

CURRICULUM VITAE

BERNARD W. CHANG, M.D.

Bernard W. Chang, M.D.

BUSINESS ADDRESS:

Plastic and Reconstructive Surgery at
Mercy
227 St. Paul Place
Baltimore, Maryland 21202
410-332-9700

DEGREES:

B.S. Chemistry, Arizona State
University, Tempe, AZ, 1980

M.D., University of California,
Los Angeles, Los Angeles, CA 1984

EDUCATION:

High School: Marcos de Niza H.S., Tempe, AZ
Summa Cum Laude

College: Arizona State University
Tempe, Arizona
B.S. Chemistry - 1980
Summa Cum Laude

Bernard W. Chang, M.D.

Medical School: University of California, Los Angeles
Los Angeles, California
M.D. - 1984

Freshman Vice President, UCLA
School of Medicine, 1980

Health Sciences Council
Representative, UCLA School
of Medicine, 1981, 1982

Medical Student Council
Representative, UCLA School
of Medicine, 1980, 1981, 1982,
1983

President, Medical Student Council,
UCLA School of Medicine, 1984

Student Affairs Committee,
UCLA School of Medicine, 1980

Charing Cross Hospital
London, England
Clerk, Neurology Service - 1984

Internship: University of California, Irvine
Orange, California
Straight surgical - 1984-1985

General Surgery: University of California, Irvine
Orange, California
General Surgery - 1985-1989
Chief Resident - 1988-1989

Plastic Surgery
Residency: Johns Hopkins Medical Institutions/

Bernard W. Chang, M.D.

University of Maryland Combined
Program in Plastic Surgery,
Baltimore, Maryland
Plastic and Reconstructive Surgery
Resident - 1989-1992

CERTIFICATION:

Administrative Chief Resident - 1991
Diplomate, National Board of Medical
Examiners - 1988

American Board of Surgery, Written
Qualifying Exam in General Surgery
Passed - 1990

American Board of Plastic Surgery,
1994

LICENSES:

Maryland - 1989 D38983

ACADEMIC APPOINTMENTS:

Assistant Professor of Plastic Surgery
Johns Hopkins University School
of Medicine, July 1992 - present

Director, Center for Reconstructive and
Aesthetic Surgery of the Breast
Division of Plastic Surgery,
Johns Hopkins University, School
of Medicine, July 1992- present

Assistant Clinical Professor of Plastic
Surgery, University of Maryland
School of Medicine, Baltimore, MD
1994 - present

HOSPITAL APPOINTMENTS:

Active Staff, The Johns Hopkins
Hospital, Baltimore, Maryland, July
1992 - present

Active Staff, The Children's Hospital
and Center for Reconstructive

Bernard W. Chang, M.D.

Surgery, Baltimore, Maryland, July
1992 - present
Active Staff, Maryland Institute for
Emergency Medical Services,
Baltimore, MD, 1994 - present

Active Staff, University of Maryland
School of Medicine, Baltimore, MD
1994 - present
Active Staff, Mercy Hospital,
Baltimore, MD, 1995- present

HOSPITAL COMMITTEES:

Staff Conference Committee, Johns
Hopkins University,
School of Medicine Nelson 2 Operating
Room Committee, Johns Hopkins Hospital
Johns Hopkins Outpatient Center
Operating Room Committee
Performance Improvement Committee, Johns
Hopkins Hospital

TEACHING ACTIVITIES:

Lecturer, The Johns Hopkins University,
School of Medicine

Plastic Surgery Tutorial for
Undergraduates, Johns Hopkins
University, School of Medicine

HONORS AND AWARDS:

Regents Academic Scholarship
Arizona State University, 1976-
1980

Summa Cum Laude
Arizona State University, GPA 3.96

Monsanto Scholarship for Outstanding
Senior Chemist, Arizona State

Bernard W. Chang, M.D.

