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Employment		
7/2010-present	United States Army Institute of Surgical Research Staff Plastic Surgeon	Fort Sam Houston, TX
4/2010-present	Burn Scar Mitigation Research Program Dental and Trauma Research Detachment Principal Investigator (Grant current Administered by Geneva Foundation)	Fort Sam Houston, TX
7/2014-6/2015	Joint Burn Reconstruction Fellowship Director (Grant Previously Administered by Geneva Foundation)	Fort Sam Houston, TX
Residency		
7/2007-6/2010	Harvard Combined Program in Plastic Surgery Residency in Plastic and Reconstructive Surgery	Boston, MA
6/2001-6/2007	Brigham & Women's Hospital Residency in General Surgery	Boston, MA
6/2000-6/2001	University of Washington General Surgery Internship in General Surgery	Seattle, WA
Education		
8/1996-6/2000	Harvard Medical School Doctor of Medicine (Division of HST) <i>cum laude</i>	Boston, MA
8/1992-6/1996	Massachusetts Institute of Technology Bachelor of Science degree in Biology	Cambridge, MA
8/1987-6/1992	Point Grey Secondary School	Vancouver, Canada
Appointments		
2/2014 – present	Associate Professor of Surgery Norman M. Rich Department of Surgery Uniformed Services University of the Health Sciences	Bethesda, MD
7/2011 – present	Chief, Plastic and Reconstructive Surgery Burn Center and Clinical Division United States Army Institute of Surgical Research	Fort Sam Houston, TX
7/2010 – present	Principal Investigator Burn Scar Mitigation Program, Craniomaxillofacial Research Division Dental and Trauma Research Detachment	Fort Sam Houston, TX
6/2002 -- 6/2004	Research Fellow in Surgery, Harvard Medical School	Boston, MA
8/1996 -- 6/2000	Research Associate in Surgery, Children's Hospital	Boston, MA

8/1992 -- 6/1996 Research Associate, Massachusetts Institute of Technology Cambridge, MA

Board Certification American Board of Surgery (Surgery) 9/25/2007 #52622
Royal College of Surgeons Canada (Plastic Surgery) 5/21/2010 #749103
American Board of Plastic Surgery 11/19/2011 #7974

Full Licensure Texas #N4334 (Active)
Massachusetts #215367 (Inactive)
Virginia #0101255971 (Inactive)

Membership American Society of Plastic Surgeons (Active Member)
American Burn Association (Active Member)
American College of Surgeons (Fellow)
Royal College of Physicians and Surgeons of Canada (Fellow)

Committees
10/2014 – present Research Committee, American Burn Association (Member)

Funded Research

Funding Agency: USAISR ILIR.

\$62,964. Period: 7/18/2011 to 6/30/2012 PI: **Rodney Chan**

“Diminishing Post-Burn Contracture in a Murine Model Using Anti-Complement and Anti-Inflammatory Strategies”

Funding Agency: DoD Combat Casualty Care Program (Project # G_041_2012_USAISR)

\$3.474M. 10/2011 to 10/2014. PI: **Rodney Chan**, Kai Leung

“Can Modulation of Cellular and Structural Components of Skin Improve Quality of Healing Burn wounds?”

Funding Agency: USAMRMC W81XWH-13-CCCRP-CCIBP11

\$1.5M. 9/2014-9/2016. PI: **Rodney Chan**, Kai Leung

“Decreasing Skin Graft Contraction through Topical Wound Bed Preparation with Anti-Inflammatory Agents”

Funding Agency: DoD Clinical and Rehabilitative Medicine Research Program

\$3.136M. 3 years. PI: **Rodney Chan**, Kai Leung

“Development of methods and markers for wound preparation with dermal scaffolds that improve split-thickness skin grafts using a porcine model”

Peer Reviewed Publications

Kang C, **Chan R**, Berger I, Lockshin C, Green L, Gold L, Rich A, “1.9 A Crystal Structure of the regA protein: A translational regulator”, Science 1995 268:1170-1173.

Sheiman RG, **Chan R**, Matthews JB., “Percutaneous treatment of a pancreatic fistula after pancreaticoduodenectomy.” J Vasc Interv Radiol 2001 Apr, 12(4):524-6

Pirie-Shepherd SR, Coffman KT, Resnick D, **Chan R**, Kisker O, Folkman J, Waters DJ, “The role of angiostatin in the spontaneous bone and prostate cancers of pet dogs”, Biochem Biophys Res Commun 2002 Apr 12;292(4):886-91.

