

Curriculum Vitae

Dr. Ithar Beshtawi



Personal Information

Name: Ithar Mustafa Saleh Beshtawi

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Date of Birth: November 2nd, 1986

Nationality: Palestinian

Gender: Female

Marital Status: Single

Education and Qualifications

Degree	Institution	Year
Doctor of Philosophy in Optometry	University of Manchester, Manchester, UK	2013
Master of Science in Investigative Ophthalmology and Visual Sciences	University of Manchester, Manchester, UK	2010
Bachelors in Optometry	An-Najah National University, Nablus, Palestine	2008
General Examination Board	Al-Aeshiya Secondary School, Nablus, Palestine	2004

Honors and awards in academic career

- The Academy of Medical Sciences, Daniel Turnberg Travel Fellowship Round 9, May 2017
- An-Najah National University award for Research Excellence and the Quality of Publication (Impact Factor), 1st of June 2017, Nablus, Palestine.
- Erasmus+ mobility project “Academic Exchange with the University of Warsaw, May 22-26, 2017, Warsaw/Poland
- Erasmus+ mobility project “Academic Exchange with the University of Masaryk, April 10-14, 2017, Brno/Czech Republic

- An-Najah National University award for Research Excellence and the Quality of Publication (Impact Factor), 14th of May 2015, Nablus, Palestine.
- A medal for my participation in The Bicentenary Ophthalmology Scientific Conference 2014 (MREH 200), 23-27 June 2014, Manchester, UK.
- An-Najah National University Scholarship for postgraduate studies: Awarded in year 2010. Three years scholarship to get a PhD degree in Optometry.
- Master of Science in Investigative Ophthalmology and Visual Sciences with merit.
- An-Najah National University Scholarship for postgraduate studies: Awarded in year 2009. Scholarship is awarded to a final professional BSc student on the basis of four yearly academics and extracurricular activities.
- Bachelor of Science in Optometry with honours.

Current Appointment

- Head of Optometry Department, Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine
- Full time lecturer and Assistant Professor, Optometry Department, Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine
- Project Manager, Bioethics project, Public Health and Human Rights center (PHHRC), An-Najah National University and Hospital, Nablus, Palestine
- A member in the Institutional Review Board IRB assisting committee, Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine

Employment History

- 2014-2017, Optometry Program Director, Optometry Department, Faculty of Medicine and Health Sciences, An-Najah National University, Nablus, Palestine
- 2012-2013, Clinical Tutor, Optometry Department, School of Life Sciences, The University of Manchester, Manchester, M13 9PL, UK.
- 2008-2009, Teaching and Research Assistant, Optometry College, An-Najah National University, Nablus, Palestine

Academic Appointments

- Demonstrator of Ocular and Corneal Aberrations using Shack-Hartmann aberrometer and Oculus Pentacam for Investigative Ophthalmology and Visual Sciences MSc students, May 2012-May 2013, The University of Manchester, Manchester, UK. Contact details; Dr. Hema Radhakrishnan, Email Hema.radhakrishnan@manchester.ac.uk

- Exam invigilator for postgraduate and undergraduate students, 2012-2013, Faculty of Life Sciences, The University of Manchester, Manchester, UK. Contact details; Mrs Gemma Roberts, Education Support Manager (Assessment & Progression) Email: gemma.roberts-2@manchester.ac.uk
- Clinical supervisor of Optometry clinics for undergraduate students, November 2012, Optometry School, The University of Manchester, Manchester, UK. Contact details; Dr. Hema Radhakrishnan, Email Hema.radhakrishnan@manchester.ac.uk
- Demonstrator of Case study presentations workshop for MSc students, October 2012, The University of Manchester, Manchester, UK. Contact details; Dr. Hema Radhakrishnan, Email Hema.radhakrishnan@manchester.ac.uk
- Demonstrator of Report Writing and Plagiarism workshop for MSc students, September 2012, The University of Manchester, Manchester, UK. Contact details; Dr. Hema Radhakrishnan, Email Hema.radhakrishnan@manchester.ac.uk

Skills and Experience

- Optometry Program Direction

The Optometry program direction mission is to graduate future professional leaders for the highest level of optometric practice dedicated to eliminating preventable blindness in Palestine. These graduates will serve as leaders in clinical and executive positions, translating evidence-based science into clinical practice and quality-improvement policies that ultimately leads to better vision care.

