

BIOGRAPHICAL SKETCH

NAME Zenhausern, Frederic	POSITION TITLE Director & Professor		
CITIZENSHIP U.S. and CH			
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Geneva, Switzerland	B.Sc.	1989	Biochemistry
University of Geneva, Switzerland	Ph.D.	1993	Applied Physics
Rutgers, The State University of New Jersey	MBA	2003	Finance

A. Personal Statement

My experience leading large multi-disciplinary research programs and teams will serve the UA Advisory Board in developing an institutional strategic roadmap integrating innovative educational curriculum and translating academic/ basic discoveries into professional outcomes and/or platform technologies for high scientific, commercial and translational impacts.

B. Accomplishments

- Developed large research initiatives at Arizona State University and University of Arizona who generated more than **\$200,000,000** in sponsored research contracts and grants over the last 8 years.
- Interdisciplinary Innovator with large patents portfolio and several **licensing agreements** generating significant royalties.
- Initiated and led the **One Healthcare Taskforce at Motorola**, an inter-departmental initiative for applying wireless technologies into healthcare market segments that led to new businesses and services for the company. This resulted in bio-monitoring platforms for First Responders Market and commercial product platforms in Life Sciences (e.g. DNA microarrays).
- Established and operated several **Centers of Excellences** in Life Sciences, Engineering and Physical Sciences that operated between multiple participating institutions, with multi-million dollars budgets and large groups of staff members (e.g. Flexible Display Center, Center for Applied NanoBioscience, the Biodesign Institute and University of Arizona in Chandler at the Innovations incubator).
- Initiated many large national and **international consortia and alliances** in Materials Engineering, Nanobiotechnology, Advanced Medical Technologies and Security (e.g. FP6 affiliate member FlexIC; FP7 full member MiDAS consortium).
- Innovated and translated cutting edge interdisciplinary technologies into new **emerging products** (e.g. Mobile DNA fingerprinting, Biodosimetry, Flexible Displays) and established startup companies.
- **Pioneered** Scanning Probe Techniques in Biology and Medicine and published work in high impact scientific journals. Invention in Near-field optics storage is a core enabler to “Blu-Ray” based storage, while its applications in DNA sequencing catalyzed some initiative in Bioinformatics with the establishment of the IBM Life Sciences Division.

C. Entrepreneurial Experience

1990-1991	Participated in establishing the first E.C. application laboratory for Park Scientific Instrument
1993-1996	Developed core technology and business plan for DNA Sequencing initiative at IBM Research Division under Caroline Kovac, who then developed the life sciences venture into IBM’s Healthcare and Life Sciences global business, with revenues of \$4.8B
1997-1998	Co-founder, Vice President, Alpha-MOS America – participated in listing the company on Euronext Paris, Compartiment C (equivalent of US NASDAQ) on the Paris stock exchange
1998-2002	Developed Motorola Labs Life Sciences Division (AZ) and led product development for the

Codelink microarray platform (then acquired by GE/Amersham) and later the eSensor DNA microarray through the \$300 M acquisition of Clinical MicroSensors (Pasadena, CA).

2003-2008 Co-founder (with Dr. J. Trent), Director, Nanobiomics Inc. (AZ)– merger with Molecular Profiling Institute (MPI) and acquisition by Caris Diagnostics for \$40,000,000 in 2008.

2007 - Present Scientific Board Member and co-developer, DxTerity Diagnostics (Los Angeles, CA)

2009 – 2011 Scientific Founder, Diomics Corporation (San Diego, CA)

2011 Scientific Consultant, Spectrum Health, Grand Rapids, (MI)

2007 – Present Director, Personalized Medicine Research Institute, Scottsdale Healthcare Research Institute, Scottsdale AZ

