Peristera Paschou June 2022

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1.GENERAL INFORMATION

A. Education

- 2002-2005 Diplomate of the American Board of Medical Genetics (August 2005) Clinical Molecular Genetics Specialty. Yale University School of Medicine, Department of Genetics Medical Genetics Training Program
- **2002-2005** Postdoctoral Training, <u>Yale University School of Medicine</u>, Department of Genetics (Supervisor: Kenneth K. Kidd)
- 1999-2002 National University of Athens, PhD in Human Genetics

Thesis: "Molecular Determinants of the Etiology and Pathogenesis of Insulin Dependent Diabetes"

- 2001 <u>Institut Pasteur, Paris</u>, training fellowship Study of the genetics of Type 1 Diabetes Mellitus in Greek families
- 1999-2000 University of Oxford, "Wellcome Trust Centre for Human Genetics" training fellowship whole genome screening for the identification of disease loci
- **1997-1999** National University of Athens, Faculty of Nursing MSc Dissertation: "Genetic Counseling in Type 1 Diabetes Mellitus"
- 1992-1997 National University of Athens, Faculty of Nursing BSc

B. Present Position

2021-today Professor, Department of Biological Sciences, Purdue University

2019-today Associate Dean, College of Science, Purdue University

Associate Dean for Graduate Education and Strategic Initiatives (2021-today)

Associate Dean for Graduate and Online Education (2019-2021)

C. Previous Positions

- 2016-2021 Associate Professor, Purdue University, Department of Biological Sciences
- 2018-2019 Inaugural Frederick Hovde Dean's Fellow, College of Science, Purdue University
- 2014-2016 <u>Associate Professor of Population Genetics</u>, Democritus University of Thrace, Department of Molecular Biology and Genetics (with Tenure)
- **2010-2014** <u>Assistant Professor of Population Genetics</u>, Democritus University of Thrace, Department of Molecular Biology and Genetics
- 2011 <u>Adjunct Investigator,</u> National Institute of Child Health and Human Development, Bethesda, USA
- **2005-2010** <u>Lecturer in Population Genetics</u>, Democritus University of Thrace, Department of Molecular Biology and Genetics
- 2007 <u>Visiting Scientist</u>, Center for Neurobehavioral Genetics, Medical School, University of California Los Angeles, USA (October 2007)
- <u>Visiting Specialist</u>, Institute for Human Genetics, University of California San Francisco, USA (June-August, 2006)
- 2003-2005 Postdoctoral Fellow, Department of Genetics, Yale University School of Medicine, USA

- 2002-2003 <u>Postdoctoral Associate</u>, Department of Genetics, Yale University School of Medicine, USA
- 1999-2002 <u>Research Associate</u>, National University of Athens European Cooperation Project: "Diabetes Prediction and Prevention DIPP DEMO Project"
- **1997-1999** Research Associate, National University of Athens European Cooperation Project: "Genomic map of Insulin Dependent Diabetes Mellitus (IDDM)"

D. Awards and Honors

- 2019 Showalter Faculty Scholar (*Press release*)
- University Faculty Scholar, Purdue University (The University Faculty Scholars Program is intended to recognize outstanding mid-career faculty who are on an accelerated path for academic distinction)
- 2015 Latsis Foundation Award 2015 Scientific Studies by Young Researchers
- 2014 Excellence Career Award ARISTEIA II co-funded by Greece and the European Union
- 2010 Platform presentation award, 2010 Hellenic Society for Biochemistry and Molecular Biology meeting, Alexandroupoli, Greece
- 2005 Hellenic Endocrine Society, 1st Research Grant Award
- 2004 Paschou et al. Am J Hum Genet 2004 selected as one of the "Top Ten papers" in 2004 by the Centre of Excellence for Early Childhood Development in Canada
- 1999 "EURODIAB TIGER: EURope and DIAbetes Type 1 Genetic Epidemiology Resource" Training scholarship Wellcome Trust Centre for Human Genetics, University of Oxford

E. Leadership Activities

Purdue University

- **Emerging Leaders Science Scholars, Faculty Director** (Director of Mentoring program for undergraduate students from under-represented backgrounds)
- 2019-today Associate Dean, College of Science
 (2021-today) Associate Dean for Graduate Education & Strategic Initiatives
 (2019-2021) Associate Dean for Online and Graduate Education
- **Co-Chair Integrative Data Science Initiative Curriculum Committee**, Purdue University (campus-wide committee working on the development of a <u>Data Science Education Ecosystem</u> at Purdue Governance of <u>Applications in Data Science undergraduate certificate</u>).
- 2019-today Leadership Team Member, <u>Purdue Institute for Integrative Neuroscience</u>
- **2018-2019 FLAIR Fellow**. <u>Faculty Leadership Academy for Interdisciplinary Research</u>, Purdue EVPRP Office
- **2018-2019 Inaugural Frederick L. Hovde Dean's Fellow.** The program is designed to provide leadership opportunities to selected faculty. As part of the College leadership team, Fellows' projects advance critical goals across the college. Dr Paschou focused on

facilitating the participation of the College in cross-campus Data Science education and research initiatives.

Boards of scientific societies

2022-today	Officer/Board Member – Greater Indiana Society for Neuroscience
2014-2017	Board Member - European Society for the Study of Tourette Syndrome (ESSTS)
2011-2014	Chair - European Society for the Study of Tourette Syndrome (ESSTS)
2011-2012	Treasurer of the Board of Directors - Hellenic Association for Medical Genetics

Coordinator of international cooperation research programs

2017-today Chair of ENIGMA-TS Working Group: Enhancing Neuroimaging Genetics through meta-analysis for Tourette Syndrome. (http://enigma.ini.usc.edu/ongoing/enigma-ts/)

2012-2016 Coordinator of "TS-EUROTRAIN: Interdisciplinary training network for Tourette Syndrome; structuring European Training capacities for neurodevelopmental disorders." – Marie Curie Initial Training Network

2011-2015 <u>Work package leader</u> - «<u>EMTICS: European Multicenter Tics in Children Study</u>» FP7-HEALTH.

2010-2014 <u>Chair</u> of the "<u>European Network for the Study of Gilles de la Tourette Syndrome</u>" (Multidisciplinary consortium of investigators from 23 European countries – Funded by *COST – European Cooperation in Science and Technology*).

2009-2014 <u>Steering Committee Member</u> of the international research project «GGRI - Gilles de la Tourette Syndrome Genome Wide Association Study Replication Initiative» (PI: Dr Jeremiah Scharf, MGH, Funded by the *National Institute of Neurological Disorders and Stroke, USA*)

2008-today Coordinator of the international research project «Tourette Syndrome Genetics. The Southern and Eastern Europe Initiative» (Scientific network of investigators from seven European countries – Funded by the *Tourette Syndrome Association, USA*) (http://tsgenesee.mbg.duth.gr/)

F. Professional and Scholarly Associations

- Greater Indiana Chapter Society for Neuroscience
- American Society for Human Genetics
- International Society for Psychiatric Genetics
- European Society for the Study of Tourette Syndrome

II. LEARNING

A. Teaching Assignments at Purdue (last 5-7 years only)

Semester	Year	Course #	Title, Credit, Type	Enroll.	Student Classification.
Fall	2021	BIOL	Neurological and	13	Graduate
		69500	Neuropsychiatric		
			Disorders		
			Lecture/Seminar (2cr)		
Fall	2019	BIOL	Neurological and	13	Graduate
		69500	Neuropsychiatric		
			Disorders		
			Lecture/Seminar (2cr)		
Fall	2018	BIOL	Neurological and	18	Graduate
		69500	Neuropsychiatric		
			Disorders		
			Lecture/Seminar (2cr)		
Fall	2018	BIOL	Human Genetics (2cr),	50	Junior/Senior
		44400	Lecture		
Fall	2017	BIOL	Human Genetics (2cr),	47	Junior/Senior
		44400	Lecture		

B. Selected Discussion of Courses Human Genetics - BIOL 44400

This is a fascinating time to be studying genetics. The first human genome took billions of dollars, a huge international team of scientists and technicians, and about eight years to complete in 2003. Today, a whole human genome can be sequenced for less than \$1,000 and in about one day. Given the computational and technical ability to handle all these data, our knowledge of human evolution, development and disease now grows by leaps and bounds every year. This course builds on students' foundations in genetics and extends into the study of human genetics. A detailed discussion of the modes of inheritance as well as pathophysiology and clinical phenotype for a broad range of human disorders is covered. Upon completion, students will be able to explain the molecular mechanisms by which genetic information is passed from person to person, how genetic information influences and is influenced by its environment, and how mutations occur and their implications. Students will also be able to discuss the genetics of a broad spectrum of human disorders and how genetic technologies and methods are employed in the diagnosis and treatment of disease as well as in genetics research. The course includes lectures by Prof Paschou as well as student presentations on assigned topics.

Neurological and Neuropsychiatric Disorders Lecture/Seminar - BIOL 69500

The aim of this multidisciplinary course is to provide graduate students with an understanding of the neurobiological basis, treatment strategies and potential goals for future research for a broad range of disorders affecting the nervous system. Students have the opportunity to benefit from a broad range of expertise from faculty across the Purdue campus. Student presentations cover papers focusing on translational research. Students are exposed to state-of-the-art methodological approaches across different disciplines and fields ranging from biology and genetics to neuroimaging and biotechnology. The course was developed with the support of the Purdue Institute for Integrative Neuroscience.

C. Other Teaching Experience: Department of Molecular Biology and Genetics, Democritus University of Thrace, Greece

D. Other Contributions to Undergraduate Education

- As **Associate Dean at the College of Science**, Dr Paschou coordinated the development of <u>43</u> undergraduate courses in online format with a goal to create an online version of the entire first year of curriculum for Science and Engineering students at Purdue University (<u>First Year Online Project</u>).
- As **Associate Dean at the College of Science**, Dr Paschou helped coordinate discussions on revising the <u>Data Science Major Curriculum at Purdue</u>. This includes integration of offerings across three different College of Science Departments (Computer Science, Mathematics and Statistics) and launching three different tracks for the program.
- As **Associate Dean at the College of Science**, Dr Paschou coordinated an agreement of partnership between <u>Purdue Dept of Computer Science and Egypt's Ministry of Communication</u>, <u>Information and Technology</u> to launch a Dual BS/MS degree program in Computer Science and Information Security (August 2020).
- As **Co-Chair of the Integrative Data Science Initiative Curriculum Committee**, Dr Paschou coordinated the <u>launch and update of the Applications in Data Science Undergraduate Certificate Program</u>. This is a University-wide program aiming to provide foundational knowledge in Data and the opportunity to apply this knowledge in specific application domains.
- Undergraduate thesis supervisor 30 students at Democritus University of Thrace, Dept of Molecular Biology and Genetics (see also Undergraduate Students section)

III. DISCOVERY

A. Discussion of Research

Summary of most significant accomplishments

Dr Paschou works on the analysis of population genomics datasets aiming to disentangle population genetic relationships around the world and uncover the genetic background of complex disease. Throughout her academic career, she has established and led multiple large international research consortia and she has been an advocate for interdisciplinary research. Her work has led to discoveries that leverage the strength of genomics towards clinical translation and personalized medicine. Examples of Dr Paschou's most innovative and highest impact scientific contributions include: (1) The identification of the first definitive genes for Tourette Syndrome, a neuropsychiatric disorder of childhood that affects up to 1% of the population; (2) The development of a novel algorithmic framework that can dissect genetic structure and identify the ancestry and genetic relationships of human populations; (3) The discovery of the migration routes undertaken by our ancestors in the Neolithic period as they moved from the Middle East towards Europe bringing with them the knowledge of farming and a new way of life.

Dr Paschou's multidisciplinary research has led to close to 80 peer-reviewed scientific publications in Population Genetics and Genetic Epidemiology. Her work has been featured in multiple venues of the popular media, such as BBC and National Geographic. Her papers appear in widely recognized interdisciplinary journals such as Proceedings of National Academy of Sciences (PNAS), Nature Communications, Neuron, and Cell Reports and top ranked scientific journals in genetics such as Molecular Psychiatry, the American Journal of Human Genetics, PLOS Genetics, and Genome Research.

