

THE UNIVERSITY OF BRITISH COLUMBIA
Curriculum Vitae for Faculty Members

Date: Nov 15, 2006

Please Initial: _____

1. **SURNAME:** Marziali

FIRST NAME: Andre

MIDDLE NAME(s):

2. **DEPARTMENT/SCHOOL:** Physics and
Astronomy

3. **FACULTY:** Science

4. **PRESENT RANK:** Associate Professor **SINCE:** July 1, 2005

5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
University of British Columbia	B.A.Sc.	Engineering Physics	1984-1989
Stanford University	Ph.D.	Physics	1989-1994

Special Professional Qualifications

P.Eng. Awarded March 2001

6. **EMPLOYMENT RECORD**

(a) Prior to coming to UBC

University, Company or Organization	Rank or Title	Dates
Stanford University	Lead Research Engineer	1994-1998

(b) At UBC

Rank or Title	Dates
Assistant Professor	1998 - 2005
Associate Biotechnology Laboratory	1999 - present
Platform Director Genome BC	2002 - present
Associate Professor	2005 - present
Director, Engineering Physics	2005 - present

(c) Date of granting of tenure at U.B.C.:

July 1, 2005

Invited Presentations

Invited Symposia Lectures

“Novel electrophoretic methods for concentration and analysis of DNA”, Ronald Davis Surprise 65th Birthday Symposium, Stanford, CA , June 9, 2006

” Technical support, engineering development, and novel research A central technology resource model for GenomeBC”, Genome Canada Genomics and Proteomics Symposium, Vancouver, BC, Nov 2004.

“Technology Development”, Genome Canada Genomics and Proteomics Symposium, Toronto, CA, Sep 26, 2003.

“Nanopore-based Single Molecule Analysis”, VII International Symposium on Mutations in the Human Genome, Palm Cove, Australia, July 2, 2003.

Invited Lectures (* denotes future talks)

“Applications of physics to genomics: electrophoretic focusing and single molecule sequence detection”, The International Conference on Genomics, James D. Watson Institute of Genome Sciences (WIGS), Hangzhou, China, 21 - 25 Oct. 2006

“DNA Concentration: from physics to a cancer test”, Vancouver Board of Trade, Vancouver, BC, Sep 27, 2006

“Parallel force-spectroscopy in an array of nanopores for DNA sequence detection”, Electronic recognition of Biomolecules 3, Liege, Belgium, Sep 6, 2006

“Technology development support for BC health and genomics research”, ICAPTURE Seminar, St. Paul’s hospital, Vancouver BC, July 28, 2006.

“Nano-Bio Convergence: Diagnostic approaches”, Genome BC – North Carolina trade mission, Vancouver, BC, June 7, 2006

“Bionanotechnology in Health Care”, Health Care Horizons, Kelowna, BC, June 5, 2006

“Novel electrophoretic methods for concentration and analysis of DNA”, Technologically Hip Speaker Series, BCIT, Burnaby, BC, May 2006.

“Synchronous Coefficient of Drag Alteration for Bio-Molecule Concentration”, Biophysics Seminar, SFU, Burnaby, BC, May 2006.

“GenomeBC Technology Development Platform”, Mini-conference – Genome-BC/Invitrogen. Invited presentation. Vancouver, April 2006.

“Pre-commercial development of a novel method for concentrating nucleic acids “, Genomics Forum, UBC, April 2006.

“Nanosensors for single-molecule DNA sequence detection”, BAYER, Colloquium on Nanotechnology, Leverkusen, Germany, Mar 2006.

“Novel electrophoretic methods for concentration and analysis of DNA” Stanford DNA Sequence and Technology Center, Feb 2006

“Parallel nanopore force spectroscopy for DNA sequence detection” NHGRI Grantee Meeting, Marco Island, FL, Feb 2006

“Novel electrophoretic methods for concentration and analysis of DNA” UBC Physics and Astronomy, Condensed Matter seminar, Feb 2006

“A powerful new method for isolating and pre-concentrating DNA”, UILO invited presentation to Business Development Bank of Canada, Dec 2005.

