

Dr. Rais A. Nawaz, Ph.D

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Faculty of Medicine, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan.

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Date of Birth: 10th September, 1987.

Education

PhD (Medical Sciences); 2014-18, First Department of Internal Medicine, Faculty of Medicine, University of Toyama, Japan. (**Grade A**)

PhD Thesis title: *CD206⁺ M2-like macrophages regulate systemic glucose metabolism by inhibiting proliferation of adipocyte progenitors*

M.Phil (Eastern Medicine); 2011-13, Faculty of Eastern Medicine, Hamdard University, Karachi, Pakistan. (*Grade A*)

M.Phil Thesis title: Ways to Manage Hepatitis C without Cirrhosis: Treatment by Comparison of Coded Eastern Medicine Hepcinal with Interferon alpha 2b and Ribavirin

BEMS; 2015-10, University College of Conventional Medicine, The Islamia University of Bahawalpur, Pakistan (**Gold Medalist**).

Grade/Division; First

Laboratory Skills

Advanced experimental and mice handling, Cell culture techniques, Flow cytometry analysis and single cell-sorting, Realtime PCR, Western blotting, Southern blotting, Immunohistochemistry, Microbead activated cell sorting analysis, Confocal microscopy, Immunofluorescence, Glucose and insulin tolerance test, Hyperinsulinemic-euglycemic clamp study, Verbal and writing communication and Research protocols handling. Ability to Develop Protocol Design for Clinical Trial Conduction.

Research Interest;

Adipose tissue contains several cell types, including stem cells, adipocyte progenitors, endothelial cells, fibroblasts, and immune cells, etc., that interact with each other to maintain tissue homeostasis. How adipose stem cell/adipocyte progenitors regulate adipose tissue inflammation during obesity and how we can target these stem cells to ameliorate obesity-induced insulin resistance. Our “niche theory” explains the homeostatic functions of the macrophages in adipose tissue for metabolic adaptations to excessive nutrient intake, which has long remained a mystery.

Awards

1. Received **Young Investigator Award (YIA)** by Japan Endocrine Society. May 9-11, 2019.
2. Received **YIA** by Japan Society for the Study of Obesity in the 28th Annual Meeting of Japan Society for the Study of Obesity (JASSO), Kobe, Japan. Oct 8-9, 2018.
3. Received **YIA** by Japan Society for Experimental Diabetes and Obese animal in the 32nd Annual conference Japan Society of Experimental Diabetes and Obesity at Nagoya, Japan. March 23-24, 2018.
4. Received **Advans Encouragement Award (AEA)** by Advanced Research Group of

- CardioVascular, Organ Network and Diabetes: Tokyo (Advans) Tokyo, Japan. December 17, 2018.
5. Received **YIA** by Study Group of Molecular Diabetology in the 29th Symposium of Molecular Diabetology at Osaka, Japan. December 2, 2017.
 6. Recipient of **Kishimoto travel award** by the International Cytokine & Interferon Society (ICIS) in the 5th Annual Meeting of International Cytokine & Interferon Society (ICIS), Kanazawa, Japan. Oct 29-Nov 2, 2017.
 7. Received **Best Presentation award** from Toyama Academic Science Gala, University of Toyama, Toyama, Japan. September 27, 2017.
 8. Received **YIA** by the JASSO in the 23rd Adiposcience Symposium at Osaka, Japan. August 18, 2017.
 9. **Awarded Gold Medal**, The Islamia University of Bahawalpur, Pakistan. 2010.
 10. **Best presenter award** at the 2nd National Conference, The Islamia University of Bahawalpur, Pakistan. May23-24, 2013.
 11. Passed Japanese Language Proficiency Test (**JLPT**) level **N-3**, 2016.

Scholarships

1. Kobayashi international student foundation scholarship
 - April, 2014- March, 2018 Kobayashi Foundation.
2. Toyama University (Sugitani) Scholarship
 - Sept 2014-March 2015 Toyama University (Sugitani) Scholarship for Foreign Students.

Professional Experience

2020.4-

Assistant Professor; Department of Molecular and Medical Pharmacology, Faculty of Medicine, University of Toyama, Toyama, Japan.

2018.4-2020.3

Post Doctorate Fellow; Japan Society for Promotion of Science (JSPS) International Research Fellow, Molecular and Medical Pharmacology, Faculty of Medicine, University of Toyama, Toyama, Japan.

2014.5-2018.2.

Teaching Assistant/Research Assistant; First Department of Internal Medicine, Faculty of Medicine, University of Toyama, Toyama, Japan.

2013.9-2014.3

International Research Fellow; First Department of Internal Medicine, University of Toyama, Japan.

2012.12-2013.9

Clinical Research Executive; Herbion Pakistan Pvt. Ltd, Karachi, Pakistan.