The main responsibilities of the optometry program include:

- To develop an innovative educational program, with an effective and dynamic curriculum.
- To redesign the eye care system in the country by facilitating the delivery of high quality care.
- To play a vital role in building human resources and infrastructure in the region by producing future leaders in Optometry dedicated to lifelong learning and innovative research.
- To provide outstanding educational programs and resources.
- To develop an outstanding clinical education through enhancing clinical services at the University's Teaching Hospital and Teaching Clinics.
- To unify the practice of optometry locally and across the region by adjusting the scope of practice and ensuring it meets international standards.

- Teaching Skills

I have been teaching clinical optometry courses as an assistant professor to undergraduate optometry students since 2014 at the optometry department, Faculty of Medicine and health Sciences, An-Najah National University/ Palestine. The teaching time is divided among lectures, demonstrating clinical and laboratory practical, taking weekly tutorials, and presentations. I'm also actively involved in scheduling, conducting and marking the theoretical and practical tests.

Following marking of tests I prepare the results and give students feedback on their performance. I'm also engaged in planning and supervising the students internal and external training program and the national visual screening program in kindergartens, primary schools, disabled care center and elderly care center. Below are the courses I'm experienced in:

- Primary Optometry Care I
- Primary Optometry Care II
- Clinical Optometry A
- Clinical Optometry B
- Low Vision Rehabilitation and Geriatrics
- External clinical externship for optometry students
- Introduction to Medical Ethics
- Introduction to Contact Lenses
- Special topics in Contact Lenses
- Graduation Project

- Clinical Skills

In addition to the basic optometry skills (e.g. Refraction, Retinoscopy, Binocular vision), I have been trained in the low vision center at the German Jordanian University and the Royal Dutch Visio center to successfully and efficiently provide quality service for persons with visual impairment through the assessment of their visual function and magnification needs... Additionally, I have been trained to use the following clinical machines on normal, emmetropes and keratoconic patients at the University of Manchester/UK:

1. Clinical Confocal microscope (ConfoScan3 and HRT confocal microscope)
2. Oculus Pentacam, Scheimpflug imaging.
3. Shack Hartmann aberrometer
4. Aesthometer
5. Fundus Camera - Topcon
6. Shin-Nippon Autorefractor

- Laboratory Skills

I'm confident in using the following laboratory techniques on human corneal tissue:

1. Cryosectioning
2. Paraffin sectioning
3. Heamatoxylin and Eosin staining
4. Cell death detection by TUNEL Assay
5. Immunohistochemistry
6. Immunofluorescence
7. Light Microscopy
8. Fluorescence Microscopy
9. Confocal Fluorescence Microscopy

10. Scanning Acoustic Microscopy

- Vision Screening

I'm involved in vision screening program, in kindergartens, primary schools, disabled care center and elderly care center in Palestine to early detect and prevent the loss of vision. Additionally, I participated in the vision-screening event for students and staff of The University of Manchester, Manchester, UK. Currently, I'm one of the principle investigators who are studying the prevalence of ocular conditions in pre-school children through screening and early detection in Nablus city/Palestine.

Projects and Grants

- Public Health and Human Rights Center- Bioethics Project

In Palestine, a vital and necessary focus on public health - the promotion of healthy living, health education and the prevention of disease, illness and injury - is severely limited and basic services are often non-existent to much of the population. This project was initiated to provide an ideal platform for organizing community projects in conjunction with key partners and community organizations by means of coordinating with general practitioners, hospitals and medical institutions, non-governmental organizations, the private sector and government agencies in order to ensure sustainable development of public health in the West Bank, with a specific human rights focus. Establishing links with other organizations will be an important feature of the centre to assist in the advancement of human rights focused public health system. Through research, promoting awareness, delivering training, offering consultancy and developing strategy, this project aimed to provide both short and long term benefits to the broader field of medicine in Palestine. This Project was funded by the Open-Society foundation.