2012 Founder of WhiteSpace Enterprise Corp., (AZ); Scientific Director, ReaSphere Ltd (UK)

2013 Scientific Board Member, Imaging Endpoint, (AZ);

D. Positions and Honors

Positions and Employment

1990 - 1993 Research Assistant, University of Geneva, Switzerland

1993 - 1996 Visiting Scientist, IBM T.J. Watson Research Center, NY

1996 - 1998 Head of Physical Measurements Lab, Firmenich Inc., NJ

1998 - 1999 Vice President, Advanced Technologies, Alpha-MOS America, NJ

1999 - 2002 Manager, MicroDevice Physics Lab, Motorola Labs, AZ

2003 - 2004 Associate Professor Research and Director, Applied Nanobioscience Center, Arizona State University, AZ

2004 –2005 Director R&D, Flexible Display Center at Arizona State University, AZ

2005 – 2009 Full Professor, Electrical Engineering Dept & School of Materials, Ira A. Fulton School of Engineering, Arizona State University, AZ

2005 – 2006 International Development Director, Flexible Display Center at Arizona State University

2005 - 2007 Chief Technology Officer, MacroTechnology Works at Arizona State University, AZ

2005 - Present Associate Director & Professor, Molecular Diagnostics & Target Validation Unit Translational Genomics Research Institute (TGen);

2006 – 2008 Director and Technology Advisor, Molecular Profiling Institute Inc., AZ

2008 – Present Director, Sr. Investigator, Personalized Medicine Research Laboratory, Scottsdale Healthcare Research Institute, AZ

2008 -2009 Executive Team Leader, Institute of Macrotechnology (new), Arizona State University

2009 - Present Endowed Chair Full Professor, Basic Medical Sciences, College of Medicine, Phoenix Director Center for Applied Nanobioscience & Medicine, University of Arizona

E. Academic/Other Research Appointments

Tenured Full Professor, Department of Electrical Engineering & School of Materials, Ira A. Fulton School of Engineering at Arizona State University;

Honors Disciplinary Faculty, Barrett Honors College, Arizona State University, AZ;

Director, Center for Applied Nanobioscience Center, The Biodesign Institute, Arizona State University (ASU);

Director R&D, Flexible Displays Center (collaborative agreement between U.S. Army, ASU & industry);

Industrial Affiliate Member, Center for Photonics and Optoelectronic Materials, Princeton University (POEM);

Academic Member, Executive Committee, Coyote Crisis Campaign (CCC), U.S. Air Natl. Guard & Scottsdale;

Adjunct faculty member, Mayo Clinic Cancer Center;

Associate Editor, International Journal of Nanotechnology and Molecular Computation" (IJNMC), Journal of Biological Engineering (JBE) and New Frontiers in Genomics;

Active Member (#145181) American Association for Cancer Research; Radiation Research Society; Scientific Association of Swiss Radiation Oncology; IAEA Technical Cooperation; Qatar National Research Fund

Member, Technology Commercialization Faculty Advisory Council, Office of the President, University of Arizona;

Member Executive Committees, Basic Medical Sciences Department & Research Senate, College of Medicine Phoenix, University of Arizona;

Professor, Biomedical Engineering Graduate Interdisciplinary Program, College of Engineering, University of Arizona, Tucson, AZ.;

Co-founder, partnership between University of Arizona-Duke Fitzpatrick Photonics Center for nanobio-medicine initiative.

Co-founder, Advanced Particle Radiotherapy International Laboratory (APRILA) in collaboration with CNAO.

F. Honors

- 2013 Nominee for Arizona Governor's Innovation Award (to be announced in Q4/13)
2011 Finalist, Healthcare Heroes, Business Journal, Phoenix
2010 Nominee, 2010 Technology Innovation Award, University of Arizona
2006 Finalist Parent Association 2006 Professor of the Year; ASU Innovators of Tomorrow Award & Special Recognition Award for the Start-up of the Year
2005 Arizona Biotech Association (ABA) Award for Best Biotechnology Startup of the Year
2004 & 2008 Finalist Governor's Innovation Award, Arizona Technology Council
1999-2002 Patent Committee, Solid State Res. Ctr., Motorola Labs; Guest Advisory Board, Motorola Life Sciences; received 3 Silver Quill Awards
1993-1996 Received 3 IBM Patent Plateau Awards, 1 Outstanding Achievement Award
1995 Finalist, Symposium of Emerging Opportunities, IBM Academy of Technology