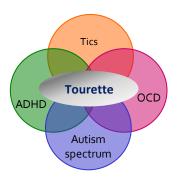
Dr Paschou has been very successful in pursuing international collaborations. She has brought together scientists across different disciplines with an aim to understand the cause of neuropsychiatric disorders of childhood and has led several large-scale international consortia in this direction. For instance, funded by the European Union, she coordinated a COST Action (European Cooperation in Science and Technology) which led to the development of an interdisciplinary network of more than 200 researchers from 23 different countries aiming to elucidate the cause of Tourette Syndrome and identify novel therapies. This program fostered the growth of the European Society for the Study of Tourette Syndome (ESSTS) and, in recognition of her contributions and strong leadership, Dr Paschou was elected ESSTS Chair and served on the Board of ESSTS Officers from 2010-2017.

Elucidating the cause of childhood neurodevelopmental disorders

For more than 18 years, Dr Paschou has been leading efforts to elucidate the genetic basis of multifactorial disorders with a particular focus on neurodevelopmental phenotypes. She has pioneered investigations in the study of the genetic basis of Tourette Syndrome (TS) in multiple populations, implicating multiple novel candidate genes in the etiology of the disorder. TS is an inherited neuropsychiatric disorder of childhood onset, which is characterized by the occurrence of

multiple motor and vocal tics and high comorbidity rates with attention deficit hyperactivity disorder and obsessive compulsive disorder. It has long been considered a model disorder to study the parts of the brain that function at the intersection of our traditional concepts of neurology and psychiatry. TS still remains severely underdiagnosed and recent studies report a prevalence of 0.4-1%. It has become clear that it involves a complex genetic background interacting with multiple environmental factors in order to lead to the onset of symptoms. In the Big Data era, novel technologies allow the

interrogation of millions of genetic variants in thousands of individuals in order to unravel the genetic background of such complex disorders. Dr Paschou has established and continues to lead multiple large-scale collaborative efforts of multidisciplinary teams of experts aiming to understand the genetic basis of TS, including the most recently funded NINDS consortium aiming to perform a mega-GWAS on more than 12,000 patients. She has previously established the Tourette Syndrome Genetics Southern and Eastern Europe Initiative, the genomics Working Group of the EU-funded European Multicenter Tics in Children Study and the TS Working Group within the worldwide consortium ENIGMA (Enhancing Neuroimaging Genetics through meta-analysis).

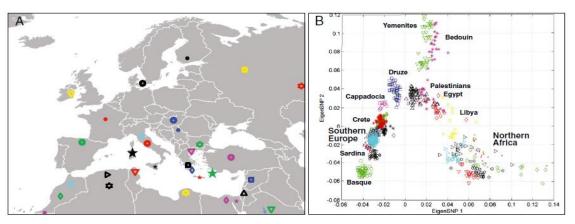


Dr Paschou pioneered studies of Tourette Syndrome, a model neurovelopmental disorder.

Dr Paschou has played a leading role in establishing some of the largest biobanks for TS, including samples and clinical information from thousands of individuals from around the world. She then led genomic analysis of these samples, using genomewide genotyping and genomewide sequencing methods and this work led to the identification of the first definitive genes for TS. For instance, Dr Paschou was a lead author in work that appeared in 2019 in the American Journal of Psychiatry, presenting the largest GWAS for TS to date and the first genomewide significant hit (Yu et al. 2019). In 2017 she was also a leading author in work that appeared in Neuron, one of the most influential and relied upon journals in the field of neuroscience; the study reports the largest ever genome scan for TS interrogating copy number variants (CNVs - a type of structural genomic variation) and shows that approximately 1% of TS cases carry a CNV on one of the genes NRXN1 or CNTN6 (Huang et al. 2017). These genes are so-called cell adhesion molecules and play important roles in neural network formation. Another example of the high impact of her work on TS is a study that appeared in 2018 in Cell Reports, in which Dr Paschou led the whole-genome sequencing analysis of a sample of 800 nuclear families with TS identifying additional novel genes that underlie TS risk (Wang et al. 2018). This was the largest family sample for TS analyzed to date and its study uncovered noninherited variants (new mutations) in a significant number of patients, implicating the biological pathway that underlies cell polarity. The identified genes point to spatial differences in shape, structure, and function within a cell, and are fundamental for special functions such as the transmission of signals in one direction in neurons. In collaboration with colleagues from around the world, Dr Paschou continues to work towards the ultimate goal of identification of novel targets for drug treatment and psychotherapy in TS seeking to improve management of the disorder and increase the quality of life for patients and their families. She is currently leading an effort (NINDS

R01 – MPI Paschou) to study an unprecedented sample of 12,000 patients with TS from around the world and she recently established the ENIGMA-TS working group with 15 collaborating sites aiming to bring together neuroimaging and genetic datasets in order to understand brain structure and function in TS. This effort is now supported by an additional R01 award to Dr Paschou.

Uncovering ancient migration routes of human populations



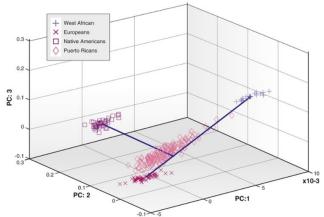
In Paschou et al 2014 (PNAS), Dr Paschou studied samples from 32 populations from around the Mediterranean basin (A) showing that the islands of the Aegean are a bridge that connects gene flow from Anatolia to Southern Europe (B. Projection on top principal components of 75,000 genetic markers from 32 populations). This was contrary to the common belief that our ancestors mainly migrated through land from the Near East towards Europe.

The study of population genetic structure can be applied to the discovery of disease genes as shown in the examples of Dr Paschou's research earlier here, but it can also elucidate the history of our species. Dr Paschou has worked together with renowned geneticist George Stamatoyannopoulos (who performed the first large-scale molecular geographical survey of a genetic trait, revealing the relationship between malaria and both thalassemia and sickle cell traits) to build an important biobank documenting population genetic diversity at a fine scale around the Mediterranean basin. Working at the intersection of genomics and data science, Dr Paschou analyzed genomewide data from this sample leading to high impact papers that attracted great publicity and were featured in multiple media outlets (e.g., NBC, BBC, National Geographic, Le Figaro). In work that appeared in Nature Communications (Hughey et al. 2013), using state of the art statistical methodologies, Dr Paschou contributed significantly in addressing the question of the origin of the ancient Minoan population by analyzing mitochondrial DNA from Minoan osseous remains found in a cave in Crete. Refuting the hypothesis of Sir Arthur Evans, who proposed a North African origin of the Minoans, the study showed that, in fact, the Minoans bear the greatest genetic relationship to Neolithic and modern populations from Europe. In work that appeared in the leading interdisciplinary journal PNAS (again attracting considerable attention from the scientific community and the popular media), Dr Paschou addressed the long-debated question of the Neolithic colonization of Europe by farmers from the Near East (Paschou et al. 2014). Using sophisticated techniques, she observed a striking structure correlating genes with geography around the Mediterranean Sea and showed that the first farmers migrating from Anatolia (what is today Syria and Palestine) to Europe via a

maritime route, with the Aegean islands acting as a bridge that connected Near East to Southern Europe.

Uncovering population genetic structure and individual ancestry

In highly cited work, Dr Paschou led a series of papers on the selection of genetic markers that can be used to identify the origin of individuals and dissect population genetic structure. Her work has important impact in forensics clinical studies. population genetics and has also been transferred to the fields biotechnology, with possible use for instance in the study of economically important traits, breeding programs, efforts to conserve biodiversity, and the traceability of breed-specific



Top three principal components of genomewide data showing ancestry contributions in an admixed Puerto Rican population (Paschou et al PLoS Genetics, 2007). This figure is also used in Thompson & Thompson's Genetics in Medicine 8th edition, a classic reference textbook in the field.

branded products. For example, Dr Paschou's paper on PCA-correlated SNPs, which appeared in PLOS Genetics, is an example of interdisciplinary research, at the interface of Genetics and Computer Science (Paschou et al. 2007). Based on Principal Components Analysis Dr Paschou developed a novel algorithm that could be applied on genomewide datasets for the selection of a small subset of ancestry informative markers that can be used to discriminate different populations. Most recently, Dr Paschou, in collaboration with colleagues from Purdue Dept of Computer Science and in work that was led by a PhD student she co-advised (Co-Chair of committee) she published a novel software tool, TeraPCA, a C++ implementation of the Randomized Subspace Iteration method to perform Principal Component Analysis of large-scale datasets of millions of individuals over millions of genetic markers (Bose et al. 2019). Such tools are expected to become of extreme significance in the Big Data era allowing the biobank-scale analysis of genomic data.

Popular Press (selected press-releases discussing Dr Paschou's work)

ENIGMA-Tourette Syndrome

 May 2022 – <u>Purdue press release</u> - Largest worldwide Tourette syndrome genetics and neuroimaging study also promises insight into related disorders

Population genetic structure in India

• January 2021 – <u>Purdue press release</u> – New study links India's genetic diversity to language not geography.

January 2021 – Language – not Geography major force behind India's gene flow – <u>Big</u>
 THINK press release

Investigating population genetic structure in a tera scale

• <u>TeraPCA</u> (a scalable, multi-threaded software package to compute the top principal components of terascale matrices). *Purdue press-release*

Understanding the genetic basis of Tourette Syndrome

- February 2021 *Spectrum NEWS website* Common variants link Tourette, autism, ADHD, and OCD.
- June 2017 <u>Purdue press-release:</u> Tourette Syndrome risk increases in people with genetic copy variants
- June 2017 <u>NIH press release</u>: Researchers uncover genetic gains and losses in Tourette Syndrome
- June 2017 **Boston Herald**: Gene find may aid in Tourette treatment
- July 2012 European Cooperation in Science and Technology Newsroom: COST
 Action BM0905 underpins proposal for a Marie Curie Initial Training Network on Tourette Syndrome (TS)
- October 2005 <u>Bulletin of the Centre of Excellence for Early Childhood Development</u>, <u>Canada:</u> How will Tourette Syndrome strike within a family next?

Population genetic structure in the Peloponnese

• March 2017 – <u>Vima Science</u>: DNA contradicts Fallmerayer theory (one of the top newspapers in Greece – article in Greek).

Maritime route of colonization of Europe

- June 2014 New Scientist: Island-hopping odyssey brought civilisation to Europe
- June 2014 *Science:* First farmers were also sailors
- June 2014 *National Geographic*: Ancient Europe colonized by island hoppers?
- June 2014 Le Figaro (in French): Lire dans l'ADN l'histoire du peuplement
- June 2014 Scinexx.de (in German): Die ersten Bauern kamen über den Seeweg
- June 2014 Le Scienze (in Italian): La via insulare delle migrazioni neolitiche
- June 2014 TO VIMA (in Greek): Farming arrived to Europe by ship
- June 2014 TA NEA (in Greek): The Greek islands as a bridge of evolution

MIT Enterprise Forum Greece press-release

• September 2013 - FORTUNE Greece.com (article in Greek), *Entrepreneurship and Innovation in Genomics and Biotechnology*

Minoan genetic ancestry press-releases

- May 2013 *Nature News:* Minoan civilization was made in Europe
- May 2013 **BBC News:** DNA reveals origin of Greece's ancient Minoan culture
- May 2013 NBC News: Mysterious Minoans really were European, DNA finds

- May 2013 *Live Science*: Mysterious Minoans were European
- May 2013 *USA Today: Europe's first civilization was home grown*
- May 2013 **RPI News:** DNA analysis unearths origins of Minoans
- May 2013 **TO VIMA (in greek):** Modern Cretans descended from the Minoans
- May 2013 *Proto Thema (in greek):* Cretans are descendants of the Minoans
- May 2013 *Kriti TV (in greek)*: Minoans were the first Europeans

PCA-correlated SNPs and population structure press-releases

- April 2008 Yahoo! News: Computer program reveals anyone's ancestry
- April 2008 *LiveScience* and NSF: Computer program reveals anyone's ancestry
- August 2008 <u>ScienceDaily</u>: Pinpointing genetic variations in European Americans
- September 2007 <u>ScienceDaily:</u> Tracing your ancestry:
- September 2007 Scitizen article: DNA markers and computer science methodology can be used to trace individual ancestry

B. Publications

* indicates primary author, Paschou lab author codes: Post-Doctoral; Graduate student; Undergraduate student; PC Pre-collegiate student.

