

CURRICULUM VITAE
Mark A. Carlson, MD, FACS
 Professor
 Department of Surgery
 University of Nebraska Medical Center

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Spouse

Sarah Gloden Carlson

Children

Kirsten, Ty, Trent, Blake, and Weston

Education

Institution, Location	Years	Degree
College of Wooster, OH	Sep 1980 – May 1984	BA
Case Western Reserve School of Medicine, Cleveland, OH	Aug 1985 – May 1989	MD

Post-degree Training

Institution, Location	Years	Training	Director/PI
Medical College of Wisconsin, Milwaukee, WI	Jul 1989 – Jun 1995	Residency, General Surgery	Robert E. Condon, MD
Medical College of Wisconsin, Milwaukee, WI	Jul 1991 – Jun 1992	Research Fellow, GI Motility	Robert E. Condon, MD
Royal Devon and Exeter Hospital, Exeter, England	Jul 1993 – Oct 1993	Registrar, General Surgery	Andrew Knox, MD
Medical College of Wisconsin, Milwaukee, WI	Jul 1995 – Jun 1996	Fellowship, Minimally Invasive Surgery	Constantine T. Frantzides, MD
University of Texas Southwestern Medical Center, Dallas, TX	Jul 1996 – Jun 1999	Research Fellow, Wound Healing	Frederick Grinnell, PhD; C. James Carrico, MD

Academic Appointments

Institution, Location	Department	Years	Appointment
University of Texas Southwestern Medical Center, Dallas, TX	Surgery	1996-1999	Assistant Clinical Professor
University of Nebraska Medical Center, Omaha VA Medical Center, Omaha, NE	Surgery	1999-2005	Assistant Professor
University of Nebraska Medical Center, Omaha VA Medical Center, Omaha, NE	Surgery	2005-2011	Associate Professor
University of Nebraska Medical Center, Omaha VA Medical Center, Omaha, NE	Genetics, Cell Biology and Anatomy	2010-2011	Associate Professor (courtesy)
University of Nebraska Medical Center, Omaha VA Medical Center, Omaha, NE	Surgery	2011-	Professor
University of Nebraska Medical Center, Omaha VA Medical Center, Omaha, NE	Genetics, Cell Biology and Anatomy	2011-	Professor (courtesy)

Certificates and Licenses

State of Nebraska No. 21117; valid until 10/01/2018

American Board of Surgery No. 42975; re-certified 12/03/2007, valid until 07/01/2018

Grants/Contract Support (most recent first)

- Title: Joint Cartilage Tissue Engineering
Agency: Mary and Dick Holland Regenerative Medicine Program at UNMC
Dates: March 1, 2016 to February 28, 2017
Total Dollars: \$175,000
Investigators: Jingwei Xie (lead PI); Carlson (Co-PI)
- Title: Small Intestine Tissue Engineering
Agency: Mary and Dick Holland Regenerative Medicine Program at UNMC
Dates: January 1, 2016 to December 31, 2017
Total Dollars: \$175,000
Investigators: Jingwei Xie (lead PI); Carlson (Co-PI)
- Title: Concurrent Development of *Ex Vivo* and *In Vivo* Models For Study of Cardiac and Vascular Remodeling and Regeneration
Agency: Mary and Dick Holland Regenerative Medicine Program at UNMC

- Dates: April 1, 2015 to March 31, 2017
Total Dollars: \$300,000
Investigators: Alexey Kamenskiy (PI); Carlson (Co-I)
4. Title: Multifunctional Nanofiber Skin Graft for Extensive Skin Replacement Therapy
Agency: NIH UNMC COBRE Project
Dates: November 2014 to June 2017
Total Dollars: \$250,000
Investigators: Jingwei Xie (PI); Carlson (Co-I)
 5. Title: Defense University Research Instrument Program
Agency: U.S. Army Research Office
Date: May 29, 2014
Total Dollars: \$58,020, for purchase of an Instron 5943 tensiometer system
Investigator: Carlson (PI)
 6. Title: Development of bioactive polymeric meshes to reduce complications of hernia repair surgery
Agency: Nebraska Research Initiative
Dates: July 1, 2014 through June 30, 2016
Total Dollars: \$100,000
Investigators: David Oupicky (PI), Carlson (co-I), Yiqi Yang (co-I)
 7. Title: Development of Porcine Cancer Models
Agency: UNMC/Buffett Cancer Center Gastrointestinal Cancer Program pilot grant
Dates: 2014-2015
Total Dollars: \$50,000
Investigators: Carlson (PI); Surinder Batra & Kay-Uwe Wagner (consultants)
 8. Title: Hemostatic Patch (Phase II)
Description: development of a resorbable mesh for hemostasis of solid organ surgery
Agency: State of Nebraska Department of Economic Development
Dates: 2014-2015
Total Dollars: \$400,000
Investigators: Luis Nuñez (PI); Carlson (co-I)
 9. Title: Hemostatic Patch (Phase I)
Description: development of a resorbable mesh for hemostasis of solid organ surgery
Agency: State of Nebraska Department of Economic Development
Dates: 2012-2013
Total Dollars: \$150,000
Investigators: Luis Nuñez (PI); Carlson (co-I)
 10. Title: Technologies for Hemostasis and Stabilization of the Acute Traumatic Wound
Description: development of devices containing resorbable nanoengineered mesh embedded with human recombinant clotting factors for treatment of noncompressible truncal

- hemorrhage and/or hemorrhage in the hypocoagulopathic subject.
Agency: United States Army
Dates: 26 Sep 2011 to 25 Oct 2016
Total Dollars: \$5,760,000
Investigators: Carlson (PI); William H. Velandar (Co-I); Gustavo Larsen (Co-I)
11. Title: Development of New Hemostatic Dressings
Agency: National Institutes of Health Small Business Innovation Research Grant
Description: development of nanoengineered mesh to treat severe hemorrhagic injuries.
Dates: 2009-2011
Total Dollars: \$296,000
Investigators: Gustavo Larsen (PI); Carlson (Co-I)
 12. Title: Regeneration With Stem Cells And Recombinant Proteins In A Nanoengineered Matrix
Agency: University of Nebraska Medical Center
Description: *in vitro* development of a three-dimensional skin substitute.
Dates: 2008-2010
Total Dollars: \$105,000
Investigators: Carlson (PI)
 13. Title: Efficacy Of A Hemostatic Bandage Embedded With Recombinant Factors
Agency: University of Nebraska–Lincoln
Description: testing of novel hemostatic devices employing human recombinant clotting factors.
Dates: 2007-2010
Total Dollars: \$150,000
Investigators: Carlson (subcontractor)
 14. Title: Regulation of Fibroblast Survival in the Collagen Matrix
Agency: National Institutes of Health (K08 award)
Description: study of human neonatal fibroblast survival signaling in three-dimensional culture
Dates: 2001-2006
Total Dollars: \$496,000
Investigators: Carlson (PI)
 15. Title: Regulation of Fibroblast Survival in the Collagen Matrix
Agency: Veterans Health Administration (Advanced Research Career Development Award)
Dates: 2001-2004
Total Dollars: \$0 (awarded with no. 5, but simultaneous awards not allowed)
Investigators: Carlson (PI)
 16. Title: Repair of Large Hiatal Hernia With Polytetrafluoroethylene
Agency: W.L. Gore and Associates, Inc.
Dates: 1996-1998
Total Dollars: \$54,000
Investigators: Constantine T. Frantzides (PI); Carlson (Co-I)

