

Rizwan Qaisar, MBBS, Ph.D.

Department of Basic Medical Sciences, College of Medicine, University of Sharjah, Sharjah, UAE.

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Employment history:

- Assistant Professor (Physiology): College of Medicine, University of Sharjah, UAE (Jan 2019 – to date).
- 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 multiorgan Physiology to undergraduate medical and dental students, and Human Biology to foundation year students at the University of Sharjah, UAE.
- ‘Muscle Biology course’ to undergraduate medical, nursing, and physiotherapy students on yearly basis for four years at the University of Uppsala, Sweden.
- ‘Geroscience’ course with emphasis on skeletal muscle aging to 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:

I supervised research projects of following Medical or master’s students at the Universities in Sweden, Italy, and UAE.

- Carl Ohlson, Project title; “Apoptosis in ICU rats”, June 2010 to April 2011
- Tatulesca Delia, Project title; “Myosin isoform distribution in unloaded mice”, June-July 2013

- Tarik Habdi, Project title; "Myosin isoforms in steroid myopathy", July-Aug 2013
- Zainab Ibrahim, Project title; "Mitigation of SR stress as an intervention to disuse-induced muscle loss in a mouse model of hindlimb unloading", Sep 2019 to May 2021.

In addition, I voluntarily supervised more than 35 undergraduate medical students in following three research projects, which are all completed, and the manuscripts submitted and/or accepted for publications.

- "Is the myonuclear domain ceiling hypothesis dead?", Review article accepted for publication in the Singapore Medical Journal (June 2021).
- "Relation of plasma high density lipoprotein-cholesterol with sarcopenia in patients with chronic obstructive pulmonary disease" (submitted).
- "Pulmonary rehabilitation reduces the sarcopenia phenotype in COPD" (published in Indian J of Respiratory Care, April 2022).

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 the 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 the 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

Treatment for age- and oxidative stress-associated muscle atrophy and weakness

Inventors: Holly Van Remmen, Rizwan Qaisar

Publication date: 2021/03/25

Patent Office: US

Application number: 16970607

Description: The present invention includes methods and compositions for treating a skeletal muscular atrophy caused by a defect in the function of one or more sarco/endoplasmic reticulum Ca²⁺-ATPase (SERCA) pumps comprising: identifying a subject having a muscular atrophy caused by a defect in the function of the one or more SERCA pumps and providing the subject with an effective amount of an activator that enhances an activity of the one or more SERCA pumps.

US Patent APP: 16/970, 607, 2021

Scientific Review Work

- 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".
- Editorial Board Member, *Khyber Medical University Journal* since July 2013.

- Have reviewed several manuscripts for 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.

List of Publications (Chronological order):

For my profile on Google Scholar, please click [here](#).

