

Stratikos, Efstratios (http://sites.google.com/site/stratikos/)	Senior Investigator National Center for Scientific Research Demokritos
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EDUCATION/TRAINING

University of Athens, Greece	B.S.	1994	Chemistry
Univ. of Illinois Medical School, Chicago, IL, USA	Ph.D.	1999	Biochemistry
Harvard University, MA, USA	Postdoctoral	1999-2004	Biochemistry/Molecular Biology

ACADEMIC APPOINTMENTS

2005-2008	Researcher, National Center for Scientific Research "Demokritos", Athens, Greece
2009-Present	Senior Researcher, National Center for Scientific Research "Demokritos", Athens, Greece

TEACHING EXPERIENCE

1994-1999	Teaching assistant in Biochemistry courses for Medical and Dental Students (Univ. of Illinois)
2005-present	Invited lecturer in multiple graduate courses and workshops. Lecture topics include: <ul style="list-style-type: none"> • Protein Structure and Function (University of Athens, Chemistry Department) • Proteins: Nature's Nano Machines (NCSR Demokritos Summer School) • Introduction to proteins and proteomics (NCSR Demokritos graduate course) • Biochemical pathways of antigen processing and presentation (Univ. of Athens, Chemistry Department and Department of Physiology, Univ. of Athens Medical school). • Biochemical and Protein Mechanisms of the Adaptive Immune Response" (Univ. of Athens, Department of Biology, Protein Summer School). • Exploring the human immune system through the eyes of a chemist... (NCSR "Demokritos" Summer School series).
2006-present	Supervised 3 M.S. Theses, 1 Diploma thesis and 2 PhD Theses in the period 2006-2012. Currently supervising 3 M.S. students and 2 PhD students.

RESEARCH FUNDING

2001-2004	Helen Hay Whitney Postdoctoral Grant (\$120,000, fellow)
2004-2006	The Medical Foundation Postdoctoral Grant (\$85,000, fellow).
2006-2007	Marie-Curie European Reintegration Grant "ERAP1" (€80000, PI)
2007-2008	NCSR Demokritos "Demoerevna" grant award (€15000, PI)
2007-2009	European Specific Target Research Grant "HDLomics" (€2,700,000 total, €210,000 for NCSR, team member)
2007-2008	"Empeirikion" institution Research grant (€8000, co-PI)
2010-2011	Hellenic Rheumatology Society Research grant (€4000, co-PI)
2010-2011	Hellenic Society of Lipidology and Atherosclerosis Research Grant (€8000, co-PI)
2011-2012	Hellenic Society for Atherosclerosis Research Grant (€5000, co-PI)
2012-2014	Greek Secretariat for R&T, postdoctoral training grant "Immunoreg" (€150,000, co-supervisor)
2012-2015	Greek Secretariat for R&T, "Thalis" network project grant "HDL bio-therapies" (€600,000, co-PI)
2012-2015	Greek Secretariat for R&T, "Aristeia" excellence grant no. 986 (€280,000 coordinator)
2012-2013	Hellenic Society of Lipidology and Atherosclerosis Award (€5000, co-PI)
2013-2015	Greek Secretariat for R&T action "Funding retained ERC proposals" grant no. ERC-14 (€584,000 coordinator)
2013-2014	Hellenic Rheumatology Society Research grant (€2000, co-PI)
2013-2015	Greek Secretariat for R&T action "Greece-France collaboration" grant no. HIAP (€30,000 coordinator)
2013-2014	Biostruct-X grant 4518 "Structural basis for epitope selection in antigen cross-presentation"

PEER-REVIEWED PUBLICATIONS

37. Argyri L, Dafnis I, Theodossiou TA, Gantz D, Stratikos E*, Chroni A*. Molecular basis for increased risk for late-onset Alzheimer's disease due to the naturally occurring Leu28Pro mutation in apolipoprotein E4.
J Biol Chem. 2014 Mar 18.
36. Stratikos E*. Modulating antigen processing for cancer immunotherapy.
Oncolmmunology, Volume 3, Issue 1, e27568.
35. Zervoudi E, Saridakis E, Birtley JR, Seregin S., Reeves E, Kokkala P, Aldhamen YA, Amalfitano A, Mavridis IM, James E, Georgiadis D and Stratikos E*. A rationally designed inhibitor targeting antigen-trimming aminopeptidases enhances antigen presentation and cytotoxic T-cell responses.
Proc Natl Acad Sci USA, 2013 in press.
34. Fotakis P, Tiniakou I, Kateifides AK, Gkolfinopoulou C, Chroni A, Stratikos E, Zannis VI, Kardassis D. Significance of the hydrophobic residues 225 to 230 of apoA-I for the biogenesis of HDL.
J Lipid Res. 2013 Oct 12.
33. Stratikos E*, Chroni A. A possible structural basis behind the pathogenic role of apolipoprotein E hereditary mutations associated with lipoprotein glomerulopathy.
Clin Exp Nephrol. 2013 Oct 23.
32. Seregin SS, Rastall DP, Evnouchidou I, Aylsworth CF, Quiroga D, Kamal RP, Godbehere-Roosa S, Blum CF, York IA, Stratikos E, Amalfitano A. Endoplasmic reticulum aminopeptidase-1 alleles associated with increased risk of ankylosing spondylitis reduce