17. Title: Use of Ketorolac in Postoperative Ileus in Humans
Agency: Roche Inc.
Dates: 1992-1993
Total Dollars: \$5,000
Investigators: Robert E. Condon (PI); Carlson (Co-I)
18. Title: Urinary Excretion of Adenosine in Patients Receiving Amphotericin B
Agency: Squibb Pharmaceutical, Inc.
Dates: 1992
Total Dollars: \$5,000
Investigators: Robert E. Condon (PI); Carlson (Co-I)

Patents and Trademarks

1. Electrospun Nanofiber-based Hemostatic Materials
Provisional Patent No. 62400700 (September 28, 2016)
2. Daily Diet Score
Trademark in Supplemental Register: February 27, 2007
3. Right-angle harmonic scalpel for minimally invasive surgery
Patent application filed January 23, 2007
4. Self-closing trocar for minimally invasive surgery
Patent application filed January 19, 2007

The following inventions have been disclosed to UNeMed (<http://www.unemed.com>), but patents have not been filed:

1. Multi-laminar, partially or fully resorbable, configurable, synthetic hernia mesh (April 12, 2017)
2. Synthetic Resorbable Hemostatic Bandage (March 29, 2017)
3. Expanded Synthetic Resorbable Matrix Supplemented With Recombinant Human Fibrin Sealant For Major Hemorrhage (March 29, 2017)
4. Expansile Synthetic Resorbable Foam Supplemented With Recombinant Human Fibrin Sealant For Noncompressible Hemorrhage (March 29, 2017)
5. Trocar washing system for laparoscopic surgery (March 7, 2015)
6. Colorimetric Graduated Transforming Expiration Label (February 7, 2015)
7. Absorbable hemostat (June 17, 2014)
8. Hernia mesh with programmable resorption (May 19, 2012)
9. Endovascular interventional catheter (March 5, 2012)
10. Wide-span balloon retractor for minimally invasive surgery (June 18, 2008).
11. Sonographic trocar for minimally invasive surgery (October 25, 2007).
12. Modified Ferris-Smith forceps (May 25, 2007).
13. Laparoscopic mesh stapler for ventral hernia surgery (April 2, 2007).
14. Combined bougie-EGD for laparoscopic esophageal surgery (March 15, 2007).

Other Appointments/Positions

1. Member, Editorial Board, *Scientific Reports* (2017-)
2. Member, UNMC Core Faculty (2014-).
3. Member, UNMC Graduate Faculty (2003-).
4. Moderator, Morbidity & Mortality Conference at the Omaha VA Medical Center (1999-2011).
5. Reviewer for the following journals:
 - American Journal of Surgery*
 - Annals of Surgery*
 - Archives of Surgery*
 - Biomed Central Research Notes*
 - Cellular Physiology and Biochemistry*
 - Hernia*
 - International Journal of Medical Robotics and Computer Assisted Surgery*
 - In Vitro Cellular & Developmental Biology*
 - Journal of Biological Chemistry*
 - Journal of Dermatologic Science*
 - Molecular and Cellular Biochemistry*
 - PLoS ONE*
 - Surgery*
 - Surgical Endoscopy*
 - Transplantation*
 - Wound Repair and Regeneration*

Honors and Awards

1980	Academic Scholarship, College of Wooster
1980-1984	Dean's List, College of Wooster
1982	Joseph Albertus Culler Prize in Physics, College of Wooster
1983	Francis and Elizabeth Twinem Scholarship, College of Wooster
1983, 1984	Summer Research Scholarship, College of Wooster
1984	Departmental Honors (Chemistry), College of Wooster
1984	William Z. Bennett Prize in Chemistry, College of Wooster
1984	Graduation with Honors, College of Wooster
1986	Summer Research Grant, Case Western Reserve University
1993	American Society of Colorectal Surgeons Travel Grant Recipient
1995	Resident Achievement Award, Society of Laparoendoscopic Surgeons
1997	Competent Toastmaster Award, Toastmasters International
1998	Grassi Prize Finalist, Collegium Internationale Chirurgiae Digestivae
2001	Mentored Clinical Scientist Development Award, National Institutes of Health
2001	Advanced Research Career Development Award, Veterans Health Administration
2004	Travel Scholarship, American Society of Clinical Investigation
2007	American College of Surgeons Traveling Fellowship to Germany

2008	Faculty Special Achievement Award, University of Nebraska
2008	New Invention Notification Award, UNeMed Corporation
2013	New Investigator Award, University of Nebraska Medical Center
2014	New Invention Notification Award, UNeMed Corporation

Memberships in Professional Societies

Fellow, American College of Surgeons
Society of University Surgeons
Central Surgical Association
The Association for Academic Surgery
Society of American Gastrointestinal Endoscopic Surgeons
American Society for Microbiology
Association of VA Surgeons
Society of Laparoendoscopic Surgeons
The Wound Healing Society
American Association for the Advancement of Science
American Society for Cell Biology
Phi Beta Kappa
Sigma Xi
Society of Investigative Dermatology
American Hernia Society

Committee Assignments

Member, Steering Committee for Regenerative Medicine at UNMC, 2009-2012
Member, Subcommittee of Human Studies at the VA Medical Center Omaha, 2001-2006
Member, Research and Development Committee at the VA Medical Center Omaha, 2008-
Member, Peer Review Committee at the VA Medical Center Omaha, 2005-2010
Member, Library Committee at the VA Medical Center Omaha, 2003-2008
Member, Promotion and Tenure Committee, UNMC Department of Surgery, 2011-12
Member, Department of Surgery Academic Variable Compensation Committee, 2015
Member, Department of Surgery Program Evaluation Committee, 2015-
Member, Department of Surgery Clinical Competency Committee, 2015-

Scientific Review Groups

1. Entity: Israeli Ministry of Science, Technology and Space
Program: Call for Proposals: Applied and Engineering Researches 2014
Role: peer reviewer of research proposals
Dates: October-November 2014
2. Entity: National Institutes of Health Center for Scientific Review
Program: NIH Support for Conferences and Scientific Meetings (Parent R13/U13)
Role: peer reviewer of conference proposals

Dates: September-November 2015

3. Entity: National Institutes of Health Center for Scientific Review
Program: Research Projects to Enhance Applicability of Mammalian Models for Translational Research (PAR16058 and PAR16059)
Panel: ZRG1-OTC-W-55
Role: peer reviewer of research proposals
Dates: May 2016
4. Entity: National Institute of Allergy and Infectious Diseases (NIAID/NIH)
Program: BAA NIHA12015042, Development of Radiation/Nuclear Medical Countermeasures or Biodosimetry Devices
Role: peer reviewer of contract proposals
Dates: June 2016

Mentoring

1. Timothy Koch, Creighton University Medical Student. Summer 2000.
Project: determination of apoptosis in fibroblasts using the Annexin V assay.
2. Mark Eichler, University of Nebraska Medical Student. Summer 2002.
Project: development of linear fibroblast-populated collagen matrix model.
3. Joshua Nelson, University of Nebraska Medical Student. Academic Year 2002-3.
Project: review article on classical healing vs. regeneration.
4. Eric Samuelson, University of Nebraska Medical Student. Summer 2004.
Project: signaling pathways stimulated by human serum in the FPCM.
5. Nitin Garg, MD, Creighton University Surgical Resident. Academic Year 2005-6.
Project: Complications and Results of Ostomy Closure in a VA Hospital Setting.
6. Jeremiah J. Gums, University of Nebraska Medical Student. Summers 2006, 2007.
Project: FAK signaling in the fibroblast-populated collagen matrix.
7. Sonya L. Caston-Pierre, PhD, UNMC Summer Faculty Development Program, 2006.
Project: survival-shape relationship in the linear fibroblast-populated collagen matrix.
8. Alex Lesiak, University of Nebraska Medical Student. Summer 2008.
Project: Effect of Hyaluronic Acid in the Fibroblast-Populated Collagen Matrix.
9. Gorsage, Daniel. Creighton University Medical Student. Summer 2009.
Project: Review of Wound V.A.C. Therapy.

