

CURRICULUM VITAE

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EDUCATION:

- 2002 - Degree: PhD in field of **biophysics**, PhD thesis title: *EPR studies of nitric oxide and ceruloplasmin in some human body fluid*
- 2002–1997 - Institute of Molecular Biology, Jagiellonian University, Krakow, Poland, Graduate studies
- 1997 - Degree: Master of Science, Eng., MSc thesis title: *Monitoring of a number and activity of macrophages in the biopsies from human tumours after therapy*
- 1992–1997 - University of Science and Technology (AGH), Faculty of Physics and Nuclear Techniques, Speciality: **Medical Physics and Dosimetry**, Krakow, Poland, Under Graduate studies

WORK EXPERIENCES:

- From 2008 - Center for Biomedical EPR Spectroscopy & Imaging, The Ohio State University, Columbus, OH, Senior Research Associate
- 2002 - 2008 - Center for Biomedical EPR Spectroscopy & Imaging, The Ohio State University, Columbus, OH, Post Doctoral Researcher
- 2002 - Johns Hopkins University, Baltimore, MD, Fellow Researcher; 3 months
- 1997-2002 - Graduate studies, Institute of Molecular Biology, Jagiellonian University, Krakow, 5 years
- 1996 - Laboratory of Cancer Radiospectroscopy and Radiobiology, Jagiellonian University, Krakow; student's training course; 4 weeks
- 1995 - Clinic of Radiology, Collegium Medicum, Jagiellonian University, Krakow; student's training course; 4 weeks
- 1994 - Biochemical Laboratory, Laboratory of Proteins and Hormones, Specjalistic Krakow City Hospital of G. Narutowicz, Krakow; student's training course; 4 weeks

AWARDS:

- Young Investigator Awards for best presentation in the Workshop on EPR Studies of Viable System and Related Technique in Dartmouth, 19-23 September 2004
- Conference fellowship (attendance of The International Society for Magnetic Resonance in Medicine Meeting) – Foundation for Polish Science, 2002
- Award of the Royal Capital City of Krakow in the field of Science and Technology for the book “Nitric Oxide in Transplant Rejection and Anti-tumor Defense” based on the research of a team of Scientists including: Dr M. Elas, Dr B. Płonka, Dr K. Ciężka, Dr S. Pająk, Dr B. Płonka, A. Bratasz M.Sc. and J. Pawlus M.Sc., performed under the direction of Prof. Dr Stanisław Łukiewicz, Krakow 8.06.1999

RESEARCH SUPPORT:

Polish State Committee for Science Research (Grant 6 P05 B 152 20); March 2001-February 2002

SUPPLEMENTARY COURSES:

- Inspector of radiology assurance cat. B
- Confocal microscopy trainee

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Original papers:

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2. M. Elas, J. Raczek, **A. Bratasz**, K. Krawczyk, T. Zając, S. Maczuga, S. Łukiewicz, Nitric Oxide Detectable by Electron Paramagnetic Resonance Spectroscopy in Cancer Patients, *The Biology of Nitric Oxide*, Eds. S. Moncada, L. Gustafsson, P. Wiklund, E. A. Higgs, Portland Press Proceedings, London 2000, part 7, p. 83
3. **A. Bratasz**, B. Polok, I. Kuter, I. Gościński, W. Traczewski, M. Krupa, M. Moskała, P. Gałka, R. Konior, S. Łukiewicz, Generation of Nitric Oxide as a Predictive Parameter in Medicine, *Current Topics in Biophysics* 2002, 26(1): 89-96
4. **Anna Bratasz**, Iwona Kuter, Ryszard Konior, Igor Gościński, Stanisław Łukiewicz, Nitric Oxide in Brain Diseases, [*Antioxidant & Redox Signalling*, 2004, 6\(3\): 613-617](#)

