

CURRICULUM VITAE

Theodore K. Christopoulos
Professor, Department of Chemistry
University of Patras
Patras, Greece



Date and Place of birth: 25-Jul-1960, Arta, Greece
Family status: Married, 4 children
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Education

1982 BSc in Pharmacy, University of Athens, Greece (Excellent)
1987 PhD in Chemistry, University of Athens, Greece (Excellent)
1991 Post-Doctoral Diploma in Clinical Chemistry, University of Toronto, Canada

Employment/Occupation

2004-present Full Professor of Analytical Chemistry, Dept. of Chemistry, University of Patras, Patras, Greece
2000-present Collaborating Faculty Member, Institute of Chemical Engineering Sciences/Foundation for Research and Technology Hellas (ICE/FORTH)
2013-2017 Member of the University Council of the University of Patras, Patras, Greece (since Feb. 2013)
2011-2013 Chair, Department of Chemistry, University of Patras, Greece (Sept. 2011 to Feb. 2013)
1999-2003 Associate Professor, Dept. of Chemistry, University of Patras
1999 Full Prof., Dept. of Chemistry & Biochemistry, Univ. of Windsor, Ontario, Canada.
1998 Visiting Assoc. Prof., Dept. of Molecular Genetics, Harvard University, Boston, MA
1996-1999 Assoc. Prof. (tenured), Dept. of Chem. & Biochem., Univ. of Windsor, Canada
1992-1996 Assist. Prof., Dept. of Chem. and Biochem., Univ. of Windsor, Ontario, Canada
1989-1992 Post-Doctoral Research Associate, Department of Clin. Biochemistry, School of Medicine, University of Toronto, Canada

Research Activities

Development of Analytical/Bioanalytical Methods and Devices. Applications to the Health and Food Sectors

- Rapid Tests for Nucleic Acids
- Nanotechnology – Biosensors
- Smartphone-based analytical methods
- Microfabricated analytical devices (Chips)
- Protein assays (Immunoassays)
- Chemical Instrumentation. Automation of Chemical Analysis.
- Fluorescence/Time-Resolved Fluorescence, Bio(chemi)luminescence
- Recombinant bioluminescent proteins: Expression, purification, conjugation and analytical application
- Pharmaceutical Analysis

Awards & Distinctions

- 1985 The '*Canadian Society of Clinical Chemists Best Poster Award*'
- 1990 The '*CSCC Award to encourage research in Clinical Chemistry*'
- 1991 The '*Student Travel Grant*' from the Ontario Soc. of Clin.Chem.
- 1991 The '*Canadian Society of Clinical Chemists Best Poster Award*'
- 1991 The '*Young Investigator Award*', from the Upstate NY Section of American Association for Clinical Chemistry (AACC).
- 1992 The '*Van Slyke Society Grant Award*' from AACC.
- 1995 The '*Canadian Society of Clinical Chemists (CSCC) Best Poster Award*'
- 1995 '*Oncor Prize for the best oncology related poster presentation*' at the San Diego Conference on 'Nucleic Acids: A Decade of Discovery'.
- 1997 The Grannis Award for: “Excellence in Research and Scientific Publication” from the U.S.A National Academy of Clin. Biochemistry.**
"The award is given annually to an individual whose work is exemplary"
- 2000 Research Award from the Empeirikeio Foundation, Athens, Greece
- 2008 *Two Best Oral Presentation Awards at the XVI Meeting of Balkan Clinical Laboratory Federation & 7th Hellenic Congress of Clinical Chemistry, Athens*
- 2009 *Best Oral Presentation. 8o Hellenic Clinical Chemistry Conference, Patras*
- 2011 Selected at the top 21 achievements (finalists) from the 295 submitted to the Competition for 'Applied Research and Innovation', organized by the Hellenic Federation of Enterprizes & Eurobank (Athens, 2011)
- 2013 Selected at the top 10 achievements (finalists) from the 143 submitted to the Competition for Innovation, organized by the Hellenic Association of Pharmaceutical Companies (SFEE) (Athens).

Invited speaker (the international are in bold)

- 1. Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Detroit, MI, 1993**
- 2. Clinical Ligand Assay Society, Dearborn, MI, 1993.**
- 3. American Association for Clinical Chemistry, Detroit, MI, 1994.**
- 4. American Association for Clin. Chemistry, Molecular Pathology, Chicago, IL, 1996**

5. University of Athens, Department of Chemistry, 1996
6. University of Ioannina, Department of Medicine, 1996
7. University of Athens, Medical School, 1996
- 8. Harvard Medical School, Dept. of Molecular Genetics, Boston, MA, 1997**
- 9. Scripps Research Institute, La Jolla, CA, 1997**
- 10. Univ. of Michigan, Dept. of Chemistry, Ann Arbor, MI, 1997**
- 11. Univ. of Alberta, Dept. of Chemistry, Edmonton, Canada, 1998**
12. University of Athens, Department of Chemistry, 1998
- 13. Conference on DNA Technologies in Human Disease Detection, San Diego, CA, 1998**
- 14. ECOSEP I Conference (International), Patras, 1998.**
- 15. University of Vienna, Medical School, 1999**
16. Hellenic Association of Clinical Chemistry, Paster Institute, Athens, 2000
17. ICE-HT/FORTH, Patra, 2000
18. Hellenic Society of Biology Conference, Athens, 2000
19. University of Patras, Department of Medicine, 2001
20. Hellenic Chemical Society Conference, 2001.
- 21. Controlled Release Society/Pharmaceutical Association, Athens, 2001**
22. National Technical University of Athens, Dept. of Chemical Engineering, Athens, 2002
23. Hellenic Chemical Society Conference, Herakleion, Crete, 2002
24. University of Crete, Dept. of Biology, 2002
- 25. Aegean Analytical Chemistry Days Conference (International), Lesbos, 2002**
26. Hellenic Conference of the Society of Biological Sciences, Eretria, Greece 2002
- 27. International conference on 'Mutation Detection', Santorini, 2005.**
28. Hellenic Biotechnology Club Meeting & NanoBiotech Business Day, Athens, Greece 2005.
29. Biosciences conference, University of Patras, Greece 2005.
30. ICEHT/FORTH, Patras, Greece 2005.
31. Hellenic Conference on Food Technology and Biotechnology, Athens, 2005
32. Foundation for Research and Technology Hellas (FORTH) symposium, 2007.
- 33. International Greek Biotechnology Forum, Athens, Greece 2008.**
34. National Research Council, Institute of Biological Sciences and Biotechnology, Athens, Greece 2008.
- 35. International Symposium on Luminescence Spectroscopy, Bologna, Italy 2008.**
- 36. International Workshop on Multianalyte Biosensing Devices, Athens, 2008**
- 37. International Intensive Course and Workshop on 'Nanomedicines-nanoparticulates for drug delivery', Patras, Greece 2008**
38. 'Pharmacogenomics and personalized Medicine, Athens, Greece 2009.
- 39. The 11th International Symposium on Mutations in the Genome, Santorini, Greece 2011.**
40. Summer school on 'Nanomaterials and Devices', University of Patras, 2012
- 41. 5th BBBB International Conference 'From drug discovery and formulation strategies to Pharmacokinetics and Pharmacodynamics', Athens, Sept 2013**
- 42. 2nd Conference on Pharmaceutical Sciences, Patras, Greece, Oct. 2014**
- 43. 3rd Hellenic Forum on Advanced Science Technology & Innovation. Workshop on 'Advanced biosensing devices for biomedical and food analysis applications', Athens, Jul. 2015**
44. Foundation for Research & Technology Hellas, Institute of Chemical Engineering Sciences, Patras, Greece, Jun 2015.