The main functions and responsibilities as the manager of the PHHRC include:

- Increase general awareness and knowledge concerning human rights in healthcare through implementing community education programs
- Establish accessible public health information and health awareness schemes for marginalized communities.
- Provide public health services for neglected and marginalized populations through targeted programs and projects.
- Provide guidance, health information and social counseling to families as well as patients
- Provide training and educational programs in human rights and public health to students, professionals and the broader community.
- Conduct research on human rights and public health in Palestine, including the evaluation of targeted projects and vital data collection.

- Skills and Curriculum development in Vision Rehabilitation

The impact of impairment on a person depends on his/her ability to cope, the tools available and the environment.

In the Middle-East as in many other countries in the world, rehabilitation services are often not a priority for health care providers and as a result, persons with visual impairment are not likely to achieve their full potential. This project was funded by the EU Tempus program, a consortium of Universities and non-governmental organizations in Europe and the Middle East worked together to improve the quality and quantity of the services for persons with visual impairment by developing university curricula and training resources on vision rehabilitation (VR). The project participants are: Aston U. (UK), Focus Birmingham (UK), Eötvös Loránd U. (HU), Hamburg U. (DE), Radboud U. Nijmegen (NL), Royal Dutch Visio (NL), German-Jordanian U. (JO), U. of Jordan (JO), and An-Najah National U. (PS), Bethlehem U. (PS) and Bethlehem Arab Society for Rehabilitation (PS).

This project aimed to improve the visual rehabilitation content in the curricula of ophthalmologists, optometrists and occupational therapists in the target programs. Through workshops, practical assignments, and study visits and practical training, the lecturers and clinical instructors provided with the knowledge and experience they need to upgrade the existing curricula and provide services to the community.

The third year of the project was dedicated to a series of meetings and workshops in Jordan and Palestine targeting other universities, professionals, parents, teachers to raise awareness on the rehabilitation needs and possibilities persons with visual impairment. In addition to the training resources and awareness materials in the field of visual rehabilitation delivered, translated to Arabic, and available for download on the internet. The end result was the establishment of a multi-disciplinary network of visual rehabilitation professionals determined to support the development of comprehensive services in the region.

As the co-manager of this project, I was responsible for conducting the goals of the project which include:

- Promote the integration of eye health at the primary health care delivery system in Palestine.
- Develop high quality, advanced, accessible and equitable eye health and vision care for Palestinians.
- Collaborate with local stakeholders to improve vision care services and eliminate preventable blindness.
- Collaborate with international institutions to improve optometric educational programmes and eye care services in Palestine.
- Provide a continuing education forum for local optometrist.

Professional Qualifications (Training)

- Jan 2016, Low Vision Assessment in Children and Disabled Children workshop (Theoretical & Practical aspect), German Jordanian University, Amman, Jordan.
- March-Sep 2015, DIES ProGRANT Proposal Writing for Research Grant-Practical oriented training for new researchers, organized by the German Academic Exchange Service (DAAD) at the University of Cologne, together with the DAAD Information Centre Amman, Jordanian University, Amman, Jordan.
- Sep 2014, Low Vision workshop (Theoretical and Practical aspects) at Royal Dutch Visio, Amsterdam, Holland.
- Sep 2014, Low Vision workshop (Practical aspect), German Jordanian University, Amman, Jordan.
- May 2014, Low Vision workshop (Theoretical aspect), by Dr. Frank Eperjesi (Aston University, Birmingham, UK), German Jordanian University, Amman, Jordan.
- Feb 2013, Writing with a style, by Chris Simms, author and FLS Writer in Residence, The University of Manchester, Manchester, UK
- May 2012, How to fit hybrid lenses workshop, by Dr. Caroline Burnett-Hodd and Katie Harrop. British Contact Lens Association (BCLA) clinical conference, Birmingham, U.K
- May 2012, Gizmos and gadgets - latest advances in clinical dry eye diagnosis and management workshop, by ^[L]~~[SEP]~~Dr Jennifer Craig and Simon Dean. British Contact Lens Association clinical conference, Birmingham, U.K
- March 2012, Electron Microscopy workshop, by Aleksandr Mironov, The University of Manchester, Manchester, UK
- March 2012, Basic RGP fitting and material selection, by Martin Conway, British Contact Lens Association (BCLA) office, BCLA, London, UK
- March 2012, How good, contact lenses fitting, is good?, by Ian Forrest, BCLA office, BCLA, London, UK.
- March 2012, Successful keratoconus fitting in general practice, by Neil Cox, BCLA office, BCLA, London, UK.
- January 2012, Corneal Histology workshop, by Dr. Jaleel Miyan and Peter Walker, The University of Manchester, Manchester, UK.
- November 2011, Faculty of Life Sciences Training for Teaching by Demonstrating (GTA), University of Manchester, Manchester, UK
- November 2011, Negotiation workshop, by Claire Gill, University of Manchester, Manchester, UK
- Sep 2011, Raman micro-spectroscopy for biomedical applications: from biological nanomaterials to imaging live cells and tissue seminar, by Dr Ioan Notingher (visiting lecturer from Nottingham), Smith lecture theatre, University of Manchester, Manchester, UK.