10. Krause, Crystal. UNMC Postdoctorate in Pharmacology and Neuroscience. October 2009–
Project: Dermal Tissue Engineering.
11. Peña, Tiffany. PhD candidate in Tissue Engineering (combined program with the Department of Surgery at UNMC and the Department of Chemical and Biomolecular Engineering at University of Nebraska–Lincoln). Role: primary advisor. August 2010–2012.
12. Kamien, Andrew. Creighton University Medical Student. 2011-12. Project: Review of Pathologic Response to Neoadjuvant Therapy of Rectal Cancer.
13. Doyle, David. University of Nebraska Medical Student. Summer 2012.
Project: effect of NF- κ B inhibition on the fibroblast-populated collagen matrix.
14. Yanala, Ujwal. UNMC Research Fellow, 2012–. Projects: Studies of Hemostasis in Porcine Model; Studies of Obesity and Short Bowel Syndrome in Rats.
15. Guenther, Timothy. University of Nebraska Medical Student. Summer 2013.
Project: RNA interference of NF- κ B pathway participants in the collagen matrix.
16. Remmers, Neeley. UNMC Postdoctoral Associate, 2014–.
Project: Development of a Porcine Cancer Model.
17. Johnson, Sydney M. UNMC M1 Student. Summer 2015.
Project: Development of Novel Hemostatic Technologies in Porcine Models.
18. Zhou, Daniel J. UNMC M1 Student. Summer 2015 & 2016.
Project: Development of a Novel *Ex Vivo* Adhesion Assay for Hemostatic Bandages.
19. Aravind, Shruthi. UNMC MS/PhD candidate. Fall 2015–
Project: Development of Novel Hemostatic Technologies in Porcine Models.
20. Staudacher, Anna. UNMC PhD candidate. 2015-2016.
Project: Mechanisms of Aging in Human Fibroblasts in 2D and 3D Culture Systems.
21. Arkfeld, Christopher. UNMC M1 Student. Summer 2016.
Project: Development of Novel Hemostatic Technologies in Porcine Models.
22. Niyogi, Upasana. UNMC PhD candidate. 2017–
Project: Mechanisms of Aging in Human Fibroblasts in 2D and 3D Culture Systems.
23. Ungar, Joshua. UNMC M1 Student. Summer 2017.
Project: Development of a Porcine Model of Critical Limb Ischemia.

Educational Workshops

1. Multiple workshops in Basic and Advanced Laparoscopic Surgery in the Animate Laboratory
Location: Medical College of Wisconsin
Period: 1995-1996
2. Multiple workshops in Basic and Advanced Laparoscopic Surgery in the Animate Laboratory
Location: University of Nebraska Medical Center
Period: 2000-2002

Teaching Responsibilities

1. Lecture: "Acute Abdomen"
Setting: Medical School core clerkship lecture
Audience: third year medical students
Duration: 1 hr
Frequency: every other month (1999–2013)
2. Conference: Surgical Morbidity & Mortality
Setting: Omaha VAMC
Role: moderator
Audience: students, residents, faculty, support personnel
Duration: 1 hr
Frequency: twice per month (1999–2011)
3. Conference: Surgical Morbidity & Mortality
Setting: UNMC
Role: faculty participant
Audience: students, residents, faculty, support personnel
Duration: 1 hr
Frequency: weekly (1999–)
4. Conference: General Surgery Preoperative Conference
Setting: Omaha VAMC
Role: faculty participant
Audience: students, residents, faculty, support personnel
Duration: 1 hr
Frequency: weekly (1999–)
5. Activity: Surgical teaching rounds
Setting: Omaha VAMC
Audience: students & residents
Duration: 1 hr
Frequency: two times per week (1999–)
6. Activity: Operating room teaching
Setting: Omaha VAMC
Audience: students & residents

- Duration: 1-4 hr
Frequency: two-four times per week (1999–)
7. Activity: General Surgery Clinic teaching
Setting: Omaha VAMC
Audience: students & residents
Duration: 3 hr
Frequency: weekly (1999–)
 8. Activity: supervise/proctor Wed morning Resident Seminar
Setting: UNMC
Audience: students & residents
Duration: 1 hr
Frequency: two times per year (2001–)
 9. Conference: Tumor Board
Setting: Omaha VAMC
Role: faculty participant
Audience: students, residents, faculty, support personnel
Duration: 1 hr
Frequency: weekly (2008–)
 10. Lecture: “Skin Regeneration”
Setting: UNMC Stem Cell Biology course
Audience: graduate students
Duration: 1.5 hr
Frequency: once per year (2010–2012)
 11. Lecture: “Hernia”
Setting: UNMC
Audience: UNMC medical students
Duration: 1 hr
Frequency: bimonthly (2014–)
 12. Conference: Surgical Morbidity & Mortality
Setting: UNMC
Role: moderator
Audience: students, residents, faculty, support personnel
Duration: 1 hr
Frequency: six times per year (2015–)
 13. Virtual reality training in surgery
Setting: UNMC
Role: proctor
Audience: residents
Duration: 2 hr

Frequency: six times per year (2015–)

Presentations (podium unless otherwise indicated; *invited lecture)

1. “[³H]Clonidine Binds to Multiple High Affinity Sites in Human Prefrontal Cortex” [poster]
Carlson MA, Andorn AC, Piletz JE
Society for Neuroscience
Dallas, TX. October, 1985
2. “The Nephrotoxicity of Amphotericin B”
Surgical Grand Rounds, Medical College of Wisconsin
Milwaukee, WI. August, 1992
3. “The Effect of Propranolol on Colonic Myoelectric Activity in the Postoperative Period” [poster]
Carlson MA, Ludwig KA, Cowles VE, Frantzides CT, Condon RE
American Motility Society Biennial Symposium
Lake Tahoe, CA. September, 1992
4. “Selective Use of Intraoperative Cholangiograms in Laparoscopic Cholecystectomy”
Collegium Internationale Chirurgiae Digestivae
Athens, Greece. September, 1992
5. “Effect of Propranolol on Human Myoelectric Activity”
American College of Surgeons Clinical Congress
New Orleans, LA. October, 1992
6. “Antibiotic Prophylaxis in Surgery”
Surgical Grand Rounds, Sinai Samaritan Medical Center
Milwaukee, WI. December, 1992
7. “Urinary Excretion of Adenosine in Patients Receiving Amphotericin B”
Medical College of Wisconsin Clinic Day
Milwaukee, WI. March, 1993
8. “Urinary Excretion of Adenosine in Patients Receiving Amphotericin B”
Milwaukee Academy of Surgery, University Club
Milwaukee, WI. March, 1993
9. “Selection of the Surgical Intern”
Surgical Grand Rounds, Medical College of Wisconsin
Milwaukee, WI. June, 1993
10. * “A comparison of American and English surgical training”
Surgical Grand Rounds
Royal Devon and Exeter Hospital