45. 17th Hellenic Pharmaceutical Conference, Athens Greece Oct. 2015.
46. 17th Medicinal Chemistry Conference, Spetses Greece Aug 2016.
47. 5th Health Forum, Patras, Greece May 2017
48. **2nd NANOMED Workshop ‘Innovative Medicines for Targeted Drug Delivery and Personalized Approaches’, University of Patras and FORTH/ICE, Patras July 2019**
49. University of Patras, Greece. “20 years of development of rapid molecular tests. Applications to the health and food sectors”, July 2021

Teaching experience

- *University of Patras (1999-present)*
Department of Chemistry, Undergraduate courses (1999-present):
 ‘Instrumental Chemical Analysis-1’,
 ‘Instrumental Chemical Analysis-2’ (Lectures and Laboratory),
 ‘Quality Control of Chemical Analyses’ (Lectures)
 ‘Analytical Chemistry-1/Qualitative Analysis’ (Lectures and Laboratory)
 ‘Analytical Chemistry-2/Quantitative Analysis’ (Laboratory)
Department of Biology, Undergraduate courses (2011-present):
 ‘Instrumental Methods for Biomolecular Analysis’
Department of Chemistry, Graduate courses (2010-present):
 ‘Micro/Nanotechnology-Chemical sensors’ (I cover the full graduate course)
 ‘Chemical Biology’. I offer two lectures, 2-hours each
- *University of Windsor, Ontario, Canada (1992-1999)*
Undergraduate courses:
 ‘Principles of Instrumental Analysis’
 ‘Intermediary Metabolism’
 ‘General Chemistry’
Graduate courses:
 ‘Advanced Bioanalytical Topics’
 ‘Clinical Chemistry I’
 ‘Clinical Biochemistry I’
 ‘Instrumental Analysis in Clinical Chemistry’.

PhD Theses Supervisor

17 PhD theses have been completed under my supervision (7 in Canada and 10 in Greece).

MSc Theses Supervisor

15 MSc theses have been completed under my supervision (2 in Canada and 13 in Greece).

Supervisor of 4th Year Projects

52 students have completed their 4th year project (2 semesters, 20 ECTS credits) under my supervision (5 in Canada, 47 in Greece)

Organization of Scientific Conferences

- ✓ Organizer and Chair of the International Conference: ‘Instrumental Methods of Analysis-Modern Trends and Applications—IMA07’, 2007. Patras, Greece
- ✓ Member of the Scientific Committee of the ‘International Symposium on Luminescence Spectroscopy, Bologna, Italy, 2008.
- ✓ Member of the Advisory Committee ‘34th International Conference on Micro and Nanoengineering’, Athens, Greece 2008
- ✓ Member of the Scientific Committee, 8th Conference of the Hellenic Association of Clinical Chemistry-Clinical Biochemistry, Patras, Greece 2009
- ✓ Organizer and Chairman of the ‘XVI International Symposium on Luminescence Spectrometry (ISLS 2014)’, Rhodes, Greece 2014.

Organization of Workshops

- ‘Molecular Biology Techniques’, University of Toronto, Canada 1992, 1993, 1994 and 1995.
- ‘Molecular Biology Techniques’ Canadian Society of Clinical Chemists, Whistler, BC, Canada 1995.
- Symposium on ‘Advances in Analytical Methods for Biomolecules’, Canadian Chemical Society, Windsor, Canada, 1997.

Referee for 17 International Scientific Journals

Editorial Board Member

Analytical & Bioanalytical Chemistry (2017-πρeσeνt)
Clinica Chimica Acta (1999-present)
Clinical Biochemistry (1999)

Administrative work

- 1992-98 Member of the Graduate Studies Committee, Dept. of Chem. and Biochem., Univ. of Windsor, Ontario, Canada.
- 1995-98 Scholarships Officer, Dept. of Chem. and Biochem., U of Windsor
- 1995-96 Awards Committee, U. of Windsor.
- 1995-96 Member of the Graduate Council of the U. of Windsor.
- 1999 Member of the Executive Committee, School of Physical Sciences, U. of Windsor.
- 2000-05 Member of the Student Transfer Committee, Dept. of Chemistry, University of Patras, Greece
- 2001-05 Member of the Committee for the Centre of Instrumental Analysis, University of Patras.
- 2002-03 & 2011-13 Member of the Senate, University of Patras, Greece
- 2006 Member of the ‘Health and Safety Committee’, Department of Chemistry, University of Patras
- 2005-present Member of the Coordinating Committee for the Program of Graduate Studies, Dept of Chemistry, University of Patras.
- 2007-10 Member of the Committee for Recycling at the University of Patras.