G. Selected Peer-Review Journal Publications (from a list of more than 70 papers and pending publications)

1. F. Zenhausern, M. Adrian, B. ten Heggeler-Bordier, L.M. Eng, P. Descouts, (1992), "DNA and RNA Polymerase / DNA Complex Imaged by Scanning Force Microscopy: Influence of Molecular-Scale Friction", **Scanning**, 14, 212
2. F. Zenhausern, M. Adrian, P. Descouts, (1993), "Solution Structure and Direct Imaging of Fibronectin Adsorption to Solid Surfaces by Scanning Force Microscopy and Cryo-Electron Microscopy", **J. Electron. Microscopy**, 42(6), 378
3. F. Zenhausern, M. Adrian, B. ten Heggeler-Bordier, F. Ardizzoni, P. Descouts, (1993), "Enhanced Imaging of Biomolecules with Electron Beam Deposited Tips for Scanning Force Microscopy, **J. Appl. Phys.**, 73(11), 7232
4. Hansma H.G., Bezanilla M., F. Zenhausern, M. Adrian, R.L. Sinsheimer, (1993), "Atomic Force Microscopy of DNA in Aqueous Solutions", **Nucleic Acids Research**, 21(3), 505
5. F. Zenhausern, M. Adrian, B. ten Heggeler-Bordier, F. Ardizzoni, P. Descouts, (1993), "Enhanced Imaging of Biomolecules with Electron Beam Deposited Tips for Scanning Force Microscopy, **J. Appl. Phys.**, 73(11), 7232
6. F. Zenhausern, M. P. O'Boyle, H.K. Wickramasinghe, (1994), "Apertureless Near-Field Optical Microscope", **Appl. Phys. Lett.**, 65(13), 1623
7. F. Zenhausern, M. P. O'Boyle, H.K. Wickramasinghe, (1994), "Apertureless Near-Field Optical Microscope", **Appl. Phys. Lett.**, 65(13), 1623
8. F. Zenhausern, Y. Martin, H.K. Wickramasinghe, (1995) "Scanning Interferometric Apertureless Microscopy: Optical Imaging at 10 Angstrom Resolution", **Science**, 269, p. 1083-1085
9. Y. Martin, F. Zenhausern, H.K. Wickramasinghe, (1996), "Scattering Spectroscopy of Molecules at Nanometer Resolution", **Appl. Phys. Lett.**, 68(18), 29 April 1996
10. B. Vojak, G. Eden, R. Koripella, J. Burdon, D.L. Wilcox and F. Zenhausern, (2000), "Ceramic Micro-Hollow Cathode Discharge", **Applied. Phys. Lett.**, 173.
11. B. Vojak, G. Eden, R. Koripella, J. Burdon, D.L. Wilcox and F. Zenhausern, (2000), "Ceramic Micro-Hollow Cathode Discharge", **Applied. Phys. Lett.**, 173.
12. S.E. Lé tant, S. Content, T.T. Tan, F. Zenhausern, and M.J. Sailor (2000), "Integration of porous silicon chips in an electronic artificial nose", **Sensors and Actuators B**, Vol. 69, 193-198
13. B. Vojak, Park S.-J., Wagner C.J., Koripella R., Burdon J., D. Wilcox, F. Zenhausern, (2001), "Microplasma photonic arrays " **Appl. Phys. Lett.**, 78, 709
14. C.F. Chou, R. Changrani, P. Roberts, D. Sadler, S. Lin, A. Mulholland, N. Swami, R. Terbrueggen, E.