“GenomeBC Technology Development”, Genome BC trade mission to San Diego, organized by the Canadian Consulate in San Diego, La Jolla, CA, Nov 2005

“Novel electrophoretic methods for concentration and analysis of DNA “, UVIC Physics Colloquium, Nov 2005

“Genome BC Technology Development”, GenomeBC Platform Day, Oct 26, 2005

“Genome BC Technology Development”, Genome Canada SIAC (Science and Industry Advisory Committee), Vancouver, BC, Oct 20, 2005

"Anomalous diffusion dynamics of ssDNA escape from alpha-HL", U. Illinois Urbana-Champaign, Electronic Recognition of Biomolecules II, Sep 7, 2005

“No, really, I want you to talk in class...”, Invited Plenary Teaching Medal lecture for CAP Congress, Vancouver, June 6, 2005

“Biophysics and Robots - recent adventures in the Department of Physics and Astronomy”, UBC Physics Open House, Alumni Dinner. June 4, 2005

“DNA concentration and analysis for mutation detection”, Vancouver Mensa Group, May 25, 2005.

“Nanopore-Based Single Molecule Sequence Detection “ RECOMB 2005 Satellite meeting, Stanford, May 22, 2005

“An electrophoretic method for isolating and pre-concentrating nucleic acids”, MSL lab seminar series, UBC, April 14, 2005

Invited Panel discussion “Technology Development”, Genomics Forum, UBC, Vancouver BC, April 1, 2005

“A powerful new method for isolating and pre-concentrating DNA”, Pacific Northwest Entrepreneur Network, Seattle, WA, Mar 2005.

“Electromechanical sensing modes of nanopores and applications to DNA analysis”, CIAR Nanoelectronics meeting, Vancouver, BC, Nov. 2004.

“The world’s smallest fishing rod: using nanotechnology in biology”, July 2004, Shad Valley program, UBC, Vancouver, BC

“A Single-Molecule Nanosensor For Oligonucleotide Identification”, June 2004, CAP congress, Winnipeg.

“Novel applications of electrophoresis for gene expression and DNA purification”, Second Canadian Gene expression Conference, Vancouver, BC, Mar 25, 2004

“Fishing for single molecules: a different approach to genotyping”, *Omics Discussion group, March 4, 2004, UBC

“Threading the Needle: Electrical Manipulation of DNA Strands for Nano-sensors and Other Application”, Engineering Physics Project Fair, March 4, 2004, UBC

“Novel applications of electrophoresis for genotyping and DNA purification”, March 3, 2004, BCCA Genome Sciences Center, Vancouver.

“Technology Development for Genomics: from robots to single molecule nano-sensors”, Nov 26, 2003, Science Colloquium series, University College of the Cariboo, Kelowna, BC.

“Nanotechnology for the life sciences”, Nov 20, 2003. BC’s role in the NanoScale revolution conference, Vancouver BC.

“A nano-sensor for trans-membrane capture and identification of single nucleic acid molecules”, Nov 18, 2003. SFU Physics dept.

“Technology Development for Genomics”, CIHR Workshop – Integrating the Physical sciences into biomedical research. Sep 20,21 2003, Vancouver, BC.

“A nanopore based sensor for single DNA molecules”, UBC Physics colloquium, Apr. 3, 2003

“Single molecule DNA analysis”, GenomeBC Genomics Forum, UBC, Mar 27, 2003

“Single molecule detection using nanopores”, Invited talk, First Canadian Gene Expression Conference, Vancouver, Mar 25, 2003

“Beyond the Human Genome – Prospects for single molecule DNA sequencing”, Invited Science First talk, UBC Mar. 20, 2003

“New instruments and methods for Genomics”, Invited seminar, Center for Molecular Medicine and Therapeutics, Vancouver, BC, Feb 21, 2003

“New Technologies For Improved Performance And Cost Reduction Of Thermal Cycling And Capillary Electrophoresis”, Invited plenary talk, Advances in Genome Biology and Technology Conference, Feb. 2002, Marco Island, Florida.