- 2007-10 Coordinator of the Committee for the Undergraduate Laboratory Training in the Chemistry Dept., University of Patras.
- 2007-17 Member of the Undergraduate Curriculum Committee, Dept. of Chemistry, University of Patras.
- 2009-20 Member of the Internal Evaluation Committee for the Department of Chemistry, University of Patras.
- 2010-present Coordinator of the MSc program in '*Analytical Chemistry & Nanotechnology*' offered by the Chemistry Dept., University of Patras.
- 2011-13 Chairman, Department of Chemistry, University of Patras, Greece
- 2011-16 Coordinator of the Internal Evaluation Committee of the Dept. of Chemistry, University of Patras
- 2011-16 Coordinator of the Committee for 'Promotion, Development and Transparency' of the Chemistry Dept., University of Patras
- 2011-13 Member of the Committee for Connecting the Chemistry Department with the Economy of Greece.
- 2011-13 Member of the Erasmus Committee (European Student Mobility Program), Dept of Chemistry, Univ. of Patras
- 2011-16 Member of the Committee for the 'Practical Exercise' (Industrial placements), Dept. of Chemistry, University of Patras, Greece
- 2013-17 Member of the 'University Council', University of Patras, Greece

CUMULATIVE DATA ON PUBLISHED WORK (CAREER TOTALS)

Original research publications (ISI):	111
Review articles (Invited):	8
Books (in English):	2
Chapters in international books:	14
Communications to international scientific conferences:	>80
Communications to national scientific meetings:	>21
Patents (Greek):	5

Quality of Scientific Journals

Impact Factor	Number of papers	Journal
<i>IF > 14</i>	1	<i>J. Am. Chem. Soc.</i>
<i>11 < IF < 12</i>	4	<i>Nucleic Acids Res.</i>
<i>10 < IF < 11</i>	4	<i>Biosens. Bioelectron.</i>
<i>7 < IF < 8</i>	11	<i>Clin. Chem.</i>
<i>6 < IF < 7</i>	27	<i>Anal. Chem. (25), Food Chem. (1), Microchim. Acta (1)</i>
<i>5 < IF < 6</i>	9	<i>Anal. Chim. Acta (9)</i>
<i>4 < IF < 5</i>	14	<i>Analyst (7), Bioconj. Chem. (1), Crit Rev Clin Lab Sci. (1), J. Agr. Food Chem. (3) Hum Mutat. (2)</i>
<i>3 < IF < 4</i>	23	<i>Anal. Bioanal. Chem. (14), Nanotechnology (1) Eur. J. Hum. Genet.(1), Clin. Chem. Lab. Med. (1) Electrophoresis (1), J. Chromatogr. B (1) J. Pharm. Sci. (1), Methods (1), Microchem. J. (2)</i>
<i>IF < 3</i>	20	<i>Anal. Biochem. (6), Biotechniques (1) Chem. Phys. Lett. (1), Clin. Biochem (4) Clin. Chim. Acta (3), Genet. Test. (1) J. Imm. Meth. (1), J. Chem. Edu. (1) Pharmacogenomics (1), Prot. Expr. Purif. (1)</i>

LIST OF PUBLICATIONS

(A) ORIGINAL PUBLICATIONS

- A111. Christopoulou N-M, Kalogianni DP, Christopoulos TK. Posidonia oceanica (Mediterranean tapeweed) leaf litter as a source of fluorescent carbon dot preparations.
Microchemical Journal, **2021**; 161: 105787.
<https://doi.org/10.1016/j.microc.2020.105787>
- A110. Sevastou A, Tragoulias SS, Kalogianni DP, Christopoulos TK. Mix-and-read method for assessment of milk pasteurization using a smartphone or a common digital camera.
Analytical & Bioanalytical Chemistry, **2020**; 412: 5663–5669
<https://doi.org/10.1007/s00216-020-02786-3>.
- A109. Kalligosfyri PM, Sevastou A, Kyriakou IK, Tragoulias SS, Kalogianni DP, Christopoulos TK. Smartphone-based chemiluminometric hybridization assays and quantitative competitive polymerase chain reaction.
Analytica Chimica Acta, **2019**; 1088: 123-130.
- A108. Galaziou A, Christopoulos TK, Ioannou PC. Paper-based device providing visual genetic signatures for precision medicine. Application to breast cancer.
Analytical & Bioanalytical Chemistry, **2019**; 411: 3769-3776.
- **PAPER IN FOREFRONT** (“Guided by the peer reviews, the Editors select a number of exceptional papers for rapid publication as ‘*Papers in Forefront*’. These articles are given priority treatment, and they are printed prominently in a journal issue”)
- A107. Magiati M, Myridaki VM, Christopoulos TK, Kalogianni DP. Lateral flow test for meat authentication with visual detection.
Food Chemistry, **2019**; 274: 803-807.
- A106. Kyriakou IK, Mavridis K, Kalogianni DP, Christopoulos TK, Ioannou PC, Skorilas A. Multianalyte quantitative competitive PCR on optically encoded microspheres for an eight-gene panel related to prostate cancer.
Analytical & Bioanalytical Chemistry, **2018**; 410: 971-980
- A105. Kouloulia S, Lazaridou M, Christopoulos TK, Ioannou PC. Multi-allele dipstick assay for visual genotyping of four novel SIRT1 gene variant alleles as candidate biomarkers for sporadic Parkinson disease.
Microchimica Acta, **2017**; 184: 2845-2853.
- A104. Spyrou EM, Kalogianni DP, Tragoulias SS, Ioannou PC, Christopoulos TK. Digital camera and smartphone as detectors in paper-based chemiluminometric genotyping of single-nucleotide polymorphisms.
Analytical & Bioanalytical Chemistry, **2016**; 408: 7393-7402.
- A103. Fountoglou N, Petropoulou M, Iliadi A, Christopoulos TK, Ioannou PC. Two-panel molecular testing for genetic predisposition for thrombosis using multi-allele visual biosensors.