Menard MT, Chew DK, **Chan RK**, Conte MS, Donaldson MC, Mannick JA, Whittemore AD, Belkin M. Outcome in patients at high risk after open surgical repair of abdominal aortic aneurysm. J Vasc Surg 2003 Feb;37(2):285-92

Chan R, Ibrahim S, Verna N, Carroll M, Moore FD, Hechtman HB, “Ischemia-reperfusion: a process mediated by immune complexes and complement”, British Journal of Surgery 2003 Dec;90(12):1470-1478.

Menard MT, Nguyen LL, **Chan RK**, Conte MS, Fahy L, Chew DK, Donaldson MC, Mannick JA, Whittmore AD, Belkin M. "Thoracovisceral Segment Aneurysm Repair After previous infra-renal abdominal aortic aneurysm surgery", *J Vasc Surg*, 2004, June 39(6):1163-70.

Austen WG, Zhang M, **Chan R**, Hechtman HB, Carroll M, Moore FD, "A single clone of murine IgM mediates skeletal muscle ischemia-reperfusion", *Surgery*, 2004 Aug 136 (2):401-6.

Chan RK, Ibrahim SI, Ding GY, Verna N, Hechtman HB, Moore FD, "Complement deposition from reperfusion injury to skeletal muscle occurs primarily on type II muscle fibers." *J Surg Res*. 2004 Nov 122 (1):54-60.

Chan RK, Ding G, Verna N, Ibrahim SI, Oakes S, Hechtman HB, Moore FD. "IgM binding precedes complement activation during skeletal muscle ischemia-reperfusion." *J Surg Res*. 2004 Nov 122 (1):29-35.

Chan RK, Ibrahim SI, Pil P, Tanasijevic M, Moore FD, Validation of a method to replace frozen section during parathyroid exploration by using the rapid parathyroid hormone assay on parathyroid aspirates. *Archives of Surgery*, 2005, 140, 371-3.

Abonia JP, Friend DS, Austen WG, Moore FD, Carroll MC, **Chan R**, Humbles A, Gerard C, Knight P, Kanaoka Y, Yasuda S, Austen KF, Stevens RL, Gurish MF, "Mast cell protease 5 mediates post-ischemic reperfusion injury to mouse skeletal muscle", *J Immunology*, 2005 Jun 1;174(11):7285-7291.

Chan R, Liu P, Lew DH, Ibrahim SI, Srey R, Valeri CR, Hechtman HB, Orgill DP, Expired liquid preserved platelet releasates retain proliferative activity. *Journal of Surgical Research*. 2005 Jun 1;126(1):55-58.

Zhang M, Alicot EM, Chiu I, Li J, Verna N, Vorup-Jensen T, Kessler B, Shimaoka M, **Chan R**, Friend D, Mahmood U, Weissleder R, Moore FD, Carroll MC. Identification of the target self-antigens in reperfusion injury. *J Exp Med*. 2006 Jan 23;203(1):141-52.

Chan RK, Verna N, Afnan J, Zhang M, Ibrahim S, Carroll MC, Moore FD Jr. Attenuation of skeletal muscle reperfusion injury with intravenous 12 amino acid peptides that bind to pathogenic IgM. *Surgery*. 2006 Feb;139(2):236-43.

Tjin Tham Sjin RM, Naspinski J, Birsner AE, Li C, **Chan R**, Lo KM, Gillies S, Zurakowski D, Folkman J, Samulski J, Javaherian K. Endostatin therapy reveals a U-shaped curve for antitumor activity. *Cancer Gene Ther*. 2006 Feb 3.

Behdad A, **Chan R**, Tavakkolizadeh A, Jacobsen D. Image of the month. Inverted Meckel diverticulum. *Arch Surg*. 2006 Feb;141(2):215-6.

Chan RK, Liu PH, Pietramaggiore G, Ibrahim SI, Hechtman HB, Orgill DP. Effect of recombinant platelet derived growth factor (Regranex) on wound closure in genetically diabetic mice. *J Burn Care Res* 2006 Mar-Apr;27(2):202-5.

Pomahac B, Matros E, Semel M, **Chan R**, Rogers SO, Demling R, Orgill DP. Predictors of Survival and Length of stay in burn patients older than 80 years of age: does age really matter? *J Burn Care Res* 2006 May-Jun;27(3):265-9.