- May 2011, An essential guide for the community optometrist clinical workshop, by Dr. Waheeda Illahi and Katie McGuinness, British Contact Lens Association clinical conference, Manchester, UK
- May 2011, Safe UV Practice: A users guide May 2011. University of Manchester, Manchester, UK
- February 2011, Good Clinical Practice (GPC) training - in research methods. This training is approved by the Federation of the Royal College of Physicians of the U.K.
- Aug-Sep 2009, Pre-sessional Academic English course for academic purposes. The University Language Center, The University of Manchester, Manchester, UK.
- November 2007, Training course in Clinical Contact Lenses, by Vanessa Moodley University of KWA-ZULU NATAL, Email: Moodleyvr@ukzn.ac.za, which was held at An-Najah University, Nablus, Palestine. Tel: +972 9 2345113
- July 2007 – September 2007, Training at Al-Noor Centre for eye health care, Specialized Arabic Hospital, Nablus, Palestine. Tel: +972 9 2344171
- October 2008 – August 2009, Training at Titi Opticians, Ramallah-Al Nahda Street, Al-Bakry Building, Palestine. Tel: +972 2 2955263, Fax: +972 9 2374974
- October 2008, Permit to practice the profession of Optometry (Vision screening, preparing eye spectacles and contact lenses fitting) in Palestine by the Ministry of Health in Palestine. Registration No. 107/232/N.

Organizing Workshops

- June 2014, Public Health and Human Rights in Palestine workshop, An-Najah National University Hospital, Nablus, Palestine
- Nov 2014, Introduction to Bioethics in Palestine, An-Najah National University, Nablus, Palestine

Medical Research

- Current Research:
 - Contact Lens Compliance and Risk Factors of Microbial Keratitis.
 - Corneal Staining and Subjective Symptoms Associated with Contact Lens care Products in Palestine.
 - Investigation of Vision Requirements for License to Drive in Palestine
 - Learning Disability associated with Visual Impairment in Primary School in Palestine
 - Prevalence of Refractive Error among Preschool Children in Nablus City, Palestine
 - The Prevalence of Inherited Color Vision Deficiency and its associated risk factors among Palestinian Medicine and Health Sciences Students
 - International Nutrition and Dry Eye Study (INDES)
 - Characteristics of keratoconic patients: a cross sectional study.

- During the PhD a research was conducted to study the repeatability of Shack-Hartman aberrometer and the Oculus Pentacam on normal subjects and a series of in-vitro studies were carried out to study the biomechanical and histological changes in the corneal tissue after applying different protocols of collagen cross-linking using normal and keratoconic corneas. A dissertation of 71, 375 words was submitted to the University of Manchester.
- During the MSc a research project was carried out to study the effect of multifocal contact lenses on peripheral refractive error. A dissertation of 10401 words was submitted to the University of Manchester.

Clinical techniques used:

1. Visual Acuity
2. Slit lamp examination
3. Subjective Refraction
4. Peripheral Refraction using Shin-Nippon Autorefractor.