- Analytical & Bioanalytical Chemistry*, **2016**; 408: 1943-1952.
- A102. Amvrosiadou M, Petropoulou M, Poulou M, Tzetis M, Kanavakis E, Christopoulos TK, Ioannou PC. Multi-allele genotyping platform for the simultaneous detection of mutations in the Wilson disease related ATP7B gene.
Journal of Chromatography B, **2015**; 1006: 201-208.
- A101. Petropoulou M, Poula A, Kanavakis E, Traeger-Synodinos J, Christopoulos TK, Ioannou PC. Screening nondeletion alpha-thalassemia mutations in the HBA1 and HBA2 genes by high-resolution melting analysis.
Clinical Chemistry & Laboratory Medicine; **2015**; 53: 1951-1959.
- A100. Petropoulou M, Poula A, Traeger-Synodinos J, Kanavakis E, Christopoulos TK, Ioannou PC. Multi-allele DNA biosensor for the rapid genotyping of 'nondeletion' alpha thalassaemia mutations in HBA1 and HBA2 genes by means of multiplex primer extension reaction.
Clinica Chimica Acta, **2015**; 446: 241-247
- A99. Kalogianni DP, Bazakos C, Boutsika L, Targem M, Christopoulos TK, Kalaitzis P, Ioannou PC. Olive oil DNA fingerprinting by multiplex SNP-genotyping on fluorescent microspheres.
Journal of Agricultural & Food Chemistry, **2015**; 63: 3121-3128
- A98. Sapountzi EA, Tragoulis SS, Kalogianni DP, Ioannou PC, Christopoulos TK. Lateral flow devices for nucleic acid analysis exploiting quantum dots as reporters.
Analytica Chimica Acta, **2015**; 864: 48-54
- A97. Papanikos F, Skoulatou C, Sakellariou P, Kekou K, Christopoulos TK, Kanavakis E, Traeger-Synodinos J, Ioannou PC. A simplified approach for FSHD molecular testing.
Clinica Chimica Acta, **2014**; 429: 96-103
- A96. Papanikos F, Iliadi A, Petropoulou M, Penelope C. Ioannou PC, Christopoulos TK, Kanavakis E, Traeger-Synodinos J. Lateral flow dipstick test for genotyping of 15 beta-globin gene (*HBB*) mutations with naked-eye detection.
Analytica Chimica Acta, **2012**; 727: 61-66.
- A95. Trantakis IA, Christopoulos TK, Spaniolas S, Kalaitzis P, Ioannou PC, Tucker GA. Quantitative bioluminometric method for DNA-based species/variety identification in food authenticity assessment.
Journal of Agricultural & Food Chemistry, **2012**; 60: 912-916.
- A94. Trantakis IA, Spaniolas S, Kalaitzis P, Ioannou PC, Tucker GA, Christopoulos TK. Dipstick test for DNA-based food authentication. Application to coffee authenticity assessment.
Journal of Agricultural & Food Chemistry, **2012**; 60: 713-717.
- A93. Iliadi A, Petropoulou M, Ioannou PC, Christopoulos TK, Anagnostopoulos NI, Kanavakis E, Traeger-Synodinos J. Absolute quantification of the alleles in somatic point mutations by bioluminometric methods based on competitive PCR in the presence of a locked nucleic acid blocker or an allele-specific primer.
Analytical Chemistry, **2011**; 83: 6545-6551.

- A92. Kalogianni DP, Boutsika L, Kouremenou P, Christopoulos TK, Ioannou PC. Carbon nano-strings as reporters in lateral-flow devices for DNA sensing by hybridization. *Analytical & Bioanalytical Chemistry*, **2011**; 400: 1145-1152.
- A91. Elenis D, Ioannou PC, Christopoulos TK. A nanoparticle-based sensor for visual detection of multiple mutations. *Nanotechnology*, **2011**; 22: 155501
- A90. Litos IK, Ioannou PC, Christopoulos TK, Tzetis M, Kanavakis E, Traeger-Synodinos J. Quadruple-allele dipstick test for simultaneous visual genotyping of A896G (Asp299Gly) and C1196T (Thr399Ile) polymorphisms in the toll-like receptor-4 gene. *Clinica Chimica Acta*, **2011**; 412: 1968-1972.
- A89. Petrakis EC, Trantakis IA, Kalogianni DP, Christopoulos TK. Screening for unknown mutations by a bioluminescent protein truncation test with homogeneous detection. *Journal of the American Chemical Society*, **2010**; 132: 5091-5095.
- A88. Vlachou MA, Glynou KM, Ioannou PC, Christopoulos TK, Vartholomatos G. Development of a three-biosensor panel for visual detection of thrombophilia-associated mutations. *Biosensors & Bioelectronics* **2010**; 26: 228-234
- A87. Konstantou JK, Iliadi AC, Ioannou PC, Christopoulos TK, Anagnostopoulos NI, Kanavakis E, Traeger-Synodinos J. Visual screening for JAK2V617F mutation by a disposable dipstick. *Analytical & Bioanalytical Chemistry*, **2010**; 397: 1911-1916.
- A86. Trantakis IA, Fakis M, Tragoulias SS, Christopoulos TK, Persephonis P, Giannetas V, Ioannou P. Ultrafast fluorescence dynamics of Sybr Green I/DNA complexes. *Chemical Physics Letters*, **2010**; 485: 187-190.
- A85. Tsiakalou V, Petropoulou M, Ioannou PC, Christopoulos TK, Kanavakis E, Anagnostopoulos N, Savvidou I, Traeger-Synodinos J. Bioluminometric assay for relative quantification of mutant allele burden. Application to the oncogenic somatic point mutation JAK2V617F. *Analytical Chemistry*, **2009**; 81: 8596-8602.
- A84. Iliadi A, Makrythanasis P, Tzetis M, Tsipi M, Traeger-Synodinos J, Ioannou PC, Kanavakis E, Christopoulos TK. Association of TLR4 single nucleotide polymorphisms and sarcoidosis in Greek patients. *Genetic Testing & Molecular Biomarkers*, **2009**; 13: 849-853.
- A83. Litos IK, Ioannou PC, Christopoulos TK, Traeger-Synodinos J, Kanavakis E. Multianalyte, dipstick-type, nanoparticle-based DNA biosensor for visual genotyping of single-nucleotide polymorphisms. *Biosensors & Bioelectronics*, **2009**; 24: 3135-3139.
- A82. Elenis DS, Ioannou PC, Christopoulos TK. Quadruple-allele chemiluminometric assay for simultaneous genotyping of two single-nucleotide polymorphisms. *Analyst*, **2009**; 134: 725-730.

