

Curriculum Vitae
Mohamed Ibrahim, MD
University of Maryland

Date

October, 10, 2022

Contact information

Mohamed Ibrahim
University of Maryland
Division of Nephrology
22 South Greene Street, N3W143
Baltimore, MD 21201
Cell phone: 404-731-8370
Email: Mohamed.Ibrahim@som.umaryland.edu

Education

2002 – 2008: M.B.B.Ch., Ain Shams University Faculty of Medicine, Egypt 12/2008
2013 – 2014: Research Animal Coordinator Certification, Duke University
2018 – present: PhD candidate, Erasmus University, Rotterdam
2019 – 2021: Nephrology fellowship: University at Buffalo, State University of New York
6/2019
2021 – present: Transplant nephrology fellowship: Washington University in St. Louis
(Graduation June, 2022)
2022– present: Nephrology Social Media Collective (NSMC) internship

Certification

2016: ECFMG Certification

Medical Licensure

2021-Present: State of Missouri training license
2022 - Present: Maryland Board of Physicians, full medical license

Employment History

2013 – 2019: Senior Research Fellow at Duke University Medical Center (volunteer)
2014 – 2019: Research Animal Coordinator, Duke University (volunteer)
2019 – 2021: Nephrology follow, University at Buffalo, Buffalo, NY
2020 – 2021: Chief fellow of nephrology, University at Buffalo, Buffalo, NY
2021 – 2022: Transplant nephrology fellow, Washington University in St. Louis, MO
2021 – 2022: Assistant professor of Medicine and Transplant Nephrology, University of
Maryland, Baltimore, MD

Professional Society Memberships

The American Society of Transplantation
The American Society of Nephrology
ECFMG Certification

Wound Healing Society: Former Chair of the Communication Committee

Grant Support

Active Grants

2019: SPiRE VA grant: collaborator

Completed Grants

2014-2016: The Plastic Surgery Foundation Pilot Research Grant: Principal Investigator.
"Novel Implantable Optical Oxygen Monitor to Detect Flap Viability"

2015-2017: The Plastic Surgery Foundation Pilot Research Grant: Co-investigator.

2018-2020: Duke Innovation and Entrepreneurship Incubation Fund: Principal Investigator

2019-2021: Duke MEDx Pilot translational award: collaborator

Patents, Inventions and Copyrights

- **Ibrahim, M.**, Wu, Z., Schweller, R., Klitzman, B. (2017). Patent: Compositions for real-time oxygen measurements and methods of making and using same. Status: Published
- **Ibrahim, M.** Mohammed, M. (2017). Patent: Self-deploying injector for implants and methods of making and using same. Status: Published
- Levinson, H., Bond, J., **Ibrahim, M.** (2013). Patent: Non-human model for wound healing. Status: Published

Awards and Honors

2007: *Founder*: www.MedicalVideos.com

2014: *Co-founder*: "Hougner Publishing Group", Hong Kong

2015: *Excellence in Research*: North Carolina Tissue Engineering and Regenerative Medicine Society

2016: *Most read author in plastic surgery*: for the week ending July, 24th: ResearchGate

2017: *Poster of Distinction in basic science*: Duke University Medical Center

2018: *Founder*: Piedmont Biomed, Inc.

2018: *Invited speaker at TEDx*: TEDx, Durham, NC

2018: *First place for best research project*: Duke Surgery Annual Research Day

2019: *First place*, Wound Healing Society, Wound Shark Innovation Competition

2021: *Co-founder*: Best Wound Practice, Peer-reviewed wound care guideline platform

Publications

Peer Reviewed Journal Articles

1. **Ibrahim, M.M.**, Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. A novel immune competent murine hypertrophic scar contracture model: A tool to elucidate disease