1. Int J Mol Sci. (accepted for publication) (IF = 6.20), Scopus, SJR (Q1)
Nanomedicine for Treating Muscle Dystrophies: Opportunities, Challenges, and Future Perspectives
Ahmad Z, [Qaisar R](#)
2. Frontiers in Physiology (accepted for publication), (IF = 4.56), Scopus, SJR (Q1)
Skeletal muscle in Age-related Diseases: From Molecular Pathogenesis to Potential Interventions
Pravatiyar M, [Qaisar R](#)
3. Life, doi.org: 10.3390/life 1201301, (IF = 3.77), Scopus, SJR (Q2)
The role of 4-phenyl butyric acid in gut microbial dysbiosis in a mouse model of simulated microgravity
Khan S, [Qaisar R](#), Khan NA, Tauseef I, Siddiqui R
4. Neuroscience research, doi.org: 10.1016/j.neures.2022.08.004 (IF = 3.30), Scopus, SJR (Q1)
Elevated plasma zonulin and CAF22 are correlated with sarcopenia and functional dependency at various stages of Alzheimer's disease
Karim A, Iqbal M, Muhammad T, Ahmad F, [Qaisar R](#)
5. Life sciences in space research, doi.org: 10.1016/j.issr.2022.06.005 (IF = 2.08), Scopus, SJR (Q2)
Suppression of endoplasmic reticulum stress prevents disuse muscle atrophy in a mouse model of microgravity
Ibrahim Z, Ramachandran G, El-Huneidi W, Elmoselhi A, [Qaisar R](#)
6. 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](#)
7. J of Cardiology. doi.org: 10.1016/j.jjcc.2022.06.006 (IF = 3.15), Scopus, SJR (Q1)
A multistrain probiotic reduces sarcopenia by modulating WnT signaling biomarkers in patients with chronic heart failure
Karim A, Muhammad T, Shah I, Khan J, [Qaisar R](#)
8. Life Sciences. doi.org: 10.1016/j.ifs.2022.120703 (IF = 5.03), Scopus, SJR (Q1)
SARS-CoV-2-infection induced growth factors play differential roles in COVID-19 pathogenesis
Gupta A, Jayakumar M, Saleh M, Kannan M, Halwani R, [Qaisar R](#), Ahmad F
9. Archives of Gerontology and Geriatrics. doi.org: 10.1016/j.archger.2022.104721 (IF = 3.25), Scopus, SJR (Q1)
A multistrain probiotic improves handgrip strength and functional capacity in patients with COPD: a randomized control trial
Karim A, Muhammad T, Iqbal MS, [Qaisar R](#)
10. The FASEB Journal. doi.org: 10.1096/fasebj.2022.36.S1.R4388 (IF = 5.19), Scopus, SJR (Q1)

Pharmacological inhibition of ER stress mitigates testicular pathology in hind-limb unloaded mice

Ranade A, **Qaisar R**, Khan AA, Karim A, Gul MT, Azeem M, Jose J, Ramachandran G, Ibrahim Z, Nair VA, Elmoselhi A, Hassan WA

11. Exp Biol n Med. doi.org: 10.177/15353702221102117 (IF = 2.69), Scopus, SJR (Q1)