- A81. Toubanaki DK, Christopoulos TK, Ioannou PC, Flordellis CS. Identification of single-nucleotide polymorphisms by the oligonucleotide ligation reaction – A DNA biosensor for simultaneous visual detection of both alleles. *Analytical Chemistry*, **2009**; 81: 218-224.
- A80. Toubanaki DK, Christopoulos TK, Ioannou PC, Flordellis CS. High-throughput chemiluminometric genotyping of single nucleotide polymorphisms of histamine, serotonin and adrenergic receptor genes. *Analytical Biochemistry* **2009**; 385: 34-41.
- A79. Toubanaki DK, Christopoulos TK, Ioannou PC, Gravanis A. Visual genotyping of single nucleotide polymorphisms by tetra-primer PCR coupled with a dry-reagent disposable biosensor. *Pharmacogenomics*, **2009**; 10: 495-504.
- A78. Kalogianni DP, Litos IK, Christopoulos TK, Ioannou PC. Dipstick-type biosensor for visual detection of DNA with oligonucleotide-decorated colored polystyrene microspheres as reporters. *Biosensors & Bioelectronics*, **2009**; 24: 1811-1815.
- A77. Konstantou JK, Ioannou PC, Christopoulos TK. Dual-allele dipstick assay for genotyping single nucleotide polymorphisms by primer extension reaction. *European Journal of Human Genetics*, **2009**; 17: 105-111.
- A76. Toubanaki DK, Christopoulos TK, Ioannou PC and Gravanis A. Dry-reagent disposable biosensor for visual genotyping of single nucleotide polymorphisms by oligonucleotide ligation reaction. Application to pharmacogenetic analysis. *Human Mutation*, **2008**; 29: 1071-1078
- A75. Iliadi A, Ioannou PC, Traeger-Synodinos J, Kanavakis E, Christopoulos TK. High-throughput microtiter well-based bioluminometric genotyping of two single nucleotide polymorphisms in the toll-like receptor-4 (TLR4) gene. *Analytical Biochemistry*, **2008**; 376: 235-241.
- A74. Tragoulias SS, Obeid PJ, Tataridis I, Christopoulos TK. Home-built integrated microarray system (IMAS). A three-laser confocal fluorescence scanner coupled with a microarray printer. *Analytical & Bioanalytical Chemistry*, **2008**; 390: 1563-1573.
- A73. Elenis DS, Ioannou PC, Christopoulos TK. Quadruple-analyte chemiluminometric hybridization assay. Application to double quantitative competitive polymerase chain reaction. *Analytical Chemistry*, **2007**; 79: 9433-9440.
- A72. Litos I, Emmanouilidou E, Glynou K, Laios E, Ioannou PC, Christopoulos TK, Kampa M, Kastanas E, Gravanis A. Rapid genotyping of CYP2D6, CYP2C19 and TPMT polymorphisms by primer extension reaction in a dipstick format. *Analytical & Bioanalytical Chemistry*, **2007**; 389: 1849-1857.
- A71. Kalogianni DP, Elenis DS, Christopoulos TK, Ioannou PC. Multiplex quantitative competitive polymerase chain reaction (MQC-PCR) based on a multianalyte hybridization assay performed on spectrally encoded microspheres. *Analytical Chemistry*, **2007**; 79: 6655-6661.

- A70. Konstantou J, Ioannou PC, Christopoulos TK. Genotyping of single nucleotide polymorphisms by primer extension reaction and a dual-analyte bio/chemiluminometric assay.
Analytical & Bioanalytical Chemistry, **2007**; 388: 1747-1754.
- A69. Kalogianni DP, Bravou VT, Christopoulos TK, Ioannou PC, Zoumbos NC. Dry-reagent disposable dipstick test for visual screening of seven leukemia-related chromosomal translocations.
Nucleic Acids Research, **2007**; 35:e23, 1-12.
- A68. Litos IK, Ioannou PC, Christopoulos TK, Traeger J, Kanavakis E. Genotyping of single nucleotide polymorphisms by primer extension reaction in a dry-reagent dipstick format.
Analytical Chemistry, **2007**; 79: 395-402.
- **ACCELERATED ARTICLE** (“Guided by the review, the Editors will select a limited number of research articles to be published as ‘Accelerated Articles’”).
- A67. Glynou K, Kastanis P, Boukouvala S, Tsaoussis V, Ioannou P, Christopoulos TK, Traeger J, Kanavakis E. High-throughput microtiter well-based chemiluminometric genotyping of 15 HBB gene mutations in a dry-reagent format.
Clinical Chemistry, **2007**; 53: 384-391.
- A66. Kalogianni DP, Goura S, Aletras AJ, Christopoulos TK, Chanos MG, Christofidou M, Skoutelis A, Ioannou PC, Panagiotopoulos E. Dry-reagent dipstick test combined with 23S rRNA PCR for molecular diagnosis of bacterial infection in arthroplasty.
Analytical Biochemistry, **2007**; 361: 169-175.
- A65. Zerefos PG, Ioannou PC, Traeger-Synodinos J, Dimissianos G, Kanavakis E, Christopoulos TK. Photoprotein aequorin as a novel reporter for SNP genotyping by primer extension. Application to the variants of mannose-binding lectin gene.
Human Mutation, **2006**; 27: 279-285.
- A64. Kalogianni DP, Koraki T, Christopoulos TK, Ioannou PC. Nanoparticle-based DNA biosensor for visual detection of genetically modified organisms.
Biosensors & Bioelectronics, **2006**; 21: 1069-1076.
- A63. Zerefos PG, Ioannou PC, Christopoulos TK. Method for rapid conjugation of recombinant photoprotein aequorin with streptavidin and application as a universal detection reagent for binding assays.
Analytica Chimica Acta, **2006**; 558: 267-273.
- A62. Mavropoulou AK, Koraki T, Ioannou PC, Christopoulos TK. High-throughput double quantitative competitive polymerase chain reaction for determination of genetically modified organisms.
Analytical Chemistry, **2005**; 77: 4785-4791.
- A61. Emmanouilidou E, Tannous B, Ioannou PC, Christopoulos TK. Duplex RT-PCR and chemiluminometric hybridization assay for combined screening of the mRNAs of prostate-specific antigen and prostate-specific membrane antigen in peripheral blood.
Analytica Chimica Acta, **2005**; 531: 193-198.