“Teaching by questioning”, Science Supper Series, UBC, January 2002

“Peer Instruction with an Electronic Student Response System”, Horizons 2001, Vancouver BC, Oct 2001.

“Nanopores and capillaries: Advances in DNA analysis”, CAP meeting, Victoria, BC, June 2001

“Nanopores for DNA analysis”, APS - NWS 01 meeting, Plenary talk, Seattle, WA, May 26 2001

“Prospects for DNA Sequencing using synthetic nanopores”, National Institutes of Health, Bethesda, MD, April 2001

"Technology Development for High Throughput DNA Sequencing", University of Victoria, Physics Dept. Colloquium, Feb. 2000

"Nanopores for Single Molecule DNA Detection and Sequencing", Pacific Center for Advanced Materials and Microstructures - Third Annual Meeting, Vancouver, BC

“Technology Development for Large Scale DNA Sequencing”, Colloquium, Dept. Of Physics, UBC, March 1998.

"Automation for Cost Reduction in Large Scale DNA Sequencing", CHI Conference, San Francisco, CA. Feb 10, 1998

“Automation in DNA Sequencing”, Invited Talk, Lab Automation 1997 Conference, San Diego, CA, Jan. 1997.

“Automation for High Throughput DNA Sequencing”, Colloquium, Dept. Of Physics, Naval Postgraduate School, Monterey, CA, June 1996.

“Automated High Throughput Template Preparation”, IBC's Automated DNA Sample Preparation Workshop, March 20, 1996.

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Conference Participation (Organizer, Keynote Speaker, etc.)

Organizer: Advances in Genome Biology and Technology conference, Marco Island, FL, Feb 2007
UBC delegate: "Conference on Systemic Change In Physics Teaching at Large Research Universities", American Center for Physics in College Park, June 2-3 2006, Maryland
Organizer: Advances in Genome Biology and Technology conference, Marco Island, FL, Feb 2006
Program Committee: IEEE Conference on Automation Science and Engineering, June 2005
Organizer: Advances in Genome Biology and Technology conference, Marco Island, FL, Feb 2005
Organizing committee: UBC Undergraduate research conference, 2004.
Invited delegate to Genome Canada / Genome Spain international partnering meeting, Madrid, Jan 27 2003.
Session chair: "New Technologies", AMS 2002
Invited Co-chair "Converging Science" track, BIO2002.
Organizer: Automation in Mapping and Sequencing Conference, Sep 1999 (AMS '99), Cambridge UK.
Session Chair: "Automation Systems" session, AMS '99.

12. AWARDS AND DISTINCTIONS

(a) Awards for Teaching (indicate name of award, awarding organizations, date)

CAP Medal for Excellence in Teaching, Mar, 2005
 Killam Award for Excellence in Teaching, Mar, 2003

(b) Awards for Scholarship (indicate name of award, awarding organizations, date)

BC Innovation Council – Young Innovator Award, 2004.

N.S.E.R.C. graduate fellowship, 1991-1993
 Association of Prof. Engineers Proficiency Prize, 1989
 Bert Henry Scholarship, UBC, 1984-1989
 Captain C. Y. Wu Scholarship, 1988
 C.A. and J.C. Banks Scholarship, 1987
 B.C. Hydro Scholarship, 1986
 H.J. Macleod Scholarship, 1985
 W.H. MacInnes Mathematics Scholarship, 1984
 B.C. Government Scholarship, 1984

(c) Awards for Service (indicate name of award, awarding organizations, date)

(d) Other Awards

AITIS – association of health technology industries - Innovation-Research Contest 2006 – 2nd place
 ALA Innovation award, Feb 2007 – Nominated as one of 9 finalists.