- Zenhausern, (2001), "A Miniaturized Cyclic PCR Device", J. M. Ramsey and A. van den Berg (eds), **Micro Total Analysis Systems** (2001), 151
15. D. Sadler, R. Changrani, P. Roberts, C.F. Chou, F. Zenhausern, (2002), "Thermal Management of BioMEMS", **IEEE Proceedings**, 1025. (*recipient of best paper award*).
 16. C.F. Chou, R. Changrani, D. Sadler, P. Roberts, J. Burdon, S. Lin, A. Mulholland, N. Swami, R. Terbrueggen, F. Zenhausern, (2002), "A miniaturized cyclic PCR device – modeling and experiments", **Microelectron. Eng.**, 61-62, 921.
 17. J.G. Eden, S.J. Park, N.P. Ostrom, S. T. McCain, C.J. Wagner, B.A. Vojak, J. Chen, C. Liu, P. von Allmen, F. Zenhausern, D.J. Sadler, C. Jensen, D. Wilcox, J.J. Ewing, (2003) " Microplasma devices fabricated in Silicon, ceramic, and metal/polymer structures: arrays, emitters and photodetectors " , **J. Phys. D: Appl. Phys.**, 36, 2869-2877.
 18. P. von Allmen, S.T. McCain, N.P. Ostrom, B.A.Vojak, F.Zenhausern, C.Jensen, M. Oliver ,and J.G.Eden ,**Appl. Phys. Lett.**, 82(16), 2003. " Ceramic microdischarge arrays with individually ballasted pixels"
 19. C.F. Chou and F. Zenhausern, (2003), "Electrodeless Dielectrophoresis for Micro-Total-Analysis Systems", **IEEE Engineering in Medicine & Biology**, 22(6), 62-67.
 20. Don Gervasio, Sonja Tasic, and F. Zenhausern, (2005) "A Room Temperature Micro-Reactor Generating Hydrogen from Aqueous Sodium Borohydride Solution for Fuel-Cell-Powered Man-Portable Applications" invited paper, **Journal of Power-sources**, 149, 15-21
 21. J. Gu, C. P. Chen, Q. Wei, C.F. Chou and F. Zenhausern, (2005) "Mask fabrication towards sub-10 nm imprint lithography", **Journal of MicroLithography**, 213-218
 22. J.Z. Wang, J. Gu, F.Zenhausern, H. Siringhaus, (2006), "Low cost fabrication of submicron all polymer field effect transistors", **Applied Physics Letters**, 88, 133502-05
 23. Jian Gu, Ravi Gupta, Chia-Fu Chou, Qihuo Wei and Frederic Zenhausern, (2007), A simple polysilsesquioxane sealing of nanofluidic channels below 10 nm at room temperature, **Lab Chip**, , 7, 1198
 24. Jian Gu, Jian Gu, Xiaoyin Xiao, Bharath R. Takulapalli, Michael E. Morrison, Peiming Zhang, and F. Zenhausern," A new approach to fabricating high-density nanoarrays by nanocontact printing", **J Vac Sci Technol B**, November 3;(2008), 26(6): 1860-1865