Literature Review

- A literature review of 17,051 words was done on keratoconus etiology, histological and biomechanical alterations, available treatments and collagen cross-linking histological and biomechanical effects on the corneal tissue.
- A literature review of 2,574 words was done on Myopia prevalence, etiology, risk factors, progression and its relation with peripheral refraction and contact lens wear.

Conference Participations

- 3rd Jordanian Palestinian Optometry Conference, 16-17 March 2017: Ramallah, Palestine. "Corneal Staining and Subjective Symptoms Associated with Contact Lens Care Products"
- 1st International Optometry Conference, 2nd & 4th Sep 2016: ANNU, Nablus, Palestine "Introduction to Low Vision Examination"
- 1st Eastern Mediterranean Council of Optometry (EMCO) Congress of Optometry, 14-15 May 2016: Beirut, Lebanon. "The Effects of Progressive Contact Lenses on Peripheral Refractive Error"
- The 2nd Jordanian Palestinian Optometry Conference, 23- 25 March 2016: Amman, Jordan. "Classification of Lubricant Eye Drops: Composition and Clinical Application" *Invited speaker*
- The 5th Palestinian Optometry Conference and the 1st Palestinian Jordanian Optometry Conference, 17-18 April 2015: Ramallah, Palestine. 'Cases in Low Vision - Grand Round Presentation' *Invited speaker*
- The Swiss- Palestinian NCD's workshop, 24-25 January 2015: Nablus, Palestine. 'Current Bioethics Status in Palestine'.

- The 10th International Congress of Corneal Cross Linking, 5-6 December 2014: Zurich, Switzerland. 'Biomechanical changes after repeated collagen cross-linking on human corneas assessed in-vitro using scanning acoustic microscopy' *Invited speaker*
- The Bicentenary Ophthalmology Scientific Conference 2014 (MREH 200), 23-27 June 2014: Manchester, UK. 'The Effects of Low and High Intensity Collagen Cross-Linking on the Human Cornea' *Invited speaker*
- Liverpool ARVO 2014 Presentations, 3-8 May 2014: Liverpool, UK 'Biomechanical Stiffness Changes of Collagen Crosslinking on Human Keratoconic Corneas using Scanning Acoustic Microscopy'.
- The 15th Emirates Ophthalmology Congress (EOC), 12-14 Dec 2013: Dubai, UAE. 'Biomechanical changes in human corneas after repeated collagen cross-linking treatment measured using scanning acoustic microscopy'.
- XXXI Congress of the European Society of Cataract and Refractive Surgeons (ESCRS), 5-9 Oct 2013: Amsterdam, Netherlands. 'Biomechanical changes after repeated collagen cross-linking on human corneas assessed in-vitro using scanning acoustic microscopy'
- The 7th International Conference on the Tear Film & Ocular Surface (TFOS), 18-21 Sep 2013: Taormina, Sicily, Italy. 'Histological Changes in Eye-Banked Human Corneas after Single and Repeated Cross-Linking Treatment with Riboflavin and UVA'.
- The 17th Scientific Meeting of the International Society for Contact Lens Research (ISCLR), 25-30 Aug 2013: Kyoto, Japan. 'Biomechanical Stiffness Differences between Low and High Intensity Collagen Cross-Linking Treatment on Human Corneas using Scanning Acoustic Microscopy'.
- The 37th British Contact Lens Association (BCLA) Clinical conference & Exhibition – June 2013: Manchester, UK 'Immunofluorescence analysis of collagen cross-linking, Photographic entry'.
- The Association for Research in Vision and Ophthalmology (ARVO) conference – May 2013: Seattle, WA, USA 'Biomechanical changes in human corneas after Low and High Intensity Collagen Cross-Linking Treatment measured using Scanning Acoustic Microscopy'.
- The 17th European Society of Cataract and Refractive Surgeons (ESCRS) Winter Meeting – February 2013: Warsaw, Poland 'Immunofluorescence analysis of human eye-banked corneas after applying low and high intensity collagen cross-linking '.
- The 8th International Congress of Corneal Cross Linking – December 2012: Geneva, Switzerland 'Histological changes in eye-banked human corneas after low and high intensity cross-linking with riboflavin and UV-A'.
- Faculty of Life Sciences Research Symposium – September 2012: The University of Manchester, Manchester, UK 'Mapping the Biomechanical Properties of UV Cross-Linked Human Corneal Tissue with Scanning Acoustic Microscopy'.
- The 36th British Contact Lens Association (BCLA) Clinical conference & Exhibition – May 2012: Birmingham, UK 'Can the Effects of Collagen Cross-Linking (CXL) be studied on Human Corneal Cell Populations *In-Vitro*'