- A60. Emmanouilidou E, Ioannou PC, Christopoulos TK. High-throughput chemiluminometric determination of prostate-specific membrane antigen mRNA in peripheral blood by RT-PCR using a synthetic RNA internal standard.
Analytical & Bioanalytical Chemistry, **2004**; 380: 90-97.
- A59. Obeid PJ, Christopoulos TK, Ioannou PC. Rapid analysis of genetically modified organisms by in-house developed capillary electrophoresis chip and laser-induced fluorescence system.
Electrophoresis, **2004**; 25: 922-930.
- A58. Glynou K, Ioannou PC, Christopoulos TK. Detection of transgenes in soybean by polymerase chain reaction and a simple bioluminometric assay based on a universal aequorin-labeled oligonucleotide probe.
Analytical & Bioanalytical Chemistry, **2004**; 378: 1748-1753.
- **PAPER IN FOREFRONT** (“Guided by the peer reviews, the Editors select a number of exceptional papers for rapid publication as ‘**Papers in Forefront**’. These articles are given priority treatment, and they are printed prominently in a journal issue”)
- A57. Obeid PJ, Christopoulos TK, Crabtree HJ, Backhouse CJ. Microfabricated device for DNA and RNA amplification by continuous-flow PCR and RT-PCR with cycle number selection.
Analytical Chemistry, **2003**; 75: 288-295.
- A56. Glynou K, Ioannou PC, Christopoulos TK, Syriopoulou V. Oligonucleotide-functionalized gold nanoparticles as probes in a dry-reagent strip biosensor for DNA analysis by hybridization.
Analytical Chemistry, **2003**; 75, 4155-4160.
- A55. Glynou K, Ioannou PC, Christopoulos TK. Affinity capture-facilitated preparation of aequorin-oligonucleotide conjugates for rapid hybridization assays.
Bioconjugate Chemistry, **2003**; 14: 1024-1029.
- A54. Tannous B, Verhaegen M, Christopoulos TK, Kourakli A. Combined flash- and glow-type chemiluminescent reactions for high-throughput genotyping of biallelic polymorphisms.
Analytical Biochemistry, **2003**; 320: 266-272.
- A53. Emmanouilidou E, Ioannou PC, Christopoulos TK, Polizois K. Determination of prostate specific antigen mRNA in peripheral blood by RT-PCR and a simple chemiluminometric hybridization assay in a high-throughput format.
Analytical Biochemistry, **2003**; 313: 97-105.
- A52. Obeid PJ, Christopoulos TK. Continuous-flow DNA and RNA amplification chip combined with laser-induced fluorescence detection.
Analytica Chimica Acta, **2003**; 494: 1-9.
- A51. Glynou K, Ioannou PC, Christopoulos TK. One-step purification of recombinant photoprotein aequorin by immobilized metal-ion affinity chromatography.
Protein Expression & Purification, **2003**; 27: 384-390.

- A50. Tannous BA, Laios E, Christopoulos TK. T7 RNA polymerase as a self-replicating label for antigen quantification. *Nucleic Acids Research*, **2002**; 30: e140 (1-7).
- A49. Verhaegen M, Christopoulos TK. Recombinant Gaussia luciferase. Overexpression, purification and analytical application of a bioluminescent reporter for DNA hybridization. *Analytical Chemistry*, **2002**; 74: 4378-4385.
- A48. Verhaegen M, Christopoulos TK. Bacterial expression of in vivo biotinylated aequorin for direct application to bioluminometric hybridization assays. *Analytical Biochemistry*, **2002**; 306: 314-322.
- A47. Tannous BA, Chiu NHL, Christopoulos TK. Heterobifunctional linker between antibodies and reporter genes for immunoassay development. *Analytica Chimica Acta*, **2002**; 459: 169-176.
- A46. Laios E, Ioannou PC, Christopoulos TK. Enzyme amplified aequorin-based bioluminometric hybridization assays. *Analytical Chemistry*, **2001**; 73: 689-692.
- A45. Laios E, Obeid P, Ioannou PC, Christopoulos TK. Expression hybridization assays combining cDNAs from firefly and renilla luciferases for simultaneous determination of two target sequences. *Analytical Chemistry*, **2000**; 72: 4022 – 4028.
- A44. White SR, Chiu NHL, Christopoulos TK. Expression Immunoassay. *Methods*, **2000**; 22: 24 – 32.
- A43. White SR, Christopoulos TK. Signal amplification system for DNA hybridization assays based on in vitro expression of a DNA label encoding apoequorin. *Nucleic Acids Research*, **1999**; 27: e25(i – viii)
- A42. Chiu NHL, Christopoulos TK. Two-site expression immunoassay using a firefly luciferase-encoding DNA label. *Clinical Chemistry*, **1999**; 45: 1954 - 1959.
- A41. Verhaegen M, Christopoulos TK. Quantitative polymerase reaction based on a dual-analyte chemiluminescence hybridization assay for the target DNA and the internal standard. *Analytical Chemistry*, **1998**; 70: 4120-4125.
- A40. Ioannou PC, Christopoulos TK. Two-round enzymatic amplification combined with time-resolved fluorometry of Tb³⁺ chelates for enhanced sensitivity in DNA hybridization assays. *Analytical Chemistry*, **1998**; 70: 698-702.
- A39. Verhaegen M, Ioannou PC, Christopoulos TK. Quantification of prostate-specific antigen mRNA by coamplification with a recombinant RNA internal standard and microtiter well-based hybridization. *Clinical Chemistry*, **1998**; 44: 1170-1176.

