic female twins</u> <u>discordant for hormone replacement therapy.</u> <u>Qaisar R</u>, Hedstrom Y, Sipilä S, Kovanen V, Larsson L.
- MyoAge workshop, Lecce, Italy (2011)
   <u>Is functional hypertrophy and specific force coupled with addition of myonuclei at the single muscle fiber</u>
   <u>level.</u>
   <u>R Qaisar.</u>
- Biophysical society, Baltimore, USA (2011) <u>Myonuclear domain size and 3D myonuclear organization in single muscle fibers from myostatin deficient or</u> <u>IGF1 overexpressing mice.</u> <u>R Qaisar.</u>
- 13. European Muscle Congress, Padova, Italy (2010) <u>Myonuclear domain size and 3D myonuclear organization in single muscle fibers from myostatin deficient or</u> <u>IGF1 overexpressing mice.</u>

<u>R Qaisar.</u>

- World Muscle Society, Geneva, Switzerland (2009) <u>Effects of muscle hypertrophy on individual myonuclear domain sizes in single muscle fibers from</u> <u>myostatin deficient or IGF-1 over-expressing mice.</u> <u>R Qaisar</u>, K Morine, ER Barton, HL Sweeney, L Larsson.
- World Muscle Society, Geneva, Switzerland (2009) <u>Acute quadriplegic myopathy: underlying mechanisms, improved diagnostic methods and specific</u> <u>intervention strategies.</u> L Larsson, AM Gustafson, J Ochala, V Banduseela, M Li, S Aare, Y Hedstrom, <u>R Qaisar</u>, M Llano Diaz, X Tang, BR Dworkin.
- European Muscle Congress, Oxford, London, UK (2008) <u>Effects of aging and gender on the spatial organization of nuclei in single human skeletal muscle fibers.</u> <u>Qaisar R</u>, Cristea A, Edlund PK, Lindblad J, Bengtsson E, Larsson L.

## Training & Courses.

- NIA summer training course on grant writing, June 2018, Buck Institute, Novato CA, USA,
- Medical Epidemiology (one week), 2012, University of Uppsala, Sweden
- Introduction to doctoral studies & scientific research (five weeks), 2010, University of Uppsala, Sweden
- Immune, gene and cell therapy (two weeks), 2009, University of Uppsala, Sweden
- Digital Imaging System (three weeks), 2009, University of Uppsala, Sweden
- Confocal microscopy (one week), 2009, University of Uppsala, Sweden
- As a junior internee doctor in Surgery (six months), 2006, Lady Reading Hospital, Peshawar, Pakistan
- As a junior internee doctor in Cardiology (six months), 2006, Lady Reading Hospital, Peshawar, Pakistan

## **Computer Skills**

Windows, MS Office, Graphics (Adobe Illustrator, Adobe Photoshop), Biostatistics (Sigma plot, Sigma stat, GraphPad prism)

## **Co-curricular activities**

Mountaineering, Literature, poetry, Science, Astrophysics, Music, Photography, Cricket, Table tennis

## References

(Available on request)