Received Research Grants

1. Japan Society for Promotion of Science (JSPS) International Research Fellow grant. Principal Investigator/to conduct research. Title: Role of macrophages in regulation of muscle progenitor cells through metabolic reprogramming. (Grant amount: 3 million Japanese yen) (4/2018-3/2020)
2. Daiichi Sankyo Research Grant. Co-Principal Investigator. Title; CD206 陽性 M2 マクロファージが肥満糖尿病状態での骨格筋損傷治癒機転に与える 影響 (Grant amount: 2 million Japanese yen) 4/2019-3/2021).
3. Front Runner of Future Diabetes Research, Japan Foundation for Applied Enzymology (Grant# 17F004). Principal Investigator. Title: Role CD206 M2 macrophages in obesity-induced insulin resistance. (Grant amount: 80,000 Japanese yen/per year) (2017-31).

4. Kobayashi International Student Foundation Research Grant. Co-Principal Investigator. Title: Role of Pakistani medicinal plants in the treatment of type 2 diabetes. (Grant amount: 6 million Japanese yen) (2016-18).

Membership:

2019-20	The Society on Sarcopenia, Cachexia, and Wasting Disorders (SCWD)
2017- present	American Diabetes Association (ADA)
2017-20	International Cytokine & Interferon Society (ICIS)
2016- present	Japan Society for the Study of Obesity (JASSO)
2015- present	Japan Diabetes Society (JDS)
2015-present	Japan Endocrine Society (JES)
2019- present	Young Endocrinologist Conference association (YEC)
2017- present	Japan Society of Experimental Diabetes and Obesity

Total number of papers; 55 (Original papers; 30, Review; 4, Proceedings; 21)
International conferences/Symposium; (Oral 26+ Poster 15)

Full list of Publications:

1. Fujisaka S, Usui I, **Nawaz A**, Igarashi Y, Okabe K, Furusawa Y, Watanabe S, Yamamoto S, Sasahara M, Watanabe Y, Nagai Y, Yagi K, Nakagawa T, Tobe K. Bofutsushosan improves gut barrier function with a bloom of *Akkermansia muciniphila* and improves glucose metabolism in mice with diet-induced obesity. **Scientific Reports**. 2020 March 26; 10: 5544. (IF; 4.012)
2. Nishida Y, **Nawaz A***, Kado T, Takikawa A, Igarashi Y, Yamamoto S, Sasahara M, Imura J, Tokuyama K, Usui I, Nakagawa T, Fujisaka S, Yagi K, Tobe K. Astaxanthin stimulates mitochondrial biogenesis in insulin resistant muscle via activation of AMPK pathway. **Journal of Cachexia, Sarcopenia and Muscle**. 2020 Jan 31; 11(1):241-258. (IF; 10.754)
3. Kado T, **Nawaz A**, Takikawa A, Usui I, Tobe K. Linkage of CD8+ T cell exhaustion with high-fat diet-induced tumourigenesis. **Scientific Reports**. 2019 Aug 22; 9(1):12284. (IF; 4.012)
4. Bilal M, Ahmad S, Rehman T, Abbasi WM, Ghauri, Arshad MA, Ayaz S, **Nawaz A**. Development of herbal formulation of medicinal plants and determination of its antihyperuricemic potential in vitro and in vivo rat's model. **Pak J Pharm Sci**. 2020 March; 33(2): 641-649. (IF; 0.596)
5. **Nawaz A**, and Tobe K. M2-like macrophages serve as a niche for adipocyte progenitors in adipose tissue. **Journal of Diabetes Investigation**. 2019 Nov; 10(6):1394-1400. (IF; 3.902)
6. Takikawa A, Usui I, Fujisaka S, Tsuneyama K, Okabe K, Nakagawa T, **Nawaz A**, Kado T¹, Jojima T, Aso Y, Hayakawa Y, Yagi K, Tobe K. Macrophage-specific hypoxia-inducible factor-1 α deletion suppresses the development of liver tumors in high-fat diet-fed obese and diabetic mice. **Journal of Diabetes Investigation**. 2019 Nov; 10(6):1411-1418. (IF; 3.902)
7. Igarashi Y, **Nawaz A**, Kado T, Bilal M, Kuwano T, Yamamoto S, Sasahara M, Jiuxiang X, Inujima A, Koizumi K, Imura J, Shibahara N, Usui I, Fujisaka S, Tobe K. Partial depletion