TFP1 and FXII negatively and S100A8/A9 and Cystatin positively correlate with D-Dimer in COVID-19
Gupta A, **Qaisar R**, Halwani R, Kannan M, Ahmad F
12. Int J Mol Sci. doi.org: 10.3390/ijms.23084408 (IF = 6.20), Scopus, SJR (Q1)
Synergistic anti-angiogenic effect of combined VEGFR kinase inhibitors, Lenvatinib, and Regorafenib: A therapeutic potential for breast cancer
Bajbouj K*, **Qaisar R***, 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)
13. Scientific Reports. doi.org: 10.1038/s41598-022-09511-3 (IF = 4.99), Scopus, SJR (Q1)
A comparison of international and national references to measure the prevalence of stunting in Pakistani school-age girls
Qaisar R, Karim A.
14. J of Orthopedic Research. doi.org: 10.1002/jor.25323 (IF = 3.49), Scopus, SJR (Q2)
The role of disrupted iron homeostasis in the development and progression of arthropathy
Karim A, Bajbouj K, **Qaisar R**, Hall A, Hamad M
15. Acta Astronautica. 2022, doi: 10.1016/j.actaastro.2022.03.008 (IF = 2.41), Scopus, SJR (Q1)
Hind-limb unloading in rodents: Current evidence and perspective
Hawliczek A, Brix B, Al Mutawan S, Alsuwaidi H, Du Plessis S, Gao Y, **Qaisar R**, Siddiqui R, Elmoselhi A, Goswami N
16. Spectroscopy Santa Monica. doi.org:10.2139/ssrn.3968037 (IF = 1.91)
Density functional model of the Raman spectra for the seminiferous tubules of hindlimb unloaded mouse
Azeem M, **Qaisar R**, Karim A, Ranade A, Elmoselhi A
17. Frontiers in Cell & Develop. Biol 2022, doi:10.3389/fcell.2022.821014 (IF = 6.68), Scopus, SJR (Q1)
Iron overload induces oxidative stress, cell cycle arrest and apoptosis in chondrocytes
Karim A, Bajbouj K, Shafarin J, **Qaisar R**, Hall A, Hamad M
18. Clinical Science (Long). 2022, doi:10.1042/CS20210964 (IF = 6.12), Scopus, SJR (Q1)
Nicotinamide riboside kinase-2 inhibits JNK pathway and limits dilated cardiomyopathy in mice with chronic pressure overload
Shahzadi SK, Marzook H, **Qaisar R**, Ahmad F
19. Heart, Lung & Circ. doi:10.1016/j.hlc.2022.01.003 (IF = 2.97), Scopus, SJR (Q2)
Relationship of haptoglobin phenotypes with sarcopenia in patients with congestive heart failure
Karim A, Muhammad T, Shah I, Khan J, **Qaisar R**,
20. 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**,
21. BMC Pediatr. 2021 (21:535), doi:10.10186/s12887-021-03017-z (IF = 2.03), Scopus, SJR (Q2)
BMI status relative to international and national growth references among Pakistani school-age girls.
Qaisar R, Karim A,
22. Circulation Research. 2021; 129: AP326, Nov 2021, Abstract, doi:10.1161/res.129.suppl_1.P326