- mechanism and develop new therapies. *Wound Repair and Regeneration*. 2014, Dec; 22(6): 755–764. Cited in PubMed; PMID: 25327261. Pub Status: Published.
2. **Ibrahim, M.M.**, Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. Abstract 34: a novel immune competent murine hypertrophic scar contracture model: a tool to elucidate disease mechanism and develop new therapies. *Plastic and Reconstructive Surgery*. 2014, Mar; 133(3): 44-45. Cited in PubMed; PMID: 25942145. Pub Status: Published.
 3. Miller, K.J., Lorden, E.R., Hammett, E., **Ibrahim, M.M.**, Quiles, C., Selim, A., Leong, K.W., & Levinson, H. Abstract 166: electrospun synthetic scaffolds: a biomimetic approach to prevent hypertrophic scar contraction. *Plastic and Reconstructive Surgery*. 2014, Mar; 133(3S): 182–183. Cited in PubMed; PMID: 25942276. Pub Status: Published.
 4. **Ibrahim, M.M.**, Chen, L., Bond, J.E., Medina, M.A., Ren, L., Kokosis, G., Selim, A.M., & Levinson, H. Myofibroblasts contribute to but are not necessary for wound contraction. *Laboratory Investigation*. 2015, Dec; 95(12): 1429-1438. Cited in PubMed; PMID: 26367489. Pub Status: Published.
 5. Lorden, E.R., Miller, K.J., Bashirov, L., **Ibrahim, M.M.**, Hammett, E., Jung, Y., Medina, M.A., Rastegarpour, A., Selim, M.A., Leong, K.W., Levinson, H. Mitigation of hypertrophic scar contraction via an elastomeric biodegradable scaffold. *Biomaterials*. 2015, Mar; 43(1): 61–70. Cited in PubMed; PMID: 25591962. Pub Status: Published.
 6. **Ibrahim, M.M.**, Lorden, E.R., Miller, K.J., Bashirov, L., Hammett, E., Jung, Y., Medina, M.A., Rastegarpour, A., Selim, M.A., Leong, K.W., & Levinson, H. Abstract 124: Mitigation Of Hypertrophic Scar Contraction And Stiffening Via An Elastomeric Biodegradable Scaffold. *Plastic & Reconstructive Surgery*. 2015, May; 135(5S): 89. Pub Status: Published.
 7. **Ibrahim, M.M.**, Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. Mitigation of hypertrophic scar contraction in an immune-competent mouse model via a biostable electrospun scaffold. *Journal of the American College of Surgeons*. 2015, Oct; 221(4): e119–e120. Pub Status: Published.
 8. **Ibrahim, M.M.**, Wu, Z., & Klitzman, B. Novel Implantable Optical Oxygen Monitor to Detect Flap Viability. *Journal of the American College of Surgeons*. 2015, Oct; 221(4): e87–e88. Pub Status: Published.
 9. Ehanire, T., Ren, L., Bond, J., Medina, M., Li, G., Bashirov, L., Chen, L., Kokosis, G., **Ibrahim, M.**, Selim, A., Globe, G.C., & Levinson, H. Angiotensin II stimulates canonical TGF- β signaling pathway through angiotensin type 1 receptor to induce granulation tissue contraction. *Journal of Molecular Medicine*. 2015, Mar; 93(3): 289–302. Cited in PubMed; PMID: 25345602. Pub Status: Published.
 10. **Ibrahim, M.M.**, & Klitzman, B. Abstract 158: Novel Implantable Optical Oxygen Monitor to Detect Flap Viability. *Plastic & Reconstructive Surgery*. 2015, May; 135(5S): 112. Pub Status: Published.
 11. **Ibrahim, M.M.**, Levering, V., Lanham, E., Parra, J., Leraas, H., Lopez, G., Klitzman, B., Peterson, A., & Levinson, H. Pervasive Biofilm Coverage: An Analysis of Biofilm Formation in Indwelling Urinary Catheters. *The Journal of Urology*. 2016, Apr; 195(4): e276. Pub Status: Published.

12. Miller, K.J., Brown, D.A., **Ibrahim, M.M.**, Ramchal, T.D., & Levinson, H. MicroRNAs in skin tissue engineering. *Advanced Drug Delivery Reviews*. 2015, Jul; 88(1): 16–36. Cited in PubMed; PMID: 25953499. Pub Status: Published.
13. Zhao, Y., Maher, J.R., **Ibrahim, M.M.**, Chien, J.S., Levinson, H., & Wax, A. Deep imaging of absorption and scattering features by multispectral multiple scattering low coherence interferometry. *Biomedical Optics Express*. 2016, Sep; 7(10): 3916-3926. Pub Status: Published.
14. Rastegarpour, A., Cheung, M., Vardhan, M., **Ibrahim, M.M.**, Butler, C.E., & Levinson H. Surgical mesh for ventral incisional hernia repairs: Understanding mesh design. *The Canadian journal of plastic surgery*. 2016, Jan; 24(1); 41-50. Cited in PubMed; PMID: 27054138. Pub Status: Published.
15. Lorden, E.R., Miller, K.J., **Ibrahim, M.M.**, Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. Biostable electrospun microfibrous scaffolds mitigate hypertrophic scar contraction in an immune-competent murine model. *Acta Biomaterialia*. 2016, Mar; 32(1): 100–109. Cited in PubMed; PMID: 26708709. Pub Status: Published.
16. Lorden, E., Ramchal, T., Chandra, P., Bashirov, L., **Ibrahim, M.M.**, Hammett, E., Klitzman, B., Yoo, J., Levinson, H., Lee, S., & Leong K.W. Pore Size Impacts Hypertrophic Scarring-related Outcomes in 3d Printed Polyurethane Scaffolds. *Wound Repair and Regeneration*. 2016, Mar; 24(2): A16-A17. Pub Status: Published.
17. **Ibrahim, M.M.**, Wu, Z., Schweller, R., Phillips, B., & Klitzman, B. Topical Vasodilator Induces Pharmacological Delay on Cutaneous Flap Viability and Vascular Remodeling. *Wound Repair and Regeneration*. 2016, Mar; 24(2): A13. Pub Status: Published.
18. **Ibrahim, M.M.**, Ogilvie, M., Lin, J., Diao, H., Milbreta, U., Long, H., Chew, S., & Levinson, H. Delivery Of miR Through Biodegradable Scaffolds. *Wound Repair and Regeneration*. 2016, Mar; 24(2): A12. Pub Status: Published.
19. Eldik, H., Klitzman, B., **Ibrahim, M.**, Martinez, J., Nichols, S., & Wisniewski, N. (2016). 548 Real-time continuous monitoring of subcutaneous tissue oxygenation. *Journal of Investigative Dermatology*, 136(9), S254. September, 2016
20. **Ibrahim, M.M.**, Medina, M., Bond, J., Bergeron, A., Chen, L., Quiles, C., Kokosis, G., Bashirove, L., Selim, A.M., Klitzman, B., & Levinson, H. Foreign Body Reaction to Commonly Used Surgical Biomaterials. *Wound Repair and Regeneration*. 2016, Mar; 24(2): A12-A13. Pub Status: Published.
21. **Ibrahim, M.M.**, McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. Gastrin-Releasing Peptide (GRP) and Scleroderma: A Potential Novel Mechanism of Tissue Fibrosis. *Wound Repair and Regeneration*. 2016, Mar; 24(2): A13. Pub Status: Published.
22. Y. Zhao, J. Maher, **M. Ibrahim**, J. Chien, H. Levinson, and A. Wax, "Deep imaging of absorption and scattering features by multispectral multiple scattering low coherence interferometry," *Biomed. Opt. Express* 7, 3916-3926 (2016). Pub Status: Published.
23. **Ibrahim, M.**, Chien, J. S., Mohammed, M. M., King, T., & Klitzman, B. (Abstract 111: Rapid Detection of Acute Vascular Occlusion Using Oxygen Monitoring in a Rat Myocutaneous Flap Model. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 81. April, 2017
24. Chien, J. S., Mohammed, M., Eldik, H., **Ibrahim, M.**, Nichols, S., Wisniewski, N., & Klitzman, B. Abstract 41: Implantable Oxygen Biosensor Reveals Post-Occlusion Tissue