Dr. Paschou has published in the following journals listed in order of the most recent impact factor: <u>Science</u> (IF 37.2), <u>Cell_(IF:36.21)</u>, <u>Neuron</u> (IF: 13.97), <u>Am J Psychiatry</u> (IF: 13.4), <u>Mol Psychiatry</u> (IF: 13.20), <u>Nature Communications</u> (IF: 12.12), <u>Biological Psychiatry</u> (IF: 12.09), <u>Genome Research</u> (IF: 11.35), <u>Molecular Biology and Evolution</u> (IF: 11.06), <u>Annals of Neurology</u> (IF: 9.89), <u>Proceedings of the National Academy of Sciences USA</u> (IF: 9.66), <u>Am J Hum Genet</u> (IF: 9.02), <u>Neurology</u>. (IF:8.32), <u>Cell Reports</u> (IF: 8.28), <u>Neurosci Biobehav Rev</u> (IF: 8.23), <u>Nat Rev Dis Primers</u> (IF: 6.39), <u>PLoS Genetics</u> (IF: 6.10), <u>J Med Genet</u> (IF: 5.45), <u>Neurobiol Aging</u> (IF: 5.15), <u>Human Genetics</u> (IF: 4.64), <u>Am J Med Genet</u> (IF: 4.44), <u>Eur J Hum Genet</u> (IF: 4.35), <u>Pharmacogenomics</u> (IF: 3.85), <u>Genes Brain Behav</u> (IF: 3.74), <u>Front Neurosci</u> (IF: 3.56), <u>Front Psychiatry</u> (IF: 3.53), <u>Cytokine</u> (IF: 3.49), <u>Eur Child Adolesc Psychiatry</u> (IF: 3.34), <u>Diabetes Metab Res Rev</u>. (IF: 3.26), <u>Spine J</u> (IF: 3.02), <u>PLoS ONE</u> (IF: 2.80), <u>Diab Vasc Dis Res</u> (IF: 2.5), <u>BMC Bioinformatics</u>. (IF: 2.45), <u>Int J Legal Med</u>. (IF: 2.38), <u>Biological Journal of the Linnean Society</u>, (IF: 2.29), <u>Annals of Human Genetics</u> (IF: 1.31), <u>Journal of Pediatric Endocrinology and Metabolism</u> (IF: 1.23)

Based on Google Scholar Report June 4, 2022:

Total number of citations: 4,848

h-index: 34 i10-index: 55

Complete list of published work available on PubMed in MyBibliography (use link below)

https://pubmed.ncbi.nlm.nih.gov/?term=paschou+p&sort=date

1. Refereed

- 1. Tsekmekidou X^g, Tsetsos F^p, Koufakis T, Georgitsi M, Papanas N, Papazoglou D, Roumeliotis A, Panagoutsos S, Thodis E, Theodoridis M, Passadakis P, Maltezos E, **Paschou P**, Kotsa K (2021). Variants in clock genes could be associated with lower risk of type 2 diabetes in an elderly Greek population. Maturitas 152:20-25.
- 2. Levy AM, **Paschou P**, Tümer Z (2021). Candidate Genes and Pathways Associated with Gilles de la Tourette Syndrome-Where Are We? Genes (Basel) 26;12(9):1321.
- 3. Roumeliotis A, Roumeliotis S, Tsetsos F, Georgitsi M, Georgianos PI, Stamou A, Vasilakou A, Kotsa K, Tsekmekidou X, **Paschou P**, Panagoutsos S, Liakopoulos V (2021). Oxidative Stress Genes in Diabetes Mellitus Type 2: Association with Diabetic Kidney Disease. Oxid Med Cell Longev Sep 2;2021:2531062.
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- 74. Palmatier MA, Pakstis AJ, Speed W, **Paschou P**, Goldman D, Odunsi A, Okonofua F, Kajuna S, Karoma N, Kungulilo S, Grigorenko E, Zhukova OV, Bonne-Tamir B, Lu RB, Parnas J, Kidd JR, DeMille MM, Kidd KK (2004). COMT haplotypes suggest P2 promoter region relevance for schizophrenia. *Mol Psychiatry* 9, 859-870. (**IF: 13.20**)
- 76. **Paschou P**, Malamitsi A, Bozas E, Havarani B, Dokopoulou M, Bartsocas CS (2004). HLA alleles and Type 1 Diabetes in low disease incidence populations of Southern Europe; a comparison of Greeks and Albanians. *Journal of Pediatric Endocrinology and Metabolism* 17, 173-182. (**IF: 1.23**)
- 77. Hermann R, Bartsocas CS, Soltesz G, Vazeou A, **Paschou P**, Bozas E, Malamitsi-Puchner A, Simell O, Knip M, Ilonen J (2004). Genetic screening for individuals at high risk for type 1 diabetes in the general population using HLA Class II alleles as disease markers. A comparison between three European populations with variable rates of disease incidence. <u>Diabetes Metab Res Rev</u> 20,322-329. (**IF: 3.26**)
- 78. Ilonen J, Sjoroos M, Knip M, Veijola R, Simell O, Akerblom HK, **Paschou P**, Bozas E, Havarani B, Malamitsi-Puchner A, Thymelli J, Vazeou A, Bartsocas CS (2002). Estimation of genetic risk for type 1 diabetes. *Am J Med Genet* 115, 30-36. (**IF: 4.44**)

2. In Press

NA

3. Submitted

79. Bose A^g, Burch MC, Chowdhury A, **Paschou P**, Drineas D. CluStrat: a structure informed clustering strategy for population stratification (available in BioRxiv)

4. Book Chapters

- 1. **Tsetsos F**^p, Drineas P, **Paschou P*** (2019). Genetics and Population Analysis. In Elsevier Encyclopedia Of Bioinformatics and Computational Biology, Oxford: Elsevier.
- 2. **Paschou P**, Fernandez TV, Sharp F, Heiman GA, Hoekstra PJ (2013). Genetic susceptibility and neurotransmitters in Tourette syndrome. Int Rev Neurobiol 112:155-177.
- 3. **Paschou P***, Hoekstra P, Heiman GA (2015). Genetics of Tourette Syndrome. In LeDoux M. Movement Disorders: Genetics and Models, Academic Press Elsevier, p. 713-731, Academic Press Elsevier.
- 4. Georgitsi M, **Paschou P*** (2016). Chapter 5.3: The role of genetics in Type 2 Diabetes Mellitus, in: Diabetes Mellitus- Current Views (ed. Kazakos Kyriakos, 1st ed., Broken Hill Publishers LTD, Nicosia, Cyprus (in Greek).
- 5. Vazaiou A, **Paschou P**, Bartsocas CS (2001). Prediction of Type 1 Diabetes. In Melidonis A. Predicting Diabetes and its complications, p 21-62, Athens (in Greek).

Textbooks - scientific editing (Greek editions)

- 1. Scientific editor of Greek edition iGenetics. A Mendelian Approach. P.J. Russell. Academic Publishing 2009
- 2. Scientific editor of Greek edition Pharmacogenomics: Social, Ethical, and Clinical Dimensions. M.A. Rothstein. Parisianos Scientific Publishing 2008
- 3. Scientific editor of Greek edition Evolution. N.H. Barton, D.E.G. Briggs, J.A. Eisen, D.B. Goldstein, N.H. Patel. Utopia Publishing (in press)

5. Abstracts

- 1. J. Bryant, G. Reynolds, A. Topaloudi, P. Paschou. Genetic Similarities and Differences between Autoimmune Disorders. Virtual poster presentation. Presented at: Indiana Clinical and Translational Science (CTSI) Retreat, February 2022. Virtual meeting
- 2. B. Raber, Y. Jin, P. Paschou. Mendelian randomization of inflammatory biomarkers involving RAGE and COX-2 pathway for cognitive decline. Virtual poster presentation. Presented at: Indiana Clinical and Translational Science (CTSI) Retreat, February 2022. Virtual meeting
- 3. Y. Jin, P. Drineas, P. Paschou. Concordance of genetic variants that affects 12-months change in inflammatory and amyloid-beta biomarkers and that also influences neuroimaging biomarker changes. Virtual poster presentation. Presented at: Indiana Clinical and Translational Science (CTSI) Retreat, February 2022. Virtual meeting
- 4. P. Jain, M. Burch, M. Martinez, P. Drineas, P. Paschou. Determining the Genetic risk of Complex Disorders in Global populations. Virtual poster presentation. Presented at: American Society of Human Genetics 2021 Annual Meeting. October 2021. Virtual meeting

- 5. Y. Jin, P. Drineas, P. Paschou. Concordance of genetic variants that affects 12-months change in inflammatory and amyloid-beta biomarkers and that also influences neuroimaging biomarker changes. Virtual poster presentation. Poster presented at: American Society of Human Genetics 2021 Annual Meeting, October 2021. Virtual meeting
- 6. A. Topaloudi, Z. Zagoriti, A. Flint, M. Martinez, Z. Yang, F. Tsetsos, Y. Christou, G. Lagoumintzis, E. Yannaki, E. Papanicolaou-Zamba, J. Tzartos, X.i Tsekmekidou, K. Kotsa, E. Maltezos, N. Papanas, D. Papazoglou, P. Passadakis, A. Roumeliotis, S. Roumeliotis, M. Theodoridis, E. Thodis, S. Panagoutsos, J. Yovos, J. Stamatoyannopoulos, K. Poulas, K. Kleopa, S. Tzartos, M. Georgitsi, P. Paschou. A Myasthenia Gravis genomewide association study implicates AGRN as a risk locus. Virtual poster presentation. Presented at: American Society of Human Genetic 2021 Annual Meeting. October 2021. Virtual meeting
- 7. Z. Yang, P. Paschou, P. Drineas, Reconstructing SNP Allele and Genotype Frequencies from GWAS Summary Statistics. Virtual poster presentation. Presented at: American Society of Human Genetics 2021 Annual Meeting, October 2021, Virtual meeting
- 8. Y. Zou, Y. Jin, J. Rispoli. Investigating the reliability of Combat for harmonizing diffusion MR images acquired at a single site with multiple echo times. Virtual poster presentation. Poster presented at: International Society for Magnetic Resonance in Medicine Conference, May 2021. Virtual meeting
- 9. M. Martinez, A. Topaloudi, P. Jain, P. Paschou. Application of Polygenic Risk Scores to understand Phenotypic Associations of Neurological Autoimmune Diseases. Virtual poster presentation. Presented at: Purdue Undergraduate Research Conference. April 2021. Virtual meeting
- 10. A. Flint, A.Topaloudi, P. Paschou. Key Genetic Contributors to Myasthenia Gravis and Other Autoimmune Disorders. Virtual poster presentation. Presented at: Greater Indiana Society for Neuroscience 2021 Annual Meeting. April 2021. Virtual meeting
- 11. M. Martinez, A. Topaloudi, P. Jain, P. Paschou. Application of Polygenic Risk Scores to understand Phenotypic Associations of Neurological Autoimmune Diseases. Virtual poster presentation. Presented at: Greater Indiana Society for Neuroscience 2021 Annual Meeting. April 2021. Virtual meeting
- 12. A. Topaloudi, Z. Zagoriti, A. Flint, M. Martinez, Z. Yang, F. Tsetsos, Y. Christou, G. Lagoumintzis, E. Yannaki, E. Papanicolaou-Zamba, J. Tzartos, X.i Tsekmekidou, K. Kotsa, E. Maltezos, N. Papanas, D. Papazoglou, P. Passadakis, A. Roumeliotis, S. Roumeliotis, M. Theodoridis, E. Thodis, S. Panagoutsos, J. Yovos, J. Stamatoyannopoulos, K. Poulas, K. Kleopa, S. Tzartos, M. Georgitsi, P. Paschou. A Myasthenia Gravis genomewide association study implicates AGRN as a risk locus. Virtual poster presentation. Presented at: Greater Indiana Society for Neuroscience 2021 Annual Meeting. April 2021. Virtual meeting
- 13. Z. Yang, PGC Cross-disorder Working group, P. Paschou, Investigating shared genetic basis across Tourette Syndrome and comorbid neurodevelopmental disorders along the impulsivity-compulsivity spectrum. Virtual poster presentation. Presented at Greater Indiana Society for Neuroscience 2021 Annual Meeting, April 2021, Virtual meeting
- 14. A. Flint, A. Topaloudi, P. Paschou. Key Genetic Contributors to Myasthenia Gravis and Other Autoimmune Disorders. Virtual oral presentation. Presented at: Purdue Undergraduate Research Conference. April 2021. Virtual meeting
- 15. **Topaloudi A**^g, **Tsetsos F**^g, Zagoriti Z, Kleopa K, Lagoumintzis G, Zamba-Papanicolaou E, Christou Y, Poulas K, Tzartos S, **Georgitsi M**^p, **Paschou P**. Identifying the genetic basis of