Nicotinamide riboside kinase-2 deficiency promotes pressure overload- induced dilated cardiomyopathy and heart failure

Shahzadi SK, **Qaisar R**, Ahmad F

23. J of Cellular Physiol. Nov 2021, doi:10.1002/jcp30644 (IF = 6.38), Scopus, SJR (Q1)
Cardiomyocyte-GSK-3b deficiency induces cardiac progenitor cell proliferation in the ischemic heart through paracrine mechanism
Yusuf A, **Qaisar R**, Al-Tamimi A, Jayakumar M, Woodgett J, Koch W, Ahmad F.
24. Histo Chem and Cell Biol. Oct 2021, doi:10.1007/s00418-021-02043-3 (IF = 4.3), Scopus, SJR (Q1)
Sarcopenia in pulmonary disease is associated with elevated sarcoplasmic reticulum stress and myonuclear disorganization
Qaisar R, Ustrana S, Muhammad T, Shah I.
25. Proceedings of the International Astronautical Congress, volume A2, 2021, Dubai
Effects of microgravity on the gut microbiota bacterial composition in a hindlimb unloaded model
Khan NA, **Qaisar R**, Siddiqui R, Elmoselhi A.
26. Proceedings of the International Astronautical Congress, volume A2, 2021, Dubai
Pharmacological inhibition of ER stress mitigates testicular pathology in hind-limb unloaded mice
Ranade A, **Qaisar R**, Karim A, Elmoselhi A, Nair V, Jose J, Ramachandran G, Ibrahim Z, Gul MT, Hassan WA, Azeem M, Khan A.
27. Resp. Med. Oct 2021, doi:10.1016/j.rmed.2021.106662 (IF = 3.41), Scopus, SJR (Q1)
Intestinal permeability marker zonulin as a predictor of sarcopenia in chronic obstructive pulmonary disease
Karim A, Muhammad T, Ustrana S, **Qaisar R**.
28. Circulation Research. 2021; 129: AP409, Sep 2021, Abstract, doi:10.1161/res.129.suppl_1.P409
GSK-3b deficiency in cardiomyocytes induces cardiac progenitor cell proliferation in the ischemic heart
Yusuf A, **Qaisar R**, Woodgett J, Ahmad F.
29. Life. Sep 2021, doi:10.3390/life11101008 (IF = 3.77), Scopus, SJR (Q2)
Effects of microgravity environment on gut microbiome and angiogenesis
Siddiqui R, **Qaisar R**, Goswami N, Khan NA, Elmoselhi A.
30. Eu. J of Internal Med. Sep 2021, doi:10.1016/j.ejim.2021.09.009 (IF = 4.48), Scopus, SJR (Q1)
The coupling between sarcopenia and COVID-19 is the real problem
Qaisar R, Karim A, Muhammad T, Shah I, Iqbal M.
31. Singapore Medical Journal 2021, 1-24, doi:10.11622/smjedj.2021103 (IF = 1.85), Scopus, SJR (Q3)
Is the myonuclear domain ceiling hypothesis dead?
Aman F, El Khatib E, AlNeaimi A, Mohamed A, Almulla A, Zaidan A, Alshafei J, Habbal O, Eldesouki S, **Qaisar R**,
32. Khyber Med Univ J. 2021, 13(3), 173-178; doi:10.35845/kmu.2021.20319 (Cite score = 0.1)
Cellular and Molecular Mechanisms of Muscle Regeneration
Qaisar R,
33. J of Pers Med. 2021, 11(9), 919; doi:10.3390/jpm1190919 (IF = 4.45), Scopus, SJR (Q2)
Prediction of sarcopenia using multiple biomarkers of neuromuscular junction deterioration in chronic obstructive pulmonary disease
Karim A, Muhammad T, **Qaisar R**,
34. Global Heart Journal 2021; 16(1): 56. Doi: 10.5334/gh.943 (IF = 3.42), Scopus, SJR (Q1)
Circulating microRNAs as biomarkers of accelerated sarcopenia in chronic heart failure
Qaisar R, Karim A, Muhammad T, Shah I, Khan J.