 25. Cedric Hurth, Ralf Lenigk and F. Zenhausern, "A compact LED-based module for capillary electrophoresis of DNA samples", **Applied Physics B**, Volume 93, Issue 2-3, pp. 693-699 (2008)
 26. Frederic Zenhausern, Chia-Fu Chou, Daniel Sadler, Sharon Lin, Rajnish Changrani, Allison Phayre, Robert Terbrueggen, "Validation of Modular Integration of Ceramic Cyclic PCR and Electrochemical DNA Sensor Using CYP2D6 Gene", **International Journal of Applied Ceramic Technology**, in review (2008)
 27. Shilpa Madhavan, Douglas Montgomery, F. Zenhausern, "Optimization of a microfluidic mixing device using Regression analysis and designed experiments", **International Journal of Product Development**, (2010), 23(1), 59-70
 28. M. Brengues, B. Paap, M. Bittner, S. Amundson, B. Seligman, R. Lenigk, F. Zenhausern, "Low Density Gene Expression Array for Acute Radiation Dose Assessment", **Health Physics**, February (2010), 179-185
 29. G. Garty, H.C. Turner, Y. Chen, J. Zhang, H. Wang, G.W. Johnson, A. Bertucci, M. Brengues, G. Randers-Pehrson, N. Simaan, Y. L. Yao, F. Zenhausern and D.J. Brenner, "Sample collection for high throughput radiation biodosimetry", **Disaster Medicine and Public Health Preparedness**, in press.
 30. Andrew J. Hopwood, Cedric Hurth, Jianing Yang, Zhi Cai, Nina Moran, John G. Lee-Edghill, Alan Nordquist, Ralf Lenigk, Matthew Estes, John P. Haley, Colin R. McAlister, Xiaojia Chen, Carla Brooks, Stan Smith, Keith Elliott, Pieris Koumi, Frederic Zenhausern, Gillian Tully, "An integrated microfluidic system for rapid forensic DNA analysis: sample collection to DNA profile", **Analytical Chemistry**, (2010), 82, 6991–6999
 31. Cedric Hurth, Stanley D. Smith , Alan R. Nordquist, Ralf Lenigk, Brett Duane, David Nguyen, Amol Surve , Andy J. Hopwood , Matthew D. Estes, Jianing Yang, Zhi Cai, Xiaojia Chen, John G. Lee-Edghill, Keith Elliott, Gillian Tully, and Frederic Zenhausern, "Microchip capillary electrophoresis analysis of a cartridge-processed buccal swab sample using an automated instrument for STR human identification", **Electrophoresis**, (2010), 31, 3510–3517
 32. Cedric Hurth, Katherine Klein, Lena van Nimwegen, Ronald Korn, Krishnaswami Vijayaraghavan and Frederic Zenhausern, "High-speed viscosity-based method for discriminating between transudative and