- Exeter, England. October, 1993.
11. “Ventral Hernia and Other Complications of 1000 Midline Wounds”
Western Surgical Association
Seattle, WA. November, 1993
 12. “Selective Use of Intraoperative Cholangiograms in Laparoscopic Cholecystectomy”
Surgical Morbidity and Mortality, St Joseph’s Hospital
Milwaukee, WI. December, 1993
 13. “Complications of Midline Incisions”
Surgical Morbidity and Mortality, St Joseph’s Hospital
Milwaukee, WI. December, 1993
 14. “The Use of Propranolol in Postoperative Ileus in Humans”
Medical College of Wisconsin
Milwaukee, WI. February, 1994
 15. “Complications of Midline Incisions”
Surgical Grand Rounds, Medical College of Wisconsin
Milwaukee, WI. February, 1994
 16. “Complications of Midline Incisions”
Milwaukee Academy of Surgery, University Club
Milwaukee, WI. March, 1994
 17. “Polyglyconate (Maxon) vs. Nylon in the Closure of the Vertical Midline Wound”
Wisconsin Surgical Association
Milwaukee, WI. April, 1994
 18. “Complications of Midline Incisions”
Medical College of Wisconsin Clinic Day
Milwaukee, WI. April, 1994
 19. “Pathophysiology of Pneumoperitoneum”
Surgical Grand Rounds, Medical College of Wisconsin
Milwaukee, WI. October, 1994
 20. *“Overview of laparoscopic surgery”
Winter Refresher Course for Family Physicians, Pfister Hotel
Milwaukee, Wisconsin. February, 1995.
 21. “Resolution of Postoperative Ileus in Laparoscopic Vs. Open Colectomy”
Medical College of Wisconsin Clinic Day
Milwaukee, WI. April, 1995

22. “Resolution of Postoperative Ileus in Laparoscopic Vs. Open Colectomy”
International American Gastroenterological Association/Singapore Gastroenterological Meeting
Singapore, Republic of Singapore. September, 1995
23. *
“Complications of midline incisions”
Department of Surgery Grand Rounds
Bay Pines VA Medical Center
St. Petersburg, FL. September, 1995.
24. “Apoptosis in fibroblasts: development of in vitro and in situ models” [poster]
Carlson MA, Grinnell F
Gordon Research Conference (Cell Death)
New London, NH. July, 1997
25. *
“Acute wound failure: incidence and pathophysiology. Absorbable versus permanent sutures
for laparotomy closure”
Symposium Suvretta II—Abdominal Wall: Function, Defects, and Repair
St. Moritz, Switzerland. March 1998
26. “Laparoscopic Prosthetic Reinforcement of Hiatal Herniorrhaphy”
Collegium Internationale Chirurgiae Digestivae
Madrid, Spain. September, 1998
27. “Management of Intrathoracic Stomach with Polypropylene Mesh Prosthesis Reinforced Hiatus
Hernia Repair”
Collegium Internationale Chirurgiae Digestivae
Madrid, Spain. September, 1998
28. “Fibroblasts in a Mechanically Stressed Matrix Undergo Apoptosis After Stress Removal”
American College of Surgeons Surgical Forum
Orlando, FL. October, 1998
29. *
“An investigation of fibroblast regression and a review of acute wound failure”
Department of Surgery Grand Rounds
University of Nebraska Medical Center
Omaha, Nebraska. November, 1998.
30. *
“An investigation of fibroblast regression and a review of acute wound failure”
Department of Surgery Research Conference
Ohio State University Medical Center
Columbus, Ohio. December, 1998.
31. *
“Wound failure”
Hernia Repair 1999/American Hernia Society
Las Vegas, Nevada. February, 1999.

32. “Complications of Minimally Invasive Antireflux Procedures”
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. November, 1999
33. “The Mechanism of Granulation Tissue Regression: a Proposal”
Pulmonary Medicine Research Conference, University of Nebraska
Omaha, NE. November, 1999
34. “Granulation Tissue Apoptosis Induced by a Musculocutaneous Flap”
American College of Surgeons, Nebraska Chapter
Omaha, NE. May, 2000
35. “Difficult Abdominal Closure”
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. November, 2001
36. “Granulation Tissue Apoptosis Induced by a Musculocutaneous Flap”
Association for Academic Surgery
Tampa, FL. November, 2000
37. “Application of a Musculocutaneous Flap Over a Wound Inhibits the Actin Cytoskeleton of the
Wound Cells”
Association of VA Surgeons
Atlanta, GA. May, 2001
38. “Loss of Extracellular Matrix Anchorage Results in FAK Dephosphorylation and Apoptosis in
Fibroblasts”
American College of Surgeons Surgical Forum
New Orleans, LA. October, 2001
39. “Wound Splinting Regulates Granulation Tissue Survival”
Association of VA Surgeons
Houston, TX. April, 2002
40. “The fibroblast-populated collagen matrix models granulation tissue” [poster]
Carlson MA
Wound Healing Society
Baltimore, MD. May, 2002
41. * “Complications and Results of Minimally Invasive Antireflux Procedures”
GERD and Barrett’s Esophagus—An International Symposium
St. Gallen, Switzerland. September, 2002.
42. “RNA Interference of FAK in Primary Dermal Fibroblasts” [poster]
Carlson MA, Lewis RE, Longaker MT, Thompson JS
Association for Academic Surgery (AAS)

- Boston, MA. November, 2002
43. *"Diaphragmatic Herniorrhaphy with Prosthetic Mesh"
Symposium Suvretta III—Use of Mesh Prosthesis in Abdominal Wall Hernia Repair
St. Moritz, Switzerland. January, 2003.
 44. "Spectrum of Healing"
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. April, 2003
 45. "FAK regulates survival in the fibroblast-populated collagen matrix"
Wound Healing Society
Seattle, WA. May, 2003
 46. "Requirements for Cellular Proliferation and Survival"
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. September, 2003
 47. "Detachment-induced apoptosis in the fibroblast-populated collagen matrix is modulated by p53"
American College of Surgeons Surgical Forum
Chicago, IL. October, 2003
 48. "Wound splinting modulates wound cell survival" [poster]
Carlson MA, Longaker MT, Thompson JS
Association for Academic Surgery (AAS)
Sacramento, CA. November, 2003
 49. "Signaling pathways regulated by stress-release of the fibroblast-populated collagen matrix"
Society of University Surgeons
St. Louis, MO. February, 2004
 50. "Interferon- γ is a putative granulation tissue regression factor"
Association of VA Surgeons
Richmond, VA. April, 2004
 51. "Randomized trial of training methods for laparoscopic skills" [poster]
AK Madan AK, CT Frantzides CT, CL Tebbitt CL, W Park W, N Dujovny N, **Carlson MA**
Society of American Gastrointestinal Endoscopic Surgeons (SAGES)
Denver, CO. April, 2004
 52. "Variable p53 response in a three-dimensional matrix"
Wound Healing Society
Atlanta, GA. May, 2004
 53. "NASH risk factors in bariatric patients" [poster]
Carlson MA, Moore RE, Madan AK, and Frantzides CT