- myasthenia gravis through analysis of genome-wide data. Poster presented at: Annual Meeting of the American Society of Human Genetics; 2019 Oct 15-19; Houston, TX
- 16. **Yang Z^g, Bose A^g**, Drineas P, **Paschou P**. Methods for genotype-based risk prediction for complex neuropsychiatric disorders. 68TH Annual Meeting of The American Society of Human Genetics, October 2018, San Diego, California
- 17. Yang Z^g, Tsetsos F^g, Paschou P. Identifying a shared regulatory background for neurodevelopmental disorders through meta-analysis of genomewide association studies. 67th Annual Meeting of The American Society of Human Genetics, October 2017, Orlando, Florida
- 18. **Bose A^g**, Kalantzis V, Kontopoulou E, **Elkady M^g**, **Paschou P**, Drineas P. TeraPCA: A fast and scalable method to study genetic variation in tera-scale genotypes. October 20, 2017. 67th Annual Meeting of the American Society of Human Genetics, Orlando, Florida.
- 19. **Bose A**^g, Platt DE, Parida L, **Paschou P**, Drineas P. Genetic Variation reveals migrations into the Indian subcontinent and its influence on the Indian society. 66th Annual Meeting of the American Society of Human Genetics, Vancouver, Canada.
- 20. Tsetsos F^g, Koukousi D^u, Mpampali M^u, Padmanabhuni SS^g, Alexander J^g, Karagiannidis I^g, Mantzaris D^p, Georgitsi M^p, Drineas P, and Paschou P. "A common genetic basis between neurodevelopmental disorders of childhood". Annual Meeting of the American Society of Human Genetics. Vancouver, Canada, Oct. 18–22, 2016.
- 21. Tsetsos F^g, Padmanabhuni SS^g, Alexander J^g, Karagiannidis I^g, Tsifintaris M^u, Topaloudi A^g, Mantzaris D^p, Georgitsi M^p, Drineas P, and Paschou P. "Meta-analysis of Tourette Syndrome and Attention Deficit Hyperactivity Disorder provides support for a shared genetic basis". 9th European Conference on Tourette Syndrome and Tic Disorders. Warsaw, Poland, June 8–11, 2016.
- 22. **Alexander J^g, Potamianou H^u,** Xing J, Deng L, Sandor P, Barr C, Tischfield J, **Georgitsi M^p,** Drineas P, Heiman GA, and **Paschou P**. "Variant Ranker: a Web-Tool to Rank Genomic Data According to Functional Significance; Application on a Tourette Syndrome Next Generation Sequencing Dataset". 9th European Conference on Tourette Syndrome and Tic Disorders. Warsaw, Poland, June 8–11, 2016.
- 23. **Houssari R^u, Padmanabhuni SS^g**, Bertelsen B, Esserlind AL, Olesen J, Werge T, Hansen TF, **Tsetsos F^g, Paschou P**, Tumer Z. "Investigation of SNP rs2060546 immediately upstream to NTN4 in a Danish Gilles de la Tourette syndrome cohort". 9th European Conference on Tourette Syndrome and Tic Disorders. Warsaw, Poland, June 8–11, 2016.
- 24. **Tsetsos F**^g, **Alexander J**^g, Yu D, Sul JH, Coppola G, Zelaya I, Drineas P, GGRI, TSAICG, Mathews C, Scharf JM, and **Paschou**, **P**. "Pathway analysis of genome-wide SNP data for Gilles de la Tourette Syndrome shows enrichment in genes expressed in nervous system tissues". World Congress of Psychiatric Genetics. Toronto, Canada, Oct. 16–20, 2015.
- 25. **Tsetsos Fg, Alexander Jg,** Yu D, Sul JH, Coppola G, Zelaya I, Drineas P, GGRI, TSAICG, Mathews C, Scharf JM, and **Paschou, P**. "Pathway analysis of genome-wide SNP data for Gilles de la Tourette Syndrome shows enrichment in genes expressed in nervous system tissues". Annual Meeting of the American Society of Human Genetics. Baltimore, MD, USA, Oct. 6–10, 2015.
- 26. Scharf JM, TSAICG, GGRI, and TIC Genetic. "An international, collaborative genome-wide association study of Tourette Syndrome in 14,000 individuals identifies a non-coding RNA expressed early in human brain development as a TS susceptibility gene". Annual Meeting of the American Society of Human Genetics. Baltimore, MD, USA, Oct. 6–10, 2015.

- 27. Plantinga AM, **Tsetsos F^g**, **Paschou**, **P**, Drineas P, Browning BL, Stamatoyannopoulos G. "Identity by descent analysis reveals fine-scale population structure in Crete". Annual Meeting of the American Society of Human Genetics. Baltimore, MD, USA, Oct. 6–10, 2015.
- 28. Plantinga AM, **Tsetsos Fg, Paschou, P**, Drineas, P, Browning, BL, Stamatoyannopoulos G. "Identity by descent analysis reveals fine-scale population structure in Crete". Joint Statistical Meeting. Seattle, WA, USA, Aug. 8–13, 2015.
- 29. **Tsetsos F^g, Alexander J^g, Yu** D, Sul, JH, Coppola G, Zelaya I, Drineas P, GGRI, TSAICG, Mathews C, Scharf JM, and **Paschou**, **P**. "Pathway Analysis on Genome-wide data for Tourette Syndrome Shows Enrichment in Genes expressed in Nervous System Tissues". 1st World Congress on Tourette Syndrome and Tic Disorders. London, UK, June 24–26, 2015.
- 30. Kovacs GG, Alexander J^g, Kalev O, Mehrabian S, Drineas P, Ströbel T, Paschou P. Early onset familial alzheimer-type dementia associated with tauopathy and TDP-43 proteinopathy. 12th International Congress on Alzheimer's and Parkinson's Diseases, Nice, March 18-22, 2015.
- 31. **Tsetsos F**^g, Yu D, Sul J H, TSAICG, GGRI Consortium, Coppola G, **Paschou P**, Mathews C, Scharf J. A Second Genome Wide Association Study for Tourette Syndrome. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 32. **Karagiannidis I**^g, Yu D, GGRI Consortium, **Paschou P**, Mathews C, Scharf J. The Gilles de la Tourette Syndrome GWAS Replication Initiative reveals significant signal of genetic association near the Netrin 4 gene. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 33. **Alexander J^g, Karagiannidis I^g, Potamianou H^u, Georgitsi M^p**, Xing J³, Sun N, Nasello C, Sandor P, Barr C, Tischfield J, **Paschou P**, Heiman G. Targeted re-sequencing approach of TS candidate genes implicates potentially functional variants in TS etiology. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 34. **Padmanabhuni SS**^g, Ander BP, Sharp F, Drineas P, **Paschou P**. Gene expression studies in TS. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 35. Arranz I, Bertelsen B, Jensen L J, **Paschou P**, Tümer Z. CNV analysis in a large cohort of Tourette syndrome patients from Denmark. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 36. Bertelsen B, Melchior L, Jensen L R, Groth C, Glenthøj B Y, Rizzo R, Mol Debes N, Skov L, Brøndum-Nielsen K, **Paschou P**, Silahtaroglu A, Tümer Z. Intragenic deletions affecting two alternative IMMP2L transcripts in patients with Tourette syndrome. Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, April 25-26, 2014.
- 37. **Karagiannidis I^g, Potamianou H^u,** Heiman G, Deng L, Xing J, Sun N, Nasello C, Sandor P, Barr C, **Paschou P**. Investigating the role of the Histidine Decarboxylase Gene in Tourette Syndrome etiology. Annual Meeting of the American Society of Human Genetics, Washington, October 22-26, 2013.
- 38. **Karagiannidis I^g, Tsetsos F^g, Athousaki A^u, Papagiannakopoulou E^u, Paschou P**. The genetic structure of Tourette syndrome associated genomic regions in worldwide populations. Annual Meeting of the European Society for the Study of Tourette Syndrome, Athens, April 26-27, 2013.
- 39. **Tsetsos F**^g, **Trivyzakis G**^u, **Karaiskos S**^u, **Ioannou** M, Gkantouna V, Papachatzopoulou A, Patrinos G, Tzimas I, Tsakalidis A, Drineas P, **Paschou P**. Investigating the Genetic Architecture

- of Diabetes Mellitus Type 2 on a worldwide level: Implications for future research. 64th Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, 6-8 December 2013.
- 40. Karaiskos S^u, Tsetsos F^g, Karagiannidis I^g, Alexander J^g, Georgitsi M^p, Paschou P. Examining genetic ancestry and demographic history among HapMap phase III populations. 64th Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, 6-8 December 2013.
- 41. **Potamianou H^u**, **Karagiannidis I^g**, **Georgitsi M^p**, **Alexander J^u**, **Karaiskos S^u**, Heiman G, Deng L, Xing J, Sun N, Nasello C, Sandor P, Barr C, Tischfield J, **Paschou P**. Investigating the role of the Histidine Decarboxylase Gene in Tourette Syndrome etiology. 64th Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, 6-8 December 2013.
- 42. **Tsetsos F^g, Tsekmekidou X^g,** Kotsa K, Papanas N, Theodoridis M, Papazoglou D, Maltezos E, Vargemezis V, Yovos J, **Paschou P**. The CDKAL1 gene in relation to type 2 diabetes in Greece and the rest of the world. 1st Panhellenic Conference of Hellenic Association of Medical Geneticists, 30-31 May, 1 June 2013 (*Best Poster Award*).
- 43. Karagiannidis Ig, Anastasiou Zu, Stathias Vu, Ligda Pu, Sandor P, Dehning S, Zill P, Hebebrand J, Noethen M, Lehmkuhl G, Tarnok Z, Barta C, Madruga-Garrido M, Mir P, Szymanska U, Wolanczyk T, Rizzo R, Mueller N, Barr C, Paschou P. The Histidine Decarboxylase Gene is associated with Gilles de la Tourette Syndrome in a large sample of trios. XXth World Congress on Psychiatric Genetics, Hamburg, October 14-18, 2012 (selected as one of the top three poster presentations).
- 44. **Trivizakis G^u, Karagiannidis I^g,** Papanas N, Theodoridis M, Papazoglou D, Maltezos E, Vargemezis V, **Paschou P**. Worldwide variation across TCF7L2; Implications for Type 2 Diabetes susceptibility around the world. 63rd Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Heraklion, November 9-11, 2012.
- 45. Athousaki A^u, Liva E^g, Palikyras S^u, Potamianou H^u, Ligda P^u, Karagiannidis I^g, Panagiotou I^u, Mystakidou K, Paschou P. Investigation of the Growth/Differentiation Factor 5 gene in association with osteoarthritis of the spine in the Greek population. 63rd Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Heraklion, November 9-11, 2012.
- 46. Anastasiou Z^u, Stathias V^u, Karagiannidis I^p, Ligda P^u, Mir P, TSGeneSEE Consortium, Paschou P. Investigation of the HDC gene in association with Gilles de la Tourette Syndrome in populations from Southern and Eastern Europe. 34th Conference of the Hellenic Society for Biological Sciences, Trikala, May 17-19, 2012.
- 47. Sotiris G^u, Aslanidou P^u, Grigoriou E^u, Papasotiriou S^u, Stathias V^u, Karagiannidis I^g, Paschou P. The genetic structure of schizophrenia associated genes in 11 HapMap populations. 34th Conference of the Hellenic Society for Biological Sciences, Trikala, May 17-19, 2012.
- 48. Paschou P, Karagiannidis Ig, Aslanidou Pu, Grigoriou Eu, Papasotiriou Vu, Stathias Vu and the Tourette Syndrome Genetics Southern and Eastern Europe Initiative. Investigating the genetic basis of Tourette Syndrome in European populations. A multinational initiative. XIXth World Congress on Psychiatric Genetics, Washington, September 10-14, 2011.
- 49. Horvath A, Alexandre RB, Saloustros E, Wassif C Manning A, **Paschou P**, Briasoulis P, Sigh S, Epstein J, Levi I, Neimela J, Oliveira JB, Carney JA, Porter FD, Stratakis CA. Tumor exome

