CURRICULUM VITAE

Apostolos Stathopoulos

16, Rue Belle-Vue-4974-Dippach-Luxemburg Tel: (EU) +32477432971, (US) +14242785252 Nationality: Belgian Birth: 16/06/1971, Volos-Greece E-mail: tstath@hotmail.com Website: www.immunoneurosurgery.com



Current Positions

Director of Neurosurgery: Polyclinique de Poitiers, France

Chief Executive Officer & Founder of ERC Belgium S.A.

Visiting Professor: Department of CellBiology and Immunology of Wageningen University & Research.

Adjunct Associate Professor of Neurological Surgery at the KeckSchool of Medecine of the University Of Southern California

Professional Experience

Chief of Neurosurgery and surgical neuro-oncology, Department of Neurosurgery South Cliniques of Luxembourg- Belgium

Director of Neurosurgery: Athens Euroclinic Hospital, Athens-Greece

Education

DOCTORATE IN CELL BIOLOGY and IMMUNOLOGY, on October 26, 2012

Wageningen University, The Netherlands

Dissertation: 'Therapeutic brain cancer targeting by gene therapy and immunomodulation. A translational study' ISBN 978-94-6173-363-4

SPECIALISED DOCTOR IN NEUROSURGERY, Awarded <u>NEUROSURGEON of Liège</u> on June 22, 2006 Summa cum Laude/Pass with Distinction

Doctorate in Medical Science, UniversitéLibre de Bruxelles, BelgiumSumma cum laude/Pass with Distinction June 2000

Degree in Medical Science, Université de Mons, Belgium 1996

Specialization in neurosurgery:

Université de Liège, Belgium University of Southern California Los Angeles,U.S.A Internship in the Neurosurgery Department at Brigham and Women's Hospital Children's Hospital,**Harvard** Medical School, Boston, U.S.A., Supervisor:**Pr Peter Black.**

Additional Training

 Advanced Practical Workshop, European Commission Biotechnology Programme The Federation of the European Biochemical Societies (FEBS) Certificate in In Vitro Practical Techniques for Neuroscience.Bristol, July 1998

- The European Association of Neurosurgical Societies-Part 1EANS European Examination, August 2004 Certificate of Training in Environmental Health and Safety
- University of Southern California Los Angeles, U.S.A, June 2005 Certificate of completion to Post-Procedure Care of Mice and Rats
- University of Southern California Los Angeles, U.S.A, July 2005 Certificate of completion to Working with Laboratory Rabbits-USC
- University of Southern California Los Angeles, U.S.A, July 2005 Certificate of completion to Working with Laboratory Rats-USC
- University of Southern California Los Angeles, U.S.A, July 2005 Certificate of completion to Working with Laboratory Mice-USC
- University of Southern California Los Angeles, U.S.A, July 2005 Certificate of completion to Working with the IACUC
- University of Southern California Los Angeles, U.S.A, July 2005 Fellowship in Neuro-Oncology
- University of Southern California Los Angeles, U.S.A, February 2006

Scientific Interests-Research Projects

October 1996

Neurosurgery Department (Prof. J. Brotchi) and Institute for Interdisciplinary Research in Human and Nuclear Biology (Prof. TH. Velu, I.R.I.B.H.N).

Faculty of Medicine, UniversitéLibre de Bruxelles (U.L.B)

a. Improvement of detection of cells genetically modified by AAV vectors by fusing the gfp carrying gene and the trans-membrane protein IsK. Techniques used for gfp-IsK fusion.

b. Generation and evaluation of AAV (adeno-associated virus) vectors expressing neurotrophic factors for genetic therapy of Parkinson's and Huntington's disease.

c. Experimentation invivo:

- i) Expression of the gfp-carrying gene in the striatum of an adult rat after stereotactic injection of an AAV vector (technique taught by Prof. M. Levivier.) Visualisation of the gfp-gene on frozen slides by immunocytochemistry.
- ii) Improvement of survival of a graft of mid-brain ventral fetal tissue genetically modified by AAV-CMV-GDNF in the striatum of an adult rat in an experimental model of Parkinson's disease in rats.

d. Study of toxicity of the proteic sub-unit: "ISK-Potassium channel" in human glial cell.