- Reactive Hyperoxia. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 32-33. April, 2017
25. **Ibrahim, M.**, Eldik, H., Mohammed, M. M., Wu, Z. J., & Klitzman, B. (2017). Abstract P15: Comparison Of Intradermal And Subcutaneous Tissue Oxygen Tension Monitor To Detect Flap Compromise. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 112. April, 2017
26. Chen, L., Xing, Q., Zhai, Q., Tahtinen, M., Zhou, F., Qi, S., **Ibrahim, M.**, & Zhao, F. (2017). Abstract P21: Enhancement of Therapeutic Benefits of Split Thickness Skin Grafts using Pre-vascularized Human Mesenchymal Stem Cells. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 116-117. April, 2017
27. **Ibrahim, M.**, McKinnon, E., Sunday, M. E., & Levinson, H. Abstract 57: Expression Of Markers For Pericytes And Myofibroblasts In Bleomycin-induced Dermal Fibrosis: Potential Role Of Neuropeptide Receptors In A Mouse Model For Scleroderma. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 43-44. April, 2017
28. Green, J., Chee, M., Gu, F., Hung, J., Ebong, A., **Ibrahim, M.**, Martinez, J., Glisson, R., Zani, S., Jr., Gall, K., & Levinson, H. Abstract 18: Creating a Low Profile Anchor to Eliminate High Profile Suture Knots. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 14-15. April, 2017
29. **Ibrahim, M.**, Schweller, R. M., Mohammed, M., Powers, D. , & Klitzman, B. Implantable Real Time Oxygen Biosensors for Detection of Vascular Perfusion and Ischemia. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 110-111. April, 2017
30. **Ibrahim, M.**, Antony, A. K., & Gordon, R. The Plastic Surgery Research Council's Website: Analytics and Demographics Pertinent to the Technology Committee. *Plastic and Reconstructive Surgery Global Open*, 5(4 Suppl), 103. April, 2017.
31. Miller, K.J., Cao, W., **Ibrahim, M.M.**, & Levinson, H. The Effect of Microporous Polysaccharide Hemospheres on Wound Healing and Scarring in Wild Type and db/db Mice. *Advances in Skin & Wound Care*. 2017, Apr; 30(4):169-180. doi: 10.1097/01.ASW.0000513149.43488.56 Pub Status: Published.
32. Y. Zhao, J. Maher, **M. Ibrahim**, J. Chien, H. Levinson, and A. Wax, "In vivo Rat Skin Flap Viability Assessment using Dual Axis Spectroscopic Optical Coherence Tomography," in *Optics in the Life Sciences Congress, OSA Technical Digest (online)* (Optical Society of America, 2017), paper BoM4A.4. Pub Status: Published
33. Yang Zhao, Will J. Eldridge, Jason R. Maher, Sanghoon Kim, Michael Crose, **Mohamed Ibrahim**, Howard Levinson, and Adam Wax. Dual-axis optical coherence tomography for deep tissue imaging. *Optics Letters*. 2017, Jun; 42(12) 2302-2305. Pub Status: Published
34. Chien, J., Mohammed, M., El-Dik, H., **Ibrahim, M.**, Martinez, J., Nichols, S., Wisniewski, N., & Klitzman, B. Injectable Phosphorescence-based Oxygen Biosensors Identify Post Ischemic Reactive Hyperoxia. *Nature: Scientific Reports* 7, Article number: 8255. 2017, Aug; Pub Status: published.
35. **Ibrahim, M.**, Bond, J., Medina, M.A, Chen, L., Quiles, C., Kokosis, G., Bashirov, L., Klitzman, B., & Levinson, H. Characterization of the foreign body response to common surgical biomaterials in a murine model. *European Journal of Plastic Surgery*. *European Journal of Plastic Surgery*. 2017, Apr; doi:10.1007/s00238-017-1308-9. Pub Status: Published