- sequencing in patients with isolated bilateral Micronodular Adrenocortical Disease identifies pathogenic somatic and germline mutations. 12th International Congress of Human Genetics, Montreal, October 11-15, 2011.
- 50. Bowen BMP, Kosmaczewski S, Powers N, **Paschou P**, Speed WC, Gruen JR, Kidd KK. Haplotype Diversity and Linkage Disequilibrium of the Dyslexia Candidate Gene *DCDC2* in 90 Populations: Patterns for Alphabetic and Logographic Languages. 12th International Congress of Human Genetics, Montreal, October 11-15, 2011.
- 51. **Sotiris G^u**, **Karagiannidis I^g**, **Stylianopoulou E^g**, Skavdis G, Grigoriou M, **Paschou P**. The genetic structure of LIM-homeobox genes LHX6 and LHX8 in 11 HapMap populations. 62nd Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, December 9-11, 2011.
- 52. Aslanidou P^u, Grigoriou E^u, Stathias V^u, Papasotiriou S^u, Karagiannidis I^g, Paschou P. Investigation of linkage disequilibrium patterns in schizophrenia susceptibility genes in eleven human populations from around the world. 62nd Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, December 9-11, 2011.
- 53. **Karagiannidis I**^g, **Tsirigoti A**^u, **Stamboliou A**^u, **Papadopoulou V**^u, Manolopoulos VG, Martinis G, Kidd JR, Kidd KK, **Paschou P**. The genetic structure of the Greek population in comparison with the European reference populations from the HapMap project. 61st Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Alexandroupolis, October 15-17, 2010 (*Platform Presentation Award*).
- 54. Paschou P, Karagiannidis I^u, Tsirigoti A^u, Stampoliou A^u, Papadopoulou V^u, Manolopoulos VG, Kidd JR, Kidd KK, Drineas P. Evaluation of the HapMap dataset as reference for the Greek population. 60th Annual Meeting of the American Society of Human Genetics, Washington, November 2-6, 2010.
- 55. **Paschou P** and the Tourette Syndrome Genetics Southern and Eastern Europe Initiative. Pan-European Initiatives for the study of the genetics of Tourette Syndrome. XVIIIth World Congress on Psychiatric Genetics, Athens, October 3-7, 2010.
- 56. Tsirigoti A, Karagiannidis I, Papadopoulou V, Stampoliou A, Papanas N, Yavropoulou M, Yovos I, Vargemezis V, **Paschou P**. Studying the genetic basis of type 2 diabetes mellitus in the Greek population. 60th Pan-Hellenic Conference of the Hellenic Society for Biochemistry and Molecular Biology, Athens, November 20-22, 2009.
- 57. **Paschou P**, **Lewis J**^g, Drineas P. Accurate inference of individual ancestry geographic coordinates within Europe using small panels of genetic markers, 59th Annual Meeting of the American Society of Human Genetics, Honolulu, October 20-24, 2009.
- 58. **Paschou P**, **Lewis J**^g, **Javed A**^g, Drineas P. Using principal components analysis to identify candidate genes for natural selection, 58th Annual Meeting of the American Society of Human Genetics, Philadelphia, November 11-15, 2008.
- 59. **Paschou P**, Ziv E, Burchard EG, Choudry S, Rodriguez-Cintron W, Mahoney MW, Drineas P. PCA-correlated SNPs for structure identification in worldwide human populations. 57th Annual Meeting of the American Society of Human Genetics, San Diego, October 23-27, 2007.
- 60. **Paschou P**, Mahoney M, Pakstis A, Kidd JR, Kidd KK, Drineas P. Inter- and intrapopulation genotype reconstruction from tagging SNPs. 56th Annual Meeting of the American Society of Human Genetics, New Orleans, October 9-13, 2006.

- 61. Rivière JB, Díaz-Anzaldúa a, Joober R, Dion Y, Lespérance P, Richer F, Chouinard S, **Paschou P**, Rouleau GA. Replication of association between Tourette Syndrome and 17q25 in the French Canadian population. XIIIth World Congress of Psychiatric Genetics, Boston October 14-18, 2005.
- 62. **Paschou P**, Feng Y, Pakstis AJ, Speed WC, DeMille MM, Kidd JR, Jaghori B, Kurlan R, Pauls DL, Sandor P, Barr CL, Kidd KK. 17q25 is a candidate susceptibility region for TS: a study of two independent family samples. 54th Annual Meeting of the American Society of Human Genetics, Toronto, October 26-30, 2004.
- 63. **Paschou P**, Feng Y, Pakstis AJ, Speed WC, DeMille MM, Kidd JR, Jaghori B, Kurlan R, Pauls DL, Sandor P, Barr CL, Kidd KK. 17q25 implicated in Tourette syndrome susceptibility: a study of two independent family samples. TSA Fourth International Scientific Symposium, Cleveland, June 25-27, 2004.
- 64. Mukherjee N, **Paschou P**, de Mille M et al. Out of Africa hypothesis supported by variation at CD4 and DM1. Am J Hum Genet 73 (Supplement), 2003: 188.
- 65. **Paschou P**, Pakstis AJ, De Mille M et al. Fine mapping of 17q25 as a candidate susceptibility region for Tourette Syndrome. Am J Hum Genet 73 (Supplement), 2003: 535.
- 66. **Paschou P**, Pakstis AJ, De Mille M et al. 17q25 is supported as a candidate susceptibility locus for Gilles de la Tourette Syndrome. Am J Med Genet (Neuropsychiatric Genetics) 122B, 2003: 156.
- 67. Ilonen J, Sjöroos M, Nejejtsev S, Knip M, Simell O, **Paschou P** et al. Genetic screening for type 1 diabetes risk in Finnish and Greek populations stepwise typing for three class II HLA loci. Diabetes Metabolism Research and Reviews 17 (Suppl 1), 2001: S25.
- 68. Bartsocas CS, Malamitsi-Puchner A, Sjöroos M, **Paschou P** et al. Greek and Albanian cord blood comparison of IDDM related DQB1 alleles. Ped Res 49, 2001: 309.
- 69. **Paschou P**, Malamitsi-Puchner A, Vazeou A et al. Genetic markers of Type 1 Diabetes and frequency differences in three European populations. 7th Panhellenic Diabetology Conference, Heraklion, 29 March- 1 April, 2001.
- 70. Bozas E, Sjöroos M, **Paschou P** et al. The genetic basis of IDDM incidence differences in Greece and FInland. 22nd Conference of the Hellenic Society for Biological Sciences, Skiathos, 25-28 May, 2000.

C. Invited Lectures

1. National and International Meetings:

- 1. *Population Genetic Structure in the Mediterranean*. 4th National Congress of Gene Therapy & Regenerative Medicine, Athens, Greece, May 2019.
- 2. *The genetic etiology of Tourette Syndrome*. 2018 Annual Meeting of the European Society for the Study of Tourette Syndrome, Copenhagen, Denmark, June 2018
- 3. Dissecting the etiology of Tourete Syndrome through large-scale genome, epigenome and transcriptome studies and cross-disorder analysis. Talk in invited symposium. XXVth World Congress of Psychiatric Genetics, Orlando, USA, October 2017
- 4. The genetic basis of Tourette Syndrome: Updates from large scale collaborative efforts. Invited talk 9th European Conference on Tourette Syndrome and Tic Disorders. Warsaw, Poland, June 2016.

- 5. Studying the genetic history of Greek populations: Focus on Crete. Invited talk International Meeting «Ancient DNA analysis: A new view in the past», Heraklio, Greece, May, 2016.
- 6. Studying the genetic basis of multifactorial disorders. Invited talk 66th Congress of the Hellenic Society for Biochemistry and Molecular Biology, Athens, 2015.
- 7. The genetic etiology of Tourette Syndrome; Updates from large scale collaborative projects. Plenary talk 1st World Congress on Tourette Syndrome, London, 2015.
- 8. Analyzing the genetic structure of Greeks. 9th Panhellenic Conference of Bioscience, Athens, Greece, 2014.
- 9. Opportunities and challenges for genomics research in Greece. MIT Enterprise Forum Greece: Entrepreneurship and Innovation in Genomics and Biotechnology, Athens, Greece, 2013
- 10. *The genetic basis of Gilles de la Tourette Syndrome*. 2012 Annual Meeting of the European Society for the Study of TS, Catania, Italy, 2012.
- 11. *Investigating the genetic basis of Tourette Syndrome in European Populations. A multinational initiative.* World Congress for Psychiatric Genetics, Washington DC, 2011.
- 12. The genetic structure of the Greek population in comparison with the European reference populations from the HapMap project. Hellenic Society for Biochemistry and Molecular Biology, Alexandroupoli, Greece, 2010.
- 13. The genetic basis of Gilles de la Tourette Syndrome. XLIII Congress of Polish Psychiatrists, Poznan, Poland, 2010.
- 14. *Pan-European (and global) initiatives for the study of Tourette Syndrome*. 3rd meeting of the European Society for the Study of Tourette Syndrome, Dresden, Germany, 2009.
- 15. An update on the genetics of Tourette Syndrome. 2nd meeting of the European Society for the Study of Tourette Syndrome, Budapest, Hungary, 2009.
- 16. Genetics of Gilles de la Tourette Syndrome. 6th Panhellenic Conference of Child Psychiatry, Athens, Greece, 2009.
- 17. Paschou P, Mahoney M, Pakstis A, Kidd JR, Kidd KK, Drineas P. *Inter- and intrapopulation genotype reconstruction from tagging SNPs*. 56th Annual meeting of the American Society of Human Genetics, New Orleans, USA, 2006.
- 18. Selection of genetic markers for complex trait association studies in worldwide populations. 1st International Congress of Clinical and Molecular Genetics, Alexandroupoli, Greece, 2006.

2. Regional Meetings and Workshops

- 1. *The genetics of Mediterranean populations*. Invited talk at G. Stamatoyannopoulos Symposium, Seattle, September 17, 2019
- 2. *Data Science in Population Genetics*. Workshop on Algorithmic, Mathematical, and Statistical Foundations of Data Science and Applications, Purdue University, April 12-13, 2019
- 3. *The genetics of Tourette Syndrome*. Invited speaker at Greater Indiana Society for Neuroscience meeting, March 22, 2019
- 4. *Genetics of Type 2 Diabetes. Current updates*, 26th Annual Conference of the Diabetology Society of Northern Greece, Thessaloniki, Greece, 2012
- 5. Genetic mapping of multifactorial disease. Genetics Symposium, National University of Athens, Athens, Greece, 2000.

3. Universities and Other Institutions

1. Tourette Genetics 2019. Invited talk at Washington University St Louis, April 29, 2019

- 2. Large scale collaborative studies for Tourette Syndrome. Invited talk at Tourette Association of America Annual Meeting, April 8, 2019
- 3. Studying human genomic variation: from population history to health and disease. Invited speaker Purdue Ecolunch Seminar Series, West Lafayette, USA, February 2017.
- 4. The genetic basis of Gilles de la Tourette Syndrome: Current updates. Invited talk University of Catania, School of Medicine, Catania, April, 2016.
- 5. Genomic approach to human brain ageing. Medical University of Vienna, Austria, 2014.
- 6. Genetics of Gilles de la Tourette. Sismanoglio Hospital of Attica, Athens, Greece, 2009.
- 7. *Population structure via Principal Components Analysis*. University of California Los Angeles, Los Angeles, USA, 2007.
- 8. *PCA-correlated SNPs for structure identification in human worldwide populations*. Biomedical Research Foundation, Academy of Athens, Greece, 2007.
- 9. *Studying Human Genetic Variation*. Dept. of Molecular Biology and Genetics, Democritus University of Thrace, Alexandroupoli, Greece, 2005.
- 10. *Urea Cycle Disorders*. Clinical Genetics Rounds, Department of Genetics, Yale University, New Haven, USA, 2004.