35. Scientific Reports. 2021 Apr 21;11 (1):8632. Doi: 10.1038/s41598-021-87974-6 (IF = 4.37), Scopus, SJR (Q1)
Prediction of sarcopenia using a battery of circulating biomarkers
Qaisar R, Karim A, Muhammad T, Shah I, Khan J.
36. Life Sci. 2021 May 15;273: 119296. Doi: 10.1016/j.lfs.2021.119296. Epub 2021 Mar 3.7 (IF = 5.03), Scopus, SJR (Q1)
Reduced sarcoplasmic Ca²⁺ ATPase activity underlies skeletal muscle wasting in asthma
Qaisar R, Qayum M, Muhammad T.
37. Biochem Biophys Rep. 2021 Jan 29;25:100930. Doi: 10.1016/j.bbrep.2021.100930.eCollection 2021 Mar. (IF = 2.61), Scopus, SJR (Q3)
Signature molecular changes in the skeletal muscle of hindlimb unloaded mice
Azeem M, Qaisar R, Karim A, Ranade A, Elmoselhi A.
38. Int J Mol Sci. 2020 Dec 22;22(1): 37. Doi: 10.3390/ijms22010037 (IF = 6.20), Scopus, SJR (Q1)
Restoration of Sarcoplasmic Reticulum Ca²⁺ ATPase (SERCA) Activity Prevents Age-Related Muscle Atrophy and Weakness in Mice
Qaisar R, Pharaoh G, Bhaskaran S, Xu H, Ranjit R, Bian J, Ahn B, Georgescu C, Wren JD, Van Remmen H.
39. J Adolesc. 2020 Dec 9;86:40-53. Doi: 10.1016/j.adolescence.2020.12.001 (IF = 3.25), Scopus, SJR (Q1)
Growth and socio-economic status, influence on the age at menarche in school going girls
Karim A, Qaisar R, Hussain MA
40. Biology (Basel). 2020 Oct 3;9(10)322. Doi: 10.3390/biology9100322 (IF = 5.07), Scopus, SJR (Q1)
Circulating biomarkers of accelerated sarcopenia in respiratory diseases
Qaisar R, Karim A, Muhammad T, Shah I
41. J Cachexia Sarcopenia Muscle. 2020 Sep 12. Doi: 10.1002/jcsm.12615 (IF = 12.91), Scopus, SJR (Q1)
Cancer cachexia in a mouse model of oxidative stress
Brown JL, Lawrence MM, Ahn B, Kneis P, Qaisar R, Ranjit R, Bian J, Pharaoh G, Brown S, Peelor FF, Kinter MT, Miller BF, Richardson A, Van Remmen H.
42. Aging Cell. 2020 Sep 4:e13225. Doi: 10.1111/accel.13225 (IF = 9.3), Scopus, SJR (Q1)
Neuron-specific deletion of CuZnSOD leads to an advanced sarcopenic phenotype in older mice
Bhaskaran S, Pollock N, C Macpherson P, Ahn B, Piekarz KM, Staunton CA, Brown JL, Qaisar R, Vasilaki A, Richardson A, McArdle A, Jackson MJ, Brooks SV, Van Remmen H.
43. Biology (Basel). 2020 Jul 15;9(7)B:166. Doi: 10.3390/biology9070166 (IF = 5.07), Scopus, SJR (Q1)
Plasma CAF22 levels as a useful predictor of muscle health in patients with chronic obstructive pulmonary disease
Qaisar R, Karim A, Muhammad T
44. BMC Pediatr. 2020 May 16; 20(1):223. Doi: 10.1186/s12887-020-02135-4 (IF = 2.03), Scopus, SJR (Q2)
Anthropometric measurements of school-going-girls of the Punjab, Pakistan
Karim A, Qaisar R
45. Int J Chron Obstruct Pulmon Dis. 2020 Feb 11; 15:311-321. Doi: 10.2147/COPD.S225765 (IF = 3.35), Scopus, SJR (Q2)
Circulating biomarkers of handgrip strength & lung function in chronic obstructive pulmonary disease
Qaisar R, Karim A, Muhammad T
46. Acta Physiol (Oxf). 2020 March; 228(3): e13431. Doi: 10.1111/alpha (IF = 6.31), Scopus, SJR (Q1)
Muscle unloading: A comparison between spaceflight and ground-based models
Qaisar R, Karim A, Elmoselhi AB
47. Innovation in Aging, Vol 2, Issue Suppl_1, Nov 2018. Doi: 10.1093/geroni/igy023.1277
SERCA activation as an intervention to reduce muscle atrophy and weakness
H Van Remmen, Qaisar R, Bhaskaran S, Ranjit R, Natarajan KS, Premkumar P, Huseman K

