

Curriculum Vitae

Elwood P. Armour, Ph.D.

Addresses:

- Work -
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Present position:

Clinical Physicist and Director of Brachytherapy Physics
Department of Radiation Oncology and Molecular Radiation Sciences
Johns Hopkins University School of Medicine

Birth Date and Place:

September 8, 1951
Woodstock, New Brunswick, Canada

Citizenship / Visa:

USA

Personal Information:

Married - 3 sons (ages 21, 23, and 26 years)

Education:

Institution	Location	Degree	Year	Major Field
University of Maine,	Orono, Maine	B.S.	1973	Engineering Physics
University of Texas,	Houston, Texas	M.S.	1976	Biophysics
University of Texas,	Houston, Texas	Ph.D.	1980	Biophysics
Stanford University	Stanford, CA	PostDoc.	1982	Cancer Biology

Professional Appointments:

Dates	Title	Institution	Location
2005-	Clinical Physicist and Director of brachytherapy physics Department of Radiation Oncology and Molecular Radiation Sciences	Johns Hopkins Univeristy School of Medicine Baltimore, MD 21231	
2003- 2005	Director of brachytherapy physics Department of Radiation Oncology.	William Beaumont Hospita Royal Oak, MI 48073-6769	
1988 -2005	Clinical Assistant Professor of Medical Physics Department of Physics	Oakland University College of Arts and Sciences Rochester, MI 48309	
1986-2005	Biophysicist Department of Radiation Oncology.	William Beaumont Hospital Royal Oak, MI 48073-6769	
1985-1986	Assistant Professor of Biophysics Department of Physics	University of Texas System Cancer Center M.D. Anderson Hospital and Tumor Institute, Houston, TX	
1982-1985	Assistant Physicist Department of Physics	University of Texas System Cancer Center M.D. Anderson Hospital and Tumor Institute, Houston, TX	

Professional Memberships and year of entry:

- American Association for Cancer Research (1987)
- American Association for the Advancement of Science (1987)
- American Brachytherapy Society (1992)
- American Society for Therapeutic Radiology and Oncology (1991)
- European Society of Therapeutic Radiology and Oncology (1999)
- Radiation Research Society (1982)
- Society of Thermal Medicine (1987)

Service:

Professional

2005-present Johns Hopkins University, Dept. Radiation Oncology and Molecular Radiation Science - Radiation Safety Committee - member

2002-present NIH/CSR SBIR Radiation Therapeutics and Biology (RTB) Study Section
- reviewer

2006--present North American Hyperthermia Society/Society of Thermal Medicine
- Membership Committee Member

2000--present North American Hyperthermia Society/Society of Thermal Medicine
- Finance Committee Member

1995-2005 William Beaumont Hospital - Biosafety Committee-Chairman

1990-2005 William Beaumont Hospital - Radiation Safety Committee - member

1988-2005 William Beaumont Hospital - Radiation Safety Officer Designate.

1991-2002 William Beaumont Hospital Research Institute - Projects Review Committee.

1995-1997 North American Hyperthermia Society - Councilor in Biology

1984-1986 M.D. Anderson Hospital - Hyperthermia Quality Assurance Officer

Community

Catholic Church

2005-present Lector and Eucharistic Minister, St. Michael and St. Patrick Catholic Community, Baltimore MD

2006-present Parish Council member, St. Michael and St. Patrick Catholic Community, Baltimore MD

YMCA

2000-2003 YMCA Swim Official Level II/National

1999-2000 YMCA Swim Official Level I

Boy Scouts of America

2002-2005 Vice Chair for Program – North Trails District - Detroit Area Council

1998- 2002 Special events coordinator –North Trails District - Detroit Area Council

1996-1999 Scoutmaster - Troop 1037 - Detroit Area Council

1991-1996 Assistant Scoutmaster - Troop 1037

1992-1995 Cubmaster - Pack 1061 - Detroit Area Council

Brother Rice High School

2001-2004 Volunteer coordinator for charity golf outing

2002-2003 Communication coordinator for swim team

Teaching:

1972 - 1973	U. of Maine - Physics Laboratory Lecturer
1987, 1988	William Beaumont Hospital - Radiobiology for Residents
1987 – 2005,	William Beaumont Hospital - Radiation Safety Training
1996 – 2005,	William Beaumont Hospital - Hyperthermia for Radiation Therapists
2001 – 2005,	Oakland University - Graduate Radiation Biophysics
2005 – present,	Johns Hopkins University - Radiation Physics for Residents

Publications:

- Corry, P. M., McGinness, J. E. and Armour, E. P.: Semiconductor Properties of Melanins Related to Preferential Killing of Melanoma Cells. *Pigment Cell* 2, 321-326, 1976.
- Corry, P., Barlogie, B., Spanos, W., Armour, E., Barkley, H., and Gonzales, M.: Approaches to Clinical Application of Combinations of Nonionizing and Ionizing Radiations. *Radiation Biology in Cancer Research*. ed. R.E. Meyn and H.R. Withers. Raven Press, New York. 1980.
- Armour, E. P., and Corry P. M.: Cytotoxic Effects of Ultrasound In Vitro: Dependence on Gas Content, Frequency, Radical Scavengers, and Attachment. *Radiation Research* Vol. 89, 369-380, 1982.
- Corry, P. M., Barlogie, B., Tilchen, E. W., and Armour, E. P.: Ultrasound Induced Hyperthermia for the Treatment of Human Superficial Tumors. *Int. J. Rad. Oncol. Biol. Phys.* Vol. 8, 1225-1229, 1982.
- Corry, P. M., Spanos, W., Tilchen, E. W., Barlogie, B., Barkley, H., and Armour, E. P.: Combined Ultrasound Radiation Therapy Treatment of Human Superficial Tumors. *Radiology* Vol. 145, No. 1, 165-169, 1982.
- Calderwood, S. K., Armour, E. P., and Hahn, G. M.: Concomitant Up-regulation of Insulin Binding and Elevated Heat Sensitivity in Serum Depleted CHO Cells. *Cell Biology Int. Reports* Vol. 7, No. 10, 869-873, 1983.
- Mehdi, S. Q., Recktenwald, D. J., Smith, L. M., Li, G. C., Armour, E.P., and Hahn, G. M.: Effects of Hyperthermia on Murine Cell Surface Histocompatibility Antigens. *Cancer Research* Vol. 44, 3394-3397, 1984.
- Corry, P. M., Jabboury, K., Armour, E. P., and Kong, J. S.: Human Cancer Treatment with Ultrasound. *IEEE Transactions on Sonics and Ultrasonics* Vol. SU-31, No. 5, 444-456, 1984.
- Armour, E. P., Li, G. C., and Hahn, G. M.: Proliferation Effects on the Decay of Thermotolerance in Chinese Hamster Cells. *Radiation Research* Vol. 103, 351-362, 1985.
- Tomasovic, S.P., Armour, E.P., North, S.N., and Welch, D.R.: Rat Mammary Adenocarcinoma Heat-stress Proteins In Vivo. *Int. J. Hyperthermia* Vol. 3, 467-474, 1987.
- Cole, A., and Armour, E. P.: Ultrastructural Study of Mitochondrial Damage in CHO Cells Exposed to Hyperthermia. *Radiation Research* Vol. 115, 421-435, 1988.
- Corry, P. M., Jabboury, K., Kong, J. S., Armour, E. P., McCraw, F. J., and LeDuc, T.: Evaluation of Equipment for Hyperthermic Treatment of Cancer. *Int. J. Hyperthermia* Vol. 4, No. 1, 53-74, 1988.

- Armour, E. P., Lee, Y.J., Corry, P. M., and Borrelli, M.J.: Protection from Heat-Induced Protein Migration and DNA Repair Inhibition by Cycloheximide. Biochemical and Biophysical Research Communications Vol. 157, No. 2, 611-617, 1988.
- Lee, Y. J., Armour, E. P., Borrelli, M. J., and Corry, P. M.: Heat Protectors and Heat-Induced Preferential Redistribution of 26 and 70 kDa Proteins in Chinese Hamster Ovary Cells. J. Cell. Physiol 141, 510-516, 1989.
- Lee, Y. J., Armour, E. P., Corry, P. M., and Dewey, W.C.: Mechanism of Drug-Induced Heat Resistance: The Role of Protein Degradation?. Int. J. Hyperthermia 6:591-596, 1990.
- Lee, Y. J., Perlaky, L., Dewey, W. C., Armour, E. P., and Corry, P. M.: Differences in Thermotolerance Induced by Heat or Sodium Arsenite: Cell Killing, and Protein Synthesis Inhibition. Radiation Research, 121:295-303, 1990.
- Corry, P. M., Martinez, A., Armour, E. P., and Edmundson G.: Simultaneous Hyperthermia and Brachytherapy with Remote Afterloading. in Brachytherapy HDR and LDR Eds. A. Martinez, C. Orton and R. Mould. Nucletron. 1990.
- Armour, E. P., Wang, Z. W., Corry, P. M., and Martinez, A.: Sensitization of 9L Gliosarcoma Cells to Low Dose Rate Irradiation by Long Duration 41°C Hyperthermia. Cancer Res. 51: 3088-3095, 1991.
- Armour, E.P., Wang, Z.W., Corry, P.M., and Martinez, A.: Equivalence of Continuous and Pulsed Simulated Low Dose Rate Irradiation in 9L Gliosarcoma Cells at 37°C and 41°C. Int. J. Radiat. Oncol. Biol. Phys. 22(10):109-114, 1992.
- Lee, Y.J., Hou, Z.Z., Curetty, L., Armour, E.P., Al-Saadi, A., J. Bernstein, J., and Corry, P.M.: Heat-Resistant Variants of Chinese Hamster Ovary Cells: Alteration of Cellular Structure and Expression of Vimentin. J. Cellular Physiol, 151:138-146, 1992.
- Wang, Z.W., Armour, E.P., Corry, P.M., and Martinez, A.: Elimination of Dose Rate Effect by Mild Hyperthermia. Int. J. Radiat. Oncol. Biol. Phys. 24:965-973, 1992.
- Armour, E.P., McEachern, D.M., Wang, Z.W., Corry, P.M., and Martinez, A.: Sensitivity of Human Cells to Mild Hyperthermia. Cancer Res. 53:2740-2744, 1993
- Armour, E.P., Wang, Z.W., Corry, P.M., Chen, P. Y., and Martinez, A.: Hyperthermic Enhancement of High Dose Rate Brachytherapy Int. J. Radiat. Oncol. Biol. Phys. 28(1):171-177, 1994
- Armour, E.P., Wang, Z.W., Corry, P.M., and Martinez, A.: Thermotolerance and Radiation Sensitizing Effects of Long Duration Mild Temperature Hyperthermia. Int. J. Hyperthermia 10(3):315-324, 1994
- Lee, Y.J., Kim, J.H., Ryu, S., Kim, S.H., Vidair, C.A., Armour, E. P. and Corry, P.M. Mechanisms of mild hyperthermia--induced cytotoxicity in human prostatic carcinoma cells: Perturbation of cell cycle progression and DNA fragmentation. J. Therm. Biol. 19(5):305-313, 1994
- Stromberg, J. S., Lee, Y. J., Armour, E. P., Martinez, A., and Corry, P. M., Lack of Radiosensitization after Paclitaxel Treatment of Three Human Carcinoma Cell Lines. Cancer 75(9):2262-2268, 1995
- Armour, E.P., McEachern, D.M., Hu, C., Corry, P.M., and Martinez, A., Cytotoxicity and Thermal-Radio-Sensitization of Human Tumor Cell Spheroids by Long Duration Mild Temperature Hyperthermia, Hyperthermic Oncology 1996, Volume II, 698-700, 1996
- Armour, E.P., White, J., DeWitt, C.C., Corry, P.M., and Martinez, A.M. Effect of Continuous Low Dose-Rate Brachytherapy on the Rectum of the Rat. Radiation Research 145:474-480, 1996
- Armour, E.P., Gersten, D., Martinez, A., and Corry, P.M. Enhancement of Brachytherapy by Long Duration-Mild Temperature Hyperthermia. Ed. Hagen, U., Harder, D., Jung, H., and Streffer, C. in "Radiation Research 1895-1995 Congress Proceedings" Vol 2 Universitätsdruckerei H. Sturtz AG. Wurzburg, pp. 1001-1004, 1996