D. Other Presented Papers

Bose A^g, Burch MC, Chowdhury A, **Paschou P**, Drineas P, CluStrat: a structure informed clustering strategy for population stratification, International Conference on Research in Computational Molecular Biology (**RECOMB**), Lecture Notes in Computer Science (volume 12074), 2020.

E. Other Professional Activities

See Leadership Activities – page 5.

F. Interdisciplinary Activities

Dr Paschou's research lies at the intersection of genomics, statistics and data analysis. She has worked with Computer Scientists to transfer algorithms from theoretical computer science to the analysis of genomic data in order to uncover population genetic structure (eg Paschou et al 2007, Paschou et al 2008, Bose et al 2020). Dr Paschou has also established and led several large-scale international multi-disciplinary consortia aiming to understand the cause of neuropsychiatric disorders of childhood. She established the TSGeneSEE Initiative (Tourette Syndrome Genetics Southern and Eastern Europe Initiative) with participation of researchers and clinicians from seven countries aiming to understand the genetic cause of TS. She also established and coordinated the "European Network for GTS", a COST Action (European Cooperation in Science and Technology), an interdisciplinary network of more than 200 researchers from 23 different countries aiming to elucidate the cause of Tourette Syndrome and identify novel therapies. Most recently, as part of one of the central NIH Data Science initiatives, the B2DK (Big Data to Knowledge) ENIGMA consortium, Dr Paschou established an interdisciplinary working group aiming to bring together worldwide datasets in brain imaging and genomics in order to understand brain structure and function in Tourette Syndrome. Already, 15 different research sites from eight countries have signed the Memorandum of Understanding to join this effort and the initial analysis is underway. Finally, Dr Paschou seeks opportunities to integrate interdisciplinarity into student education. For instance,

she has coordinated TS-EUROTRAIN, a Marie Curie Initial Training Network aiming to train 12 PhD students, the next generation of experts in genetics and neuroimaging for TS, with the participation of 10 sites from academia and industry. At Purdue, she also developed a multidisciplinary seminar course on Neurological and Neuropsychiatric Disorders (BIOL 69500), supported by the Purdue Institute for Integrative Neuroscience and aiming to expose graduate students to diverse aspects of neurological disease under the frame of a broad range of expertise from Purdue faculty and preparing the student to immerse into primary literature from multiple fields.

Purdue Interdisciplinary Program Memberships:

- Purdue University Interdisciplinary Life Sciences Graduate Program (PULSe)
- Computational Life Sciences (CIGP) Graduate Program

G. Patents - None

H. Funding

1. Discussion of Support

Dr Paschou has been very successful in pursuing international collaborations and attracting funding to support large-scale multi-disciplinary research. For instance, she has brought together scientists across different disciplines with an aim to understand the cause of neuropsychiatric disorders of childhood and has led several large-scale international consortia in this direction. She has been supported by the NSF, the NIH, the European Union, and private research foundations. Since she joined Purdue in August 2016, Dr Paschou was very rapidly successful in getting funding from NSF as PI and Co-PI as well as a large-scale multi-site R01 from NINDS as MPI and a multi-site R01 from NIMH (again as PI). Regarding the MPI grant, the NIH recently adopted this multi-PD/PI option which presents an important opportunity for investigators seeking support for projects or activities that require a team science approach. The overarching goal is to maximize the potential of team science efforts in order to be responsive to the challenges and opportunities of the 21st century. MPIs all play an equal role in the leadership of the project and collaborate as equals.

Dr Paschou's R01 grants from NINDS and NIMH are of tremendous significance for the Tourette Syndrome field. The studies manage to bring together all major consortia in Europe and the US, working on elucidating the genetic basis of this disorder. The NINDS-funded project focuses on a mega-analysis of more than 12,000 patients. Dr Paschou will lead the SNP and pathway analysis as well as the correlation of the mega-GWAS findings to neuroimaging x genetics GWAS results from the ENIGMA consortium. The unprecedented sample size of this project is expected to lead to important discoveries that will increase our understanding of the neurobiology of Tourette Syndrome and help identify novel targets for therapies. On the other hand, her NIMH R01 will allow, for the first time, large-scale analysis on brain structure and function for Tourette Syndrome, bringing together, once more, an international research team who, led by Dr Paschou, will share and jointly analyze genetics and neuroimaging data.

Prior to joining Purdue, Dr Paschou already had a long track-record of gaining external funding to support collaborative research. She is recognized as a leader in TS genetics based on her research findings and great contributions in bringing together researchers from multiple disciplines and multiple sites in order to understand this disorder. In 2008, supported by the Tourette Association of America, she established the TSGeneSEE Initiative (Tourette Syndrome Genetics Southern and Eastern Europe Initiative) with participation of researchers and clinicians from seven countries aiming to understand the genetic cause of TS. This sparked the establishment of the "European Network for GTS", an EU-funded COST Action (European Cooperation in Science and Technology) which Dr Paschou coordinated leading to the development of an interdisciplinary network of more than 200 researchers from 23 different countries aiming to elucidate the cause of Tourette Syndrome and identify novel therapies. The collaborative work and the success of this network of researchers further expanded to attract 10 million USD in additional support from the European Union, in order to support EMTICS (European Multicenter Tics in Children Study) where Dr Paschou runs the genomics Work Package and TS-EUROTRAIN, a Marie Curie Initial Training Network coordinated by Dr Paschou, and aiming to train 12 PhD students, the next generation of experts in genetics and neuroimaging for TS, with the participation of 10 sites from academia and industry (including the multinational pharmaceutical company BI Pharma).

2. Funding

Current Awards:

1. NIMH/ R01: <u>International collaborative study on Tourette Syndome genetics and</u> neuroimaging

Duration of Funding: 3/4/2022- 3/3/2027 Total amount of award: \$2,576,012

Role: Principal Investigator (PI)

2. Purdue Institute for Drug Discovery – Programmatic Areas Research Grants: Identifying Drug Targets and Biomarkers for Alzheimer's Disease and Related Dementias

Duration of Funding: 12/1/2021-11/31/2023 Total amount of award: \$100,000 Role: Principal Investigator (PI)

3. NINDS/R01: Large-scale collaborative genetic and epigenetic studies of Tourette Syndrome

Duration of Funding: 4/1/2019- 3/31/2024 Total amount of award: \$3,928,325 Role: Principal Investigator (MPI) Purdue subcontract: \$440,000

Taken from NIH website: The multi-PD/PI option presents an important opportunity for investigators seeking support for projects or activities that require a team science approach. The overarching goal is to maximize the potential of team science efforts in order to be responsive to the challenges and opportunities of the 21st century. The goal is to encourage collaboration among equals when that is the most appropriate way to address a scientific problem. Specific features of the Multiple PD/PI Option include the following:

o All PD/PIs share the responsibility and authority for leading and directing the project

- o Being named contact PD/PI does not imply any particular role within the leadership team
- o All PD/PIs will be listed on the Notice of Award (NoA)
- o The role type, "co-PI" is not used by the NIH

4. NSF CISE/IIS/III Core - III: Small. Randomized Matrix-Sketching Approaches for Estimating

Missing Heritability in Massive Population Genetics Datasets

Duration of Funding: 9/1/2020-8/31/2023 Total amount of award: \$500,000

Role: Principal Investigator

5. NSF CISE/IIS/III Core - III: Small / <u>Novel Statistical Data Analysis Approaches for Mining</u>

Human Genetics Datasets

Duration of Funding: 9/1/2017-8/31/2022 Total amount of award: \$500,000

Role: Co-Principal Investigator

If Co-PI, for how much of the total funding are you directly responsible: \$300,000

Pending proposals:

NA

Past Awards:

1. European Committee FP7-HEALTH, Cooperation / EMTICS: European Multicentre Tics in Children Study

Duration of Funding: 2011-2018

Total amount of award: €6,000,000

Role: Work Package Leader

If Co-PI, for how much of the total funding are you directly responsible: €746,941

2. European Committee FP7-PEOPLE, Marie Curie Initial Training Network / TS-EUROTRAIN: Interdisciplinary training network for Tourette Syndrome; structuring

European Training capacities for neurodevelopmental disorders

Duration of Funding: 2012-2016

Total amount of award: €3,000,000

Role: Principal Investigator

3. CAREER EXCELLENCE AWARD - ARISTEIA II – Co-funded by Greece and the European Union - *GENOMAP.GR*: A genomic reference map of Greece.

Duration of Funding: 2014-2015

Total amount of award: €165,000

Role: Principal Investigator

4. Greece-France Bilateral Cooperation Program – Co-funded by Greece and the European Union, NSRF / TSGeneExpress: Investigating the role of the histaminergic pathway in the etiology of Gilles de la Tourette Syndrome.

Duration of Funding: 2014-2015

Total amount of award: €30,000

Role: Principal Investigator

5. THALIS program, Co-funded by Greece and the European Union, NSRF / The genetic architecture of Type 2 Diabetes Mellitus in the Greek Population.

Duration of Funding: 2012-2015

Total amount of award: €599,800

Role: Principal Investigator

6. COST office – European Cooperation in Science and Technology / Network for the Study of

Gilles de la Tourette Syndrome Duration of Funding: 2010-2014

Total amount of award: €400,000

Role: Principal Investigator

7. Tourette Syndrome Association Research Grant Award / TSGeneSEE: Genetics of Tourette

Syndrome. The Southern and Eastern Europe initiative

Duration of Funding: 2009-2010

Total amount of award: \$74,970

Role: Principal Investigator

8. Tourette Syndrome Association Research Grant Award / TSGeneSEE: Genetics of Tourette

Syndrome. The Southern and Eastern Europe initiative

Duration of Funding: 2008-2009

Total amount of award: \$74,655

Role: Principal Investigator

9. European Commission, Seventh Framework Program / "Strengthening regional bioresearch potential in Greece. Department of Molecular Biology and Genetics in Thrace"

Duration of Funding: 2008-2012

Total amount of award: €1,000,000 Role: Work-Package Deputy Leader

10. Tourette Syndrome Association Research Grant Award / Fine mapping of 17q25 and other candidate susceptibility regions for Tourette Syndrome

Duration of Funding: 2004-2005

Total amount of award: \$73,308

Role: Principal Investigator

11. Tourette Syndrome Association Fellowship Award / Fine mapping of 17q25 and other candidate susceptibility regions for Tourette Syndrome

Duration of Funding: 2003-2004

Total amount of award: \$40,000

Role: **Principal Investigator**

I. Evidence of Involvement in Graduate Research Program

- 1. Number of M.S. (1) and Ph.D. (5) Students Graduated
- 2. Current Graduate Students (5), Post doctorates (0)
- 3. Current Undergraduate Students (4)

			Date
Current Graduate	Degree/	Past Graduate Students	Graduated/
<u>Students</u>	Date Entered		<u>Degree</u>
Major Professor:			
Yin Jin	PhD/2019	Hanrui Wu (Purdue)	2020/MS
Pritesh Jain	PhD/2018	Zhiyu Yang (Purdue)	2021/PhD
Apostolia Topaloudi	PhD/2017	Aritra Bose (Purdue)	2019/PhD
Yuxin Guo	PhD/2021	Shanmukha Padmanabhuni	2017/PhD
Sudhanshu Shekhar	PhD/2017	John Alexander	2016/PhD
		Fotis Tsetsos	2017/PhD
		Iordanis Karagiannidis	2017/PhD
		Emmanuella Vogiatzi	2012/PhD
Member, Committee:			
Shawna Cook (Purdue)	PhD	Xanthi Tsekmekidou	2020/PhD
		(AUTH)	
Madeline Carpenter	PhD	Electra Stylianopoulou	2015/PhD
(Purdue)		(DUTH)	
Mai Elkady (Purdue)	PhD	Jamey Lewis (RPI)	2010/PhD
Aashish Jain (Purdue)	PhD	Chrysi Tsikrikoni	2009/PhD
Myson Burch	PhD	Asif Javed (RPI)	2008/PhD
Eleni Liva (NKUA)	PhD	Loukas Damianos (DUTH)	2007/PhD
Matina Symeonidi	PhD		
(NKUA)			