- HLA-B27 mediated presentation of multiple antigens.
Autoimmunity. 2013 Sep 13.
31. Fotakis P, Katefides A, Gkolfinopoulou C, Georgiadou D, Beck M, Grundler K, Chroni A, Stratikos E, Kardassis D, Zannis VI. Role of the hydrophobic and charged residues in the 218 to 226 region of apoA-I in the biogenesis of HDL.
J Lipid Res. 2013 Aug 29.
30. Papakyriakou A, Zervoudi E, Theodorakis EA, Saveanu L, Stratikos E, Vourloumis D. Novel selective inhibitors of aminopeptidases that generate antigenic peptides.
Bioorg Med Chem Lett. 2013 Sep 1;23(17):4832-6.
29. Vanhille DL, Hill LD, Hilliard DD, Lee ED, Teves ME, Srinivas S, Kusanovic JP, Gomez R, Stratikos E, Elovitz MA, Romero R, Strauss JF 3rd. A Novel ERAP2 Haplotype Structure in a Chilean Population: Implications for ERAP2 Protein Expression and Preeclampsia Risk.
Mol Genet Genomic Med. 2013 Jul 1;1(2):98-107.
28. Stratikos E*, Stern LJ. Antigenic peptide trimming by ER aminopeptidases-Insights from structural studies.
Mol Immunol. 2013 Mar 29.
27. Georgiadou D, Stamatakis K, Efthimiadou E, Kordas G, Gantz D, Chroni A,* and Stratikos E*. Thermodynamic and structural destabilization of apolipoprotein E3 by hereditary mutations associated with the development of Lipoprotein Glomerulopathy
J Lipid Res 2013 Jan;54(1):164-76.
26. Georgiadou D, Chroni A, Drosatos K, Kypreos KE, Zannis VI, Stratikos E*. Allele-dependent thermodynamic and structural perturbations in ApoE variants associated with the correction of dyslipidemia and formation of spherical ApoE-containing HDL particles
Atherosclerosis 2013 Feb;226(2):385-91.
25. Duka A, Fotakis P, Georgiadou D, Katefides A, Tzavlaki K, von Eckardstein L, Stratikos E, Kardassis D, Zannis VI. Apolipoprotein A-IV promotes the biogenesis of apoA-IV containing HDL particles with the participation of ABCA1 and LCAT.
J Lipid Res. 2013 Jan;54(1):107-15.
24. Evnouchidou I, Birtley J, Seregin S, Papakyriakou A, Zervoudi E, Samiotaki M, Panayotou G, Giastas P, Petrakis O, Georgiadis D, Amalfitano A, Saridakis E, Mavridis IM and Stratikos E.* A common SNP in ER aminopeptidase 2 induces a specificity switch that leads to altered antigen processing.
J Immunol. 2012, Sep 1;189(5):2383-92
23. Birtley JR, Saridakis E, Stratikos E*, Mavridis IM*. Crystal Structure of Human ER Aminopeptidase 2 Reveals Atomic Basis for Distinct Roles in Antigen Processing.
Biochemistry, 2012 Jan 10;51(1):286-95.
22. Georgiadou D, Chroni A, Vezeridis A, Zannis VI and Stratikos E*. Biophysical analysis of apolipoprotein E3 variants linked with development of Type III Hyperlipoproteinemia.
PLoS ONE, 2011;6(11):e27037.
21. Zervoudi E, Papakyriakou A, Georgiadou D, Evnouchidou, I., Gajda, A., Poreba, M., Salvesen, G. S., Drag, M., Hattori, A., Swevers, L., Vourloumis, D., and Stratikos, E.* Probing the S1 specificity pocket of the aminopeptidases that generate antigenic peptides.
Biochem J, 2011, 435, 411-420
20. Nguyen, T. T., Chang, S. C., Evnouchidou, I., York, I. A., Zikos, C., Rock, K. L., Goldberg, A. L., Stratikos, E., and Stern, L. J. Structural basis for antigenic peptide precursor processing by the endoplasmic reticulum aminopeptidase ERAP1.
Nat Struct Mol Biol 2011 18, 604-613
19. Kim, S., Lee, S., Shin, J., Kim, Y., Evnouchidou, I., Kim, D., Kim, Y. K., Kim, Y. E., Ahn, J. H., Riddell, S. R., Stratikos, E., Kim, V. N., and Ahn, K. Human cytomegalovirus microRNA miR-US4-1 inhibits CD8(+) T cell responses by targeting the aminopeptidase ERAP1.
Nat Immunol 2011 12, 984-991
18. Evnouchidou, I., Kamal, R. P., Seregin, S. S., Goto, Y., Tsujimoto, M., Hattori, A., Voulgari, P. V., Drosos, A. A., Amalfitano, A., York, I. A., and Stratikos, E.* Coding single nucleotide polymorphisms of endoplasmic reticulum aminopeptidase 1 can affect antigenic peptide generation in vitro by influencing basic enzymatic properties of the enzyme.
J Immunol 2011 186, 1909-1913
17. Argyri, L., Skamnaki, V., Stratikos, E., and Chroni, A. A simple approach for human recombinant apolipoprotein E4 expression and purification.
Protein Expr Purif 2011 79, 251-257
16. Georgiadou D, Hearn A, Evnouchidou I, Chroni A, Leondiadis L, York IA, Rock KL and Stratikos, E*. Placental leucine aminopeptidase efficiently generates mature antigenic peptides in vitro but in patterns distinct from endoplasmic reticulum aminopeptidase 1.
J Immunol 2010 185, 1584-1592
15. Dafnis, I., Stratikos, E., Tzinia, A., Tsilibary, E. C., Zannis, V. I., and Chroni, A. An apolipoprotein E4 fragment can promote intracellular accumulation of amyloid peptide beta 42.
J Neurochem 2010 115, 873-884
14. Georgiadou, D., and Stratikos, E.* Cellular mechanisms that edit the immunopeptidome.
Current Proteomics 2009 6, 13-24
13. Evnouchidou, I., Papakyriakou, A., and Stratikos, E.* A New Role for Zn(II) Aminopeptidases: Antigenic Peptide Generation and Destruction.
Curr Pharm Design 2009 15, 3656-3670
12. Evnouchidou, I., Berardi, M. J., and Stratikos, E.* A continuous fluorogenic assay for the measurement of the activity of endoplasmic reticulum aminopeptidase 1: Competition kinetics as a tool for enzyme specificity investigation.
Anal Biochem 2009 395, 33-40
11. Evnouchidou, I., Momburg, F., Papakyriakou, A., Chroni, A., Leondiadis, L., Chang, S. C., Goldberg, A. L., and Stratikos, E.* The internal sequence of the peptide-substrate determines its N-terminus trimming by ERAP1.