48. Redox Biol J, 2018 Sep 27;20:68-74. Doi: 10.1016/j.redox.2018.09.018 (IF = 11.79), Scopus, SJR (Q1)
Restoration of SERCA ATPase to prevent oxidative stress-related muscle atrophy and weakness
Qaisar R, Bhaskaran S, Ranjit R, Natarajan KS, Premkumar P, Huseman K, Van Remmen H
49. J Cachexia Sarcopenia Muscle. 2018 Aug 2. Doi: 10.1002/jcsm. 12339 (IF = 12.91), Scopus, SJR (Q1)
Oxidative stress-induced dysregulation of excitation-contraction coupling contributes to muscle weakness
Qaisar R, Bhaskaran S, Premkumar P, Ranjit R, Natarajan KS, Ahn B, Riddle K, Clafin DR, Richardson A, Brooks SV, Van Remmen H
50. Free Radic Biol Med. 2017 Nov; 112:48-49. Doi: 10.1016/j.freeradbiomed.2017.10.063 (IF = 7.37), Scopus, SJR (Q1)
Inducible motor neuron specific deletion of CuZn Superoxide dismutase accelerates muscle atrophy in mice
Bhaskaran S, Li H, Ahn B, Piekarz K, Ranjit R, Qaisar R, Premkumar P, Forbes B, Riddle K, Richardson A, Van Remmen H.
51. Free Radic Biol Med. 2017 April 26; 108:704-714. Doi: 10.1016/j.freeradbiomed.2017.04.028 (IF = 7.37), Scopus, SJR (Q1)
A fish oil diet induces mitochondrial uncoupling and mitochondrial unfolded protein response in epididymal white adipose tissues of mice
Bhaskaran S, Unnikrishnan A, Ranjit R, Qaisar R, Pharaoh G, Matyi S, Kinter M, Deepa SS.
52. Diabetes. 2016 Dec;65(12):3585-3597. Epub 2016 Sep 27 (IF = 9.46), Scopus, SJR (Q1)
Enhanced GLUT-4 Dependent Glucose Transport Relieves Nutrient Stress in Obese Mice Through Changes in Lipid and Amino Acid Metabolism
Gurley JM, Ilayeva O, Jackson RM, Griesel BA, White P, Mastuzaki S, Qaisar R, Van Remmen H, Humphries KM, Newgard CB, Olson AL.
53. Free Radic Biol Med. 2016, Doi: 10.1016/j.freeradbiomed.2016.03.25 (IF = 7.37), Scopus, SJR (Q1)
Muscle fiber type diversification during exercise and regeneration
Qaisar R*, Bhaskaran S, Van Remmen H.
54. Free Radic Biol Med. 2016 Feb;91:281-92. Doi: 10.1016/j.freeradbiomed.2015.12.021 (IF = 7.37), Scopus, SJR (Q1)
Down-regulation of the mitochondrial matrix peptidase ClpP in muscle cells causes mitochondrial dysfunction and decreases cell proliferation
Deepa SS, Bhaskaran S, Ranjit R, Qaisar R, Nair BC, Liu Y, Walsh ME, Fok WC, Van Remmen H.
55. Aging Cell. 2015 Dec;14(6):957-70. Doi: 10.1111/ace.12387. Epub 2015 Aug 20 (IF = 9.3), Scopus, SJR (Q1)
The histone deacetylase inhibitor butyrate improves metabolism and reduces muscle atrophy during aging
Walsh ME, Bhattacharya A, Sataranatarajan K, Qaisar R, Sloane L, Rahman MM, Kinter M, Van Remmen H.
56. Redox Biol. 2015 Apr 15;5:140-148. Doi: 10.1016/j.redox.2015.04.005 PMID: 25917273 (IF = 11.79), Scopus, SJR (Q1)
Neuron specific reduction in CuZnSOD is not sufficient to initiate a full sarcopenia phenotype
Sataranatarajan K*, Qaisar R*, Davis C, Sakellariou GK, Vasilaki A, Zhang Y, Liu Y, Bhaskaran S, McArdle A, Jackson M, Brooks SV, Richardson A, Van Remmen H.
(*, authors contributed equally)
57. Muscle Nerve. 2015 Jan 16. Doi: 10.1002/mus.24572 (IF = 3.21), Scopus, SJR (Q2)
Quantitative and qualitative adaptations of muscle fibers to glucocorticoids
Minetto MA*, Qaisar R*, Agoni V, Motta G, Longa E, Miotti D, Pellegrino MA, Bottinelli R
(*, authors contributed equally)
58. Indian J of Physiol and Pharmacol 2014, 58 (1), 1-12 (IF = 0.25), Scopus, SJR (Q4)
What determines myonuclear domains size?
Qaisar R, Larsson L
59. Acta Physiol (Oxf). 2014 Dec;212(4):316-29. Doi: 10.1111/apha. 12320. Epub 2014 June 30 (IF = 6.31), Scopus, SJR (Q1)
Actin sliding velocity on pure myosin isoforms from hindlimb unloaded mice
Maffei M, Longa E, Qaisar R, Agno V, Desaphy JF, Camerino DC, Bottinelli R, Canepari M.