- Society of Surgery of the Alimentary Tract (SSAT)
New Orleans, LA. May, 2004
54. “Wound matrix attachment regulates actin in cells of the granulation tissue”
Association for Academic Surgery
Houston, TX. November, 2004
 55. “Incisional hernia surgery”
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. February, 2005
 56. ***“Update on Wound Healing and Regeneration”**
Department of Surgery Grand Rounds
Medical College of Wisconsin
Milwaukee, WI. April, 2005
 57. “Laparoscopic redo Nissen fundoplication” [poster]
Zeni TM, **Carlson MA**, Zografakis JG, Frantzides CT
Society of American Gastrointestinal Endoscopic Surgeons (SAGES)
Ft. Lauderdale, FL. April, 2005
 58. “Proteomic and genomic analysis of a granulation tissue regression model” [poster]
Carlson MA
American Society of Clinical Investigation
Chicago, IL. April, 2005
 59. ***“Worldwide Analysis of Laparoscopic Treatment of GERD”**
7th Pan-Hellenic Congress of Laparoendoscopic Surgery
Ioannina, Greece. May, 2005
 60. ***“Technical Factors That Influence Incisional Herniation”**
Symposium Suvretta IV—Recurrent Hernia
St. Moritz, Switzerland. February, 2006.
 61. ***“Technical Factors That Influence Incisional Herniation”**
American College of Surgeons Postgraduate Course
Chicago, IL. October, 2006
 62. “Stem Cell Therapy”
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. October, 2006
 63. “A review of 6,266 published cases of minimally invasive ventral herniorrhaphy” [poster]
Carlson MA
American Hernia Society

Hollywood, FL. March, 2007

64. ***“Complications and Results of Minimally Invasive Incisional Herniorrhaphy”**
124th Congress of the German Surgical Society
Munich, Germany. May, 2007
65. ***“Report of the 2007 American College of Surgeons Traveling Fellow to Germany”**
American College of Surgeons 93rd Annual Clinical Congress
New Orleans, LA. October, 2007
66. **“Radiation Injury From A Nuclear Accident Or Terrorist Attack”**
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. April, 2008
67. **“Radiation Injury From A Nuclear Accident Or Terrorist Attack”**
Omaha VA Medical Center Research Conference
Omaha, NE. May, 2008
68. **“Hemostatic and Regeneration Technology at UNMC”**
UNMC Delegates Conference
Omaha, NE. January, 2009
69. **“Dermal Replacement Therapy”**
UNMC Regenerative Medicine Retreat
Omaha, NE. May, 2009
70. **“Laparoscopic transgastric esophageal mucosal resection for high grade dysplasia” [poster]**
Frantzides CT, Keshavarzian A, Roberts J, Meiselman M, **Carlson MA**
American College of Surgeons Clinical Congress
Chicago, IL. October, 2009
71. **“Next Generation Hemostatic Devices”**
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. March, 2010
72. **“Early vs. Delayed Laparoscopic Cholecystectomy for Acute Cholecystitis”**
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. March, 2010
73. **“Wound Repair and Regeneration, Part I”**
University of Nebraska Medical Center Surgical Research Conference
Omaha, NE. March, 2010
74. **“Skin Regeneration”**
University of Nebraska Medical Center Stem Cell Biology Course

- Omaha, NE. April, 2010
75. “Wound Repair and Regeneration, Part II”
University of Nebraska Medical Center Surgical Research Conference
Omaha, NE. June, 2010
 76. “Skin Regeneration”
University of Nebraska Medical Center Surgical Grand Rounds
Omaha, NE. July, 2010
 77. “Differential contraction in fibroblast-populated 3D collagen matrices made with type I vs. type III collagen” [poster]
Krause CM, **Carlson MA**
Gordon Research Conference (Signal Transduction By Engineered Extracellular Matrices)
Biddeford, ME. June, 2010.
 78. “Next Generation Hemostatic Devices”
University of Nebraska Medical Center Division of Endocrinology Seminar
Omaha, NE. August, 2010
 79. “A Totally Recombinant Factor XIII-Supplemented Fibrin Sealant”
Society of University Surgeons/Academic Surgical Congress
Huntington Beach, CA. February, 2011.
 80. “Development of Novel Hemostatic Devices in Swine Hemorrhage Models” [poster]
Carlson MA, Velandar WH, Larsen G, Calcaterra J, Pipinos II, Johanning JM, Krause CM,
Noriega S, Spretz R, Burgess WH
American Association of Laboratory Animal Science, District 6
Omaha, NE. April, 2011.
 81. “Nanofibrous PLA Mesh is Wound Adherent and Hemostatic in Pig Liver Resection Model”
[poster]
Velandar WH, Calcaterra J, Spretz R, Noriega S, Larsen G, **Carlson MA**, Pipinos II, Johanning JM
Society for Biomaterials
Orlando, FL. April, 2011.
 82. “Development of Novel Hemostatic Devices in Swine Hemorrhage Models” [poster]
Carlson MA, Velandar WH, Larsen G, Calcaterra J, Pipinos II, Johanning JM, Krause CM,
Noriega S, Spretz R, Burgess WH
VA Research Week
Omaha, NE. May, 2011.
 83. “Bioengineering hemostasis using human fibrinogen sealants in swine surgical models” [poster]
Velandar WH, Calcaterra J, Spretz R, Noriega S, Larsen G, **Carlson MA**, Pipinos II, Johanning JM

- Swine in Biomedical Research Conference
Chicago, IL. July, 2011.
84. “Treatment of Major Hemorrhage with Recombinant Resorbable Fibrin Sealant Bandages”
[poster]
Carlson MA, Calcaterra J, Noriega S, Spretz R, Larsen G, Pipinos II, Johanning JM, Velander
WH
American College of Surgeons Surgical Forum
San Francisco, CA. October, 2011.
85. “Gene Networks Involved With Mechanoregulation Of Cell Population In The Fibroblast-
Populated 3D Collagen Matrix”
Carlson MA, Eudy JD, Smith LM.
Academic Surgical Congress
Las Vegas, NV. February, 2012.
86. “Hemostasis & Healing”
Omaha VA Research Conference
Omaha, NE. April, 2012.
87. “ A Video Atlas of Minimally Invasive Surgery”
UNMC Department of Surgery Grand Rounds
Omaha, NE. June, 2012.
88. “Effect Of An NF-kB Inhibitor On The Cell Population In The Fibroblast-Populated Collagen
Matrix”
Doyle DA, Chao J, Heimann D, Peña T, Hansen C, **Carlson MA**.
Academic Surgical Congress
New Orleans, LA. February, 2013.
89. “Medical Subject Headings: Hemostasis, Wound Healing, Regenerative Medicine”
Department of Genetics, Cell Biology, and Anatomy Research Conference
Omaha, NE. February, 2013.
90. “The Use of Swine in Biomedical Research”
West Omaha Rotary Club
Omaha, NE. May 24, 2013
91. “Development Of A Porcine Cancer Model: A Proposal”
UNMC Department of Surgery Research Forum
Omaha, NE. June, 2013.
92. “Development Of A Porcine Cancer Model: A Proposal”
UNL Institute of Agriculture and Natural Resources
Lincoln, NE. June, 2013