University, 1980

Regents Academic Scholarship, UCLA
School of Medicine, 1980-1984

Mosby Award, UCLA School of Medicine,
1984

SCHOLASTIC SOCIETIES:

Phi Beta Kappa
Phi Kappa Phi
Phi Lambda Upsilon (Chemistry Honorary)
Phi Delta Epsilon
Mellinkoff Society, UCLA School of
Medicine

PROFESSIONAL MEMBERSHIP:

American Society of Plastic and
Reconstructive Surgery
John Staige Davis Society of Plastic
Surgery
Plastic Surgery Research Council -
Active Member
American Medical Association

RESEARCH EXPERIENCE
AND PROJECTS:

"On Mixed Crystals of $\text{Pr}(x)\text{tb}(x)\text{O}$
Grown Under High Oxygen Pressures",
Eyring, L., Chang, B.W., Dept. of
Chemistry and Center for Solid State
Science, Arizona State University, 1980

"The Effects of Counterrolling on Oculo-
Vestibular Function", Dept. of
Neurology, Reed Neurologic Institute,
UCLA School of Medicine, 1984

"Questioning the Selectiveness of

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Hematoporphyrin-Photosensitized
Atheromatous Plaque", Dept. of Surgery,
University of California, Irvine and the
Beckman Laser Institute, Irvine, CA,
1986

"Laser Assisted Biliary Anastomoses,
Human Cadaveric and Animal Studies",
Dept. of Surgery, University of
California, Irvine and the Beckman Laser
Institute, Irvine, CA, 1986

"Patency and Healing of Femoral Artery
Laser Welded Vein Interposition Grafts
in Rabbits", Dept. of Surgery,
University of California, Irvine and the
Beckman Laser Institute, Irvine, CA,
1986

"Arterialization of the Saphenous Vein
Flap in the Canine", Div. of Plastic
and Reconstructive Surgery, Univ. of
Maryland, and Johns Hopkins University
School of Medicine, 1991

"TGF- β in Capsular Scar Tissue
Surrounding Breast Implants", Div. of
Plastic and Reconstructive Surgery,
Johns Hopkins Univ. School of Medicine,
Current work in progress

"Effects of Decorin, Mannose
G-phosphate, TGF-Beta on fibrous
Capsule Formation with Saline Filled
Textured Silicone Implants Combined
with Biocompatibility Study of HPMC as

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Saline Substitute in Textured Silicone Implants", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Current work in progress

Current Projects

"Isometric and Dynamic Assessment of Abdominal Wall Function After TRAM Flap Breast Reconstruction", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Current work in progress

"Factors Determining Choice of Breast Surgery and Subsequent Quality of Life Among Breast Cancer Patients: A Survey of Patients and Their Surgeons", Div. Of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Work in Progress

"Secondary TRAM Flap Contouring Using Tumescant Liposuction", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Work in Progress

"Autogenous Tissue Replacement of Prosthetic Breast Implants After Mastectomy; A Retrospective Review", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Work in progress

"Smoking and Complications in 211 Breast Reconstructions", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Work in progress

"Obesity and Complications in 196 Consecutive Breast Reconstructions", Div. of Plastic and Reconstructive

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Surgery, Johns Hopkins Univ. School of Medicine, Work in progress

"Lower Extremity Limb Salvage Using the Gastrocnemius Muscle Rotation Flap", Div. of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, and Maryland Institute for Emergency Medical Services, Work in progress

"The Role of Heat Shock Proteins in TRAM flap physiology", Div. Of Plastic and Reconstructive Surgery and Div. Of Surgical Oncology, Johns Hopkins Univ. School of Medicine, Work in Progress

"Complications in Free TRAM vs. Pedicle TRAM flaps", Div. Of Plastic and Reconstructive Surgery, Johns Hopkins Univ. School of Medicine, Work in Progress

Grant Proposals

"Heat Shock Proteins and Breast Cancer Reconstruction in High Risk Patients" III-B.2.a HSP Grant Proposal, Submitted July, 1997

PRESENTATIONS:

The potential for Common Bile Duct Injury During Pulsed Dye Laser Cholelitholysis, Seventh Annual Meeting of the American Society for Laser Medicine and Surgery, San Francisco, California, 1987

Experimental Cholelitholysis With the Pulsed Tunable Dye Laser, Sixth Annual Scientific Session of the Academy of Surgical Research, Long Beach, California, September 27-29, 1990.

An Alternative Incision for Approaching Recurrent Median Nerve Compression at the Wrist, Eighth Annual Meeting of the Northeastern Society of Plastic Surgeons, September 13-14, 1991.

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Surgical Management of Recurrent Carpal Tunnel Syndrome, Ninth Annual Residents and Fellows Hand Surgery Conference at the American Society for Surgery of the Hand, Orlando, Florida, October 1-2, 1991.