Current Postdocs	Past Postdocs
Fotis Tsetsos	Shanmukha Padmanabhuni (Purdue)
	Yogesh Kumar (Purdue)
	Dimitris Mantzaris (DUTH)
	Marianthi Georgitsi (DUTH)

Current	Degree/	Past	Date Graduated/
Undergraduates	Date Entered	Undergraduates	Degree
Josie Brown		Zaid Al Haddadin	2020
Bryce Raber		Cameron Locker	2018
Carlos Rubin de Celis		Marguerite Stonier	2018
		Bailey Kamp	2018
		Kate Phelps	2018
		Melanie Martinez	2021
		Sydney Pedigo	2021

	Degree/	Past	Date Graduated/
Undergraduates	Date Entered	Undergraduates	Degree
		Lauren Holly Price	2021
		Alyssa Flint	2021

Current High School student: Grace Reynolds

Undergraduate Diploma Thesis Supervisor

- 1. Athina Dritsoula, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2008)
- 2. Petros Fragoulis, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2008)
- 3. George Papachristodoulou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2008)
- 4. Aggeliki Tsirigoti, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2009)
- 5. Iordanis Karagiannidis, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2009)
- 6. Vasiliki Papadopoulou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2009)
- 7. Albiona Stamboliou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2009)
- 8. Georgia Pantidou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2010)
- 9. Grigorios Panteloglou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2010)
- 10. Athina Gianakkara, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2010)
- 11. Chronis Kemos, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2010)
- 12. Sotiris Kleidonas, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2011)
- 13. Zachos Anastasiou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2011)
- 14. George Sotiris, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2011)
- 15. Panagiota Ligda, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2011)
- 16. Eleni Grigoriou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2012)
- 17. Paraskevi Aslanidou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2012)
- 18. Spyros Papasotiriou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2012)
- 19. Vasilis Stathias, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2012)

- 20. Papagiannakopoulou Eleana, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2013)
- 21. Asimenia Athousaki, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2013)
- 22. Leyla Basgül <u>Erasmus Program Istanbul Technical University, Dept. of Molecular Biology</u> and Genetics (2013)
- 23. Spyros Palikyras, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2013)
- 24. Hera Potamianou, Dept. of Molecular Biology and Genetics Democritus University of Thrace; co-supervision (2013)
- 25. Trivyzakis George, Dept. of Molecular Biology and Genetics Democritus University of Thrace; co-supervision (2013)
- 26. Stylianos Laparidis, Dept. of Molecular Biology and Genetics Democritus University of Thrac; co-supervision (2014)
- 27. Spyros Karaiskos, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2014)
- 28. Kalliopi Ioumpa, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2014)
- 29. Xanthippi Tsimourtakidou, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2014)
- 30. Melina Mitsiogianni, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2014)

Student Awards:

Graduate Student Awards

- 1. Shanmukha Padmanabhuni 2018 Purdue Postdoctoral Mentoring Award Honorable Mention
- 2. Zhiyu Yang, 2018 Purdue Institute for Integrative Neuroscience Travel Grant to present at the American Society for Human Genetics Annual Meeting
- 3. Apostolia Topaloudi, 2018 Gerondelis Foundation Scholarship
- 4. Fotis Tsetsos 2018 WHBA Fellowship, Fellowship to attend the 7th World Hellenic Biomedical Association Summer School
- 5. Fotis Tsetsos 2016 ASHG Travel Award, Travel Award for the 2016 HackSeq Genomics Hackathon in Vancouver, sponsored by ASHG.
- 6. Fotis Tsetsos 2016 Fulbright Fellowship, Fellowship for Greek students pursuing graduate studies in the US, The Fulbright Foundation in Greece and U.S.A.
- 7. Fotis Tsetsos 2016 WHBA Fellowship, Fellowship to attend the 5th World Hellenic Biomedical Association Summer School
- 8. Fotis Tsetsos 2016 Best poster award, Tsetsos et al "Meta-analysis of Tourette Syndrome and Attention Deficit Hyperactivity Disorder provides support for a shared genetic basis", 9th European Conference on Tourette Syndrome and Tic Disorders, Warsaw, Poland.
- 9. Iordanis Karagiannidis 2015 Early Career Investigator Award, Award and Travel Grant, International Society of Psychiatric Genetics, Toronto, Canada

- 10.John Alexander 2015 Best poster award, Alexander et al "Network analysis on Tourette Syndrome associated genes using genomewide data", 1st World Congress on Tourette Syndrome & Tic Disorders, London, United Kingdom.
- 11. Karagiannidis I, Anastasiou Z, Stathias V, Ligda P, Sandor P, Dehning S, Zill P, Hebebrand J, Noethen M, Lehmkuhl G, Tarnok Z, Barta C, Madruga-Garrido M, Mir P, Szymanska U, Wolanczyk T, Rizzo R, Mueller N, Barr C, Paschou P. The Histidine Decarboxylase Gene is associated with Gilles de la Tourette Syndrome in a large sample of trios. XXth World Congress on Psychiatric Genetics, Hamburg, October 14-18, 2012 (selected as one of the top three poster presentations).
- 12. Fotis Tsetsos 2014 Second best poster award, Tsetsos et al "Investigating the genetic architecture of Diabetes Mellitus type 2 on the Greek population: Implications for future research", 65th Conference of the Hellenic Society of Biochemisty and Molecular Biology, Thessaloniki, Greece.
- 13. Fotis Tsetsos 2013 Best poster award, Tsetsos et al "The CDKAL1 gene in association with Diabetes Mellitus Type 2 in Greece and Worldwide", 1st Conference of the Hellenic Association of Medical Geneticists, Athens, Greece.
- 14. Fotis Tsetsos 2013 Bodossaki Foundation Scholarship for Doctoral Studies, The Bodossaki Foundation scholarship aims to aid outstanding students, undergraduates and postgraduates, carry on their postgraduate studies in Greece or abroad in various academic fields.
- 15. John Alexander 2013 Fellowship by the European Society of Human Genetics, in collaboration with the European School of Genetic Medicine for the Course in Next Generation Sequencing, European Society of Human Genetics
- 16.Iordanis Karagiannidis 2012 Early Career Investigator Award, Award and Travel Grant, International Society of Psychiatric Genetics, Hamburg, Germany
- 17. Iordanis Karagiannidis 2011 Short Term Scientific Mission Award: COST Action BM0905: "European Network for the Study of Gilles de la Tourette Syndrome", Investigation of the implication of candidate CNVs in the etiology of Tourette Syndrome.
- 18. Iordanis Karagiannidis 2010 ESHG Travel Fellowship: Course of the European Society of Human Genetics: Introduction to the Genetic Epidemiology of Complex Diseases, CHU du Kremlin Bicêtre, Facultê de Mêdecine Paris-Sud, Paris, France

Undergraduate Student Awards

- 1. Alyssa Flint 2021 Purdue Singleton Award for Undergraduate Honors Research Thesis
- 2. Anagnostou Foteini 2014 Third best poster award, Anagnostou et al "Investigating ancient DNA and its implications in the modern human genomic landscape", 65th Conference of the Hellenic Society of Biochemisty and Molecular Biology, Thessaloniki, Greece.
- 3. Papagiannakopoulou Eleana, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2013) Short Term Scientific Mission Fellowship (COST Action) to visit the Dept. of Medical Chemistry, Molecular Biology and Pathobiochemistry, Semmelweis University, Hungary

4. Asimenia Athousaki, Dept. of Molecular Biology and Genetics Democritus University of Thrace (2013) – Short Term Scientific Mission Fellowship (COST Action) to visit Applied Human Molecular Genetics Center, Kennedy Center, Denmark

Placements of former graduate students/postdocs

- 1. Zhiyu Yang Postdoctoral Associate, Helsinki University, Finland
- 2. Aritra Bose Postdoctoral Associate, Computational Genomics Group at the IBM TJ Watson Research Center.
- 3. Shanmukha Padmanabhuni Postdoctoral Associate, University of Pennsylvania, USA
- 4. Yogesh Kumar Postdoctoral Associate, Monash University, Australia
- 5. John Alexander Postdoctoral Researcher, Sheffield University, UK
- 6. Fotis Tsetsos Postdoctoral Researcher, Democritus University of Thrace, Greece
- 7. Emmanuela Vogiatzi –Hellenic Center for Marine Research, Greece
- 8. Marianthi Georgitsi Assistant Professor, Aristotle University of Thessaloniki, Greece

IV. ENGAGEMENT

A. Discussion of Service

Raising public awareness about Tourette Syndrome: Dr Paschou has led multiple efforts aiming

to raise awareness for Tourette Syndrome (TS), educate the general public and professionals and combat stigmatization of TS patients. Funded by the European Union, she coordinated a COST Action (European Cooperation in Science and Technology) which led to the development of an interdisciplinary network of more than 200 researchers from 23 different countries aiming to elucidate the cause of Tourette Syndrome and identify novel therapies. This program fostered the growth of the European Society for the Study of Tourette Syndrome (ESSTS) and, in recognition of her contributions and strong leadership, Dr Paschou was elected ESSTS Chair and served on the Board of ESSTS Officers from 2010-2017. From this position, she led from 2010-2017 the organization of the annual meeting of ESSTS, the largest annual scientific and networking event for Tourette Syndrome. She was also one of the initiators of the 1st World Congress for Tourette Syndrome which was held in London in 2015, bringing together researchers from the European Society for the Study of Tourette Syndrome with counterparts from the



Dr Paschou was an inspirer and Co-Chair of the Steering Committee for the 1st World Congress on Tourette Syndrome and Tic Disorders

USA, Canada, and Asia. As Chair of the European Society for the Study of Tourette Syndrome she organized multiple training schools, seminars and educational workshops targeting neuroscientists,

but also clinicians. She was involved in the organization of several events aiming to promote the standardization and harmonization of practices for the study and clinical management of TS across Europe. Such events led to the publication of best practice guidelines for the diagnosis and management of Tourette Syndrome. From the position of ESSTS Chair, she also launched the annual international meeting of Tourette Syndrome Support and Advocacy Groups bringing together patient groups from across Europe. As coordinator of the Marie Curie Initial Training Network TS-EUROTRAIN she was the editor of a quarterly newsletter providing updates on TS research to the general public. Importantly, she was among the inspirers of the European Tourette Day, celebrated to motivate TS awareness on June 7 of every year.

Engagement activities at Purdue: At Purdue University, Dr Paschou continues to participate in and indeed lead multiple service and engagement activities. She participates in multiple departmental committees and supports efforts to engage with the local community. For instance, she was a speaker at an event organized by the Department of Biological Sciences aiming to present to students from local high schools, opportunities for careers in the Biological Sciences. In 2018, she was named the inaugural Frederick L. Hovde Dean's Fellow, working under the Dean's and Associate Deans' mentorship at the Purdue College of Science in order to carry forward initiatives of strategic importance. As part of the Data Science Initiative Dr Paschou coordinated the development of the online Data Science Connector Modules, a core of eight fundamental data science courses which will be delivered online with a scope to prepare graduate students across Purdue and beyond in order to be able to leverage Big Data and undertake Data Science related research as part of their graduate studies. She was appointed by the Provost's Office as Co-Chair of the Integrative Data Science Initiative Curriculum committee, bringing together representatives from all Purdue Colleges in order to discuss how to expand the Data Science Education Ecosystem within Purdue. As part of this program, she coordinated the launch of an updated "Applications in Data Science" undergraduate certificate program, aiming to provide students across Purdue with foundational skills in Data Science and provide opportunities to apply this knowledge in different domains. These efforts are part of Purdue's strategic plan to promote Data Science literacy and foster a training environment for Citizen Data Scientists within Purdue.