Publications Record

SURNAME: Marziali

FIRST NAME Andre

Initials: _A.M._

MIDDLE NAME(s):

Date: Apr 11,2006

Publication Summary:

	1(a)	1 (b)	1 (c)	2 (a,b,c)	3	4	5
Career Total	23	2		7	2	9	
Last 5 Years Total	15	0		0	2	8	

1 = Refereed Publications [*]: (a) Journals; (b) Conference Proceedings; (c) Other

2 = Non-Refereed Publications (a) Journals; (b) Conference Proceedings; (c) Other

3 = Books

4 = Patents

5 = Special Copyrights

[*] = include pagination and indicate with an **asterisk** about 5 papers you consider of primary importance

1. REFEREED PUBLICATIONS

(a) Journals

1. Jared Slobodan, Dylan Gunn, Jason Thompson, Kurtis Guggenheimer, Keddie Brown, Mark Homenuke, Roy Belak, Diponkar Banerjee, David Broemeling, and **Andre Marziali**, "An Automated Nanoliter Dispenser for Tissue Microarrays", in press, *International Journal of Oncology*
2. Carolina Tropini and **Andre Marziali**, "Multi-nanopore force spectroscopy for DNA analysis", in press, *Biophysical Journal*
3. Elisabeth Maurer-Spurej, Keddie Brown, Audrey Labrie, **Andre Marziali** and Otto Glatter, "Portable dynamic light scattering instrument and method for the measurement of concentrated cell suspensions", *PHYSICS IN MEDICINE AND BIOLOGY* 51 (15): 3747-3758 AUG 7 2006
4. N. Jetha and **A. Marziali**, "Liquid handling technology and the method of electrostatic drop transfer to improve dispensing", invited paper, *Journal of the Association for Laboratory Automation, JALA* Aug 2006;11:278-80
5. N. Jetha and **A. Marziali**, "An Electrostatic Device For Active Transfer Of Sub-Microliter Samples From Syringe Pipettors", *BioTechniques*, 40 (2): 148+ FEB 2006
6. *Duane E Smailus, Marco A Marra, **Andre Marziali**, Robert A Holt, "Simple, robust methods for high-throughput nanoliter-scale DNA sequencing", *Genome Research*, 2005, 15: 1447 - 1450
7. *R. Coope, **A. Marziali**, "Contaminant-induced current decline in capillary array electrophoresis", *Electrophoresis*, 2005, 26, 11, 2128-2137