36. Parra, J., II, **Ibrahim, M.**, McKinnon, E., Levinson, H. and Sunday, M.E. (2017), Altered Expression of Neuropeptide Receptors in the Bleomycin (Bleo)-Induced Mouse Model of Scleroderma (SSc). *The FASEB Journal*, 31: 182.3-182.3. October, 2018
37. **Ibrahim, M.**, Poveromo, L., Glisson, R.R., Cornejo, A., Farjat, A.E., Gall, K., & Levinson, H. Modifying Hernia Mesh Design to Improve Device Mechanical Performance and Promote Tension-Free Repair. *Journal of Biomechanics*. February, 2018; Pub Status: Published.
38. Green, J., Glisson, R., **Ibrahim, M.**, Gall, K., & Levinson, H. Abstract 63: Application of a Novel Suture Anchor to Abdominal Wall Closure. *Plastic and Reconstructive Surgery Global Open*, April, 2018 Pub Status: Published.
39. **Ibrahim, M.**, Glisson, R., Green, J. , Gall, K., & Levinson, H. A New Hernia Mesh Precisely Engineered to Prevent Hernia Recurrence. *Plastic and Reconstructive Surgery Global Open*, April, 2018 Pub Status: Published.
40. **Ibrahim, M.**, Eldik, H., Mohammed, M., Wu, Z., King, T., & Klitzman, B. Which Is More Ideal To Monitor And Detect Flap Vascular Compromise: Intradermal Or Subcutaneous Tissue Oxygen Tension?. *Plastic and Reconstructive Surgery Global Open*, April, 2018 Pub Status: Published.
41. Zhang Z., **Ibrahim M.**, Fu Y., Wu X., Ren F., Chen L. Application of laser scanning confocal microscopy in the soft tissue exquisite structure for 3D scan. *Int J Burns Trauma*. April, 2018 Pub Status: Published.
42. Green, J. L., Glisson, R.R., Huang, J., **Ibrahim, M.**, Farjat, A.E., Gall, K., & Levinson, H. Creating a Small Anchor to Eliminate Large Knots in Mesh and Tape Suture. *Journal of Medical Devices*. 2018, April; Pub Status: Published
43. Lujan-Hernandez, J., **Ibrahim, M.**, Taub, P.J. International Medical Graduates and the Plastic Surgery Residency Match. *Annals of Plastic Surgery*, February, 2019; Pub Status: Published.
44. Green, J., Ruppert, D., Glisson, R., **Ibrahim, M.**, Gall, K., Levinson, H. Application of a novel suture anchor to abdominal wall closure. *American Journal of Surgery*, April, 2019. Pub Status: Published
45. Sergesketter, A., Cason, R., **Ibrahim, M.**, Lane, W., Lubkin, D., Hollenbeck, S., Brown, D. Perioperative Treatment with a Prolyl Hydroxylase Inhibitor Reduces Necrosis in a Rat Ischemic Skin Flap Model. *Plastic and Reconstructive Surgery*, April, 2019. Pub Status: Published
46. **Ibrahim, M.**, Green, J., Everitt, J., Ruppert, D., Glisson, R., Leopardi, F., Risoli, T., Kuchibhatla, M., Reynolds, R & Levinson, H. Soft Tissue Anchoring Performance, Biomechanical Properties, and Tissue Reaction of a New Hernia Mesh Engineered to Prevent Hernia Occurrence and Recurrence. *Journal of Medical Devices*. 2019, May; Pub Status: Published
47. Scheuermann, U., **Ibrahim, M.**, Yerxa, J., Parker, W., Hartwig, M., Klitzman, B., Barbas, A. Machine Perfusion of Liver Grafts With Implantable Oxygen Biosensors: Proof of Concept Study in a Rodent Model. *Journal: Transplant Direct*, July, 2019. Pub Status: Published
48. Finn, S., Scheuermann, U., Holzknacht, Z., Gao, Q., 1, **Ibrahim, M.**, Parker, W., Granek, J., Lin, S., McKenney, E., Barbas, A. The effect of levofloxacin on the lung microbiota of laboratory rats. *Exp Lung Research*. September, 2019. Pub Status: Published

49. **Ibrahim, M.**, Patel, P., Wu, Z., Chien, J., Wisniewski, N., Mohammed, M., Klitzman, B. Detection of flap tissue ischemia in a rat model: Real-time monitoring of changes in oxygenation and perfusion through injectable biosensors. *Journal of Surgery*, July, 2020. Pub Status: Published
50. Ruppert, D., Mohammed, M., **Ibrahim, M.**, Bachtiar, E., Erning, K., Ansari, K., Everitt, J., Brown, D., Klitzman, B., Koshut, W., Gall, K., Levinson, H. Poly(lactide-co-ε-caprolactone) scaffold promotes equivalent tissue integration and supports skin grafts compared to a predicate collagen scaffold. *Wound Repair and Regeneration*, June, 2021. Pub Status: Published
51. Wu, Z., **Ibrahim, M.M.**, Schweller, R., Phillips, B., & Klitzman, B. The Influence of Topical Vasodilator-Induced Pharmacological Delay on Cutaneous Flap Viability and Vascular Remodeling. *Plastic and Reconstructive Surgery*, February, 2022. Pub Status: Published.

Peer Reviewed Journal Articles (Other than Published)

1. Ngo, H., Liu, Y., Mittal, M., Wang, H., Palmer, G., Klitzman, B., Vo-Dinh, T. In Vivo pH Sensing in Animal Model using Implanted SERS Nanowave Chip. Pub Status: In preparation
2. Eldik, H., Mohammed, M., **Ibrahim, M.**, Martinez, J., Farjat, A., Klitzman, B. Real-time monitoring of subcutaneous oxygen with implantable optical biosensors. *Experimental Dermatology*. 2017, Jan; Pub Status: Submitted.
3. Lorden, E., Ramchal, T., Chandra, P., Bashirov, L., **Ibrahim, M.M.**, Hammett, E., Klitzman, B., Yoo, J., Levinson, H., Lee, S., & Leong K.W. Effect of pore size on cell-cell communication and hypertrophic scarring. *ACS Biomaterials Science & Engineering*. Pub Status: Accepted.