Chan RK, Ibrahim SI, Takahashi K, Kwon E, McCormack M, Ezekowitz A, Carroll MC, Moore FD Jr., Austen WG Jr. The differing roles of the classical and mannose binding lectin complement pathways in the events following skeletal muscle ischemia reperfusion. *J Immunology* 2006 Dec;177 (11):8080-5.

Chan RK, Garfein E, Gigante PR, Liu P, Agha RA, Mulligan R, Orgill DP. Side population hematopoietic stem cells promote wound healing in diabetic mice. *Plast Reconstr Surg* 2007 Aug; 120(2):407-11.

Kung D, Ruan DT, **Chan RK**, Ericsson ML, Saund MS. Pneumatosis intestinalis and portal venous gas without bowel ischemia in a patient treated with irinotecan and cisplatin. *Dig Dis Sci* 2008 Jan; 53(1):217-9.

Scherer SS, Pietramaggiore G, Mathews JC, **Chan R**, Fiorina P, Orgill DP. Wound healing kinetics of the genetically diabetic mouse. *Wounds*. 2008; 20(1):18-28.

Pietramaggiore G, Scherer SS, Mathews JC, Alperovich M, Yang HJ, Neuwalder J, Czczuga JM, **Chan RK**, Wagner CT, Orgill DP. Healing modulation induced by freeze-dried platelet rich plasma and micronized allogenic dermis in a diabetic wound model. *Wound Repair Regen* 2008 Mar-Apr;16(2):218-25.

Pietramaggiore G, Yang HJ, Scherer SS, Kaipainen A, **Chan RK**, Alperovich M, Neuwalder J, Demcheva M, Vournakis JN, Valeri CR, Hechtman HB, Orgill DP. Effects of poly-N-acetyl glucosamine (pGlcNAc) patch on wound healing in db/db mouse. *J Trauma* 2008 Mar; 64(3):803-8.

Williams Z, **Chan R**, Kelly E. A simple device to increase rates of compliance in maintaining 30 degree head of bed elevation in ventilated patients. *Critical Care Medicine* 2008 Apr; 36(4): 1155-7.

Chan RK, Ruan DT, Gawande AA, Moore FD Jr. Surgery for hyperparathyroidism in image-negative patients. *Arch Surg* 2008 Apr;143(4):335-7.

Hartzell TL, Orgill BD, **Chan R**, Mathy JA, Orgill DP. V-Y modification of a bipedicle perforator flap. *Plast Reconstr Surg* 2009 Jul;124(1):167-70.

Carty MJ, **Chan R**, Huckman R, Snow D, Orgill DP. A detailed analysis of the reduction mammoplasty learning curve: a statistical process model for approaching surgical performance improvement. *Plast Reconstr Surg* 2009 Sep;124(3):706-14.

Chan RK, Przylecki W, Guo L, Caterson SA. The use of both antegrade and retrograde internal mammary vessels in a folded, stacked deep inferior epigastric artery perforator flap. *Eplasty* 2010 Apr 30; 10:e32.

Chan RK, Pribaz JJ. Refinement in breast reconstruction with folded flaps. *Plast Reconstr Surg*. 2010 Jul; 126(1):37-9.

Kane BJ, Younan G, Helm D, Dastouri P, Prentice-Mott H, Irimia D, **Chan RK**, Toner M, Orgill DP. Controlled induction of distributed microdeformation in wounded tissue via a microchamber array dressing. *J Biomed Mater Res A*. 2010 Nov 6; 95(2):333-40.

Pribaz JJ, **Chan RK**. Where do perforator flaps fit into our armamentarium? *Clinics in Plastic Surgery* 2010 Oct; 37(4); 571-9.

Chan RK, Mathy JA, Przylecki W, Guo L, Caterson SA. Superior gluteal artery perforator flap breast reconstruction salvage following late venous congestion after discharge. *Eplasty* 2010 Oct 13; 10:e63.

Przylecki WH, **Chan RK**, Carty MJ, Caterson SA. Metastatic breast cancer after delayed deep inferior epigastric perforator flap reconstruction. *Ann Plastic Surgery* 2011 Mar; 66(3): 233-4.

Chan RK, Liu A, Bojovic B, Chun Y, Guo L, Caterson SA, Orgill DP, Pribaz JJ. Venous congestion in abdominal flap breast reconstructions – A simple treatment for a temporary problem. *J Plast Reconstr Aesthet Surgery*. 2011 May; 64(5):e135-6.

Chan RK, Bojovic, B, Talbot SG, Weiss D, Pribaz JJ. Lower lip suspension using bilateral temporalis muscle flaps and fascia lata grafts. *Plast Reconstr Surg*. 2012 Jan; 129(1):119-22.