5. Govindasamy Ilangovan, **Anna Bratasz**, Haiquan Li, Petra Schmalbrock, Jay L. Zweier, and Periannan Kuppusamy, In Vivo Measurement and Imaging of Tumor Oxygenation using Coembedded Paramagnetic Particulates, [*Magn Reson Med.*, 2004, 52\(3\): 650-657](#)
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7. Govindasamy Ilangovan, **Anna Bratasz**, Periannan Kuppusamy, Non-invasive Measurement of Tumor Oxygenation using Embedded Microparticulate EPR Spin Probe, [*Adv. Exp. Biol. Med.*, 2005, 566: 67-73](#)
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9. **Anna Bratasz**, Ramasamy Pandian, Govindasamy Ilangovan, and Periannan Kuppusamy, Monitoring oxygenation during the growth of a transplanted tumor, *Adv. Exp. Biol. Med.* 2006, 578:375-80
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12. **Bratasz A**, Kuppusamy P, Mapping Tumor Hypoxia Using Magnetically Labeled Cells, *Ind. J. Rad. Chem.*, 2007, 4 (3-4):144-151
13. **Bratasz Anna**, Aditi Kulkarni, Periannan Kuppisamy, Perchlorotriphenylmethyl Radical in Hexafluorobenzene: An Injectable Probe Formulation for Imaging of Oxygen Concentration in Tumors, [*Biophysical Journal*, 2007,92\(8\):2918-25; Epub 2007 Jan 26](#)
14. Deepti S Vikram, **Anna Bratasz**, Ahmad Rizwan, Periannan Kuppusamy, A Comparative Evaluation of EPR and OxyLite Oximetry Using a Random Sampling of pO₂ in a Murine Tumor, [*Radiat Res.* 2007 Sep;168\(3\):308-15](#)
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22. Tennille Presley, **Anna Bratasz**, C.D. Venkatakrisnan, Periannan Kuppusamy, Jay L. Zweier, and Govindasamy Ilangovan, Endogenous Nitric Oxide does not inhibit Cellular Respiration by Competitive Binding at Cytochrome c Oxidase in Hypoxic Conditions. An Electron Paramagnetic Resonance Oximetry Study, 2008 (*Biophysical Journal - in review*)
23. **Anna Bratasz**, Valery Khramstov, Periannan Kuppusamy, Measurement and imaging of thiol concentration in intact cells and tissue using EPR spectroscopy, 2008 (*in preparation*)
24. Deepti S. Vikram, **Anna Bratasz**, Rizwan Ahmad, and Periannan Kuppusamy, In vivo monitoring of temporal changes in tumor pO₂ using EPR oximetry, 2008 (*in preparation*)
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44. **Anna Bratasz**, Valery V., Khramtsov and Periannan Kuppusamy, Measurement of Thiol Levels in Human Ovarian Cancer Cells Treated with Cisplatin, 45th Rocky Mountain Conference on Analytical Chemistry, Denver, Colorado, July, 2003
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49. **Anna Bratasz**, Valery V Khramtsov, Periannan Kuppusamy, A Modified Tietze Assay for the Determination of Thiols in Intact Cells and Tissues, Society for Free Radical Biology and Medicine 10th Annual Meeting (SFRBM), Seattle, Washington, November 2003, [Free Radicals in Biology and Medicine 2003, vol. 35 Suppl., S147](#)
50. Giovindasamy Ilangovan, **Anna Bratasz**, and Periannan Kuppusamy, Direct Visualisation of Emergency of hypoxia in a Growing Tumor, Society for Free Radical Biology and