Major Invited Speeches

2018: Invited speaker at TEDx: TEDx, Durham, NC

2022: Invited speaker at the “National Kidney Foundation”: Kidney transplant in the era of COVID-19 pandemic

Oral Presentation

Ibrahim, M.M., Chen, L., Bond, J.E., Medina, M.A., Ren, L., Kokosis, G., Selim, A.M., & Levinson, H. (May, 2015). Myofibroblasts Contribute to but are not Necessary for Wound Contraction Oral Presentation presented at: The Wound Healing Society’s 2014 annual meeting; San Antonio, TX, USA.

Ibrahim, M.M., Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. (March, 2014). A Novel Immune Competent Murine Hypertrophic Scar Contracture Model: A Tool to Elucidate Disease Mechanism and Develop New Therapies Oral Presentation presented at: 59th Annual Meeting, Plastic Surgery Research Council; New York, NY, USA.

Ibrahim, M.M., Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. (April, 2014). A Novel Immune Competent Murine Hypertrophic Scar Contracture Model: A Tool to Elucidate Disease Mechanism and Develop New Therapies Oral Presentation presented at: The Wound Healing Society's 2014 annual meeting; Orlando, FL, USA.

Ibrahim, M.M., Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. (March, 2014). A Novel Immune Competent Murine Hypertrophic Scar Contracture Model: A Tool to Elucidate Disease Mechanism and Develop New Therapies Oral Presentation presented at: 46th Annual Meeting, American Burn Association; Boston, MA, USA.

Ibrahim, M.M., Lorden, E.R., Miller, K.J., Bashirov, L., Hammett, E., Jung, Y., Medina, M.A., Rastegarpour, A., Selim, M.A., Leong, K.W., & Levinson, H. (May, 2015). Mitigation Of Hypertrophic Scar Contraction And Stiffening Via An Elastomeric Biodegradable Scaffold Oral Presentation presented at: 60th Annual Meeting, Plastic Surgery Research Council; Seattle, WA, USA.

Ibrahim, M.M., Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. (February, 2015). Mitigation of Hypertrophic Scar Contraction in vivo via a Biostable Polyurethane Scaffold Oral Presentation presented at: 10th Annual Academic Surgical Congress; Las Vegas, NV, USA.

Ibrahim, M.M., Wu, Z., Schweller, R., Phillips, B., & Klitzman, B. (October, 2015). Topical Vasodilator Induces Pharmacological Delay on Cutaneous Flap Viability and Vascular Remodeling Oral Presentation presented at: 17th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winsten-Salem, NC, USA.

Ibrahim, M.M., Ogilvie, M., Lin, J., Diao, H., Milbreta, U., Long, H., Chew, S., & Levinson, H. (May, 2016). Delivery of mIR Through Biodegradable Scaffolds Oral Presentation presented at: The 2016 AAPS/PSRC Joint Meeting; New York, NY, USA.

Ibrahim, M.M., McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. (June, 2016). Gastrin-Releasing Peptide (GRP) and Scleroderma Oral Presentation presented at: Duke's Skin Disease Research Center - Invited Publication; Durham, NC, USA.

Ibrahim, M.M., McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. (May, 2016). Gastrin-Releasing Peptide (GRP) and Scleroderma: A Potential Novel Mechanism of Tissue Fibrosis Oral Presentation presented at: The 2016 AAPS/PSRC Joint Meeting; New York, NY, USA.

Ibrahim, M.M., & Klitzman, B. (May, 2015). Novel Implantable Optical Oxygen Monitor to Detect Flap Viability Oral Presentation presented at: 60th Annual Meeting, Plastic Surgery Research Council; Seattle, WA, USA.

Ibrahim, M.M, Wu, Z., & Klitzman, B. (October, 2015). Novel Implantable Optical Oxygen Monitor to Detect Flap Viability Oral Presentation presented at: 17th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winston-Salem, NC, USA.

Wu, Z., Ibrahim, M.M., Schweller, R., Phillips, B., & Klitzman, B. (May, 2016). Topical Vasodilator Mimics Surgical Delay to Improve Cutaneous Flap Viability and Induce Vascular Remodeling Oral Presentation presented at: The 2016 AAPS/PSRC Joint Meeting; New York, NY, USA.

Ibrahim, M.M, Wu, Z., & Klitzman, B. (May, 2016). Implantable Optical Oxygen Monitor to Diagnose Flap Compromise Oral Presentation presented at: The 2016 AAPS/PSRC Joint Meeting; New York, NY, USA.