- White, J., Armour, E.P., Armin, A., DeWitt, C., Corry, P.M., Martinez, A., Reproducible Rat Model for Comparing Late Rectal Toxicity from Different Brachytherapy Techniques. Int. J. Radiat. Oncol. Biol. Phys. 37(5):1155-1161, 1997
- Armour, E.P., White, J., Armin, A., Coffey, M., DeWitt, C., Corry, P.M., Martinez, A., Pulsed Low Dose-Rate Brachytherapy in a Rat Model: Dependence of late Rectal Injury on Radiation Pulse Size. Int. J. Radiat. Oncol. Biol. Phys. 38(4):825-834, 1997
- Blackburn, R.V., Galoforo, S.S., Berns, C.M., Armour, E.P., McEachern, D., Corry, P.M., Lee, Y.J. Comparison of Tumor Growth Between HSP25- and HSP27-Transfected Murine L929 Cells in Nude Mice. Int. J. Cancer 72(5):871-877, 1997
- Brenner, D., Armour, E., Corry, P., Hall, E., Sublethal Damage Repair Times for a Late-Responding Tissue Relevant to Brachytherapy (and External-Beam Radiotherapy): Implications for New Brachytherapy Protocols J. Radiat. Oncol. Biol. Phys. 41(1):135-138, 1998
- Corry, P., Armour, E.P., Gersten, D., and Martinez, A. Hyperthermia and brachytherapy. In: Principles and Practice of Brachytherapy – Joslin, Hall, and Flynn (Eds.), Chapter 30, 400-409, 2001.
- Brenner, D., Martinez, A.A., Edmundson, G.K., Mitchell, C., Thames, H.D., and Armour, E.P. Direct evidence that prostate tumors show high sensitivity to fractionation (low α/β ratio), Similar to late-responding normal tissue. Int. J. Radiat. Oncol. Biol. Phys. 52(6):6-13, 2002
- Martinez, A.A. Gustafson, G., Gonzalez J., Armour, E., Mitchell, C., Edmundson, G.K., Spencer W., Stromberg, J., Huang, R., and Vicini, F. Dose escalation using conformal high dose rate brachytherapy improves the outcome in unfavorable prostate cancer. Int. J. Radiat. Oncol. Biol. Phys. 53(2):316-327, 2002
- Armour EP, Raaphorst GP. Long duration mild temperature hyperthermia and brachytherapy. Int. J. Hyperthermia. 20(2):175-189, 2004
- Corry, PM, Armour, EP. The heat shock response: Role in radiation biology and cancer therapy, Int. J. Hyperthermia, 21(8) 769-778, 2005.