July 1998

Cardiac Surgery Department: **Prof. J. L. Leclerc Proposal of the most suitable vector for gene therapy carrying the angiogenesis gene as therapeutic agent in myocardicischemia.**

October 1998

Neurosurgery Department: **Prof. J. Brotchi Electrostimulation of sub-thalamic nucleus in a patient of 40 years of age with Parkinson's disease.**

Neurology Department: **Prof. J. Hildebrand Evaluation of the functioning of the experimental prototype of electrophysiological recording of the different basal nuclei in adult rats.**

April 2005-Currently

U.S.C Department of Neurosurgery Chief of the brain tumor research center: **Thomas Chen MD PhD Brain tumor rejection by immuno-modulation**

Publications in International Journals with Review Board

Cellular contaminants of adeno-associated virus vector stocks can enhance transduction. L.Tenenbaum, M.Hamdane, M. Pouzet, B. Avalosse, A. Stathopoulos, F. Jurysta, C. Rosenbaum, CO. Hanemann, M. Levivier, and T. Velu (1999) Gene Therapy 6, 1045-1053.

Efficiency and cell type specificity of gene transfer mediated by an adeno-associated virus derived vector in various regions of the rat brain. A. Stathopoulos, L.Tenenbaum, F. Jurysta, Z. Puschban, T. Velu, and M. Levivier(1998) Cell Biology International, vol. 23 (2), 144-145.

Tropism of AAV vectors for neurons of the globus pallidus. L.Tenenbaum, F. Jurysta, A. Stathopoulos, Z.Puschban, C. Melas, W. Hermens, J. Verhaaghen, T. Velu, and M. Levivier (2000) Neuroreport vol. 11 (10), 2277-2283.

Efficient and sustained transduction of human and rat fetal ventral mesencephalon mediated by adenoassociated virus vectors.E. Lehtonen, L. Tenenbaum, F. Bonnaud, A. Chtarto, A. Stathopoulos, F. Rodesh, T.Velu, M. Peschanski, J. Brotchi, and M. Levivier (2001) Parkinsonism & Related Disordersvol. 7 Supplement, S39.

Efficient early and sustained transduction of human fetal mesencephalon using adeno-associated virus type **2 vectors.** L.Tenenbaum, M. Peschanski, C. Melas, F. Rodesch, E. Lehtonen, A. Stathopoulos, T. Velu, J. Brotchi, andM. Levivier (2004) Cell Transplantation, 13(5):565-71.

Overexpression of mouse IsK protein fused to green fluorescent protein induces apoptosis of human astroglioma cells. A.Stathopoulos, C. Melas, B. Attali, D. Blum, M. Levivier, J. Brotchi, T. Velu, and L.Tennebaum (2007) Neurol Res, Sep;29(6):628-31.

Therapeutic vaccination against malignant gliomas based on allorecognition and syngeneic tumor antigens: Proof of principle in two strains of rat. A.Stathopoulos, Samuelson C, Milbouw G, Hermanne JP, Schijns VEJC, and Chen TC. (2008) Vaccine 26:1764-1772.

Development of immune memory to glial brain tumors after tumor regression induced by immunotherapeutic Toll-like receptor 7/8 activation. Apostolos Stathopoulos, ChrystelPretto, Laurent Devilliers, Denis Pierre, Florence M. Hofman, Carol A. Kruse, Martin Jadus, Thomas C. Chen, and Virgil E.J.C. Schijns. (2012) Oncolmmunology 1:3, 1–8.

Exploring the Therapeutic Efficacy of Glioma Vaccines Based on Allo-and Syngeneic Antigens and Distinct Immunological CostimulationActivators. Apostolos Stathopoulos, ChrystelPretto, Laurent Devillers, DenisPierre, Florence M. Hofman, HoomanFarghadani, Carol A. Kruse, Martin Jadus, Thomas C. Chen, and Virgil Schijns (2012) J Clin Cell Immunol, S5.

Therapeutic targeting of malignant glioma. Alexandru-Abrams D, Jadus M, Hsu F, Stathopoulos A, and Bota D.(2014) Anticancer Agents Med Cjem. 14(8):1075-84 Review.

First clinical results of a personalized immunotherapeutic vaccine against recurrent, incompletely resected, treatment-resistant glioblastoma multiforme (GBM) tumors, based on combined allo-and auto-immune tumor reactivity. Schijns VE, Pretto C, Devillers L, Pierre D, Hofman F, Chen T, Mespouille P, Hantos P, GlorieuxP, Bota D, and Stathopoulos A. (2015) Vaccine 33(23):2690-6.