- of CD206-positive M2-like macrophages induces proliferation of beige progenitors and enhances browning after cold stimulation. **Scientific Reports**. 2018 Oct 1; 8(1):14567. (IF; 4.012)
8. **Nawaz A**, Aminuddin A, Kado T, Takikawa A, Yamamoto S, Tsuneyama K, Igarashi Y, Ikutani M, Nishida Y, Nagai Y, Takatsu K, Imura J, Sasahara M, Okazaki Y, Ueki K, Okamura T, Tokuyama K, Ando A, Matsumoto M, Mori H, Nakagawa T, Kobayashi N, Saeki K, Usui I, Fujisaka S, Tobe K. CD206+ M2-like macrophages regulate systemic glucose metabolism by inhibiting proliferation of adipocyte progenitors. **Nature Communications**. 2017 Aug 18; 8(1):286. (IF; 11.878)
 9. **Nawaz A**, Mehmood A, Kanatani Y, Kado T, Igarashi Y, Takikawa A, Yamamoto S, Okabe K, Nakagawa T, Yagi K, Fujisaka S, Tobe K. Sirt1 activator induces proangiogenic genes in preadipocytes to rescue insulin resistance in diet-induced obese mice. **Scientific Reports**. 2018 Jul 27; 8(1):11370. (IF; 4.012)
 10. Ono Y, Nagai M, Yoshino O, Koga K, Nawaz A, Hatta H, Nishizono H, Izumi G, Nakashima A, Imura J, Tobe K, Fujii T, Osuga Y, Saito S. CD11c+ M1-like macrophages (MΦs) but not CD206+ M2-like MΦ are involved in folliculogenesis in mice ovary. **Scientific Reports**. 2018 May 25; 8(1):8171. (IF; 4.012)
 11. Takikawa A, Mahmood A, **Nawaz A**, Kado T, Okabe K, Yamamoto S, Aminuddin A, Senda S, Tsuneyama K, Ikutani M, Watanabe Y, Igarashi Y, Nagai Y, Takatsu K, Koizumi K, Imura J, Goda N, Sasahara M, Matsumoto M, Saeki K, Nakagawa T, Fujisaka S, Usui I, Tobe K. HIF-1 α in Myeloid Cells Promotes Adipose Tissue Remodeling Toward Insulin Resistance. **Diabetes**. 2016 Dec; 65(12):3649-3659. (IF; 7.224)
 12. **Nawaz A**, Nazar H, Usmanghani K, Sheikh ZA, Chishti MA, Ahmad I. Ways to manage hepatitis C without cirrhosis: Treatment by comparison of coded eastern medicine hepcinal with interferon alpha 2b and ribavirin. **Pak J Pharm Sci**. 2016 May; 29(3):919-27. (IF; 0.596)
 13. Akram M, **Nawaz A**. Effects of medicinal plants on Alzheimer's disease and memory deficits. **Neural Regen Res**. 2017 Apr; 12(4):660-670. (IF; 2.472)
 14. Daniyal M, Akram M, Hamid A, **Nawaz A**, Azhar I, Usmanghani K, Ahmed S. Comprehensive review on treatment of HIV. **Pak J Pharm Sci**. 29(4): 1331-8, July, 2016. (IF; 0.596)
 15. Siddiqui MS, Saeed A, **Nawaz A**, Naveed S, Usmanghani K. The effects of new polyherbal Unani formulation AJMAL06 on serum creatinine level in chronic renal failure. **Pak J Pharm Sci**. 2016 Mar; 29(2 Suppl):657-61. PMID: 27113299. (IF; 0.596)
 16. Sheikh ZS, Usmanghani K, Nazar H, **Nawaz A**, Jahanzeb LR, Ahmad I. Comparative clinical study on the efficacy of Biocor plus compared with simvastatin for the management of hypercholesterolemia. **Pak J Pharm Sci**. 2015 Nov; 28(6 Suppl):2291-5. PMID: 26687746. (IF; 0.596)
 17. Chishti MA, Mohi-Ud-Din E, Usmanghani K, **Nawaz A**, Nazar H, Ahmad I. Comparative clinical efficacy and safety of coded herbal medicine Dermovix in the management of patients with atopic dermatitis versus allopathic medicine. **Pak J Pharm Sci**. 2015 Sep; 28(5):1655-63. PMID: 26408885. (IF; 0.596)
 18. Toseef MU, Saeed A, Mohi-Ud-Din E, Usmanghani K, Nazar H, **Nawaz A**, Ahmad I, Siddiqui FA. Comparative clinical evaluation on herbal formulation Pepsil, Safoof-e-Katira and Omeprazole in gastro esophageal reflux disease. **Pak J Pharm Sci**. 2015 May; 28(3):863-70. PMID: 26004718. (IF; 0.596)
 19. **Nawaz A**, Sheikh ZA, Feroz M, Alam K, Nazar H, Usmanghani K. Clinical efficacy of polyherbal formulation Eezpain spray for muscular pain relief. **Pak J Pharm Sci**. 2015 Jan; 28(1):43-47. (IF; 0.596)
 20. Senda S, Inoue A, Mahmood A, Suzuki A, Kamei N, Kubota N, Watanabe T, Aoyama M,