- A38. Chiu NHL, Christopoulos TK, Peltier J. Sandwich-type deoxyribonucleic acid hybridization assays based on enzyme amplified time-resolved fluorometry. *Analyst*, **1998**; 123(6): 1315-1320.
- A37. White S, Chiu NHL, Christopoulos TK. Expression immunoassay based on antibodies labeled with a deoxyribonucleic acid fragment encoding the alpha-peptide of beta-galactosidase. *Analyst*, **1998**; 123(6): 1309-1314.
- A36. Laios E, Ioannou PC, Christopoulos TK. Novel hybridization assay configurations based on *in vitro* expression of DNA reporter molecules. *Clinical Biochemistry*, **1998**; 31: 151-158.
- A35. Galvan B, Christopoulos TK. Quantitative reverse transcriptase-polymerase chain reaction for prostate-specific antigen mRNA. *Clinical Biochemistry*, **1997**; 30: 391-397.
- A34. Galvan B, Christopoulos TK. Bioluminescence hybridization assays using recombinant aequorin. Application to the detection of prostate-specific antigen mRNA. *Analytical Chemistry*, **1996**; 68: 3545-3550.
- A33. Chiu NHL, Christopoulos TK. Hybridization assays using an expressible DNA fragment encoding firefly luciferase as a label. *Analytical Chemistry*, **1996**; 68: 2304-2308.
- A32. Bortolin S, Christopoulos TK, Verhaegen M. Quantitative polymerase chain reaction using a recombinant DNA internal standard and time-resolved fluorometry. *Analytical Chemistry*, **1996**; 68: 834-840.
- A31. Bortolin S, Christopoulos TK. Quantitative RT-PCR combined with time-resolved fluorometry for the determination of BCR-ABL mRNA. *Clinical Chemistry*, **1996**; 42: 1924-1929.
- A30. Bortolin S, Christopoulos TK. Determination of polymerase chain reaction products by time-resolved immunofluorometry. *Clinical Biochemistry*, **1996**; 29: 179-182.
- A29. Galvan B, Christopoulos TK. Fluorometric and time-resolved immunofluorometric assays for protein tyrosine phosphatase activity. *Clinical Biochemistry*, **1996**; 29: 125-131.
- A28. Christopoulos TK, Chiu NHL. Expression immunoassay. Highly sensitive antigen quantitation using antibodies labeled with enzyme-coding DNA fragments. *Analytical Chemistry*, **1995**; 67: 4290-4294.
- A27. Radovich P, Christopoulos TK, Bortolin S. Time-resolved fluorometric hybridization assays with RNA probes synthesized from polymerase chain reaction-generated DNA templates. *Analytical Chemistry*, **1995**; 67: 2644-2649.
- A26. Galvan B, Christopoulos TK, Diamandis EP. Detection of prostate-specific antigen mRNA by reverse-transcription polymerase chain reaction and time-resolved fluorometry. *Clinical Chemistry*, **1995**; 41: 1705-1709.

- A25. Bortolin S, Christopoulos TK. Detection of BCR-ABL transcripts from the Philadelphia translocation by microtitre-well hybridization and time-resolved immunofluorometry.
Clinical Chemistry, **1995**; 41: 693-699.
- A24. Bortolin S, Christopoulos TK. Time-resolved immunofluorometric determination of specific mRNA sequences amplified by the polymerase chain reaction.
Analytical Chemistry, **1994**; 66: 4302-4307.
- A23. Markantonis SL, Kyroudis A, Christopoulos T. Evaluation of two prediction models for digoxin dosing.
Pharmacy World & Science, **1993**; 15: 29-33.
- A22. Christopoulos TK, Diamandis EP. Enzymatically amplified time-resolved fluorescence immunoassay with terbium chelates.
Analytical Chemistry, **1992**; 64: 342-346.
- A21. Papanastasiou A, Christopoulos TK, Diamandis EP. Ultrasensitive thyrotropin immunoassay based on enzymatically amplified time-resolved fluorescence with terbium chelates.
Clinical Chemistry, **1992**; 38: 545-548.
- A20. Kakabakos SE, Christopoulos TK, Diamandis EP. Multianalyte immunoassay based on spatially distinct fluorescent areas quantified by laser-excited solid-phase time-resolved fluorometry.
Clinical Chemistry, **1992**; 38: 338-342.
- A19. Diamandis EP, Christopoulos TK, Bean CC. Quantitative western blot analysis and spot immunodetection using time-resolved fluorometry.
Journal of Immunological Methods, **1992**; 147: 251-259.
- A18. Christopoulos TK, Diamandis EP, Wilson G. Quantification of nucleic acids on nitrocellulose membranes with time-resolved fluorometry.
Nucleic Acids Research, **1991**; 19: 6015-6019.
- A17. Christopoulos TK, Diamandis EP. Ultrasensitive determination of europium using microsecond time-resolved fluorometry.
Analyst, **1991**; 116: 627-630.
- A16. Diamandis EP, Christopoulos TK. Time-resolved immunofluorometric detection of antigens separated by high performance liquid chromatography and coated to polystyrene.
BioTechniques, **1991**; 16: 646-648.
- A15. Christopoulos TK, Diamandis EP. Binding studies using ion-selective electrodes. Examination of the picrate-albumin interaction as a model system.
Analytical Chemistry, **1990**; 62: 360-367.
- A14. Christopoulos TK, Lianidou ES, Diamandis EP. Ultrasensitive time-resolved fluorescence method for alpha-fetoprotein.
Clinical Chemistry, **1990**; 36: 1497-1502.
- A13. Lianidou ES, Christopoulos TK, Diamandis EP. Assay of creatine kinase isoenzyme MB in serum with time-resolved immunofluorometry.
Clinical Chemistry, **1990**; 36: 1679-1683.

- A12. Papanastasiou-DA, Christopoulos TK, Diamandis EP. Effect of solid-phase blocking on the background signal in a time-resolved fluorescence immunoassay system based on labelled streptavidin.
Journal of Clinical Chemistry & Enzymology Communications, **1990**; 2: 177-181.
- A11. Christopoulos TK, Diamandis EP. Potentiometric measurements in air-segmented streams without debubbling.
Analytical Chemistry, **1989**; 61: 504-508.
- A10. Christopoulos TK, Diamandis EP. Use of a sintered glass crucible for easy construction of liquid membrane ion-selective electrodes.
Journal of Chemical Education, **1988**; 65: 648.
- A09. Mitsana-PA, Christopoulos TK, Diamandis EP, Koupparis MA. Dissolution studies of drug formulations using ion-selective electrodes as sensors in an air segmented continuous flow analyzer.
Journal of Pharmaceutical Sciences, **1987**; 76: 724-730.
- A08. Christopoulos TK, Diamandis EP. Flow-through units for solid-state, liquid and PVC matrix membrane ion-selective electrodes to minimize streaming potentials.
Analyst, **1987**; 112: 1293-1298.
- A07. Christopoulos TK, Diamandis EP. A general method for the assay of binders. Application to the potentiometric determination of albumin in serum, plasma and whole blood.
Clinical Biochemistry, **1986**; 19:151-160.
- A06. Christopoulos TK. Application of ion-selective electrodes to the study of the binding of organic ions to albumin.
PhD thesis, Athens **1986**.
- A05. Christopoulos TK, Mitsana-PA, Diamandis EP. Ion-selective electrodes for the determination of ionization constants of sparingly soluble organic bases in aqueous solutions: applications to chlorpromazine and amitriptyline.
Analyst, **1985**; 110: 1497-1500.
- A04. Mitsana A, Christopoulos TK, Diamandis EP, Hadjiioannou TP. Construction of ion-selective electrodes for chlorpromazine, amitriptyline, propantheline and meperidine: analytical study and application to pharmaceutical analysis.
Analyst, **1985**; 110: 1091-94.
- A03. Diamandis EP, Papanastasiou-DA, Christopoulos TK, Hadjiioannou TP. Continuous-flow potentiometric determination of α -amylase activity in serum and urine.
Microchemical Journal, **1985**; 32: 183-190.
- A02. Diamandis EP, Christopoulos TK. Potentiometric titration of pharmaceutical compounds in formulations with sodium tetraphenylborate.
Analytica Chimica Acta, **1983**; 152: 281-284.
- A01. Christopoulos TK, Diamandis EP, Hadjiioannou TP. Potentiometric titration of organic cations with sodium tetraphenylborate and a liquid-membrane tetraphenylborate ion-selective electrode.
Analytica Chimica Acta, **1982**; 143: 143-151.