Use of ERC-1671 Vaccine in a patient with Recurrent Glioblastoma Multiforme after Progression during Bevacizumab Therapy: First Published Report. Bota D, Alexandru-Abrams D, Pretto C, Hofman F, Chen T, FuB, Carrillo J, Schijns V, and Stathopoulos A. (2015) Perm J, 19(2):41-46.

A Personalized immunotherapeutic vaccine (GLIOVAC or ERC1671) against recurrent glioma multiforme (GBM).Schijns VE, Bota DA, and Stathopoulos A. (2015) Brain Disorder, S:2.

Press Book

29th Annual meeting Soc. For Neuroscience, Miami, 23-28 Oct. 1999. **AAV-mediated transduction of human fetal brain tissue.**

Annual meeting of the Belgian Neurosurgery Society at UCL Hospital, Mont-Godinne, March 23, 2002. **Anterior cervical spine fusion using P.E.E.K. material cages avoiding iliac crest spongiosa: Experiences and results**.A.Stathopoulos, V. Petrov C.H.R Namur, Centre Hospitalier Universitaire de Liege, Service de Soins Intensifs Generaux et Centre des Brules.

EANS Training course Krakow, 22- 26 August 2004. Evolutive disease of Ihermitte-duclos: Case report and review of the literature.

Spring meeting of Belgian Society of Neurology K.U.L, Leuven, March 2006. **Rejection of Subcutaneously Implanted Malignant Gliomas via Immunodulation in Two Strains of Rat: Proof of Principle.**A.Stathopoulos, C. Samuelson, M. Jabbour, V. Gupta, E. Aertgeerts, W. Wang, G. Milbouw, J.P. Hermanne, B. Kaschten, V. Petrov, J.M. Van de Velde, F. Hofman, A. Schonthal, and T.Chen.

Grand rounds Department of neurosurgery U.S.C Los Angeles, March 2007. Therapeutic vaccination against Malignant Gliomas based on allorecognition and syngeneic tumor antigens: Proof of Principle in Two Strains of Rat.

Brain Tumor immunotherapy Symposium Aspen Colorado, August 2007. Elimination of Intracranial Gliomas via Immune Rejection of Subcutaneous Allogeneic Glioma Cell Lysate.

Cell Biology and Immunology-Thesis October 2012. **Therapeutic brain cancer targeting by gene therapy and immunomodulation.A translational study.** ISBN 978-94-6173-363-4

Abstracts

Cellular specificity of AAV vectors-mediated transduction in vitro and in vivo.L. Tenenbaum, M. Pouzet, A. Stathopoulos, F. Jurysta, M. Hamdane, B. Avalosse, W. Hermens, J. Verhaagen, C. Rosenbaum, O. C. Hanemann, T. Velu, and M. Levivier (1998): Society for Neuroscience Abstracts, 24:1307.

AAV-mediated transduction of human fetal brain tissue.L. Tenenbaum, F. Bonnaud, M. Peschanski, C. Melas, G. Saber, A. Stathopoulos, F. Rodesh, T. Velu, and M. Levivier (1999): SocNeurosc: Abst n° 2126.

AAV-mediated expression of an IsK-GFP fusion protein in human glial cell lines. A. Stathopoulos, L. Tenenbaum, C. Melas, B. Attali, T. Velu, and M. Levivier (1999): Society for Neuroscience Abst n°13247.

Cellular tropism of AAV-mediated transduction in the rat brain.L. Tenenbaum, F. Jurysta, A. Stathopoulos, Z. Puschban, T. Velu, and M. Levivier (1999): Cell Transplantation, vol.8 n°4 p416

Toxicity of ISK-Potassium channel subunit in human glial cell lines. A. Stathopoulos, C. Melas, B. Attali, E. Lehtonen, F. Jurysta, A. Charto, T. Velu, M. Levivier, and L. Tenenbaum

(March 18, 2000): Spring meeting of the Belgian Society for Cell Biology.

Efficient early and sustained AAV-mediated transduction of humain and rat fetal brain tissue. L. Tenenbaum, F. Bonnau, A. Charto, C. Melas, G. Saber, A. Stathopoulos, F. Rodesch, T. Velu, M. Peschanski, and M. Levivier (June 28-July 2, 2000): VIII th Parvovirus Workshop, Hôtel Club Tremblant. Mont-Tremblant, Quebec, Canada.