B. Department

Faculty Search Committee – College of Science cluster hire – Da	ıta		
Science/Applications in the Life Sciences			
Search Committee – Vector Ecologist position			
Inclusion Diversity and Equity Committee			
Honors Committee			
Promotions Primary Committee			
Neurobiology & Physiology Research Area			
Structural and Computational Biology and Biophysics Research Area			
	Science/Applications in the Life Sciences Search Committee – Vector Ecologist position Inclusion Diversity and Equity Committee Honors Committee Promotions Primary Committee Neurobiology & Physiology Research Area		

C. College of Science

2019-2020	Faculty Search Committee – College-wide Data Science cluster hire
2017-2019	Elected Faculty Council Member

2018-2019 Undergraduate Curriculum Committee2017-today Graduate Curriculum and Academic Policy

D. University Committee Service

2018-2019 Showalter Research Awards Reviewer **2019-ongoing** IDSI Curriculum Committee Co-Chair

E. Professional

1. Grant Review

- **2021** Reviewer- ZRG1 BBBP-S02 Member Conflict SEP: Child Psychopathology and Developmental Disabilities (CPDD)
- 2021 Reviewer SEP/Scientific Review Group 2021/10 ZRG1 GGG-F (03) M
- **2020** Reviewer General Health and Disease Study Section, NINDS
- 2019 Reviewer NINDS Special Emphasis Panel (SEP) R13 conference grant applications
- **2014** Reviewer European Commission, call Horizon 2020-PHC-2014-two-stage-Stage 1
- **2014** Reviewer <u>European Commission</u>, call Horizon 2020-PHC-2014-two-stage-Stage 2
- 2015 Reviewer European Commission, call Horizon 2020-PHC-2015-two-stage-Stage 1

2. Editorial Boards

2015	Editor – Frontiers Research Topic: The Genetic Basis and Neurobiology of Tourette
	Syndrome (33 articles included)

2012-today Academic Editor - PLOS ONE

2011-today Review Editor - <u>Frontiers in Evolutionary and Population Genetics</u>

2009-2015 Academic Editor - Journal of Medical Genetics

3. Reviewed Manuscripts for the following journals:

- 1. American Journal of Human Genetics
- 2. Journal of Medical Genetics
- 3. Molecular Biology and Evolution
- 4. PLOS ONE
- 5. Annals of Human Genetics
- 6. American Journal of Medical Genetics
- 7. Journal of Human Genetics
- 8. American Journal of Psychiatry
- 9. Bioinformatics
- 10. Briefings in Bioinformatics
- 11. Molecular Ecology Resources
- 12. Archives of Oral Biology
- 13. British Journal of Clinical Pharmacology
- 14. European Child and Adolescent Psychiatry Journal
- 15. Frontiers in Neuroscience
- 16. Frontiers in Psychiatry

F. Diversity Activities

From the position of Associate Dean for Graduate Education, Dr Paschou coordinates activities across the College of Science aiming to increase diversity within the graduate student population as well as promote inclusion and equity. She has played a leading role in **establishing partnerships between Purdue College of Science and Minority Serving Institutions** with a goal to broaden pathways towards STEM Graduate Education for students who have been minoritized and historically underserved by Higher Education Institutions. For instance, she initiated a partnership with Chicago State University, a Predominantly Black Institution, pursuing funding from the Sloan Foundation and NSF to build a bridge program and joint mentorship program between Purdue and CSU. She also helps lead discussions between the Purdue College of Science and the School of Computer, Mathematical & Natural Sciences at Morgan State University (HBCU) moving towards the establishment of a dual degree program that will act as a bridge for Morgan State students towards Purdue graduate programs, expanding access to STEM graduate education.

Building a Mentoring Program for High-Achieving Students from Under-Served Populations: Dr Paschou is Faculty Director for the College of Science Emerging Leaders Scholars program which is meant to recruit high achieving students from historically under-served groups and offer them a unique learning experience that will pave their way to success. Students receive a scholarship as well as intensive mentoring from peers and faculty and opportunities for study abroad, undergraduate research and internships. The program was launched as a pilot in 2020, attracting record numbers of students (88 students across seven departments) and is now expanded across multiple Purdue Colleges. As Faculty Director, Dr Paschou established and oversees the faculty mentoring framework of the program and leads faculty training in culturally aware mentoring in coordination with the Office of Diversity within the College of Science and the Provost's office for Equity and Diversity. This includes a series of guided discussions with faculty mentors focused on mentorship development and sharing of best practices. Her goal in this program is to create a community that fosters mentoring at Purdue and motivates faculty to actively engage in the mentoring process which can be life-changing for both the mentor and the mentee.

As Associate Dean for Graduate Education Dr Paschou is also involved and indeed leads multiple additional activities and initiatives with a goal to increase diversity and foster a welcoming environment at Purdue. She helps coordinate the organization of the Graduate Diversity Visitation Program, with students from under-represented minorities visiting the College of Science. She also coordinates an effort across all College of Science Depts to increase the pool of applicants from under-represented groups across our graduate programs through targeted recruitment efforts. She launched a series of workshops on Intercultural Competence (World-Wise) for graduate students at the College of Science. She participated in the first Purdue cohort in the USC Institutes of Equity Training Program, undertaking discussions on diversity, equity and inclusion with the entire College of Science leadership team. Dr Paschou has also served on the Diversity Committee of the Dept of Biological Sciences in 2016-2021. From this position she participated in all efforts trying to coordinate diversity activities at the Department and coordinate with other such diversity activities at the College of Science.

Dr Paschou also participated as a Faculty Mentor in the Horizons Program. Purdue Horizons is a federally funded TRIO Program that was authorized by the Higher Education Amendments of 1968. The name TRIO stands for the original three programs that were initiated by the U.S. Department of Education and were the first national college access and retention programs to address the serious social and cultural barriers to education in America. Dr Paschou has mentored five female graduate students as a major professor (past and present) and she is currently co-advising a Black PhD student at Purdue, who recently won an NSF Graduate Research Fellowship as well as a Black female PhD student who just won an American Association for the Advancement of Women Fellowship. At her previous institution (Democritus University of Thrace) she was the first professor to recruit international students in the graduate program of the Department of Molecular Biology and Genetics. Dr Paschou has mentored 23 female undergraduate students (at Purdue and Democritus University of Thrace). From the position of Chair of the European Society for the Study of Tourette Syndrome, she has provided multiple travel awards in order to allow students from low-income countries to attend the annual ESSTS meeting as well as educational workshops.

G. Other Engagement Activities

Public Engagement

- **Invited Speaker -** Women In Science Program (WISP) at Purdue University "The Influence of Data Science in Scientific Research", February 22, 2022
- **2011-2017** Established (in 2011) and co-organized in 2011-2017 the Annual International meeting of Tourette Syndrome Support and Advocacy Groups with participation of TS patient groups from around the world
- Establishment of European Tourette Syndrome Awareness Day (June 7) (from the position of Chair of European Society for the Study of Tourette Syndrome)
- 2010-2014 As Chair of the EU-funded COST Action European Network for the Study of Tourette Syndrome, organized multiple workshops for the education of health professionals in Tourette Syndrome diagnosis, assessment and management in several European countries (Greece, France, Italy, Poland, UK, Spain)
- **2012-2016** Together with PhD students from the EU-funded TS-EUROTRAIN Training Program, published a semi-annual newsletter highlighting research developments in Tourette Syndrome research
- **2010-2017** Established and maintained website for the European Society for the Study of Tourette Syndrome

<u>Scientific meetings – organizing committees</u>

- 2022 Greater Indiana Chapter Society for Neuroscience, April 2022
- 2022 Program Committee Member –World Congress for Psychiatric Genetics, Florence, Italy, September 2022
- Member of the Program and Organizing Committee, Annual Meeting of the Greater Indiana Society for Neuroscience, April 2022

Proposer and Co-Chair of Symposium at XXVth World Congress for Psychiatric 2017 Genetics: Genetics of Gilles de la Tourette Syndrome: Accelerating discoveries through large-scale collaborative efforts. Orlando, USA, October 2017 2017 Member of the Program and Organizing Committee, Annual Meeting of the European Society for the Study of Tourette Syndrome, Seville, Spain, 2017 2016 Member of the Program and Organizing Committee, Annual Meeting of the European Society for the Study of Tourette Syndrome, Warsaw, Poland, 2016 Co-Chair of Scientific Committee, 1ST World Congress on Tourette Syndrome and Tic 2015 Disorders, 2015 2014 Chair of the Program and Organizing Committee, Annual Meeting of the European Society for the Study of Tourette Syndrome, Paris, France, 2014 Chair of the Program and Organizing Committee, Annual Meeting of the European 2013 Society for the Study of Tourette Syndrome, Athens, Greece, 2013 2012 Chair of the Program and Organizing Committee, Annual Meeting of the European Society for the Study of Tourette Syndrome, Catania, Italy, 2012 2011 Chair of Program and Organizing Committee, International workshop on "Planning the future of Tourette Syndrome Genetics Studies", Amsterdam, December 14, 2001 Program Committee Chair – International workshop "The Genetic basis of Gilles de la 2008 Tourette Syndrome", Athens, November 18, 2008 2001 Organizing Committee Member – 11th International Clinical Genetics Seminar: "The genetics of Diabetes Mellitus", Heraklion, June 9-14 2001.

V. Mentoring

A. Undergraduate Students

Dr Paschou strongly supports early involvement in research at the undergraduate level and has already supervised 30 undergraduate students in their diploma thesis at the Department of Molecular Biology of Genetics, Democritus University of Thrace. At Purdue she has already trained nine undergraduate students and she participates as a mentor in the Horizons Program and the Beering program. She also offers opportunities for undergraduate students to present their work at national and international conferences (ten undergraduate students who trained with Dr Paschou have presented their work at national and international conferences as lead authors). Six of Dr Paschou's published peer-reviewed journal papers include undergraduate researchers as co-authors.

B. Graduate Students

Dr Paschou currently serves as Associate Dean for Graduate Education at Purdue University and from this position she oversees programs and facilitates discussions on mentoring graduate students across Purdue College of Science. From this position, she also works with Graduate Chairs across the College of Science departments to develop training and mentoring programs across the College. She also serves as Faculty Director for the Purdue Emerging Leaders Science Scholars Program, a program that is meant to attract high-achieving undergraduate students from populations that have been under-served by Purdue and provide them a unique learing experience. As ELSS Faculty

Director, Dr Paschou also runs a Faculty Mentor program, including workshops and seminars for training in Mentoring. Dr Paschou has a long track record in supporting and mentoring graduate students prior to joining Purdue. She coordinated TS-EUROTRAIN, a Marie Curie Initial Training Network funded by the EU with 3,000,000 Euros and aiming to train 12 PhD students hosted by ten partners from academia and industry to pursue studies on the neurobiology and genetics of TS. In her own lab, she has mentored five graduate students who have already graduated and is currently supervising four graduate students at Purdue University. 23 of Dr Paschou's research papers have a graduate student supervised by her as first author. Dr Paschou has taught classes at both the undergraduate and graduate levels and she has served on the Master's Program Organizing Committee at her previous institution.

Training and Mentoring Programs

2012-2016 *Training Grant Coordinator:* TS-EUROTRAIN: Interdisciplinary training network for Tourette Syndrome; structuring European Training capacities for neurodevelopmental disorders." – Marie Curie Initial Training Network

2010-2014 From the position of Chair of the EU-funded COST Action European Network for the Study of TS, Dr Paschou coordinated numerous training workshops as well as short-term scientific missions (training visits/exchanges) of young investigators across different European counties

2017-2019 Purdue Horizons Program Faculty Mentor

2018-2020 Purdue Beering Scholars Faculty Mentor

2021-today Faculty Director – Mentoring Program – Emerging Leaders Science Scholars.

Dr Paschou is Faculty Director for the College of Science Emerging Leaders Scholars program which is meant to recruit high achieving students from historically underserved groups and offer them a unique learning experience that will pave their way to success. Students receive a scholarship as well as intensive mentoring from peers and faculty and opportunities for study abroad, undergraduate research and internships. The program was launched as a pilot in 2020, attracting record numbers of students (88 students across seven departments) and is now expanded across multiple Purdue Colleges. As Faculty Director, Dr Paschou established and oversees the faculty mentoring framework of the program and leads faculty training in culturally aware mentoring in coordination with the Office of Diversity within the College of Science and the Provost's office for Equity and Diversity. This includes a series of guided discussions with faculty mentors focused on mentorship development and sharing of best practices. Her goal in this program is to create a community that fosters mentoring at Purdue and motivates faculty to actively engage in the mentoring process which can be life-changing for both the mentor and the mentee.