60. J Physiol. 2013 May 1;591(Pt 9):2333-44. doi: 10.1113/jphysiol.2012.250092. (IF = 5.18), Scopus, SJR (Q1)
Hormone replacement therapy improves contractile function and myonuclear organization of single muscle fibers from postmenopausal monozygotic female twin pairs
 Qaisar R, Hedstrom Y, Pöllänen E, Ronkainen P, Kaprio J, Alen M, Larsson L
61. Am J Physiol Regul Integr Comp Physiol. 2012 Nov;303(10):R1090-9. doi: 10.1152/ajpregu.00636.2011. (IF = 3.61), Scopus, SJR (Q1)
Loss of muscle strength during sepsis is in part regulated by glucocorticoids and is associated with reduced expression of myosin heavy chain type IIb
 Alamdari, N, Toraldo G, Aversa Z, Renaud G, Qaisar R, Larsson L, Jasuja R, Hasselgren P
62. FASEB J. 2012 Mar;26(3):1077-85. doi: 10.1096/fj.11-192195. Epub 2011 Nov 28. (IF = 5.19), Scopus, SJR (Q1)
Is functional hypertrophy and specific force coupled with addition of myonuclei? A single fiber study of myostatin knock-out and IGF-1 over-expressing mice
 Qaisar R, Renaud G, Morine K, Barton ER, Sweeney H.L, Larsson L
63. J Physiol. 2011 Apr 15;589(Pt 8):2007-26. Epub 2011 Feb 14. (IF = 5.18), Scopus, SJR (Q1)
Preferential skeletal muscle myosin loss in response to mechanical silencing in a novel rat intensive care unit model: Underlying mechanisms
 Ochala J, Gustafson AM, Llano Diez M, Renaud G, Li M, Aare S, Qaisar R, Banduseela VC, Hedström Y, Tang X, Dworkin B, Ford CG, Nair SN, Perera S, Gautel M, Larsson L.
64. Biophysical society journal (2011)
Myonuclear domain size and 3D myonuclear organization in single muscle fibers from myostatin deficient or IGF1 overexpressing mice
 R. Qaisar
65. Aging Cell. 2010 Oct;9(5):685-97. doi: 10.1111/j.1474-9726.2010.00594.x. Epub 2010 Jul 2. (IF = 9.3), Scopus, SJR (Q1)
Effects of ageing and gender on the spatial organization of nuclei in single human skeletal muscle cells
 A Cristea, R Qaisar, PK Edlund, J Lindblad, E Bengtsson, L Larsson.
 (*, authors contributed equally)
66. Neuromuscular disorders. 2009
Effects of ageing and gender on the spatial organization of nuclei in single human skeletal muscle cells
 A Cristea, PK Edlund, J Lindblad, R Qaisar, E Bengtsson, L Larsson.
67. Neuromuscular disorders. 2009
Acute Quadriplegic Myopathy: Underlying mechanisms, improved diagnostic methods and specific intervention strategies
 AM Gustafson, J Ochala, ML Diez, G Renaud, M Li, S Aare, R Qaisar, VC Banduseela, Y Hedstrom, X Tang, B Dworkin, GC Ford, KS Nair, G Perera, M Gautel, L Larsson
68. Exp Physiol. 2009 Jan;94(1):117-29. Epub 2008 Sep 26. (IF = 2.96), Scopus, SJR (Q2)
Myonuclear domain size and myosin isoform expression in muscle fibres from mammals 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.