- exudative pleural effusions”, **Journal of Applied Physics**, (2011), 110, 034701
33. Namwon Kim, Zhenguo Li, Cedric Hurth, Frederic Zenhausern, Shih-Fu Chang and Daniel Attinger, “Identification of fluid and substrate chemistry based on automatic pattern recognition of stains”, **Analytical Methods**, (2012), 2012, 4, 50.
 34. Xiaojia Chen, Jianing Yang, Jian Gu, Ralf Lenigk and Frederic Zenhausern, “Surface Treatment on Cyclic Olefin Copolymer Electrophoresis Microchip Developed for the Integrated STR Typing”, submitted to **Nanofluidics and Microfluidics** (under review)
 35. Muriel Brengues, Stanley Smith, Matthew Estes and Frederic Zenhausern, “Integrated Microfluidic System for Gene Expression-Based Biodosimetry”, **Proceedings of The Medical Basis for Radiation Accident Preparedness V**, in press.
 36. Cedric Hurth, Maurice Aboud, Matt Estes, Alan Nordquist, Jian Gu, Bruce McCord and Frederic Zenhausern, “Direct loading of polymer matrices in plastic microchips for rapid DNA analysis: a comparative study”, **Electrophoresis**, (2012), 33, 2604–2611
 37. Matthew D. Estes, Jianing Yang, Brett Duane, Stan Smith, Carla Brooks, Alan Nordquist, and Frederic Zenhausern, “Optimization of Multiplexed PCR on an Integrated Microfluidic Forensic Platform for Rapid DNA Analysis”, **The Analyst**, (2012), 137, 5510.
 38. Jianing Yang, Carla Brooks, Matthew D. Estes and Frederic Zenhausern, “An Integratable Microfluidic Cartridge for Forensic Swab Samples Lysis”, **Forensic Science International: Genetics**, (2013), <http://dx.doi.org/10.1016/j.fsigen.2013.08.012>
 39. Cedric Hurth, Zhenguo Li, Daniel Attinger and Frederic Zenhausern, “Influence of Biological Interactions on the Evaporative Deposition Pattern of Liquid Droplets on Solid Surfaces”, **Langmuir**, submitted.
 40. C. Badie, S. Kabacik, N. Bernard, M. Brengues, G. Faggioni, R. Greither, A. Missel, A. Peinnequin, T. Poyot, B. Terbrueggen, F. Zenhausern, V. Meineke, H. Braselmann, C. Beinke, M. Abend, NATO Biodosimetry Study Comparison of Established and Emerging Biodosimetry Assays, **Radiation Research**, 180, (2013)
 41. K. Rothkamm, C. Beinke, H. Romm, C. Badie, Y. Balagurunathan, S. Barnard, N. Bernard, H. Boulay-Greene, M. Brengues, A. De Amicis, S. De Sanctis, R. Greither, F. Herodin, A. Jones, S. Kabacik, T. Knie, U. Kulka, F. Lista, P. Martigne, A. Missel, J. Moquet, U. Oestreicher, A. Peinnequin, T. Poyot, U. Roessler, H. Scherthan, B. Terbrueggen, H. Thierens, M. Valente, A. Vral, F. Zenhausern, V. Meineke, H. Braselmann and M. Abend, Comparison of Established and Emerging Biodosimetry Assays, **Radiation Research**, 180, (2013)
 42. M. Brengues, D. Liu, R. Korn and F. Zenhausern, “Method for validating radiobiological samples using a linear accelerator”, **Radiation Measurements**, accepted, in press.
 43. C. Hurth, J. Yang, C. Brooks, S. Smith, A. Nordquist and F. Zenhausern, “A miniature quantitative PCR device for directly monitoring a sample processing on a microfluidic rapid DNA system”, **Biomedical Microdevices**, submitted.
 44. C. Hurth, D. Whitfield, B. Duane, S. Smith, A. Nordquist and F. Zenhausern, “Automation of rheological measurements using high-speed imaging”, **Measurement Science and Technology**, in review.