Mellus D, **Chan RK**, Reconstructive Surgery in the Thermally Injured Patient. *Perioperative Nursing Clinics of North America* 2012 Mar; 7(1): 107-113.

Chan RK, Liu AS, Rogers GF. Aplasia cutis congenital of the trunk associated with fetus papyraceous. *Journal Craniofacial Surg.* 2012 Jul;23(4): 995-7.

Chan RK, Zamora DO, Wrice NL, Baer DG, Renz EM, Christy RJ, Natesan S. Development of a Vascularized Skin Construct Using Adipose-Derived Stem Cells from Debrided Burned Skin. *Stem Cell International* 2012:841203.

Kittle CP, Verrett AJ, Wu J, Mellus DE, Hale RG, **Chan RK**. Characterization of Midface Fractures Incurred in Recent Wars. *Journal Craniofacial Surg.* 2012 Nov;23(6): 1587-91.

Renz EM, King BT, Chung KK, White CE, Lundy JB, Lairet KF, Maani CF, Young AW, Stout LR, **Chan RK**, Wolf SE, Baer DG, Cancio LC, Blackburne LH. The US Army Burn Center: Professional Service during 10 years of war. *J Trauma Acute Care Surg.* 2012 Dec; 73(6 Suppl 5): S409-16.

Chan RK, Siller-Jackson A, Verrett AJ, Wu J, Hale RG. Ten years of war: A characterization of craniomaxillofacial injuries incurred during Operations Enduring Freedom and Iraqi Freedom. *J Trauma Acute Care Surg.* 2012 Dec; 73(6 Suppl 5): S453-8.

Fletcher JL, Cateson EJ, Hale RG, Cancio LC, Renz EM, **Chan RK**. Characterization of skin allograft use in thermal injury. *J Burn Care & Research: Jan/Feb 2013; 34(1):168-175.*

Zachar MR, Labella C, Kittle CP, Baer PB, Hale RG, **Chan RK**., Characterization of Mandibular Fractures Incurred From Battle Injuries in Iraq and Afghanistan From 2001-2010., *J Oral Maxillofac Surg.* 2013 Apr; 71(4):734-42.

Tucker DI, Zachar MR, **Chan RK**, Hale RG., Characterization and management of mandibular fractures: lessons learnt from Iraq and Afghanistan., *Atlas Oral and Maxillofacial Surgery Clinics of North America.* 2013 Mar; 21(1):61-8.

Madson AQ, Tucker D, Aden J, Hale RG, **Chan RK**. Non-battle craniomaxillofacial injuries from U.S. military operations. *J Craniomaxillofacial Surgery.* 2013 Dec;41(8):816-20

Longaker MT, Rohrich RJ, Greenberg L, Furnas H, Wald R, Bansal V, Seify H, Tran A, Weston J, Korman JM, **Chan R**, Kaufman D, Dev VR, Mele JA, Januszyk M, Cowley C, McLaughlin P, Beasley B, Gurtner GC. A Randomized Controlled Trial of the embrace® Device to Reduce Incisional Scar Formation. *Plast Reconstr Surg.* 2014 Sep;134(3):536-46.

Guda T, Labella C, **Chan R**, Hale R. Quality of bone healing: Perspectives and assessment techniques. *Wound Repair Regen.* 2014 May;22 Suppl 1:39-49.

Chan RK, Aden J, Wu J, Hale RG, Renz EM, Wolf SE. Operative Utilization Following Severe Combat-Related Burns. *J Burn Care & Research: 2015 Mar-Apr; 36(2):287-96.*

Williams JF, Lundy JB, Chung KK, **Chan RK**, King BT, Renz EM, Cancio LC. Traumatic Injuries Incidental to Hydraulic Well Fracturing: A Case Series. *Burn Care Res.* 2014 Nov 24. [Epub ahead of print]

Li Z, Roussakis E, Koolen PG, Ibrahim AM, Kim K, Rose LF, Wu J, Nichols AJ, Baek Y, Birngruber R, Apiou-Sbirlea G, Matyal R, Huang T, **Chan R**, Lin SJ, Evans CL. Non-invasive transdermal two-dimensional mapping of cutaneous oxygenation with a rapid-drying liquid bandage. *Biomed Opt Express.* 2014 Oct 1;5(11):3748-64. doi: 10.1364/BOE.5.003748. eCollection 2014 Nov 1.