93. “Development Of A Porcine Cancer Model: A Proposal”
UNMC Eppley Cancer Institute
Omaha, NE. August, 2013
94. “Fibrinogen/Fibronectin complex forms strong fibrin polymer and is chemotactic to fibroblasts and endothelial cells *in vitro*”
Ismail A, Calcaterra J, **Carlson MA**, Burgess WH, Velander WH.
2103 Biomedical Engineering Society Annual Meeting
Seattle, WA. September, 2013.
95. “Implementation And Validation Of A Bedside Frailty Index To Improve Surgical Decision-Making”
Johanning JM, **Carlson MA**, Bailey T, Huben NB, Seevers GA, Bockman T, Goede M, Lynch TG
2013 American College of Surgeons Clinical Congress
Washington, DC. October, 2013
96. “Effect of 50% enterectomy on nutritional parameters in lean and obese rats” [poster]
Yanala UR, Reidelberger RD, Thompson JS, **Carlson MA**
2014 Clinical Nutrition Week
Savannah, GA. January, 2014
97. “Disruption of Nuclear Factor–kappa-B Signaling in the Fibroblast-Populated Collagen Matrix”
Guenther TM, Chao J, Heimann D, Hansen C, **Carlson MA**
2014 Academic Surgical Congress
San Diego, CA. February, 2014
98. “Development of a porcine model of severe noncompressible truncal hemorrhage”
Yanala UR, Johanning JM, Pipinos II, Velander WH, **Carlson MA**
2014 Academic Surgical Congress
San Diego, CA. February, 2014
99. “Development Of A Porcine Cancer Model: A Proposal”
UNMC Pancreatic Cancer SPORE Seminar
Omaha, NE. February, 2014
100. “Comparison Of Open vs. Minimally Invasive Esophagectomy From The UHC Database”
Simorov A, Tanner TN, Lackner RP, Trujillo KP, Oleynikov D, **Carlson MA**
2014 Society of American Gastrointestinal and Endoscopic Surgeons Meeting
Salt Lake City, UT. April, 2014
101. “Development of a Model of Internal Bleeding” [poster]
Yanala UR, Johanning JM, Pipinos II, Velander WH, **Carlson MA**
2014 Omaha VA Medical Center Research Week
Omaha, NE. May, 2014

102. “Development of a porcine model of severe noncompressible truncal hemorrhage” [poster]
Carlson MA, Yanala UR, Johanning JM, Pipinos II, Velandar WH
2014 Swine in Biomedical Research Conference
Raleigh, NC. July, 2014
103. “Microskin-seeded Electrospun Nanofiber Scaffolds for Skin Regeneration”
Xie J, **Carlson MA**, Jiang J
3rd International Conference on Electrospinning
San Francisco, CA. August, 2014
104. “Overview of Porcine Biomedical Research in Omaha”
Carlson, MA
Animal Genetics Seminar, UNL Department of Animal Sciences
Lincoln, NE. October, 2014
105. “Synthetic Resorbable vs. Cellulose Bandage for Minor Hemorrhage in a Porcine Model”
Yanala UR, Noriega S, Spretz R, Ragusa J, Nuñez L, Larsen G, **Carlson MA**
2015 Academic Surgical Congress
Las Vegas, NV. February, 2015
106. “Effect Of Crystalloid Infusion Rate In A Noncompressible Hemorrhage Model”
Yanala UR, Johanning JM, Pipinos II, Larsen G, Velandar WH, **Carlson MA**
2015 meeting of the Central Surgical Association
Chicago, IL. March, 2015
107. “Biomedical Porcine Models at the Omaha VAMC”
UNMC Department of Surgery Research Forum
Omaha, NE. June 24, 2015
108. “Effect of crystalloid infusion rate in a porcine model of uncontrolled noncompressible
intraabdominal hemorrhage” [poster]
Yanala UR, Johanning JM, Pipinos II, Larsen G, Velandar WH, **Carlson MA**
Military Health Systems Research Symposium
Ft. Lauderdale, FL. August 16-20, 2015
109. “Effect of 75% intestinal resection on body composition in lean vs. obese rats”
Yanala UR, Reidelberger RD, Thompson JS, **Carlson MA**
2015 American College of Surgeons Clinical Congress
Chicago, IL. October 5, 2015
110. “Biomedical Research With Porcine Models”
Carlson MA
UNMC Department of Surgery Grand Rounds
Omaha, NE. December 9, 2015

111. “Effect of Factor XIII in an ex vivo assay of hemostatic bandage adhesion”
Zhou DJ, Spretz R, Larsen G, Velander WH, **Carlson MA**
2016 Academic Surgical Congress
Jacksonville, FL. February, 2016
112. “Treatment of noncompressible intraabdominal hemorrhage with resorbable foam supplemented with clotting factors”
Johnson SM, Yanala UR, Larsen G, Fatemi M, Johanning JM, Pipinos II, Velander WH,
Carlson MA
2016 meeting of the Central Surgical Association
Montreal, QE. March, 2016
113. “Use of Pigs in Biomedical Research” [poster]
Carlson, MA
2016 Science, Engineering and Medicine (SEM) Research Retreat
Buena Vista, NE. March 2016
114. “Biomedical Research With Swine”
Carlson, MA
UNMC Scientific Forum for the Rothman-Ranawat Traveling Fellows
Omaha, NE. March 2016
115. “Development of a Porcine Model of Pancreatic Cancer [poster]
Remmers N, Rund LA, Schook LB, **Carlson MA**
UNMC Pancreatic SPORE Retreat
Omaha, NE. April 2016
116. “Development of a Porcine Model of Pancreatic Cancer [poster]
Remmers N, Rund LA, Schook LB, **Carlson MA**
Omaha VA Medical Center Research Week
Omaha, NE. May 2016
117. “Biologics-Supplemented Hemostatic Patch In A Porcine Model Of Hepatic Resection” [poster]
Aravind S, Fabian F, Spretz R, Yanala UR, Ragusa J, Ismail A, Larsen G, Velander WH, and
Carlson MA
2016 Military Health Systems Research Symposium
Orlando, FL. August, 2016
118. “Disease Modeling With Pigs: Work In Progress”
Carlson MA
UNMC Department of Surgery Research Seminar
Omaha, NE. October, 2016
119. “Porcine Model of Pancreatic Cancer: Work In Progress”
Carlson MA
UNMC Pancreas SPORE/GICP Meeting