Ibrahim, M.M., McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. (May, 2017). Expression of Markers for Pericytes And Myofibroblasts In Bleomycin-induced Dermal Fibrosis Oral Presentation presented at: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Ibrahim, M.M, Wu, Z., Chien, J., Mohammed, M., King, T., & Klitzman, B. (May, 2017). Rapid Detection of Acute Vascular Occlusion Using Oxygen Monitoring in a Rat Myocutaneous Flap Model Oral Presentation presented at: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Ibrahim, M.M., McKinnon, E, Sunday, M, & Levinson, H. (April, 2018). Potential Role Of Neuropeptide Receptors In Scleroderma Oral Presentation presented at: The Wound Healing Society's 2018 annual meeting; Charlotte, NC, USA

Ibrahim, M.M., Glisson, R.R, Gall, K., & Levinson, H. (April, 2018). A New Hernia Mesh Precisely Engineered to Prevent Hernia Recurrence Oral Presentation presented at: The Wound Healing Society's 2018 annual meeting; Charlotte, NC, USA

Ibrahim, M.M., Chien, J., Mohammed, M., King, T., & Klitzman, B. (April, 2018). Detection Of Acute Vascular Occlusion Using Oxygen Monitoring In Myocutaneous Flaps Oral Presentation presented at: The Wound Healing Society's 2018 annual meeting; Charlotte, NC, USA

Ibrahim, M.M., Schweller, R., Mohammed, M., Powers, D.B., & Klitzman, B. (April, 2018). Real-time Detection Of Vascular Perfusion And Ischemia Oral Presentation presented at: The Wound Healing Society's 2018 annual meeting; Charlotte, NC, USA

Ibrahim, M.M., Eldik, H., Mohammed, M.M., Wu, Z., King, T., & Klitzman, B (May, 2018). Which Is More Ideal To Monitor And Detect Flap Vascular Compromise: Intradermal Or Subcutaneous Tissue Oxygen Tension? Oral Presentation presented at: The 63rd Annual Meeting, Plastic Surgery Research Council; Birmingham, AL, USA.

Ibrahim, M.M., Glisson, R.R, Gall, K., & Levinson, H. (May, 2018). A New Hernia Mesh Precisely Engineered to Prevent Hernia Recurrence Oral Presentation presented at: The 63rd Annual Meeting, Plastic Surgery Research Council; Birmingham, AL, USA.

Ibrahim, M.M., Schweller, R., Mohammed, M., Powers, D.B., & Klitzman, B. (April, 2018). Real-time Detection Of Vascular Perfusion And Ischemia Oral Presentation presented at: Duke Surgery Annual Research Day, Durham, NC, USA

Poster Presentation

Lorden, E., Ramchal, T., Chandra, P., Bashirov, L., Ibrahim, M.M., Hammett, E., Klitzman, B., Yoo, J., Levinson, H., Lee, S., & Leong K.W. (April, 2016). Pore Size Impacts Hypertrophic Scarring-related Outcomes in 3d Printed Polyurethane Scaffolds Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M., Wu, Z., Schweller, R., Phillips, B., & Klitzman, B. (April, 2016). Topical Vasodilator Induces Pharmacological Delay on Cutaneous Flap Viability and Vascular Remodeling Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M., Ogilvie, M., Lin, J., Diao, H., Milbreta, U., Long, H., Chew, S., & Levinson, H. (April, 2016). Delivery of miR Through Biodegradable Scaffolds Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M., Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. (October, 2015). Mitigation of Hypertrophic Scar Contraction in vivo via a Biostable Polyurethane Scaffold Poster presented at: 17th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winston-Salem, NC, USA.

Ibrahim, M.M., Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. (October, 2014). Mitigation of Hypertrophic scar contraction in an immune-competent mouse model via a biostable electrospun scaffold Poster presented at: 16th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Durham, NC, USA.

Ibrahim, M.M., Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. (May, 2015). Mitigation of hypertrophic scar contraction in an immune-competent mouse model via a biostable electrospun scaffold Poster presented at: The Wound Healing Society's 2015 annual meeting; San Antonio, TX, USA.

Ibrahim, M.M., Miller, K.J., Bashirov, L., Hammett, E., Chakraborty, S., Quiles-Torres, C., Selim, M.A., Leong, K.W., & Levinson, H. (October, 2015). Mitigation of hypertrophic scar contraction in an immune-competent mouse model via a biostable electrospun scaffold. Poster presented at: American College of Surgeons: 2015 Clinical Congress; Chicago, IL, USA.

Ibrahim, M.M., Medina, M., Bond, J., Bergeron, A., Chen, L., Quiles, C., Kokosis, G., Bashirove, L., Selim, A.M., Klitzman, B., & Levinson, H. (October, 2015). Foreign body

response to five common subcutaneous implants Poster presented at: American College of Surgeons: 2015 Clinical Congress; Chicago, IL, USA.

Ibrahim, M.M., Medina, M., Bond, J., Bergeron, A., Chen, L., Quiles, C., Kokosis, G., Bashirove, L., Selim, A.M., Klitzman, B., & Levinson, H. (May, 2015). Foreign Body Response to Five Common Subcutaneous Implants Poster presented at: The Wound Healing Society's 2015 annual meeting; San Antonio, TX, USA.

Ibrahim, M.M., Medina, M., Bond, J., Bergeron, A., Chen, L., Quiles, C., Kokosis, G., Bashirove, L., Selim, A.M., Klitzman, B., & Levinson, H. (April, 2016). Foreign Body Reaction (FBR) to Commonly Used Surgical Biomaterials Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M., McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. (April, 2016). Gastrin-Releasing Peptide (GRP) and Scleroderma: A Potential Novel Mechanism of Tissue Fibrosis Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M., Lorden, E.R., Miller, K.J., Bashirov, L., Hammett, E., Jung, Y., Medina, M.A., Rastegarpour, A., Selim, M.A., Leong, K.W., & Levinson, H. (October, 2015). Mitigation of hypertrophic scar contraction and stiffening via an elastomeric biodegradable scaffold Poster presented at: 17th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winston-Salem, NC, USA.