Rejection of Subcutaneously Implanted Malignant Gliomas via Immunodulation in Two Strains of Rat: Proof of Principle. A. Stathopoulos, C. Samuelson, M. Jabbour, V. Gupta, E. Aertgeerts, W. Wang, G. Milbouw, J.P. Hermanne, B. Kaschten, V. Petrov, J.M. Van de Velde, F. Hofman, A. Schonthal, and T.C. Chen. (11/03/06) Spring meeting of Belgian Society of Neurology K.U.L Leuven.

Presentations to National and International Scientific Congresses

International Conference on Vectors for Gene Therapy, Brussels, March 12-14, 1998 Oral Communication: **AAV vectors: Infectious titer does not correlate with transducing titer.** L. Tenenbaum, M. Hamdane, M. Pouzet, B. Avalosse, A. Stathopoulos, C. Rosenbaum, O. Hanemann, F. Jurysta, W. Hermens, J. Verhaagen, T. Velu, and M. Levivier.

Symposium of the Belgian Biochemistry and Molecular Biology Society, Namur, October 1998. Poster: Efficiency and cell type specificity of gene transfer mediated by an adeno-associated virus derived vector in various regions of the rat brain.

A. Stathopoulos, L. Tenenbaum, F. Jurysta, Z. Puschban, T. Velu, and M. Levivier.

28th Annual Meeting of the Society for Neuroscience, Los Angeles, November 1998. Poster: Cellular specificity of AAV vectors-mediated transduction in vitro and in vivo.

L. Tenenbaum, M.Pouzet, A.Stathopoulos, F.Jurysta, M.Hamdane, B.Avalosse, W.Hermens, J.Verhaagen, C.Rosenbaum, O.C.Hanemann, T.Velu, and M.Levivier.

10th Annual NECTAR (Network European CNS transplantation and Restoration) meeting, Amsterdam, December 1998. **Cellular tropism of AAV vectors-mediated gene transfer in the rat brain.** L. Tenenbaum, F. Jurysta, A. Stathopoulos, C. Melas, Z. Puschban, T. Velu, and M. Levivier.

29th Annual Meeting Soc. For Neuroscience, Miami, October 1999.

- 1. L.Tenenbaum, F.Bonnaud, M.Peschanski, C.Melas, G.Saber, A.Stathopoulos, F.Rodesh, T.Velu, and M.Levivier. Aav-mediated transduction of human fetal brain tissue.
- 2. A.Stathopoulos, L.Tenenbaum, C.Melas, B.Attali, T.Velu, and M.Levivier. **Aav-mediated expression of a** isk-gfp fusion protein in human glial cell lines.

SociétéFrancaise de Neurochirurgie, Guadeloupe, January 2000.

Transplantation of genetically-modified fetal brain tissue: A new aproach to improve graft survival in **Parkinson's disease.**M.Levivier, L.Tenenbaum, F.Bonnaud, C.Melas, G.Saber, A.Stathopoulos, F.Rodesch, T.Velu, M.Peschanski, and J.Brotchi.

Spring Meeting of the Belgian Society for Cell Biology, Brussels, March 2000.

Poster: Toxicity of ISK-Potassium channel subunit in human glial cell lines.

A. Stathopoulos, C.Melas, B.Attali, E.Lehtonen, F.Jurysta, A.Charto, T.Velu, M.Levivier, and L.Tenenbaum.

IV International Congress on Parkinson's Disease, Helsinki, July 2001.

Poster: Efficient and sustained transduction of human and rat fetal ventral mesencephalon mediated byadeno- associated virus vectors.

E. Lehtonen, L. Tenenbaum, F. Bonnaud, A. Chtarto, A. Stathopoulos, F. Rodesh, T. Velu, M. Peschanski, J. Brotchi, and M. Levivier.

XXIth Colloquium of the Development of Biology Group, Villefranche sur Mer, May 2002.

Poster: Efficient transduction of human and rat fetal ventral mesencephalon mediated by adeno-associated virus.E.Lehtonen^{1,2}, F.Bonnaut⁴, C.Melas^{1,2}, A.Lubansu¹, A.Chtarto^{1,2}, A.Stathopoulos^{1,2}, F.Rodesch³,

virus.E.Lehtonen^{1,2},F.Bonnaut⁴, C.Melas^{1,2}, A.Lubansu¹, A.C T.Velu²,M.Penschanski⁴, J.Brotchi¹, M.Levivier¹, and L. Tenenbaum^{1,2},

¹ Lab. Experimental Neurosurgery and ² I.R.I.B.H.N; ³DeptGynaecology, U.L.B.-HôpitalErasme, Brussels, Belgium, ⁴ INSERM U421, Créteil, France.