- Nawaz A**, Ohkuma Y, Tsuneyama K, Koshimizu Y, Usui I, Saeki K, Kadowaki T, Tobe K. Calorie restriction-mediated restoration of hypothalamic signal transducer and activator of transcription 3 (STAT3) phosphorylation is not effective for lowering the body weight set point in IRS-2 knockout obese mice. **Diabetol Int.** 2015 Dec; 6(4); 321-35.
21. Fujisaka S, Usui I, **Nawaz A**, Takikawa A, Kado T, Igarashi Y, Tobe K. M2 macrophages in metabolism. **Diabetol Int.** 2016 Dec; 7(4):342-351. 13.
 22. **Nawaz A**, Zaidi SF, Usmanghani K, Ahmad I. Concise Review on the Insight of Hepatitis C. **J. Taibah. Univ Med. Sci.** 2015 Jan; 10(2):132-139. 14.
 23. **Nawaz A**, Bano S, Sheikh ZA, Usmanghani K, Ahmad I, Zaidi SF, Ahmad I. Evaluation of Acute and Repeated Dose Toxicity of the Polyherbal Formulation Linkus Syrup in Experimental Animals. **Chinese Medicine.** 2014 Dec; 5(4):179-189.
 24. **Nawaz A***, Kado T, Igarashi Y, Yagi K, Usui I, Fujisaka S, Tobe K*. Adipose tissue-resident macrophages and obesity. **Rads J Pharm Pharmac Sci.** 2017; 5(3): 57-62.
 25. Sultana T, Naveed S, **Nawaz A**, Muhammad JS, Zaidi SF, Ebrahim M, Alam MT, Usmanghani K. The Use of Cissus quadrangularis in the Management of Left Tibia Fracture: A case report. **Rads J Pharm Pharmac Sci.** 2016 Dec; 4(1):117-22.
 26. Ayaz S, Usmanghani K, **Nawaz A**, Khan S, Mohiuddin E. Evaluation of the Clinical Efficacy of Comparison of Irocibin Iron Polymaltose (Herbal Complex) and Iberet for the Treatment of Iron Deficiency Anemia. **Rads J Pharm Pharmac Sci.** 2015 Dec; 3(2):50-57.
 27. Chishti MA, Nazar H, Usmanghani K, Nasreen R, **Nawaz A**. Clinically Evaluation of an Herbal Medicine Acidom in Hyperacidity. **Rads J Pharm Pharmac Sci.** 2015 Dec; 3(2):72-77.
 28. Shakeel S, Usmanghani K, **Nawaz A**, Zakki SA, Cui Z, Abraham S, Mir TA. Evaluation of in vitro lipooxygenase Inhibition and Antioxidant Activity of Polyherbal Formulation Entoban. **Rads J Pharm Pharmac Sci.** 2015 Dec; 3(2):82-88.
 29. Mir TA, Abraham S, **Nawaz A**, Wani SI, Rehman M. Biosensors and their biomedical applications: Invited Review. **Rads J Pharm Pharmac Sci.** 2015 Dec;3(2):104-112.
 30. Chishti MA, Nazar H, Usmanghani K, **Nawaz A**. Role of Qurs Fishar in Hypertension. **Rads J Pharm Pharmac Sci.** 2015 Jun; 3(1):62-65.
 31. **Nawaz A**, Iqbal A, Ahmed A, Mushtaq A, Chishti MA, Ahmad I, Usmanghani K. Treatment of Sciatica by HIJAMA (Regimental Therapy- Cupping). **Rads J Pharm Pharmac Sci.** 2014 Dec; 2(2), 22-25.
 32. Sheikh ZS, Zahoor A, **Nawaz A**, Khan SS, Siddiqui ZA, Khan AA, Usmanghani K. Concise Review: Efficacy and Safety of Verona in Patients with Oligospermia_ Meta Analytical Insight and Management. **Rads J Pharm Pharmac Sci.** 2014 Dec; 2(2)35-40.
 33. Sheikh ZA, Khan AA, **Nawaz A**, Zahoor A, Siddiqui ZA, Khan SS, Usmanghani K. Development and Clinical Evaluation of Polyherbal Laxative Laxisen. **Rads J Pharm Pharmac Sci.** 2014 Dec; 2(2) 63-70.
 34. **Nawaz A**, Alam K, Sheikh ZA, Khatoon N, Amir SM, Usmanghani K. Design, Development, and Evaluation of Antimicrobial Activity of Herbal Antiseptic Wound Pad-Neemplast. **African J Pharmacy and Pharm.** 2013 September; 7(33), pp. 2341-2347.

Proceedings;

1. **Nawaz A***, Nishida Y, Kado T, Bilal M, Fujisaka S, Yagi K, Nakagawa T, Tobe K. Astaxanthin contribute to ameliorating insulin resistance and muscle remodelling. *Journal of Cachexia, Sarcopenia and Muscle.* 2019; 10: 1378–1435 DOI: 10.1002/jcsm.12513 (IF; 10.754)