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51. Nathan M Weir, **Anna Bratasz**, Periannan Kuppusamy, Modulation of Thiol Level in Human Ovarian Cancer Cells Treated with Cisplatin, Society for Free Radical Biology and Medicine 10th Annual Meeting (SFRBM), Seattle, Washington, November 2003, [Free Radicals in Biology and Medicine 2003, vol. 35 Suppl., S172](#)
 52. Govindasamy Ilangovan, **Anna Bratasz**, and Periannan Kuppusamy, Monitoring the Hypoxia During Tumor Growth by EPR Imaging, Society for Free Radical Biology and Medicine 10th Annual Meeting (SFRBM), Seattle, Washington, November 2003, [Free Radicals in Biology and Medicine 2003, vol. 35 Suppl., S169](#)
 53. **Anna Bratasz**, Govindasamy Ilangovan, Periannan Kuppusamy, In Vivo Imaging of Tissue Oxygenation During Growth and after Irradiation, Workshop on EPR Studies of Viable System, (especially in vivo and Related Technique (especially Oximetry) in Dartmouth, 2004
 54. **Anna Bratasz**, Periannan Kuppusamy, EPR Imaging of Alterations in Tissue Oxygenation during Tumor Growth and Post-irradiation (oral presentation), 6th Workshop on Applications of EPR in Biology and Medicine, Krakow 2004
 55. **Anna Bratasz**, Govindasamy Ilangovan, Periannan Kuppusamy, Changes in Intracellular Oxygenation during Tumor Growth and after Irradiation, 11th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 17-21 2004, St. Thomas, Virgin Island, USA; [Free Radicals in Biology and Medicine 2004, vol.37\(Suppl.1\):S169](#)
 56. **Anna Bratasz**, Frederick Villamena, Shi Du Yan, Periannan Kuppusamy, In Vivo Imaging of Oxidative Stress in the Brain Tissue of Mice with Alzheimer's Disease, 11th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 17-21 2004, St. Thomas, Virgin Island, USA; [Free Radicals in Biology and Medicine 2004, vol.37\(Suppl.1\):S150](#)
 57. Govindasamy Ilangovan, Sola Osinbowale, **Anna Bratasz**, Periannan Kuppusamy, Jay Zweier, Heat-shock Regulates the Respiration of Cardiac H9c2 Cells through Upregulation of Nitric Oxide Synthase, 11th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 17-21 2004, St. Thomas, Virgin Island, USA; [Free Radicals in Biology and Medicine 2004, vol.37\(Suppl.1\): S83](#)
 58. **Anna Bratasz**, Yuanmu Deng, Rammasamy Pandian, and Periannan Kuppusamy, Imaging of Tissue Oxygenation During Tumor Growth, In Vivo, The International Conference/Workshop on Electron Paramagnetic Resonance Spectroscopy and Imaging of Biological Systems, A joint meeting of the 8th International EPR Spin Trapping Meeting & 11th In Vivo EPR Spectroscopy and Imaging, September 4-8, 2005, Columbus, Ohio, USA
 59. **Anna Bratasz**, John D. Grechula, Nilendu Gupta, and Periannan Kuppusamy, In Vivo Imaging of Tissue Oxygenation During Radiotherapy of the Tumor, The International Conference/Workshop on Electron Paramagnetic Resonance Spectroscopy and Imaging of Biological Systems, A joint meeting of the 8th International EPR Spin Trapping Meeting & 11th In Vivo EPR Spectroscopy and Imaging, September 4-8, 2005, Columbus, Ohio, USA