- 1 **22nd IAA Humans in Space Symposium "Together to Mars", Dubai, UAE (Nov 2019)**
Targeting SR stress to mitigate disuse-induced muscle atrophy in simulated microgravity.
 R Qaisar, Bajbouj K, Elmoselhi A
- 2 **NIA summer training course, Buck Institute, Novato, CA, USA (June 2017)**
Defining the role(s) of ER stress in age- and oxidative stress-related skeletal muscle

impairment.

R Qaisar.

- 2 **Experimental Biology Conference, San Diego, USA (April 2017)**
Restoration of SERCA ATPase as an intervention to muscle atrophy and weakness.
R Qaisar, Bhaskaran S, Ranjit R, Sataranatarajan K, Premkumar P, Huseman K, H Van Remmen.
- 3 **Oklahoma Medical Research Foundation Retreat, Oklahoma City, USA (March 2017)**
Restoration of SERCA ATPase as an intervention to muscle atrophy and weakness.
R Qaisar, Bhaskaran S, Ranjit R, Sataranatarajan K, Premkumar P, Huseman K, H Van Remmen.
- 4 **Physiology of Skeletal Muscle and Bone during Aging: Impact of Health span. 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
- 6⁵ **Advance in Skeletal Muscle Biology in health and disease, University of Florida, USA (March 2017)**
Oxidative stress-induced dysregulation of excitation-contraction coupling contributes
7 *to muscle weakness.*
R Qaisar, Bhaskaran S, Ranjit R, Riddle K, H Van Remmen.
- 6 **Oklahoma Medical Research Foundation Retreat, Oklahoma City, USA (March 2016)**
Mechanism(s) of force deficit in mouse models of muscle specific deletion of CuZnSod1.
R Qaisar, Sataranatarajan K, Riddle K, H Van Remmen.
- 7 **American Aging Association, Marina Del Rey, LA, USA (2015)**
Neuron specific reduction in CuZnSOD is not sufficient to initiate a full sarcopenia phenotype.
K Sataranatarajan, R Qaisar, C Davis, GK Sakellariou, A Vasilaki, Y Zhang, Y Liu, S Bhaskaran, A McArdle, M Jackson, SV Brooks, A Richardson, H Van Remmen.
- 8 **IIM Conference, Siena, Italy (2014)**
Quantitative and qualitative adaptations of muscle fibers to glucocorticoids.
R Qaisar, MA Minetto, V Agoni, G Motta, E Longa, D Miotti, MA Pellegrino, R Bottinelli.
- 9 **MyoAge workshop, Jyvaskyla, Finland (2011)**
Contractile function and myonuclear organization in single fibers from monozygotic female twins discordant for hormone replacement therapy.
Qaisar R, Hedstrom Y, Sipilä S, Kovanen V, Larsson L.
- 10 **MyoAge workshop, Lecce, Italy (2011)**
Is functional hypertrophy and specific force coupled with addition of myonuclei at the single muscle fiber level.
R Qaisar.
- 11 **Biophysical society, Baltimore, USA (2011)**
Myonuclear domain size and 3D myonuclear organization in single muscle fibers from myostatin deficient or IGF1 overexpressing mice.
R Qaisar.
- 12 **European Muscle Congress, Padova, Italy (2010)**
Myonuclear domain size and 3D myonuclear organization in single muscle fibers from myostatin deficient or IGF1 overexpressing mice.
R Qaisar.
- 13 **World Muscle Society, Geneva, Switzerland (2009)**

Effects of muscle hypertrophy on individual myonuclear domain sizes in single muscle fibers from myostatin deficient or IGF-1 over-expressing mice.

R Qaisar, K Morine, ER Barton, HL Sweeney, L Larsson.

14 **World Muscle Society, Geneva, Switzerland (2009)**

Acute quadriplegic myopathy: underlying mechanisms, improved diagnostic methods and specific intervention strategies.

L Larsson, AM Gustafson, J Ochala, V Banduseela, M Li, S Aare, Y Hedstrom, **R Qaisar**, M Llano Diaz, X Tang, BR Dworkin.

15 **European Muscle Congress, Oxford, London, UK (2008)**

Effects of aging and gender on the spatial organization of nuclei in single human skeletal muscle fibers.

Qaisar R, 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

Literature, poetry, Science, Astrophysics, Quantum physics, Music, Photography
Cricket, Table tennis,

References

(Available on request)