In-Vivo Two-Dimensional Color Doppler Imaging for TRAM Flap Perforator Mapping, Size Determination, and Pre-Operative Flap Design, 38th Annual Meeting, Plastic Surgery Research Council, Houston, TX, Apr 28-May 1, 1993

Breast Reconstruction, Current Update and New Techniques, 22nd Congress, Pan-Pacific Surgical Association, Hong Kong, Jan, 1994

Complex Lower Extremity Reconstruction, 22nd Congress, Pan-Pacific Surgical Association, Hong Kong, Jan, 1994

Burn Safety in the Operating Room, 22nd Congress, Pan-Pacific Surgical Association, Hong Kong, Jan, 1994

In-Vivo Two Dimensional Color Doppler Imaging for TRAM Flap Perforator Mapping, Size Determination, and Pre-Operative Flap Design, 9th Annual Meeting, American Society for Reconstructive Microsurgery, Kansas City, MO, Sept 25-27, 1993

The Circumscribed Keyhole Flap for Projecting Nipple and Areola Reconstruction, International Symposium on Plastic Surgery, Florence, Italy, May 21-24, 1994

TRAM Flap Breast Reconstruction, Current Update and New Techniques, Surgical Grand Rounds, Johns Hopkins Dept. of Surgery, 1993

The Circumscribed Keyhole Flap for Projecting Nipple and Areola Reconstruction, 11th Annual Meeting, Northeastern Society of Plastic Surgeons, Quebec, Canada, Oct 12-15, 1994

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Breast Cancer Recurrence Following Mastectomy with Reconstruction, 74th Annual Meeting, American Association of Plastic Surgeons, San Diego, CA, May 2, 1995

A Retrospective Analysis of Contracture and Rupture in 379 Breast Implants, 74th Annual Meeting, American Association of Plastic Surgeons, San Diego, CA, May 2, 1995

Long Term Assessment of 104 Nipple/Areola Reconstructions Using a Circular Keyhole Pattern, 75th Annual Meeting, American Association of Plastic Surgeons, Hilton Head Island, SC, May 5, 1996

Breast Cancer Recurrence Following Mastectomy With Reconstruction, 7th Annual Meeting, European Association of Plastic Surgeons, Innsbruck, Austria, May 16-18th, 1996

Current Options for Autogenous Breast Reconstruction, The Spectrum of Breast Care, Clinton, MD, Sept 6-7, 1996

Pre-Operative Assessment of Risk Factors In TRAM Flap Breast Reconstruction, 13th Annual Breast Surgery Symposium, Atlanta, Georgia, January 17-19, 1997

Nipple Reconstruction with Keyhole Pattern, 13th Annual Breast Surgery Symposium, Atlanta, Georgia, January 17-19, 1997

Understanding the Implant Controversy, The Spectrum of Breast Care, Vicenza, Italy, and Garmisch, Germany, March 27, 31, 1997

Breast Reconstruction After Cancer, The Spectrum of Breast Care, Vicenza, Italy, and Garmisch, Germany, March 28, April 1, 1997

Obesity as a Risk Factor in Breast

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Reconstruction - A Review of 196 Patients, 76th Annual Meeting of the American Association of Plastic Surgeons, Portland, Oregon, May 21, 1997

Post-Mastectomy Reconstruction, 14th Annual Scientific Meeting, Korean Medical Association, July 19, 1997

Results of Lower Limb Salvage Using the Gastrocnemius Rotation Flap in High Energy Trauma, 14th Annual Scientific Program, Northeastern Society of Plastic Surgeons, October 27-29, 1997

MEDIA/PUBLIC
PRESENTATIONS:

Current Aspects of Breast Reconstruction. Johns Hopkins Women's Health Seminars. Johns Hopkins Hospital, Baltimore, Maryland, April 15, 1992.

Endoscopic Breast Augmentation, Channel 13 News, Baltimore, MD, 1993

Update on Breast Reconstruction, Channel 13 News, Baltimore, MD, 1993

Breast Reconstruction with Living Tissue, Johns Hopkins Women's Health Luncheon, Bethesda, MD, Sept. 25, 1996

Breast Reconstruction, Breast Cancer and Women's Health Symposium, Baltimore, MD, April 12, 1997

Visual Arts: New Tools of Plastic Surgery, A Women's Journey, Baltimore, MD Nov. 22, 1997