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61. Sola Osinbowale, **Anna Bratasz**, Nathan Weir, Jing Fang, Periannan Kuppusamy, An EPR Based Assay for the Determination of Thiols in Intact Cells and Tissues, The International Conference/Workshop on Electron Paramagnetic Resonance Spectroscopy and Imaging of Biological Systems, A joint meeting of the 8th International EPR Spin Trapping Meeting & 11th In Vivo EPR Spectroscopy and Imaging, September 4-8, 2005, Columbus, Ohio, USA
62. Deepti Vikram, **Anna Bratasz**, Periannan Kuppusamy, A Comparative Evaluation of EPR versus OxyLite Oximetry on the Regional pO₂ Measurements in RIF-1 Tumor, The International Conference/Workshop on Electron Paramagnetic Resonance Spectroscopy and Imaging of Biological Systems, A joint meeting of the 8th International EPR Spin Trapping Meeting & 11th In Vivo EPR Spectroscopy and Imaging, September 4-8, 2005, Columbus, Ohio, USA
63. Nathan Weir, **Anna Bratasz**, Periannan Kuppusamy, Cytostatic Effects of an Imidazolidine Nitroxyl Biradical on Cisplatin Resistant Human Ovarian Cancer Cells, The International Conference/Workshop on Electron Paramagnetic Resonance Spectroscopy and Imaging of Biological Systems, A joint meeting of the 8th International EPR Spin Trapping Meeting & 11th In Vivo EPR Spectroscopy and Imaging, September 4-8, 2005, Columbus, Ohio, USA
64. Govindasamy Ilangovan, C.D. Venkatakrishnan, **Anna Bratasz**, Arturo Cardounel, Jay Zweier, and Periannan Kuppusamy, Hyperthermia induced attenuation of hydroxyl radical generation and mitochondrial aconitase activity in cardiac cells, 12th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 16-20 2005, Austin, Texas, USA, *Free Radicals in Biology and Medicine*, 2005, vol.39 (Suppl.1):S25
65. **Anna Bratasz**, Aditi Kulkarni, Periannan Kuppusamy, Imaging of Oxygen Concentration in Tumor Tissue Using an Injectable Probe, Perchlorotriphenylmethyl Radical in Hexafluorobenzene, 13th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 16-19 2006, Denver, Colorado, USA, *Free Radicals in Biology and Medicine*, 2006, vol.41 (Suppl.1):S99
66. Tennille Presley, **Anna Bratasz**, C.D. Venkatakrishnan, Periannan Kuppusamy, Jay Zweier, Govindasamy Ilangovan, Does endogenous NO inhibit Cellular Respiration at Hypoxic Conditions?, 13th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), November 16-19 2006, Denver, Colorado, USA, [*Free Radicals in Biology and Medicine*, 2006, vol.41 \(Suppl.1\):S53](#)
67. Aditi C. Kulkarni, **Anna Bratasz**, Periannan Kuppusamy, A New Spin Probe for High Resolution In Vivo Oximetry and Imaging, 51th Annual Meeting of Biophysical Society, March 3-7, 2007, Baltimore, Maryland
68. Tennille Presley, **Anna Bratasz**, Periannan Kuppusamy, Jay Zweier, Govindasamy Ilangovan, 51th Annual Meeting of Biophysical Society, March 3-7, 2007, Baltimore, Maryland

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70. Deepti S. Vikram, **Anna Bratasz**, Rizwan Ahmad, and Periannan Kuppusamy, A comparative evaluation of EPR and OxyLite oximetry using a random sampling of pO₂ in murine tumor, A Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling, April 29- May 3, 2007, Chicago
71. Galina I. Roshchupkina, **Anna Bratasz**, Andrey A. Bobko, Vladimir A. Reznikov, Periannan Kuppusamy, and Valery V. Khramtsov, In vitro and in vivo EPR measurement of thiols using improved disulfide biradical probe, A Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling, April 29- May 3, 2007, Chicago
72. **Bratasz A.**, Selvendiran K., Khramtsov V.V., and Kuppusamy P., NO-releasing aspirin derivative (NCX-4040), induces apoptosis and depletes of intracellular thiols in cisplatin-resistant human ovarian xenograft tumors (oral presentation), VIIth International Workshop on EPR (ESR) in Biology and Medicine, 2007, Krakow, Poland
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75. Karuppaiyah Selvendiran, M. Lakshmi Kuppusamy, **Anna Bratasz**, Liyue Tong, Brian Rivera, Cameron Rink, Chandan K. Sen, Tamas Kalai, Kalman Hideg, and Periannan Kuppusamy, Inhibition of Smooth Muscle Cell Proliferation and Balloon Injury-Induced Neointimal Hyperplasia Through Activation of PTEN Expression by HO-3867, a Synthetic Curcuminoid, US-JSPS EPR Core-to-Core Symposium, Columbus, OH
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77. Liyue Tong, Karuppaiyah Selvendiran, **Anna Bratasz**, Nancy Trigg, Brian Rivera, Tamas Kalai, Kalman Hideg, Periannan Kuppusamy, Safe and targeted anti-tumor (STAT) therapeutics by difluoroketones: A novel drug-design targeting the STAT3 pathway in the treatment of ovarian cancer, SFRBM's 15th Annual Meeting, November 19 - 23, 2008, Indianapolis, Indiana USA, [Free Radical Biology & Medicine, 2008, vol.45:S51](#)
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Muscle Cell Proliferation and Balloon Injury-Induced Neointimal Hyperplasia through Activation of PTEN Expression by HO-3867, a Synthetic Curcuminoid, SFRBM's 15th Annual Meeting, November 19 - 23, 2008, Indianapolis, Indiana USA, [*Free Radical Biology & Medicine*, 2008, vol.45:S149](#)

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