Ibrahim, M.M., Chen, L., Bond, J.E., Medina, M.A., Ren, L., Kokosis, G., Selim, A.M., & Levinson, H. (October, 2015). Myofibroblasts Contribute to but are not Necessary for Wound Poster presented at: 17th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winston-Salem, NC, USA.

Ibrahim, M.M., Bond, J., Bergeron, A., Miller, K.J., Ehanire, T., Quiles, C., Lorden, E.R., Medina, M.A., Fisher, M., Klitzman, B., Selim, M.A., Leong, K.W., & Levinson, H. (October, 2013). A Novel Immune Competent Murine Hypertrophic Scar Contracture Model: A Tool to Elucidate Disease Mechanism and Develop New Therapies. Poster presented at: 15th Annual Conference of the North Carolina Tissue Engineering and Regenerative Medicine Society; Winston-Salem, NC, USA.

Ibrahim, M.M, Wu, Z., & Klitzman, B. (April, 2016). Novel Implantable Optical Oxygen Monitor to Detect Flap Viability Poster presented at: The Wound Healing Society's 2016 annual meeting; Atlanta, GA, USA.

Ibrahim, M.M, Wu, Z., & Klitzman, B. (May, 2015). Novel Implantable Optical Oxygen Monitor to Detect Flap Viability Poster presented at: The Wound Healing Society's 2015 annual meeting; San Antonio, TX, USA.

Ibrahim, M.M, Wu, Z., & Klitzman, B. (October, 2015). Novel Implantable Optical Oxygen Monitor to Detect Flap Viability Poster presented at: American College of Surgeons: 2015 Clinical Congress; Chicago, IL, USA.

Ibrahim, M.M, Wu, Z., Chien, J., Mohammed, M., King, T., & Klitzman, B. Rapid detection of acute vascular occlusion using oxygen monitoring in a rat myocutaneous flap model: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Ibrahim, M.M, Eldik, H., Mohammed, M., Wu, Z., & Klitzman, B. Comparison of intradermal and subcutaneous tissue oxygen tension monitor to detect flap compromise: The Wound Healing Society's 2017 annual meeting; San Diego, CA, USA.

Ibrahim, M.M, Schweller, R., Mohammed, M., Powers, D., & Klitzman, B. Novel implantable oxygen biosensors for detection of vascular perfusion and ischemia: The Wound Healing Society's 2017 annual meeting; San Diego, CA, USA.

Ibrahim, M.M, Wu, Z., Chien, J., Mohammed, M., King, T., & Klitzman, B. Rapid detection of acute vascular occlusion using oxygen monitoring in a rat myocutaneous flap model: The Wound Healing Society's 2017 annual meeting; San Diego, CA, USA.

Ibrahim, M.M., McKinnon, E., Parra, J., Mohammed, M., Sunday, M., & Levinson, H. Expression of markers for pericytes and myofibroblasts in bleomycin-induced dermal fibrosis: potential role of neuropeptide receptors in a mouse model for scleroderma: The Wound Healing Society's 2017 annual meeting; San Diego, CA, USA.

Ibrahim, M.M, Eldik, H., Mohammed, M., Wu, Z., & Klitzman, B. Comparison of intradermal and subcutaneous tissue oxygen tension monitor to detect flap compromise: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Ibrahim, M.M, Schweller, R., Mohammed, M., Powers, D., & Klitzman, B. Implantable Real Time Oxygen Biosensors for Detection of Vascular Perfusion and Ischemia: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Ibrahim, M.M., Antony, A., Gordon, C. The Plastic Surgery Research Council's Website: The 62nd Annual Meeting, Plastic Surgery Research Council; Durham, NC, USA.

Research Experience

03/2018 – present

Erasmus University, Rotterdam/ Duke University, Durham, NC

PhD student, project targeted towards developing novel implantable oxygen sensors for several biomedical applications. Mentors: Marc Mureau, MD, PhD and Leila Mureebe, MD

05/2012 – 6/2019

Duke University Medical Center, Dept. of Surgery, Durham, NC, United States

Lab Manager, Plastic, Maxillofacial, and Oral Surgery, Howard Levinson, MD and Bruce Klitzman, PhD

Full time lab manager and senior research fellow, responsible for performing research experiment, designing experiments, overseeing research projects. Teaching techniques and mentoring research fellows and medical students.

2012

Duke University Medical Center, Dept. of Surgery, Durham, NC, United States Research Fellow, Plastic, Maxillofacial, and Oral Surgery, Howard Levinson, MD

Full time research fellow, responsible for performing research experiment, designing experiments, overseeing research projects.

Work Experience

06/2007 - Present

Medical Videos, Durham, NC, United States: Founder

Founded "Medical Videos", a company dedicated to providing a platform to host medical videos with over 2 million visitors every month. I am the founder of the company overseeing four full time employees

03/2009 - 03/2010

Ain Shams University Hospitals, Cairo, Egypt: Medical Intern

01/2014 - 2021

Hougner Publishing Group, Hong Kong: Cofounder, Technical Manager

Overseeing biomedical publishing journals such as Hougner Protocols in Biomedical Science (HPBS, ISSN:2410-2555) publishes papers that describe reliable, easy-to-follow methods that accelerate and simplify the procedure of biological and medical experiments in order to save time, maximize the scientific productivity and help us explore science.