H. Issued Patents*

1. Daniel J. Sadler, Rajnish G. Changrani, Chia Fu Chou, Frederic Zenhausern, Piezoelectric Mixing Method, U.S. Pat. 6,986,601
2. Lars Chapsky, Wayne D. Frasch, Chia Fu Chou, Frederic Zenhausern, Herbert Goronkin, Single molecule detection of bio-agents using the F1-ATPase biomolecular motor, U.S. Pat. 6,989,235
3. Peter Roberts, Frederic Zenhausern, Jeremy Burdon, Daniel Sadler, Electro-chemical analysis device with integrated thermal sensor and method for monitoring a sample using the device, U.S. 6,756,223
4. Rajnish Gopal Changrani, Frederic Zenhausern, Jeremy W. Burdon, Daniel J. Sadler, Bioreactor for manipulating biofluids at a low flow rate in a ceramic microfluidic system and method of fabrication, US 2004/0121455 A1
5. Bernard F. Coll, Paul A. Von Allmen, Frederic Zenhausern, Method and apparatus for plasma treating a chemical species, U.S. Pat. 6,624,583
6. Frederic Zenhausern, Chia-Fu Chou, Near-field Transform Spectroscopy, U.S. Pat. 6,858,436

* 70 reports including WIPO PCT and E.C collection; 3 active corporate licenses

7. Gary Blackburn, Hau H. Duong, Piotr Grodzinski, Jon Faiz Kayyem, Stephen D. O'Connor, Robert Pietri, Robert Henry Terbrueggen, Frederic Zenhausern, Gary T. Olsen, Devices and methods for biochip multiplexing, U.S. Pat. 7,172,897
8. Frederic Zenhausern, Apparatus and method for monitoring molecular species within a medium, U.S. Pat. 7,115,229
9. Bernard F. Coll, Frederic Zenhausern, Jeremy W. Burdon, Chowdary R. Koripella, MHCD and microfluidic apparatus and method, U.S. Pat. 6,586,885
10. Frederic Zenhausern, Method and apparatus for monitoring materials used in electronics, U.S. Pat. 6,975,944
11. Frederic Zenhausern, Method for monitoring molecular species, U.S. Pat. 7,097,973
12. Frederic Zenhausern, Substrate and method for microscopical observation of amorphous specimens, U.S. Pat. 5,788,853
13. Hemantha K. Wickramasinghe, Frederic Zenhausern, Yves Martin, Martin P. O'Boyle, Interferometric near-field apparatus based on multi-pole sensing, U.S. Pat. 5,623,338
14. Hemantha Kumar Wickramasinghe, Frederic Zenhausern, Yves Martin, Martin Patrick O'Boyle, Interferometric detecting/imaging method based on multi-pole sensing, U.S. Pat. 5,646,731
15. Hemantha K. Wickramasinghe, Frederic Zenhausern, Method suitable for identifying a code sequence of a biomolecule, US Pat. 5,538,898
16. Frederic Zenhausern, Hemantha K. Wickramasinghe, Assembly and a method suitable for identifying a code, US Pat. 5,624,845
17. Frederic Zenhausern, Hemantha K. Wickramasinghe, Method and apparatus for mass data storage, U.S. 5,602,820
18. Frederic Zenhausern, Method and apparatus for monitoring a physical or chemical conversion of a grain material, U.S. 6,495,341

I. Personal Information

Citizenship: U.S, Origin: Swiss (French speaking)

Home Address: 15818 Palomino Blvd, Fountain Hills, AZ 85268

Mobile Phone: (480) 235-8957 (preferred)

Business Email: Frederic.zenhausern@arizona.edu

Hobbies: biking, running, hiking, snowboarding and sailing (ASA certified 101/103/104/105/114); Scout Venturing 2343 (adult crew member); fashion photography (publications in Desert Living Magazine, Phoenix, "Weird Science", 2007, C. Loomis, G. Mihaleva and F. Zenhausern; Next Fest, Wired Magazine, 2004).

Additional detailed information can be provided upon request.

Other Support

The projects listed below represent some of the sponsored projects awarded to Dr. Zenhausern.

Frederic Zenhausern, Ph.D., MBA

Active Research Support

1U19A106777302 (Brenner)
12-01-2010-11/30/2014
Columbia University
Budget: \$ 125,000 (\$15,891,855 - all costs)
Role: Principal Co-Investigator

Flinn Foundation and Virginia G. Piper Partnership in Personalized Medicine – Miniaturized Protein Preparation Module for Proteomics Analysis
Role: Principal Investigator
Budget: \$ 250,000
06/30/11 – 07/01/13

BARDA/DHHS – High Throughput Gene Expression Biodosimetry (Curie System)
Role: Co- Investigator (PI: Dr. J. Chute, Duke University)
Budget: \$ 7,864,877 (UofA only – total: \$41,300,000)
09/01/09 – 08/31/14

Arizona Biomedical Research Commission (ABRC) – Category III
Role: Principal Investigator
Budget: \$ 375,000
07/01/11 – 06/30/14

05/01/12 – 09/30/13
University of Luxembourg / Fonds National de Recherche (FNR)
Role : Principal Investigator (5%)
Budget : \$64,449

10/01/13 – 09/30/15
Corporate Sponsor (confidential)
Role: Principal Investigator
Budget: \$1,350,000

05/01/13 – 04/30/14
Dignity Health, Barrow Neurological Institute
Role: Principal Investigator
Budget: \$ 45,000

Completed Research Support

E.C. 7th Framework – Development & Validation of a rapid millifluidic DNA analysis system for forensic casework samples
Role: Co-investigator
Budget: \$1,158,198 (total \$ 4,160,000)
11/01/10 – 10/31/13

Science Foundation Arizona and The Boeing Company – Biofuel Cell Reforming System
Role: Co-investigator
Budget: \$6,563,790