2. **Nawaz A**, Kado T, Okabe K, Igarashi I, Yagi K, Fujisaka S, Nakagawa T, Tobe K. Depletion of CD206 M2-like macrophages ameliorates insulin resistance. **Journal of Japan Society for the Study of Obesity** 2019, 25 (Suppl) 279.
3. **Nawaz A**, Nishida Y, Fujisaka S, Nakagawa T, Tobe K. Astaxanthin ameliorates insulin resistance in muscle of obese mice via activation of AMPK pathway. **Journal of Japan Society for the Study of Obesity** 2019, 25 (Suppl) 274.
4. **Nawaz A**, Okabe K, Nakagawa T, Yagi K, Usui I, Fujisaka S, Tobe K. Partial depletion of CD206⁺ M2-like macrophages induces proliferation of white and beige adipocyte progenitor and ameliorate insulin resistance. *Floia Endocrinologia Japonica* 2019 April 1; 95(1) 332.
5. **Nawaz A**, Nakagawa T, Yagi K, Fujisaka S, Okabe K, Kado T, Liu J, Bilal M, Tobe K. Partial Depletion of CD206 M2-Like Macrophages Enhances Preadipocyte Differentiation via Reduction of Wnt Signaling. *Diabetes* 2019 Jun; 68(1): <https://doi.org/10.2337/db19-188-OR> [IF; 7.224]
6. Okabe K, **Nawaz A**, Fujisaka S, Yagi K, Kado T, Usui I, Nakagawa T, Tobe K. Nampt Deletion Changes Metabolism in Adipose Tissue and Prevents Diet-Induced Obesity. *Diabetes* 2019 Jun; 68 (1): 1987-P. <https://doi.org/10.2337/db19-1987-P> [IF; 7.224]
7. **Nawaz A**, Fujisaka S, Usui I, Yagi K, Nakagawa T, Kado T, Tobe K, Igarashi Y, Okabe K, Saeki K. Depletion of CD206 M2-like macrophages promotes the browning of the white adipose tissue. **Diabetes**. 2018 Jul;67(Supplement 1):1749-P. <https://doi.org/10.2337/db18-1749-p>. [IF; 7.224]
8. Fujisaka S, Usui I, **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Tobe K. Bofutsushosan improves gut barrier function with a bloom of akkermansia muciniphila and improves glucose metabolism in diet-induced obese mice. **Diabetes**. 2018 Jul;67(Supplement 1): <https://doi.org/10.2337/db18-1990-p>. [IF; 7.224].
9. Okabe K, Usui I, **Nawaz A**, Fujisaka S, Kado T, Igarashi Y, Yagi I, Tobe K, Nakagawa T. NAD-mediated metabolic reprogramming epigenetically regulates gene expression to promote preadipocyte differentiation. **Diabetes**. 2018 Jul;67 (Supplement 1): 360-Or. <https://doi.org/10.2337/db18-360-or>. [IF; 7.224]
10. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Saeki K, Usui I, Tobe K. Partial depletion of CD206⁺ cells enhances adipocyte differentiation and improves glucose metabolism through Tgfb signaling. **Diabetes**. 2017 Jun; 66(Supplement 1): A88. <https://doi.org/10.2337/db17-1-380>. [IF; 7.224]
11. Takikawa A, Usui I, Zhang Q, Okabe K, Kado T, **Nawaz A**, Fujisaka S, Nakagawa T, Tsuneyama K, Tobe K. Myeloid cell-specific Hif-1 α deletion decreases the number of liver tumors in high fat-fed mice. **Diabetes**. 2016 Jun;65(Supplement 1): A503. <https://doi.org/10.2337/db16-1771-2041>. [IF; 7.224]
12. Takikawa A, Mehmood A, **Nawaz A**, Kado T, Senda S, Okabe K, Usui I, Tobe K. Myeloid Cell-specific HIF-1 alpha Deletion Protected against Insulin Resistance with Increased Angiogenesis in High Fat-fed Mice. **Diabetes** 2015 Jun; 64(Supplement 1): A496-A574. <https://doi.org/10.2337/db15-1929-2253>. [IF; 7.224]
13. **Nawaz A**, Igarashi Y, Kado T, Bilal M, Okabe K, Liu J, Takikawa A, Yagi K, Nakagawa T, Fujisaka S, Tobe K. CD206 M2-like macrophages and adipose tissue inflammation. **Journal of the Japan Diabetes Society**. 2019 July 13, 62(1) S40. <https://doi.org/10.11213/tonyoby.62.S-86>
14. **Nawaz A**, Igarashi Y, Kado T, Takikawa A, Okabe K, Yamamoto S, Nakagawa T, Yagi K, Fujisaka S, Tobe K. Depletion of CD206 M2-like macrophages promotes browning of

- white adipose tissue. **Journal of the Japan Diabetes Society** 2018 Sept 13, 61(1) S96. <https://doi.org/10.11213/tonyobyoy.61.S-96>
15. **Nawaz A**, Tobe K. CD206⁺ M2 macrophages inhibit proliferation of adipocyte progenitors and impact on glucose metabolism. **Journal of the Japan Diabetes Society** 2017 Jun 15, 60(1) S25. <https://doi.org/10.11213/tonyobyoy.60.S-25>
 16. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Usui I, Tobe K. Depletion of CD206 cells is associated with increased white adipose tissue proliferation. **Journal of Japan Society for the Study of Obesity** 2015, 21 (Suppl) 149-149.
 17. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Usui I, Tobe K. Adipose tissue resident macrophages (CD206) negatively regulate glucose metabolism. **Journal of Japan Society for the Study of Obesity** 2015, 21 (Suppl) 149-149.
 18. **Nawaz Allah**, 角朝信, 藤坂志帆, 瀧川章子, 中川崇, 薄井勲, 戸邊一之. Adipose tissue resident macrophages (CD206) negatively regulate glucose metabolism. **Journal of Japan Society for the Study of Obesity** 2016 22(suppl): 218-218.
 19. **Allah Nawaz**, Kazuyuki Tobe. CD206 M2 macrophages promote insulin resistance. **Journal of Japan Society for the Study of Obesity** 2017; 23(suppl): 137-137.
 20. **Allah Nawaz**. M2 macrophages inhibit adipocyte progenitor's proliferation/regulate glucose metabolism. **Journal of Japan Society for the Study of Obesity** 2017;23(suppl): 225-225
 21. **Allah Nawaz**, 五十嵐喜子, 角朝信, 岡部圭介, 八木邦公, 中川崇, 藤坂志帆, 戸邊一之. CD206 M2-like macrophages regulate adipocyte progenitor's proliferation via Tgf β signaling. **Journal of Japan Society for the Study of Obesity** 2018; 24(suppl): 162-162.