8. ***A. Marziali**, J. Pel, D. Bizzotto¹, L. Whitehead, “Novel Electrophoresis Mechanism Based On Synchronous Alternating Drag Perturbation” *Electrophoresis*, 2005, 26, 82-90
9. *J. Nakane, M. Wiggin, **A. Marziali**, “A nano-sensor for trans-membrane capture and identification of single nucleic acid molecules” *Biophysical Journal*, 87: 615-621 July 2004.
10. Martin Krzywinski¹, John Wallis², Claudia Gösele^{3,4}, Ian Bosdet¹, Readman Chiu¹, Tina Graves², Oliver Hummel³, Dan Layman², Carrie Mathewson¹, Natasja Wye¹, Baoli Zhu⁵, Derek Albracht², Jennifer Asano¹, Sarah Barber¹, Mabel Brown-John¹, Susanna Chan¹, Steve Chand¹, Alison Cloutier¹, Jonathon Davito², Chris Fjell¹, Tony Gaiage², Detlev Ganten³, Noreen Girn¹, Kurtis Guggenheimer, Heinz Himmelbauer⁴, Thomas Kreitler^{3,4}, Stephen Leach¹, Darlene Lee¹, Hans Lehrach⁴, **Andre Marziali**, Michael Mayo¹, Kelly Mead², Teika Olson¹, Pawan Pandoh¹, Anna-Liisa Prabhu¹, Heesun Shin¹, Jason Thompson, Miranda Tsai¹, Jason Walker², George Yang¹, Mandeep Sekhon², LaDeana Hillier², Heike Zimdahl^{3,4}, Kazutoyo Osoegawa⁵, Shaying Zhao⁶, Asim Siddiqui¹, Pieter J. de Jong⁵, Wes Warren², Elaine Mardis², John D. McPherson², Rick Wilson², Norbert Hübner³, Steven Jones¹, Marco Marra¹, Jacqueline Schein^{1,7}, “Integrated and Sequence-Ordered BAC and YAC-based Physical Maps for the Rat Genome”, *Genome Research*, 14 (4): 766-779 APR 2004
11. J. Nakane, M. Akeson, and **A. Marziali**, “Nanopore sensors for macromolecule analysis”, invited review for *Journal of Physics: Condensed Matter*, 2003, **15**: R1365–R1393
12. J. Thompson, T. Pugh, K. Guggenheimer, A. Safarpour, A. Christie, J. Pel, S. Chow, **A. Marziali**, “Facilitated Loading Of Horizontal Gels Using A Capillary Gel Comb”, *BioTechniques*, 2003, 34:814-818
13. Wenonah A. Vercoutere , Stephen Winters-Hilt, Veronica S. DeGuzman, David Deamer , Sam Ridino , Joseph T. Rodgers, Hugh E. Olsen , **Andre Marziali**, and Mark Akeson, Discrimination Among Individual Watson-Crick Base-Pairs at the Termini of Single DNA Hairpin Molecules” *Nucleic Acids Research*, 2003, Vol. 31, 4, 1311-1318
14. Greg Vatcher, Duane Smailus, Martin Krzywinski, Ran Guin, Jeff Stott, Miranda Tsai, Susanna Chan, Pawan Pandoh, George Yang, Jennifer Asano, Teika Olson, Anna-Liisa Prabhu, Robin Coope, **Andre Marziali**, Jacquie Schein, Steven Jones, and Marco Marra, “Resuspension of DNA Sequencing Reaction Products in Agarose Increases Sequence Quality on an Automated Sequencer”, *BioTechniques*, 2002 Sep;33(3):532-4, 536, 538-9
15. J.Nakane, M. Akeson, **A. Marziali**, “Evaluation of nanopores as candidates for electronic analyte detection”, invited submission, *Electrophoresis* 2002, 23,2592–2601
16. **A. Marziali** and M. Akeson, " New DNA Sequencing Methods", *Annu. Rev. of Biomed. Eng.* 2001, 3:195-223.

17. *Jonathan Nakane, David Broemeling, Roger Donaldson, **Andre Marziali**, Thomas D. Willis, Matthew O'Keefe, and Ronald W. Davis**, "A Method For Parallel, Automated, Thermal Cycling Of Sub-Microliter Samples", *Genome Res.* 2001 11: 441-447. 2601