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Articles

1. Chang, B.W., "Determining the Area of a Lesion or a Flap?", *Plastic and Reconstructive Surgery*, 85(4):641, 1990
2. Chang, B.W., Rumley, T.O., "Monitoring a Free Flap", *Plastic and Reconstructive Surgery*, 87(3):581, 1991
3. Chang, B.W., Slezak, S., Goldberg, N., "Technical Modifications for On-site Nipple-Areola Reconstruction", *Annals of Plastic Surgery*, 28(3):277, 1992.
4. Chang, B.W., Wilgis, E.F., "A Systematic Approach to Repair of Syndactylism", *Annals of Plastic Surgery*, 28(3):252, 1992.
5. Chang, B.W., Dellon, A.L., "Alternative Incision for Approaching Recurrent Median Nerve Compression at the Wrist", *Plastic and Reconstructive Surgery*, 89(3):576, 1992.
6. Chang, B.W., Luethke, R, Berg, W.A., Hamper, U.M., Manson,

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- P.N., " Two-Dimensional Color Doppler Imaging for Precision Preoperative Mapping and Size Determination of TRAM Flap Perforators", *Plastic and Reconstructive Surgery*, 93(1):197, 1994.
7. Chang, B.W., Petty, P., Manson, P.N., " Patient Fire Safety in the Operating Room", *Plastic and Reconstructive Surgery*, 93(3):519, 1994.
 8. Berg, W.A., Chang, B.W., DeJong, M.R., Hamper, U.M., " Color Doppler Flow Mapping of Abdominal Wall Perforating Arteries for Transverse Rectus Abdominis Myocutaneous Flap in Breast Reconstruction: Method and Preliminary Results", *Radiology*, 192(2):447, 1994.
 9. Angel, M.F., Chang, B.W., Clark, N., Wong, L., Ringelman, P., Manson, P.N., "Further Clinical Use of the Interposition Arteriovenous Loop Graft in Free Tissue Transfers", *Microsurgery*, 14(8): 479, 1993.
 10. Chang, L., Goldberg, N.H., Chang, B.W., Spence, R., " Elbow Defect Coverage with a One-Staged, Tunneled Latissimus dorsi Transposition Flap", *Annals of Plastic Surgery*, 32(5):496, 1994.
 11. Ceraldi, C.M., Rypins, E.B., Chang, B.W., Sarfeh, I.J., "Comparison of continuous single layer polypropylene anastomosis with double layer and stapled anastomoses in elective colon resections", *American Surgeon*, 59(3):168, 1993.
 12. Chang, B.W., Dellon, A.L., "Surgical management of recurrent carpal tunnel syndrome", *J. Hand Surg.*, 18(4):167, 1993.
 13. Chang, B.W., Pollock, M.E., Eugene, J., Berns, M.W., Mason, G.R., "Experimental cholelitholysis with the pulsed tunable dye laser", *J. Invest. surg.*, 1(1):457, 1991.
 14. Berg, W.A., Caskey, C.I., Hamper, U.M., Anderson, N.D., Chang, B.W., Sheth, s., Zerhouni, E.A., Kuhlman, J.E., "Diagnosing breast implant rupture with MR imaging, US, and mammography", *Radiographics*, 13(6):1323, 1993.
 15. Caskey, C.I., Berg, W.A., Anderson, N.D., Sheth, S., Chang,

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- B.W., Hamper, U.M., "Breast implant rupture: diagnosis with US", *Radiology*, 190(3):819, 1994.
16. Berg, A.B., Anderson, N.D., Zerhouni, E.A., Chang, B.W., Kuhlman, J.E., "MR Imaging of the Breast in Patients with Silicone Breast Implants: Normal Postoperative Variants and Diagnostic Pitfalls", *Am.J.Rad.*, 163:575, 1994.
 17. Berg, W.A., Kuhlman, J.E., Chang, B.W., Zerhouni, E.A., Anderson, N.D. "Residual silicone following removal of ruptured breast implants: MR imaging evaluation. *Radiology*, 189:302, 1993.
 18. Berg, W.A., Caskey, C.I., Hamper, U.M., Kuhlman, J.E., Anderson, N.D., Chang, B.W., Sheth, S., Zerhouni, E.A., "Single- and double-lumen silicone breast implant integrity: Prospective evaluation of MR and US criteria. *Radiology*, 197:45-52, 1995
 19. Frassica, F.J., Chang, B.W., Ma, L.D., Howard, S.P., Lietman, S.A., Frassica, D.A., Sim, F.H., "Soft tissue sarcomas: general features, evaluation, imaging, biopsy and treatment", *Current Orthopedics*, 11:105, 1997.