- Manchester Life Sciences PhD conference - May 2012: The University of Manchester, Manchester, UK ‘Mapping the Biomechanical Properties of Cross-Linked Human Corneal Tissue using Scanning Acoustic Microscopy’. Speaker and a session chair
- Student’s representative and event organizer, The Optometry clinic opening ceremony – Apr 2007: Optometry Department, An-Najah National university, Nablus, West Bank, Palestine.

Conferences Attended

- Research Staff Conference - April 2012: The University of Manchester, Manchester, UK.
- Fast Forward 2012 - Innovation in Health Care - March 2012: Manchester, UK.
- The 7th International Congress of Corneal Cross Linking – December 2011: Zurich, Switzerland.
- The 8th British Contact Lens Association Pioneers conference and Lecture – November 2011: London, UK.
- The 35th British Contact Lens Association (BCLA) clinical conference & Exhibition – May 2011: Manchester, UK.

Professional Registration and Memberships

- Member of the International Association of Contact Lens Educators (IACLE)
- Member of the British Contact Lens Association (BCLA).
- Member of the Association for Research in Vision and Ophthalmology (ARVO).
- Member of the Scientific Association for Palestinian Optometrists (SAPO).
- A board member of Oyooni organization.

Public Engagement and volunteer work

- March 2013. The Eye stall, The Body Experience public engagement which was held as part of the Brain Awareness Week and National Science and Engineering Week, Manchester Science Festival, Manchester Museum, Manchester, UK.
In the Body Experience event, the public were invited to come and explore the human body with scientists from Life Sciences and Human and Medical Sciences at The University of Manchester. A passport was prepared for them to collect and to travel around the human body from top to toe. They learn how the brain communicates with all the different organs in the body and how it controls the senses. They were able to see how the heart works and how the lungs help you breathe. Additionally they explored the wonder of the human spine and perform their very own surgery! They also traveled through the gut and learnt about (and saw) the bugs that can infect it!
- October 2012, The Brain storm, Manchester Science Festival, Manchester Museum, Manchester, UK.

BrainStorm was a family event held in the Manchester Museum. The aim was to take visitors on an interactive journey, starting with the eye and travelling “through” the brain to understand how vision affects action and other senses such as touch and hearing. There were four main themes containing posters, hands on activities and computer displays. In the first theme, “*The eye and vision*” visitors could test how good their vision and colour vision was as well as take home a photograph of the back of their eye. The idea behind the second theme “*The eye and brain*” was to show people that vision is all about the brain getting involved. There were demonstrations of visual illusions and stereograms with the opportunity to test 3D vision. In the third theme “*the eye and action*”, the importance of vision for everyday actions such as walking or making a cup of tea was highlighted. People could “fly through a star field” or see how useful 3D vision is for eye – hand coordination. Finally, in our fourth theme “*The eye and other senses*” visitors could experience how vision interacts with other senses using some startling illusions. For example, in the very popular rubber hand illusion people begin to think that a rubber hand is actually their own hand! Children enjoyed taking a quiz sheet round to answer questions about the different themes and choose a prize at the end of their visit.

- March 2012, Coming to your senses stand, The Science Fair, Sackvill Street Building, The University of Manchester, Manchester, UK.

In this one day event, both children and adults found out how the eye and brain give us the ability to see. Visitors were able to explore how good their own sight is and what conditions can affect vision. There were also activities demonstrating how closely vision, action and other senses such as hearing are linked.

- October 2011 Vision stand, Manchester science festival, Whitworth Hall, The University of Manchester, Manchester, UK

This family-friendly event took place at The University of Manchester. The aim of the vision stand was to take visitors on an interactive journey, starting with the eye and travelling “through” the brain to understand how vision affects action and other senses such as touch and hearing. Children of all ages, parents and grandparents visited and took part of this event and interacted with most of the science challenges.