(B) REVIEW ARTICLES (INVITED)

- B08. Kalogianni DP, Kalligospfyri P, Kyriakou I, Christopoulos TK. Advances in microRNA analysis. *Analytical & Bioanalytical Chemistry*, **2018**; 410: 695-713.
- B07. Elenis DS, Kalogianni DP, Glynou K, Ioannou PC, Christopoulos TK. Advances in molecular techniques for detection and quantification of genetically modified organisms. *Analytical & Bioanalytical Chemistry*, **2008**; 392: 347-354.
- B06. Obeid P, Christopoulos TK. Microfabricated systems for nucleic acid analysis. *Critical Reviews in Clinical Laboratory Science*, **2004**, 41: 429-465.
- B05. Christopoulos TK. Nucleic acid analysis. *Analytical Chemistry*, **1999**; 71: 425R – 438R.
- B04. Diamandis EP, Christopoulos TK. Immunological assays based on time-resolved fluorometry and lanthanide chelates as labels". *Service Training and Continuing Education AACC*, **1992**; 10: 9-19.
- B03. Diamandis EP, Christopoulos TK. The biotin-(strept)avidin systems-Principles and applications in biotechnology. *Clinical Chemistry*, **1991**; 37:625-636
- B02. Diamandis EP, Christopoulos TK. Europium chelates as labels in time-resolved fluorometric immunoassays and DNA hybridization assays. *Analytical Chemistry*, **1990**; 62:1149A-1157A
- B01. Christopoulos TK, Siskos PA. Quality assurance in clinical chemistry laboratories *Iatriki*, **1986**; 49:79-88.

(C) BOOKS

- C2. ‘Advances in immunoassay technology’. Chiu NHL, Christopoulos TK, Eds (180 pages). InTech, Croatia, **2012**.
- C1. ‘Immunoassay’. Diamandis EP, Christopoulos TK, Eds (579 pages). Academic Press Inc. San Diego CA, **1996**.

(D) BOOK CHAPTERS

- D14. Laios E, Ioannou PC, Christopoulos TK. Gene assays based on bio(chemi)luminescence. In: *Analytical chemiluminescence and bioluminescence: past, present and future*, Roda A (Ed), Royal Society of Chemistry (RSC), Cambridge, **2011**.
- D13. Christopoulos TK, Ioannou PC, Verhaegen M. Photoproteins in nucleic acid analysis. In: *Photoproteins in Bioanalysis*, Daunert S, Deo S (Ed.), pp. 77-94, Wiley-VCH **2006**.

- D12. Christopoulos TK. Polymerase chain reaction and other amplification systems. In: *Encyclopedia of Analytical Chemistry*, R.A. Meyers (Ed.), pp. 5159-5173, John Wiley & Sons Ltd, Chichester **2000**.
- D11. Christopoulos TK, Diamandis EP. Theory of immunoassays. In: *Immunoassay*, EP Diamandis, TK Christopoulos Eds, pp 25-50, Academic Press **1996**.
- D10. Christopoulos TK, Diamandis EP. Fluorescence immunoassays. In: *Immunoassay*, EP Diamandis, TK Christopoulos Eds, pp. 309-335, Academic Press **1996**.
- D09. Christopoulos TK, Diamandis EP. Immunoassay configurations. In: *Immunoassay*, EP Diamandis, TK Christopoulos Eds, pp. 227-236, Academic Press **1996**.
- D08. Christopoulos TK, Diamandis EP. Past, present and future of immunoassays. In: *Immunoassay*, EP Diamandis, TK Christopoulos Eds, pp. 1-3, Academic Press **1996**.
- D07. Diamandis EP, Christopoulos TK, Khoshravi J. Development of in-house immunological assays. In: *Immunoassay*, EP Diamandis, TK Christopoulos Eds, pp. 555-568, Academic Press **1996**.
- D06. Christopoulos TK. Immunoassays. Fluorescence based methods. In: *Encyclopedia of Analytical Science*, Alan Townsend, Editor, pp. 2072-2081, Academic Press **1995**.
- D05. Diamandis EP, Christopoulos TK. Lanthanide chelates and multiple labelling Strategies/Time-Resolved Fluorescence In: *Nonisotopic probing blotting and sequencing*, 2nd Edition. L.J. Kricka, Editor, pp. 377-390, Academic Press **1995**.
- D04. Diamandis EP, Christopoulos TK. Time-resolved fluorescence In: *Nonradioactive labelling and detection of biomolecules*, C. Kessler, Editor, pp. 188-193, Springer-Verlag, **1992**.
- D03. Diamandis EP, Christopoulos TK. Lanthanide chelates and multiple labelling Strategies/Time-Resolved Fluorescence In: *DNA Probes: Labels, Detection and Strategies*, L.J. Kricka, Editor, pp. 263-274, Academic Press, **1992**.
- D02. Diamandis EP, Christopoulos TK. Time-resolved fluorescence immunoassays - Principles and applications In: *Immunochemical Assays and Biosensor Technology for the 1990s*, R. Nakamura, Y. Kasahara and G. Rechnitz, Editors, pp. 251-271, American Society of Microbiology, **1992**.
- D01. Diamandis EP, Christopoulos TK. Biochemical markers of malignancy. In: *Clinical Chemistry*, Alan H.B. Wu, Editor, pp.103-111, Health and Education Resources Inc., **1991**.