10. Chroni, A., Pyrpassopoulos, S., Thanassoulas, A., Nounesis, G., Zannis, V. I., and *Stratikos, E.* Biophysical analysis of progressive C-terminal truncations of human apolipoprotein E4: insights into secondary structure and unfolding properties. *Biochemistry* 2008 47, 9071-9080
 9. *Stratikos, E.*, Wiley, D. C., and Stern, L. J. Enhanced catalytic action of HLA-DM on the exchange of peptides lacking backbone hydrogen bonds between their N-terminal region and the MHC class II alpha-chain. *J Immunol* 2004 172, 1109-1117
 8. *Stratikos, E.*, Mosyak, L., Zaller, D. M., and Wiley, D. C. Identification of the lateral interaction surfaces of human histocompatibility leukocyte antigen (HLA)-DM with HLA-DR1 by formation of tethered complexes that present enhanced HLA-DM catalysis. *J Exp Med* 2002 196, 173-183.
 7. Backovic, M., *Stratikos, E.*, Lawrence, D. A., and Gettins, P. G. Structural similarity of the covalent complexes formed between the serpin plasminogen activator inhibitor-1 and the arginine-specific proteinases trypsin, LMW u-PA, HMW u-PA, and t-PA: use of site-specific fluorescent probes of local environment. *Protein Sci* 2002 11, 1182-1191
 6. *Stratikos, E.*, and Gettins, P. G. Formation of the covalent serpin-proteinase complex involves translocation of the proteinase by more than 70 Å and full insertion of the reactive center loop into beta-sheet A. *Proc Natl Acad Sci USA* 1999 96, 4808-4813
 5. *Stratikos, E.*, and Gettins, P. G. Mapping the serpin-proteinase complex using single cysteine variants of alpha1-proteinase inhibitor Pittsburgh. *J Biol Chem* 1998 273, 15582-15589
 4. Futamura, A., *Stratikos, E.*, Olson, S. T., and Gettins, P. G. Change in environment of the P1 side chain upon progression from the Michaelis complex to the covalent serpin-proteinase complex. (1998) *Biochemistry* 1998 37, 13110-13119
 3. *Stratikos, E.*, and Gettins, P. G. Major proteinase movement upon stable serpin-proteinase complex formation. *Proc Natl Acad Sci USA* 1997 94, 453-458
 2. *Stratikos, E.*, Alberdi, E., Gettins, P. G., and Becerra, S. P. Recombinant human pigment epithelium-derived factor (PEDF): characterization of PEDF overexpressed and secreted by eukaryotic cells. *Protein Sci* 1996 5, 2575-2582
 1. Konstantianos, D. G., Ioannou, P. C., and *Stratikos, E.* Simultaneous determination of naproxen and its desmethyl metabolite in human serum by second-derivative synchronous fluorescence spectrometry. *Analytica Chimica Acta* 1994 290, 34-39
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