Johnson BW, Madson AQ, Bong-Thakur S, Tucker D, Hale RG, **Chan RK**. Combat-related facial burns: analysis of strategic pitfalls. *J Oral Maxillofac Surg*. 2015 Jan;73(1):106-11.

Rose LF, Wu JC, Carlsson AH, Tucker DI, Leung KP, **Chan RK**. Recipient wound bed characteristics affect scarring and skin graft contraction. *Wound Repair Regen*. 2015 Mar-Apr;23(2):287-96.

Wu JC, Rose LF, Christy RJ, Leung KP, **Chan RK**. Full-Thickness Thermal Injury Delays Wound Closure in a Murine Model. *Adv Wound Care (New Rochelle)*. 2015 Feb 1;4(2):83-91.

Rowan MP, Cancio LC, Elster EA, Burmeister DM, Rose LF, Natesan S, **Chan RK**, Christy RJ, Chung KK. Burn wound healing and treatment: review and advancements. *Crit Care*. 2015 Jun 12;19:243. doi: 10.1186/s13054-015-0961-2.

Howarth AL, Bell BE, Peterson WC, Renz EM, King BT, **Chan RK**. A novel approach to graft loss in burn using the CelluTome™ epidermal harvesting system for spot grafting: A case report. *Burns*. 2015 Sep;41(6):e57-60. doi: 10.1016/j.burns.2015.02.021.

Chan RK, Rose LF, Wu JC, Tucker DI, Chan MM, Christy RJ, Hale RG, Leung KP. Autologous Graft Thickness Affects Scar Contraction and Quality in a Porcine Excisional Wound Model. *Plast Reconstr Surg Glob Open*. 2015 Aug 10;3(7):e468.

Qian LW, Fourcaudot A, Kazuyoshi Y, You T, **Chan RK**, Leung KP. Exacerbated and prolonged inflammation impairs wound healing and increases scarring. *Wound Repair and Regeneration*. Accepted and in Press.

Chapters

Zhang S, Altman M, **Chan R**, Ma R, “Self-Assembling Peptides in Biology, Materials Science and Engineering”, in Shimonishi Y, *Peptide Science – Present and Future*, 761-768 (1999).

Ibrahim SI, **Chan R**, Hechtman HB. “Ischemia-Reperfusion”, in Shepro D, *Microvascular Research Biology and Pathology*, 2005. 761-769.

Chan R, Liu P, Orgill DP, “Wound healing – an orchestration of humoral and cellular factors”, in Shepro D, *Microvascular Research – Biology and Pathology*, 2005. 897-902.

Chan R, Donelan MB, “Z-plasty in Burn reconstruction”, Ch 21, in Ogawa R, “Burn Reconstruction”, 2010.

Chan R, Pribaz J, “Use of previous burnt skin flaps for upper extremity reconstruction”, Ch 37, in Ogawa R, “Burn Reconstruction”, 2010

Chan R, “Burns”, Ch 7, in Chambers, JA, *Tarascon Plastic and Reconstructive Surgery Pocketbook*, 2013.

Albanna MZ, **Chan RK**, Holmes JH, “Collagen-Based Dermal Substitutes”, in *Encyclopedia of Biomedical Polymers and Polymeric Biomaterials*, Taylor and Francis, 2014.

Chan R, Pribaz J, “Free flaps for burns of the face and neck”, Editor, Boyd, Jones, Ch 39, 2014.

Chan R, Pribaz J, “Secondary facial reconstruction”, Editor, Neligan, P, Ch 19, 2014.

Honors

USAISR Top Papers August, 2015. (Chan et al., PMID 26301157)
Alpha Omega Alpha Faculty Award, Maryland Gamma Chapter, 2013
Academic Scholar Award, Harvard Plastic Surgery Residency, 2010
Regan Fellowship Operation Smile (2010 Guwahti, India)

Francis D. Moore Outstanding Chief Resident Award 2007
John A. Mannick Research Award 2004
Outstanding resident teacher (award by Tufts Medical Students, 2003, 2006)
Phi Beta Kappa, Massachusetts Institute of Technology, 1996
Sigma Xi, Massachusetts Institute of Technology, 1996
Randolph Wei UROP (undergraduate research) award, MIT, 1996
Outstanding Associate Advisor Award, MIT, 1995, 1996
University of Victoria French Language Bursary, 1992
The University of Toronto National Book Award, 1992
Canadian Association of Physicist Prize Exam (First Place), 1992

Background

Born in Hong Kong; grew up in Vancouver.