18. *Athanasios Theologis, Joseph R. Ecker, Curtis J. Palm, Nancy A. Federspiel, Samir Kaul, Owen White, Jose Alonso, Hootan Alta, Rina Araujo, Cheryl L. Bowman, Shelise Y. Brooks, Eugen Buehler, April Chan, Qimin Chao, Huaming Chen, Rosa F. Cheuk, Christina W. Chin, Mike K. Chung, Lane Conn, Aaron B. Conway, Andrew R. Conway, Todd H. Creasy, Ken Dewar, Patrick Dunn, Pelin Etgu, Tamara V. Feldblyum, Ji Dong Feng, BettyFong, ClaireY.Fujii, John E. Gill, Andrew D. Goldsmith, BrianHaas, Nancy F. Hansen, Beth Hughes, Lucas Huizar, Jonathan L. Hunter, Jennifer Jenkins, Chanda Johnson-Hopson, Shehnaz Khan, Elizabeth Khaykin, Christopher J. Kim, Hean L. Koo, Irina Kremenetskaia, David B. Kurtz, Andrea Kwan, Bao Lam, Stephanie Langin-Hooper, Andrew Lee, Jeong M. Lee, Catherine A. Lenz, Joycelyn. H. Li, YaPing Li, Xiaoying Lin, Shirley X. Liu, Zhaoying A. Liu, Jason S. Luross, Rama Maiti, **Andre Marziali**, Jennifer Militscher, Molly Miranda, Michelle Nguyen, William C. Nierman, Brian I. Osborne, Grace Pai, Jeremy Peterson, Paul K. Pham, Michael Rizzo, Timothy Rooney, Don Rowley, Hitomi Sakano, Steven L. Salzberg, Jody R. Schwartz, Paul Shinn, Audrey M. Southwick, Hui Sun, Luke J. Tallon, Gabriel Tambunga, Mitsue J. Toriumi, Christopher D. Town, Teresa Utterback, Susan Van Aken, Maria Vaysberg, Valentina S. Vysotskaia, Michelle Walker, Dongying Wu, Guixia Yu, Claire M. Fraser, J. Craig Venter & Ronald W. Davis, "Sequence and analysis of chromosome 1 of the plant *Arabidopsis thaliana*", *Nature* 408, 816 - 820 (2000)

19. ***Andre Marziali**, Thomas D. Willis, Nancy A. Federspiel, and Ronald W. Davis, "An Automated Sample Preparation System for Large Scale DNA Sequencing" *Genome Res.* 1999 9: 457-462.

20. ***Andre Marziali**, Thomas D. Willis, and Ronald W. Davis, "An Arrayable Flow-Through Microcentrifuge for High Throughput Instrumentation", *Proc. Natl. Acad. Sci. USA* 1999 Jan 5;96(1):61-66 (this paper elicited a commentary: "Laue, T.M., "An arrayable flow-through microcentrifuge for high-throughput instrumentation—a matter of scale", *Proc. Natl. Acad. Sci. USA* Vol. 96, p. 1163, February 1999)

21. **A. Marziali**, Nancy Federspiel, and Ron Davis, "Automation for the Arabidopsis Genome Sequencing Project", *Trends in Plant Science*, Feb. 1997, Vol. 2, No. 2.

22. **A. Marziali** and T.I. Smith, "Demonstration of Wavelength Stabilization in a Free Electron Laser", *I.E.E.E. Journal of Quantum Electronics*, vol. 30, no.9, September 1994.

23. **A. Marziali**, H.A. Schwettman, J.G. Hatmaker, M.W. Hiller, H.G. Cambell, R. Sinko, M.W. Hamilton, C.G. Coghill, R. Dunham, J.L. Light, Carroll Allcock, "Fabrication Methods of the Superconducting Injector Cavities for the Stanford University Free Electron Laser", *I.E.E.E. Trans. Magn.*, 27(2) p1916, March 1991.

(b) Conference Proceedings

A. Marziali, T.I. Smith, H.A. Schwettman, "Wavelength Shifting in the Stanford FEL", Nuclear Instruments and Methods in Physics Research A 358, pp252-255, 1995.

A. Marziali and T.I. Smith, "Feedback Stabilization of the SCA/FEL Wavelength", Nuclear Instruments and Methods in Physics Research A 331, pp59-61, 1993.

(c) Other

2. NON-REFEREED PUBLICATIONS

(a) Journals

(b) Conference Proceedings

A. Marziali and H.A. Schwettman, "Vibrational Analysis of the TESLA Structure", Proceedings of the Sixth Workshop on RF Superconductivity, Newport News, VA, 1993.

A. Marziali and H.A. Schwettman, "Microphonic Analysis of Cryo-Module Design", 1993 Particle Accelerator Conference, Washington D.C., 1993.