Omaha, NE. November, 2016

120. “Biologics-Supplemented Hemostatic Patch In A Nonsurvival Porcine Model Of Hepatic Resection”
Aravind S, Fabian F, Spretz R, Yanala UR, Ragusa J, Ismail A, Larsen G, Velander WH, and **Carlson MA**
2017 Academic Surgical Congress
Las Vegas, NV. February, 2017
121. “Development of a Porcine Model of Pancreatic Cancer [poster]
Remmers R, Cox JL, Grandgenett PM, Grunkemeyer JA, Rund LA, Schook LB, Hollingsworth MA, **Carlson MA**
2017 American Association of Cancer Research
Washington, D.C. April, 2017
122. “3D Nanofibrous Scaffolds with Arrayed Holes for Engineering Skin Tissue Constructs” [poster]
Fu L, **Carlson MA**, Reilly DA, Xie J
UNMC 3rd Annual Regenerative Medicine Symposium
Mahoney State Park, NE. April, 2017
123. “Porcine Model Of Hindlimb Ischemia From Acute/Subacute Peripheral Vascular Occlusion”
Aravind S, Pipinos II, and **Carlson MA**
UNMC 3rd Annual Regenerative Medicine Symposium
Mahoney State Park, NE. April, 2017
124. “The Size of Hiatal Hernia That Will Require Use of Mesh”
Frantzides CT, **Carlson MA**.
2017 Digestive Disease Week/Society for Surgery of the Alimentary Tract
Chicago, IL. May, 2017
125. “Treatment of noncompressible intraabdominal hemorrhage with resorbable foam supplemented with clotting factors” [poster]
Carlson MA, Yanala UR, Larsen G, Fatemi M, Fabian FF, Velander WH
2017 Military Health Systems Research Symposium
Kissimmee, FL. August, 2017

Web-based Projects

1. **Daily Diet Score™** (www.dailydietscore.com; online May 4, 2006). This is a rationally-designed nonoperative weight-reduction method, which I have made freely available on the internet. The method is essentially a “meta-diet,” composed of a combination of weight-reduction techniques; each technique employed has previous documentation of efficacy.
2. **Nebraska Surgical Research** (www.nebraskasurgicalresearch.com; online January 1, 2010). This web site provides information on my clinical and basic research interests and my clinical

practice. There also are links to pdf files of my publications, presentations, inventions, CV, and so forth.

Publications

(a) Articles published in scholarly journals

1. Johnson LK, Haynes LW, **Carlson MA** et al. Alarm substances of the stingless bee, *Trigona silvestriana*. *J Chem Ecol* 1985;11:409-416.
2. **Carlson MA**, Andorn AC. [³H]Clonidine binds to multiple high affinity sites in human prefrontal cortex. *Eur J Pharmacol* 1986;123:73-78.
3. Andorn AC, **Carlson MA**, Gilkeson RC. Specific [³H]UK14,304 binding in human cortex occurs at multiple high affinity states with α_2 -adrenergic selectivity and differing affinities for GTP. *Life Sci* 1988;43:1805-1812.
4. **Carlson MA**, Ludwig KA, Cowles VE, Frantzides CT, Condon RE. Effect of propranolol on human myoelectric activity. *Surg Forum* 1992;43:155-157.
5. **Carlson MA**, Ludwig KA, Frantzides CT et al. Routine or selective intraoperative cholangiography in laparoscopic cholecystectomy. *J Laparoendosc Surg* 1993;3:27-33.
6. Ludwig KA, Frantzides CT, **Carlson MA**, Grade KL. Myoelectric motility patterns following open versus laparoscopic cholecystectomy. *J Laparoendosc Surg* 1993;3:461-466.
7. Ludwig KA, **Carlson MA**, Condon RE. Prophylactic antibiotics in Surgery. *Annu Rev Med* 1993;44:385-393.
8. Frantzides CT, **Carlson MA**. Laparoscopic repair of a penetrating injury to the diaphragm: a case report. *J Laparoendosc Surg* 1994;4:153-156.
9. **Carlson MA**, Condon RE. The nephrotoxicity of amphotericin B. *J Am Coll Surg* 1994;179:361-381.
10. Frantzides CT, **Carlson MA**, Makris V, Potamitis G, Efthimiou E. The first laparoscopic Nissen funduplications in Cyprus. *Cyprus Med J* 1995;13(3):12-15.
11. **Carlson MA**, Ludwig KA, Condon RE. Ventral hernia and other complications of midline incisions. *South Med J* 1995;88:450-453.
12. Frantzides CT, **Carlson MA**, Schulte WJ. Laparoscopic gastric bypass in a porcine model. *J Laparoendosc Surg* 1995;5:97-100.
13. Frantzides CT, **Carlson MA**. Laparoscopic vs. conventional fundoplication. *J Laparoendosc Surg* 1995;5:137-143.

14. Condon RE, Cowles VE, Ferraz AAB, Carilli S, **Carlson MA** et al. Human colonic smooth muscle electrical activity during and after recovery from postoperative ileus. *Am J Physiol* 1995;269:G408-G417.
15. **Carlson MA**, Condon RE. Polyglyconate (Maxon) versus nylon suture in midline abdominal incision closure: a prospective randomized trial. *Am Surg* 1995;61:980-983.
16. Frantzides CT, **Carlson MA**. Laparoscopic Jaboulay gastroduodenostomy for gastric outlet obstruction: a case report. *J Laparoendosc Surg* 1996;6:341-344.
17. **Carlson MA**, Frantzides CT. Control of venous hemorrhage during laparoscopic adrenalectomy: a case report. *J Laparoendosc Surg* 1996;6:349-351.
18. Frantzides CT, **Carlson MA**. A review of laparoscopic surgery of the colon and rectum. *Cyprus Med J* 1996;14(1-2):45-49.
19. Frantzides CT, **Carlson MA**. A review of laparoscopic surgery of the esophagus. *Cyprus Med J* 1996;14(3-4):16-18.
20. **Carlson MA**, Ferraz AAB, Condon RE. Urinary adenosine excretion in patients receiving amphotericin B. *Surgery* 1997;121:190-193.
21. **Carlson MA**. Acute wound failure. *Surg Clin North Am* 1997;77:607-636.
22. Frantzides CT, **Carlson MA**. Minimally invasive ventral herniorrhaphy. *J Laparoendosc Adv Surg Techn* 1997;7:117-120.
23. **Carlson MA**, Frantzides CT. Canine intestinal myoelectric activity after open versus laparoscopically-assisted right hemicolectomy. *Am J Surg* 1997;174:79-82.
24. **Carlson MA**, Frantzides CT. Prosthetic reinforcement of posterior cruroplasty during laparoscopic hiatal herniorrhaphy. *Surg Endosc* 1997;11:769-771.
25. Frantzides CT, **Carlson MA**. Laparoscopic highly selective vagotomy. *J Laparoendosc Adv Surg Techn* 1997;7:143-146.
26. Frantzides CT, **Carlson MA**. Laparoscopic Redo Nissen Fundoplication. *J Laparoendosc Adv Surg Techn* 1997;7:235-239.
27. **Carlson MA**, Condon RE, Ludwig KA, Schulte WJ. Management of intrathoracic stomach with polypropylene mesh prosthesis reinforced hiatus hernia repair. *J Am Coll Surg* 1998;187:227-230.