In Press - Submitted Bibliography

1. Berg, W.A., Anderson, N.A., Zerhouni, E.A., Chang, B.W., Kuhlman, J.E., "The importance of clinical history in MR evaluation of silicone breast implants", (submitted *Am.J.Rad.*)
2. Chang, B.W., Berg, W.A., Angel, M.A., Hamper, U., Manson, P.N., "Color doppler evaluation of 599 TRAM flap perforators; providing a rational approach to flap design", (submitted to *J. Reconstr. Microsurg.*)
3. Chang, B.W., " Long term Assessment of 104 Nipple/Areola Reconstructions using a Circular Keyhole Pattern", (accepted *Plast. Reconstr. Surg.*)
4. Wang, B.H., Chang, B.W., Dooley, W.C., Chang, L.D., Hamad, G., VanderKolk, C.A., Manson, P.N., "Breast Cancer Recurrence Following Mastectomy with Reconstruction", (submitted to *Plastic and Reconstructive Surgery*)
5. Mucci, S.J., Chang, B.W., Frassica, F., Kleinberg, L., Manson, P.N., "Immediate Radiation to Microvascular Anastomoses in Limb Salvage Treatment for Extremity soft Tissue Sarcomas", (accepted, *Annals of Plastic*

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Surgery)

6. Chang, B.W., "Mastopexy", (book chapter for Schusterman and Evans, Operative Plastic Surgery).
7. Chang, B.W., " Shaping the Autologous Breast", 1997 (submitted book chapter for Clinics in Plastic Surgery)

Book Reviews

1. Chang, B.W., Endoscopic Plastic Surgery (Bostwick, Eaves, Nahai), Surgical Laparoscopy and Endoscopy, 6(5):, 1996.
2. Chang, B.W., Critical Issues in Surgery (Cernaianu, DelRossi, Spence), Plastic and Reconstructive Surgery, 98(4):747, 1996

ABSTRACTS

1. Caskey, C.B., Berg, W.A., Hamper, U.K., Sheth, S., Chang, B.W., Anderson, N.D. "Complications of Polyurethane Covered Breast Implants: Ultrasound Evaluation". Submitted Abstract, Society of Breast Imaging, April, 1993.
2. Chang, B.W., Mason, G.R., et. al., "The Potential for Common Bile Duct Injury During Pulsed Dye Laser Cholelitholysis". Lasers in Surgery and Medicine, 7(1):88, 1987.
3. Berg, W.A., Caskey, C.B., Chang, B.W., et al., "Fluid Collections around breast implants: prevalence and clinical implications", Am. Roentgen Ray Soc., Apr. 1993 (submitted Am.J. Rad.)
4. Berg, W.A., Anderson, N.A., Chang, B.W., Zerhouni, E.A., Kuhlman, J.E., " Silicone Breast Implants: Tailoring the MRI evaluation", Soc. Mag. Res. Med., Aug 14-20, 1993.

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5. Caskey, C.B., Berg, W.A., Anderson, N.A., Sheth, S., Chang, B.W., Hamper, U.K., " Breast implant rupture: diagnosis by ultrasonography", Rad.Soc.N.Am., 1992.
6. Nammoun, J., Chang, B.W., Fisher, B., Clark, N., Manson, P., "Reconstruction of Large Wounds of the back using the latissimus dorsi turnover flap", Intl.Symp.Plast.Surg., May 21-24, 1994.
7. Wang, B., Chang, B.W., Jedrysiak, A., Nammoun, J., VanderKolk, C. , Manson, P., "Smoking and Complications in Breast Reconstruction", Plast. Surg. Forum, 18:216, 1995.
8. Carpenter, R., Chang, B.W., Robertson, B., " Modifications to the Component Separation Technique for Abdominal Wall Reconstruction", Plastic Surgery Senior Resident Conference, 1994.

BOOK CHAPTERS

1. Chang, B.W., " The Timing, Indications, and Results of Reconstruction following Mastectomy", Current Surgical Therapy, 1995.
2. Chang, B.W., "Minor Operations: Excision and Skin Closure; Small flaps; Small grafts", Atlas of General Surgery, Chapman and Hall, London, 1996.
3. Chang, B.W., "Excision of Skin Cancers", Atlas of General Surgery, Chapman and Hall, London, 1996.