International conferences/Symposium (Oral 26+ Poster 15)

Symposium/Oral Presentation:

1. **Nawaz A**, Nishida Y, Fujisaka S, Nakagawa T, Tobe K. Astaxanthin ameliorates insulin resistance in muscle of obese mice via activation of AMPK pathway. The 40th Annual Meeting of Japan Society for Study of Obesity at Tokyo, Japan. **November 2-3, 2019**. (Oral)
2. **Nawaz A**, Kado T, Okabe K, Igarashi I, Yagi K, Fujisaka S, Nakagawa T, Tobe K. Depletion of CD206 M2-like macrophages ameliorates insulin resistance. The 40th Annual Meeting of Japan Society for Study of Obesity at Tokyo, Japan. **November 2-3, 2019**. (Oral)
3. **Nawaz A**, Nishida Y, Fujisaka S, Nakagawa T, Tobe K. Astaxanthin ameliorates insulin resistance in muscle of obese mice via activation of AMPK pathway. The 40th Annual Meeting of Japan Society for Study of Obesity at Tokyo, Japan. **November 2-3, 2019**. (Oral)
4. **Nawaz A**, Kado T, Okabe K, Fujisaka S, Yagi K, Nakagawa T, Tobe K. Partial Depletion of CD206 M2-like Macrophages Enhances preadipocyte Differentiation via Reduction of Wnt Signaling. The 79th Annual meeting of American Diabetes Association at San Francisco, California. **Jun 07-11, 2019**. (Oral)
5. **Nawaz A**, Igarashi Y, Kado T, Bilal M, Okabe K, Liu J, Takikawa A, Yagi K, Nakagawa T, Fujisaka S, Tobe K. CD206 M2-like macrophages and adipose tissue inflammation. The 62nd Annual meeting of Japan Diabetes Society at Sendai, Japan. **May 23-25, 2019**. (Symposist)
6. **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Fujisaka S, Tobe K. Partial depletion of CD206⁺ M2-like macrophages induces proliferation of white and beige adipocyte progenitor and ameliorate insulin resistance. The 92nd Annual Meeting of the Japan Endocrine Society at Sendai International Center, Sendai. **May 9-11, 2019**. (Oral)
7. **Nawaz A**, Tobe K. Novel Therapeutic Approaches for the Treatment of Obesity and Type 2 Diabetes. International Seminar organized by University College of Conventional Medicine,

The Islamia University of Bahawalpur in Collaboration with BMA Pakistan, Khawaja Fareed Campus, The Islamia University of Bahawalpur, Pakistan. **April 12th, 2019**. (Invited Talk) (Oral)