Department of Intensive Care: Prof. P. Damas, Department of Neurosurgery: Prof. A.Stevenaert, Department of Anaesthesia: Prof. M.Lamy September-October 2003 Monthly Anaesthesia-Reanimation-Neurosurgery Meeting, C.H.U Liège, September 23, 2003.

Presentation: The Role of Decompressive Craniectomy in the Treatment of Uncontrollable Post-TraumaticIntracranial Hypertension Indication and Results.

Annual meeting of the Belgian Neurosurgery Society at UCL Hospital, Mont-Godinne.March 2004. Poster:

Evolutive disease of Lhermitte-duclos: Case report and review of the literature. Stathopoulos A. 1, Lenelle J.1, Deprez M. 2, Stevenaert A.1 1 Department of Neurosurgery and 2 Department of neuropathology. CHU Sart-Tilman- Liege, Belgium.

2nd Congress is the Danube-Carpathian Region, Cluj-Napoca (Romania) May 2012. Controversies in Neurosurgery.**Vaccination against Glioblastoma: Project Evaluation and Results.**

2nd Annual Conference of ICCTI (Immunotherapy and cell therapy clinical trials) Brno (Czech Republic), November 2012.

Report of ERC-1671 Vaccine Use in Recurrent GBM Patients.

17th Annual Meeting of the Society for Neuro-Oncology, Washington, November 2012.

First Report of ERC-1671 Vaccine Use in Recurrent GBM patients. Daniela A. Bota, ChrystelPretto, Peter Hantos, Florence M. Hofman, Thomas C. Chen, Jise A. Carillo, Virgil E. Schijns, and Apostolos Stathopoulos.

Congrès Annuel de la Société de Neurochirurgie de Langue Française, Paris, November 2012.

Vaccinutiliséchez des patients attaints d'unerécidive de glioblastome.(Use of vaccine in recurrent glioblastoma patients). A. Stathopoulos, G. Milbouw, P. Glorieux, Ch. Pretto, P. Hantos, Fl. Hofman, Th. Chen, J. Carrillo, V. Schijns, and D. Bota. Neuro-Oncology 2012

Adult Brain Tumor Consortium, Baltimore, December 2012.

Presentation of ERC-1671 Vaccine Use in GBM patients at the Adult Brain Tumor Consortium (ABTC).J.Elliot, A. Stathopoulos

Other Oral Presentations

Brigham and Women's Hospital Children's Hospital Harvard Medical School Department of Neurosurgery Prof. P. Black: September-October 1999 Weekly Neurosurgery Seminar. Presentation of Own Research: **Aav-mediated expression of isk-gfp fusion protein in human glial cell lines.**

Rotary Club Val Duchesse (Brussels): 'Gene transfer into rat and human ventral mid-brain tissue by means of recombinated viral vector based on adeno-associated virus (AAV)' on May 23, 2000.

Grants

Youth Travel Fund of the Federation of European Biochemical Societies(FEBS) Travel grant to take part in FEBS course: *In vitro* Practical Techniques for Neuroscience Bristol,14-24 July1999. D.R.I.(DepartmentofInternationalRelations,FreeUniversityofBrussels)

GrantforClinicalInternshipatHarvardMedicalSchool.BayerAwardfromBelgiumsociety of Neurosurgery Travel grant to take part in main experience at the brain tumor lab of U.S.C Los Angeles, December2006.

GrantawardedbyBayerfromBelgiumsocietyofNeurosurgeryfor'Braintumorsubcutaneouslyimplantedandrejected by immune modulation in two strains of rat' on Mars 18,2006.

Prizes

Final Year Prize, 4th High School, Volos, 1989.

Prize awarded by Rotary Club Val Duchesse (Brussels) for 'Gene transfer into rat and human ventral mid-brain tissue by means of a recombinated vector based on adeno-associated virus (AAV)' May 23, 2000.

Patents

Tumor Vaccine Comprising Allogeneic or Xenogeneic tumor cells PCT/EP2007/050807 Vaccine, Therapeutic Composition and Methods for Treating or Inhibiting Glioblastoma PCT/US11/57654

Languages

Greek (Native Language) French English

Personal Information

Married: 2 children

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