28. **Carlson MA**, Zhu M, Abrams JM, Grinnell F. Human fibroblasts in a mechanically stressed matrix undergo apoptosis after stress removal. *Surg Forum* 1998;49:643-645.
29. Frantzides CT, **Carlson MA**. Minimally invasive Nissen fundoplication with hernia repair. *Hellenic Laparosc Surg* 1999;2:12-19.
30. Grinnell F, Zhu M, **Carlson MA**, Abrams JM. Release of mechanical tension triggers apoptosis of human fibroblasts in a model of regressing granulation tissue. *Exp Cell Res* 1999;248:608-619.
31. **Carlson MA**, Richards CG, Frantzides CT. Laparoscopic prosthetic reinforcement of hiatal herniorrhaphy. *Dig Surg* 1999;16:407-410.
32. Frantzides CT, Richards CG, **Carlson MA**. Laparoscopic repair of large hiatal hernia with polytetrafluoroethylene. *Surg Endosc* 1999;13:906-908.
33. **Carlson MA**. New developments in abdominal wound closure. *Der Chirurg* 2000;71:743-753.
34. Frantzides CT, **Carlson MA**, Pappas C, Gatsoulis N. Laparoscopic repair of a congenital diaphragmatic hernia in an adult: a case report. *J Laparoendosc Adv Surg Techn* 2000;10:287-90.
35. **Carlson MA**, Horton JW. A primary burn wound does not slow the contraction rate of an adjacent excisional wound. *Ann Plast Surg* 2001;46:36-42.
36. **Carlson MA**, Frantzides CT. Complications and results of primary minimally invasive antireflux procedures: a review of 10,489 reported cases. *J Am Coll Surg* 2001;193:428-439.
37. **Carlson MA**, Lewis RE, Longaker MT, Thompson JS. Loss of extracellular matrix anchorage results in FAK dephosphorylation and apoptosis in fibroblasts. *Surg Forum* 2001;52:547-549.
38. **Carlson MA**, Longaker MT, Thompson JS. Granulation tissue regression induced by musculocutaneous advancement flap coverage. *Surgery* 2002;131:332-337.
39. Frantzides CT, Madan AK, **Carlson MA**, Stavropoulos GP. A prospective, randomized trial of polytetrafluoroethylene (PTFE) patch repair vs. simple cruroplasty for large hiatal hernia. *Arch Surg* 2002;137:649-652.
40. Molpus KL, Wedergren JS, **Carlson MA**. Robotically assisted endoscopic ovarian transposition. *J Soc Laparoendosc Surg* 2003;7:59-62.
41. **Carlson MA**, Longaker MT, Thompson JS. Wound splinting regulates granulation tissue survival. *J Surg Res* 2003;110:304-309.
42. Frantzides CT, Madan AK, **Carlson MA**, et al. Selective use of esophageal manometry and 24-hour pH monitoring prior to laparoscopic fundoplication. *J Am Coll Surg* 2003;197:358-364.

43. Frantzides CT, Moore RE, Madan AK, **Carlson MA**. Minimally invasive surgery for achalasia: a 10-year experience. *J Gastrointest Surg* 2004;8:18-23.
44. **Carlson MA**, Longaker MT. The fibroblast-populated collagen matrix as a model of wound healing: a review of the evidence. *Wound Rep Regen* 2004;12:134-147.
45. **Carlson MA**, Longaker MT, Thompson JS. Modulation of FAK, Akt, and p53 by stress release of the fibroblast-populated collagen matrix. *J Surg Res* 2004; 120(2):171-177.
46. **Carlson MA**, Thompson JS. Wound splinting modulates granulation tissue proliferation. *Matrix Biol* 2004;23:243-250.
47. Frantzides CT, Madan AK, **Carlson MA**, Moore RE, Zografakis JG. Minimally invasive incisional herniorrhaphy: a review of 208 cases. *Surg Endosc* 2004;18:1488-1491.
48. Frantzides CT, Madan AK, Keshavarzian A, Moore RE, Zografakis JG, **Carlson MA**. Laparoscopic transgastric esophageal mucosal resection for high-grade dysplasia. *J Laparoendosc Adv Surg Techn* 2004;14:261-265.
49. Frantzides CT, **Carlson MA**, Moore RE, et al. Effect of body mass index on nonalcoholic fatty liver disease in patients undergoing minimally invasive bariatric surgery. *J Gastrointest Surg* 2004;8:849-855.
50. **Carlson MA**, Thompson JS. Wound matrix attachment regulates actin content and organization in cells of the granulation tissue. *Wound Repair Regen* 2005;13:84-92.
51. Eichler ME, **Carlson MA**. Modeling dermal granulation tissue with the linear fibroblast-populated collagen matrix: survival and proliferation dependence on matrix attachment. *J Dermatol Sci* 2006;41:97-108.
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53. Frantzides CT, **Carlson MA**, Zografakis JG, et al. Postoperative gastrointestinal complaints after laparoscopic Nissen fundoplication. *J Soc Laparoendosc Surg* 2006;10:39-42.
54. **Carlson MA**. Assay of cell quantity in the fibroblast-populated collagen matrix with a tetrazolium reagent. *Eur Cell Mater* 2006;12:44-48.
55. **Carlson MA**, Petersen A. Technique for the insertion of large mesh during minimally invasive incisional herniorrhaphy. *Surg Endosc* 2007;21:1243-1244.
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57. **Carlson MA**. Report of the 2007 American College of Surgeons traveling fellow to Germany. *Bull Am Coll Surg* 2007;92:40-47.
58. **Carlson MA**, Prall A, Gums JJ. RNA Interference in human foreskin fibroblasts within the three-dimensional collagen matrix. *Mol Cell Biochem* 2007;306:123-132.
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60. Foda M, **Carlson MA**. Enterocutaneous fistula associated with ePTFE mesh: case report and review of the literature. *Hernia* 2009;13:323-326.
61. Frantzides CT, **Carlson MA**, Zeni T, et al. Laparoscopic revision of failed fundoplication and hiatal herniorrhaphy. *J Laparoendosc Adv Surg Techn* 2009;19:135-139.
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64. Frantzides CT, **Carlson MA**, Loizides S, et al. Hiatal hernia repair with mesh: a survey of SAGES members. *Surg Endosc* 2010;24:1017-24.
65. Frantzides CT, **Carlson MA**, Keshavarzian A, Roberts JE. Laparoscopic transgastric esophageal mucosal resection: four year minimum follow-up. *Am J Surg* 2010; 200(2):305-307.
66. Frantzides CT, **Carlson MA**, Shostrom VK, et al. A Survey of Dumping Symptomatology After Gastric Bypass With or Without Lesser Omental Transection. *Obes Surg* 2011;21:186-193.
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- 10.1016/j.jss.2013.09.039.
71. Chao C, Peña T, Heimann DG, Hansen C, Doyle DA, Yanala UR, Guenther TM, **Carlson MA**. Expression of green fluorescent protein in human foreskin fibroblasts for use in 2D and 3D culture models. *Wound Rep Regen* 2014;**22**:134-140; DOI :10.1111/wrr.12121; published online 6 January 2014.
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 77. Jiang J, Li Z, Wang H, Wang Y, **Carlson MA**, Teusink MJ, MacEwan ME, Gu L, Xie J. Expanded Three-dimensional Nanofiber Scaffolds: Cell Penetration, Neovascularization, and Host Response. *Adv Healthcare Mater* 2016; PMID: 27709840; DOI: 10.1002/adhm.201600808; published online 6 October 2016.
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