05/2012 – 06/2019

Duke University Medical Center, Durham, NC, Unites states: Plastic surgery laboratory manager

07/2019 – 06/2021

University at Buffalo, SUNY: Nephrology fellow

07/2021– Present

Washington University in St. Louis: Transplant nephrology fellow

Volunteer Experience

07/2016 - 07/2016

Duke University Medical Center - CMF Course, Durham, NC, United States Trainee, David Powers, MD, DMD, FACS, FRCS

Third Annual Duke University Craniomaxillofacial Trauma Anatomy Course: The objectives for this course are to provide the necessary understanding of anatomy and treatment protocols for

residents involved in the management of Craniomaxillofacial Trauma; specifically focusing interest to residents in Plastic & Reconstructive Surgery.

01/2016 - 02/2016

Duke University Medical Center, Dept. of Surgery, Durham, NC, United States Instructor, Beth Hollister

Served as an instructor to healthcare professionals in Duke University Medical Center, Department of Surgery to teach data interpretation and statistical analyses.

05/2015 - 05/2016

Plastic Surgery Research Council Mentorship Program, Beverly, MA, United States Mentee, Robert Galiano, MD and Justin Sacks, MD

The Mentorship Program is a 1-year time commitment for both mentors and mentees. The program pairs medical students, young faculty, fellows, residents, and research fellows with established plastic surgery researchers to provide them with the unique opportunity to gain experience from seasoned research veterans. Pairs work together throughout the year connecting at affiliated meetings when possible with continuous communication by email and phone. The program is supervised by Dr. Justin Sacks, and I have been mentored by Dr. Robert Galiano.

05/2015 – 06/2019

Plastic Surgery Research Council, Beverly, MA, United States Member of the Technology Committee, Timothy King, MD, PhD

Help making decisions and planning of the technology committee of the Plastic Surgery Research Council, including introducing new methods and means to improve committee

04/2015 - Present

Wound Healing Society, Bethesda, MD, United States

Chair of the Communication Committee, Elof Eriksson, MD, PhD

Responsible for planning and overseeing communication of the Wound Healing Society, including supervising electronic means like the website, the electronic apps and all electronics publications. Planning collaboration with other medical societies.

08/2014 – 05/2018

Duke Medicine Orchestra (Durham Medical Orchestra), Durham, NC, United States

Percussionist, Verena Moesenbichler-Bryant, D.M.A

Volunteer percussionist in the Duke Medicine Orchestra. The Duke Medicine Orchestra strives to unite members of the Duke healthcare system and broader community in the pursuit of musical excellence and cultural enrichment, to inspire and renew its audiences and members. The orchestra provides an opportunity for musicians affiliated with Duke Medicine to come together to play substantial pieces from the classical repertoire. More than 90 orchestra members represent 26 departments across the Duke Medicine community.

07/2014 - Present

Duke University, Durham, NC, United States

Duke Research Animal Coordinators Advisory Committee, William L. Wade, LVT, RLATG, CPIA

Contributing in overseeing regulations of animal care and welfare. Helping in preparing for international AAALAC inspection and approval. Testing new potential platforms and digital solutions involved in submitting animal care protocols.

04/2014 - 04/2019

Wound Healing Society, Bethesda, MD, United States Member of the website Committee, Andrew Baird, PhD

Chair of the communication committee of the Wound Healing Society; contributing to making decisions and manage educational content.

Conference Session Moderator

- 2015: The “Emerging Technologies” session of the Wound Healing Society’s 2015 annual meeting
- 2016: The “Emerging Technologies” session of the Wound Healing Society’s 2016 annual meeting
- 2017: The “Acute Wounds” session of the Wound Healing Society’s 2017 annual meeting
- 2017: The “Fat Grafting/Stem Cells” session of the Plastic Surgery Research Council’s 62nd annual meeting
- 2021: “Immunomodulatory Strategies for Wound Healing and Repair” session of the Wound Healing Society’s 2021 annual meeting

Hobbies & Interests

Web designing: Founder www.MedicalVideos.com

Web development: Founder: www.NephColor.com

Cofounder of "Hougner Publishing Limited", a biomedical publishing company.

Music: Former percussionist in the "Duke Medicine Orchestra".

Photography: Member of the professional Photographers of America

Medical Contributions to Web

- Founder and developer of www.NephColor.com, a web application that uses artificial intelligence to colorize electron microscopy pathology images
- Co-founder of “Best Wound Practice” www.BestWoundPractice.com: peer-reviewed, step-by-step examples of best treatment of most wounds and to give all wound care practitioners
- Founder of MedicalVideos.us that provides a monthly average of 2,000,000 doctors, surgeons, medical students, nurses, patients and healthcare professionals all over the world with educational medical videos: www.MedicalVideos.com
- MedicalVideos.us provides more than 10 million medical videos monthly and is acknowledged as a medical videos source by the Library of Congress, universities and medical schools worldwide.

- MedicalVideos.com is considered as one of the components of the Medical web 2.0 and is providing medical videos for many medical presentations and Wikipedia medical articles
- MedicalVideos.us is indexed in the Library of Congress. ISSN 2164-6554
- Assisted many physicians and surgeons in establishing online communication with patients through providing consultations and solutions for their online presence
- Active member of the website communication/website of the Wound Healing Society