A. Marziali and H.A. Schwettman, "Structure Tuning and its Effect on Higher Order Modes", Proceedings of the 1992 Linear Accelerator Conference, Ottawa, Canada, 1992.

A. Marziali and H.A. Schwettman, "Microphonic Measurements on Superconducting Linac Structures", Proceedings of the 1992 Linear Accelerator Conference, Ottawa, Canada, 1992.

A. Marziali, H.A. Schwettman and J.G. Hatmaker, "Structure Fabrication and Control of Higher order Modes", Proceedings of the Fifth Workshop on RF Superconductivity, Hamburg, Germany, 1991.

A. Marziali and H.A. Schwettman, "Mechanical Modes of Multicell Linac Structures", Proceedings of the Fifth Workshop on RF Superconductivity, Hamburg, Germany, 1991.

(c) Other

A. Marziali, "Microphonics in Superconducting Linear Accelerators and Wavelength Shifting in Free Electron Lasers", Ph.D. Thesis, Stanford University, December 1994.

3. BOOKS

(c) Chapters

Andre Marziali, "Modular Automation for High Throughput DNA Sequencing", submitted chapter for Oxford University Press Genome Sequencing: A Practical Approach. Edited by M. Vaudin & B. Barrell

Andre Marziali, "Nucleic Acids / Centrifugation", section of the Encyclopedia of Separation Science, Academic Press, Ian D. Wilson editor, Aug 2000.

4. PATENTS AND INTELLECTUAL PROPERTY

- A. Marziali and D.R. Stevens, “XY Velocity Controller”, **January 8, 1991**, U.S. Pat # 4,983,786,
- A. Marziali, “Microcentrifuge”, **May 29, 2001**, US Pat. # 6,238,330
- A. Marziali, “Method for simultaneous Centrifugation of Samples”, **August 14, 2001**, US Pat # 6,273,848
- A. Marziali, “Method of simultaneous mixing of Samples”, **November 25, 2003**, US Pat # 6,652,136
- A. Marziali, “Flow through microcentrifuge”, **November 25, 2003**, US Pat # 6,652,136 B
- A. Marziali, “Thermal cycling method and apparatus”, **2002**, US Pat. Appl. #U0080507
- A. Marziali, “Thermal cycling method and apparatus”, **2004**, European patent application in progress.
- A. Marziali, “Nanopore detection and characterization of nucleic acids”, **2001**, Provisional patent
- A. Marziali, A Christie, C. Gray, “Capillary gel comb for automated sample loading”, **2003**, Prov. Pat.
- A. Marziali, “A Nanopore Based Sensor”, **2003**, Provisional patent
- A. Marziali, “Sealing apparatus for small volume plate”, **2003**, Provisional patent
- A. Marziali, J. Thompson, K. Guggenheimer, “Device And Method To Facilitate Loading Of Horizontal Gels”, **Jan 2003**, Provisional patent
- A. Marziali, P. Dextras, K. Guggenheimer, “Pulsed-Field Droplet Spotter for Microarray Printing”, **Jan 2004**, Provisional patent
- A. Marziali, J. Thompson, R. Coope, “Capillary electrophoresis array”, **Jan 2004**, Provisional patent,
- A. Marziali and L. Whitehead, “Apparatus and methods for directing the movement of charged molecules in solution”, **Jan 2004**, provisional; PCT filed **Feb 2, 2005**
- A. Marziali, D. Banerjee, J. Thompson, K. Guggenheimer, K. Brown, R. Belak, J. Slobodan, REAGENT DELIVERY APPARATUS AND METHODS PCT application filed **9 June 2005**
- A. Marziali and D. Broemeling “Electrokinetic injection for SCODA”, PCT filed **Feb 8, 2006**
- A. Marziali and N. Jetha, “Electrostatic drop transfer device”, PCT filed **Feb 8, 2006**