8. **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Fujisaka S, Tobe K. Role of adipose tissue-resident macrophages in obesity and type 2 diabetes. National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan. **April 10th, 2019**. (Invited Talk) (Oral)
9. **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Usui I, Fujisaka S, Tobe K. Partial depletion of CD206 M2-like macrophage induces proliferation of white and beige progenitors, and promotes systemic insulin sensitivity. Asian Network of Research on Anti-Diabetic Plants (ANRAP). The 9th International Seminar “FROM PLANT TO PATIENT: IDENTIFICATION OF NEW DRUGS FOR METABOLIC DISORDERS”. International Center for Chemical and Biological Sciences (ICCBS), University of Karachi, Pakistan. **January 25-27, 2019**. (Invited Speaker) (Oral)
10. **Nawaz A**, Tobe K. Partial depletion of CD206 M2-like macrophages promotes proliferation of white and beige progenitors. International Conference on Therapeutic Importance of Traditional medicine, Virtual University, Lahore, Pakistan. **November 14, 2018**. (Invited Speaker) (Oral)
11. **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Usui I, Fujisaka S, Tobe K. CD206 M2-like macrophages regulates adipocyte progenitor’s proliferation via TGF β signaling. The 39th Annual Meeting of Japan Society for Study of Obesity at Kobe, Japan. **October 7-8, 2018**. (Oral)
12. **Nawaz A**, Tobe K. Partial depletion of CD206⁺ M2-like macrophages promotes proliferation of white and beige adipocyte progenitors. Toyama Academic Science GALA at Toyama, Japan. **September 14, 2018**. (Oral)
13. **Nawaz A**. Partial depletion of CD206 M2-like macrophages promotes proliferation of white and beige progenitors. The 23rd Adiposcience Symposium, organized by Japan Society for the Study of Obesity at Osaka, Japan. **August 18, 2018**. (Symposist)
14. Okabe K, Usui I, **Nawaz A**, Fujisaka S, Kado T, Igarashi Y, Yagi I, Tobe K, Nakagawa T. NAD-mediated metabolic reprogramming epigenetically regulates gene expression to promote preadipocyte differentiation. The 78th Annual meeting of American Diabetes Association at Orlando, FL, USA. **Jun 22-26, 2018**. (Oral)
15. **Nawaz A**, Tobe K. Depletion of CD206 M2-like macrophages promotes browning of white adipose tissue. The 61st Annual meeting of Japan Diabetes Society at Tokyo, Japan. **May 24-26, 2018**. (Symposist)
16. **Nawaz A**, Tobe K. Depletion of CD206 M2-like macrophages enhances adipocytes progenitor’s proliferation and promotes insulin sensitivity. The 32nd Annual conference Japan Society of Experimental Diabetes and Obesity at Nagoya, Japan. **March 23-24, 2018**. (Oral)
17. **Nawaz A**, Tobe K. CD206⁺ M2-like macrophages regulate systemic glucose metabolism by inhibiting proliferation of adipocyte progenitors. Advanced Research Group of CardioVascular, Organ, Network, and Diabetes (Advans) at Tokyo, Japan. **December 15-16, 2017**. (Oral)
18. **Nawaz A**, Tobe K. CD206⁺ M2-like macrophages regulate systemic glucose metabolism by inhibiting proliferation of adipocyte progenitors. The 29th Symposium of Molecular Diabetology at Osaka, Japan. **December 2, 2017**. (Symposist)
19. **Nawaz A**, Tobe K. CD206 M2 macrophages promote insulin resistance. The 38th Annual meeting of Japan Society for Study of Obesity at Osaka, Japan. **October 7-8, 2017**. (Symposist)

20. **Nawaz A**, Tobe K. CD206⁺ M2-like macrophages regulate systemic glucose metabolism by inhibiting proliferation of adipocyte progenitors. Toyama Academic Science GALA at Toyama, Japan. **September 27, 2017**. (Oral)
21. **Nawaz A**, Tobe K. Depletion of CD206 M2-like macrophages in adipose tissue promotes insulin sensitivity. Diabetes and Insulin Resistance Conference (DESIRE) at Tokyo, Japan. **July 1-2, 2017**. (Oral)
22. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Saeki K, Usui I, Tobe K. Partial depletion of CD206⁺ cells enhances adipocyte differentiation and improves glucose metabolism through Tgf β signaling. The 77th Annual meeting of American Diabetes Association at San Diego, CA, USA. **Jun 9-13, 2017**. (Oral)
23. **Nawaz A**, Tobe K. CD206⁺ M2 macrophages inhibit proliferation of adipocyte progenitors and impact on glucose metabolism. The 60th Annual meeting of Japan Diabetes Society at Nagoya, Japan. **May 18-20, 2017**. (Symposist)
24. **Nawaz A**. Adipose tissue resident macrophages regulate insulin sensitivity. Toyama Academic Science GALA at Toyama, Japan. **September 30, 2016**. (Oral)
25. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Usui I, Tobe K. Depletion of CD206 cells is associated with increased white adipose tissue proliferation. The 36th Annual Meeting of Japan Society for the Study of Obesity at Nagoya, Japan. **October 2-4, 2015**. (Oral)
26. **Nawaz A**. Pakistan Association of Eastern Medicine (PAEM) Symposium on “Modern Health Challenges and Eastern Medicine”. Hyderabad, Pakistan. **March 12, 2011**. (Symposist)
27. **Nawaz A**. PAEM One-Day Symposium on “Eastern Medicine: Education and Research in the Contemporary World”. Mirpur Khas, Pakistan. **April 15, 2012**. (Symposist)

Poster Presentation:

1. **Nawaz A**, Nishida Y, Kado T, Bilal M, Fujisaka S, Yagi K, Nakagawa T, Tobe K. Astaxanthin ameliorate insulin resistance in skeletal muscle of obese mice via activation of AMPK pathway. Keystone Symposia Conference, B3: Obesity and NAFLD: Mechanisms and Therapeutics. Fairmont Banff Springs, Banff, Alberta, Canada. **February 23 - 27, 2020**. (Poster)
2. **Nawaz A**, Nishida Y, Kado T, Bilal M, Fujisaka S, Yagi K, Nakagawa T, Tobe K. Astaxanthin contribute to ameliorating insulin resistance and muscle remodeling. 12th International SCWD Conference on Cachexia, Sarcopenia and Muscle Wasting at Berlin, Germany. **December 6-8, 2019**.
3. **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Usui I, Fujisaka S, Tobe K. CD206 M2-like macrophages inhibit adipocyte progenitors proliferation and promotes insulin resistance. Keystone Symposia Conference, J7: Obesity and Adipose Tissue Biology. Fairmont Banff Springs, Banff, Alberta, Canada. **February 10 - 14, 2019**. (Poster)
4. **Nawaz A**, Fujisaka S, Usui I, Yagi K, Nakagawa T, Kado T, Tobe K, Igarashi Y, Okabe K, Saeki K. Depletion of CD206 M2-like macrophages promotes the browning of the white adipose tissue. The 78th Annual meeting of American Diabetes Association at Orlando, FL, USA. **Jun 22-26, 2018**.
5. **Nawaz A**, Igarashi Y, Kado T, Fujisaka S, Yagi K, Tobe K. Depletion of CD206 M2-like macrophages promotes browning of the white adipose tissue. The 25th International Symposium on Molecular Cell Biology of Macrophages (MMCB2018) at Senri Life Science Center, Tokyo, Japan. **Jun 19-20, 2018**.
6. Fujisaka S, Usui I, **Nawaz A**, Igarashi Y, Kado T, Okabe K, Yagi K, Nakagawa T, Tobe K. Bofutsushosan improves gut barrier function with a bloom of akkermansia muciniphila and improves glucose metabolism in diet-induced obese mice. The 78th Annual meeting of American Diabetes Association at Orlando, FL, USA. **Jun 22-26, 2018**.

7. **Nawaz A**, Igarashi Y, Bilal M, Kado T, Okabe K, Yagi K, Nakagawa T, Fujisaka S, Tobe K. CD206 M2-like macrophage regulates proliferation of white and beige progenitors, and systemic insulin sensitivity. The 62nd Annual meeting of Japan Diabetes Society at Sendai, Japan. **May 23-25, 2018.**
8. **Nawaz A**, Tobe K. Depletion of CD206 M2 macrophages promotes browning of white adipose tissue. The 91st Annual Meeting of **Japan Endocrine Society** at Miyazaki, Japan. **April 26-28, 2018.**
9. **Nawaz A**, Tobe K. Depletion of CD206 M2 macrophages promotes insulin sensitivity and adipocyte progenitor's proliferation. The 22nd Adiposcience Symposium organized by Japan Society for the Study of Obesity at Osaka, Japan. **August 19, 2017.**
10. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Usui I, Tobe K. Adipose tissue resident macrophages (CD206) negatively regulate glucose metabolism. The 37th Annual Meeting of Japan Society for the Study of Obesity at Tokyo, Japan. **October 7-8, 2016.**
11. Takikawa A, Usui I, Zhang Q, Okabe K, Kado T, **Nawaz A**, Fujisaka S, Nakagawa T, Tsuneyama K, Tobe T. Myeloid cell-specific Hif-1 α deletion decreases the number of liver tumors in high fat-fed mice. The 76th Annual meeting of American Diabetes Association at New Orleans, Louisiana, USA. **June 10 - 14, 2016.**
12. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Usui I, Tobe K. Decline of CD206/TGF β signaling improved insulin sensitivity. The 59th Annual Scientific Meeting of the Japan Diabetes Society at Kyoto, Japan. **May 19-21, 2016.**
13. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Nakagawa T, Usui I, Tobe K. Role of CD206 M2 macrophages in Insulin resistance. The 89th Annual Meeting of the Japan Endocrine Society at Kyoto, Japan. **April 21-23, 2016.**
14. **Nawaz A**. M2 macrophages associated with white adipose tissue proliferation and insulin resistance. Keystone Symposia on Molecular and Cellular Biology at Fairmont Banff Springs, Banff, Alberta, Canada. **Feb 15-19, 2016.**
15. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Usui I, Tobe K. Role of M2 macrophages in type 2 diabetes. Depletion of CD206 cells is associated with increased white adipose tissue proliferation. Keystone Symposia on Molecular and Cellular Biology; Diabetes: New Insights into Molecular Mechanisms and Therapeutic Strategies (T2) at Kyoto, Japan. **October 25-29, 2015.**
16. **Nawaz A**, Kado T, Fujisaka S, Takikawa A, Usui I, Tobe K. Role of M2 macrophages in type 2 diabetes. The 59th Annual meeting of Japan Diabetes Society at Shimonoseki, Fukuoka, Japan. **May 21-24, 2015.**

Certificates

1. **2013**; Certificate of Appointment as Tourism Ambassador of the Town of Minimiaizu, Japan
2. **2013**; JENESYS2.0 Certificate upon successfully completion of program conducted by Japan International Cooperation Center (JICE)
3. **2012**; Higher Education Commission, Pakistan Certificate of 2-Day Workshop on "Statistical Package for Social Sciences (SPSS)" held at Hamdard University, Karachi, Pakistan
4. **2011-2012**; Certificate of Clinical Internship, Shifa-ul-Mulk Memorial Hospital for Easeterm Medicine, Hamdard University, Karachi, Pakistan

Languages

- English, Japanese, Urdu