Publications

- ORCID ID (ORCID is a unique digital identifier for researchers): <http://orcid.org/0000-0002-8267-4126>
- Beshtawi I M, O’Donnell C, Hillarby M C, Brahma A, Carley F, Radhakrishnan H. Comparison of Low and High intensity Collagen Cross-linking: Histological Analysis of Eye-Banked Human Corneas, in-vitro. *Acta Ophthalmol.* (under review).

- Beshtawi I M, Akhtar R, Hillarby M C, O'Donnell C, Zhao X, Brahma A, Carley F, Derby B, Radhakrishnan H (2016). Biomechanical changes of collagen cross-linking on human keratoconic corneas using scanning acoustic microscopy. *Curr Eye Res*, 41(5), 609-615.
- Beshtawi I M, Akhtar R, Hillarby M C, O'Donnell C, Zhao X, Brahma A, Carley F, Derby B, Radhakrishnan H (2014). Biomechanical changes after repeated collagen cross-linking on human corneas assessed in-vitro using scanning acoustic microscopy. *Invest Ophthalmol Vis Sci*, 55 (3), 1549- 1554
- Beshtawi I M, Akhtar R, Hillarby M C, O'Donnell C, Zhao X, Brahma A, Carley F, Derby B, Radhakrishnan H (2013). Biomechanical Properties of Human Corneas Following Low and High Intensity Collagen Cross-Linking determined with Scanning Acoustic Microscopy. *Invest Ophthalmol Vis Sci*, 54 (8), 5273-5280
- Beshtawi I M, O'Donnell C, Radhakrishnan H (2013) Biomechanical properties of corneal tissue after UV-A/riboflavin cross-linking: Review. *Journal of Cataract and Refractive Surgery*, 39 (3), 451–462.
- Beshtawi I M, Akhtar R, Hillarby M C, O'Donnell C, Zhao X, Brahma A, Carley F, Derby B, Radhakrishnan H (2013). Scanning Acoustic Microscopy for Mapping the Microelastic Properties of Human Corneal Tissue. *Curr Eye Res*, 38 (4), 437-444.

Ethics Applications

I'm quite experienced in preparing and completing ethics applications for clinical trials. During my MSc and PhD I submitted and got approvals for five ethics applications, two of them were submitted to the National Research Ethics Service (NRES) committee in the UK and the other three forms were submitted the Research Ethics Committee within the University of Manchester, Manchester, UK.

Institutional Review Board (IRB) member

The Institutional Review board has the authority to approve, disapprove or make recommendations to proposed clinical research proposals to be conducted at An-Najah University or its affiliated institutions. The main function of the IRB and its jurisdictional responsibility include:

- Protection of the right and welfare of individuals involved in human research;
- Assurance of the scientific merits of submitted proposals;
- Validity of informed consent as signed by patients in these proposals;
- Adjudication of the ethics of the submitted proposals;

- Monitoring of the ongoing trials;
- Monitoring of completed and ongoing research records.

Volunteer Experience

- 2013, Arabic language teaching for foreigners (Intermediate level), The International Society, The University of Manchester, Manchester, UK
- 2012-2013 Trips leading, The International Society, The University of Manchester, Manchester, UK
- April 2010, Gardening, Platt fields Park Manchester, Manchester, UK
- 2007-2008, Health awareness education for school children, Nablus, West Bank, Palestine.

Languages Skills

- Fluent in speaking English and Arabic.

Computer Skills

- Good knowledge of Microsoft office, Power-point, Internet, EndNote bibliography software, and Image J program as well as statistical tests like student's *t* test and 2-way ANOVA using SPSS software.

Interests

- Travelling, hiking, reading and learning international languages and cultures.

Links

- An-Najah Staff: <http://staff.najah.edu/dr-ithar-beshtawi>
- LinkedIn: <https://www.linkedin.com/in/ithar-beshtawi-98945366/>
- Research gate: <https://www.linkedin.com/in/ithar-beshtawi-98945366/>
- Google scholar: <https://scholar.google.com/citations?user=VeYL7egAAAAJ&hl=en>

References

- Will be given upon request.