11/01/09 – 03/31/13

Forensic Science Service
Budget: \$6,113,378
Role: Principal Investigator
12/01/09 – 12/31/12

Van Andel Research Institute – Integration Grant
Role: Co-investigator
Budget: \$ 150,000
07/01/2010 – 06/30/2012

BARDA/DHHS (ASU Lead) – Integrated Biodosimetry System (iBiS)
Role: Principal Investigator (Technical) and lead investigator until transition from ASU to UofA
Budget: \$ 8,242,545 (UofA only – total: \$ 41,339,421)
12/09/09 – 12/08/11

1U19A106777302 (Brenner) 08-01-2006-08/31/2010
Columbia University \$5,891,855
NIAID Counter Measure Centers for Radioprotection – Center for High-throughput Biodosimetry
Role: Co-Investigator

W911NF04-2-0005
DOD-ARO \$43,700,000
ARL Flexible Display Center 02/06/04 – 10/31/09
Phase 2 - Renewal \$50,000,000 (11/01/08 – 10/31/12) (no effort after move to UofA)
Role: F. Zenhausern (Technical PI), Gregory Raupp (Admin PI)

0541835 (Petuskey) 02/15/06-01/31/09
NSF-Chemistry Division \$ 675,000
Purchase of an Instrument for Ultrafast, Multidimensional Fluorescence Detection and Imaging
Role: Co-Investigator

AGR 05/25/07 (Gervasio) 06/01/07-05/31/09
STMicroelectronics Italy \$ 250,000
Role: Co-Investigator

07119089 (Zenhausern) 08/01/07 – 01/31/08
Beckman Coulter \$ 99,250
Role: Principal Investigator

0114712 T. Garcia (PI)
NSF-HER 05/01/05-10/31/07
Phase III: Western Alliance to Expand Student Opportunities
This project involves training of Hispanic students in the field of bioengineering.
Role: Co-Investigator

LTR 03/30/06 (F. Zenhausern) 05/15/06-07/31/2007
Forensic Science Service \$ 750,000
Automated Miniaturized DNA Forensic System
Role: Principal Investigator

TRENT-06-02 (Zenhausern) 09/22/06-09/21/07
Translational Genomics Research Institute \$ 150,000
Arizona Clinical and Translational Science Award
Role: Principal Investigator

BAA-0034202 (Zenhausern) 08/01/03 – 09/30/07
FBI Construction and Laboratory Contracts Unit \$4,086,644
Role: Principal Investigator

W91ZLK-04-P-0779 (Zenhausern) 02/23/04 – 03/31/05
DOD-ARMY \$ 50,000
Feasibility Study of the ANBC Micro-PCR Cartridge System
This project comprises the design, prototyping and delivery of an instrument workstation for running micro-PCR reactor for anthrax detection.
Role: Principal Investigator

AGR 4/1/2004 (Zenhausern) 04/01/04 – 09/30/05
Sony Corporation \$ 200,000
DNA single molecule stretching under E-Field
Role: Principal Investigator

AGR 12/16/05 (Zenhausern) 12/16/05 – 07/31/06
Corium International \$ 52,000
Role: Principal Investigator

06-024485 (Zenhausern) 07/28/05 – 09/15/05
Goen Technologies \$ 31,000
Role: Principal Investigator

The Boeing Company – High Temperature Fuel Cell
Role: Co-Investigator (50%)
Budget: \$ 208,000
05/01/08 – 04/30/09 (no cost extension until 03/01/10)

NIH / NIAID – SBIR Phase 1 - 96 well plate Microfluidic System for rapid qNPA assay
Role: Principal Investigator (100%)
Budget: \$ 74,300
02/11/08 – 05/01/2010

ASU – Mayo Clinic Collaborative Funds Program – Intelligent IV-Pole
Role: Principal Investigator
Budget: \$40,000
11/01/09 – 10/31/13