

Curriculum Vitae

Name: Sabato

Surname: D'Auria

Current Position

- Director of the Institute of Food Science, ISA-CNR, Avellino, Italy;
- Professor Invité at the Centre INRS - Institut Armand-Frappier, Laval, Quebec, Canada;

Education

1985 Dr. in Biology, University of Napoli "Federico II", Italy;

1989 Specialization in Medical Genetics, University of Rome "La Sapienza", Italy;

1993 Specialization in General Pathology, University of Napoli "Federico II", Italy.

Title

2014

- Habilitation to the position of Full Professor of Biochemistry;
- Habilitation to Director of the Institute of Protein Biochemistry, Napoli, Italy, (IBP-CNR);
- Habilitation to Director of the Institute for Food Science, Avellino, Italy (ISA-CNR);
- National Coordinator of "Safety & Security" of CNR International Foresight Working Group;
- National Coordinator Flagship Project "Advanced biosensors for an early diagnosis of celiac disease";
- Scientific Responsible of the European Project – MARIABOX – FP7 KKBE Project (2014-2018);
- Member of the scientific board of the National Cluster Project "Smart & Safe";
- Governor Board Member of the Institute of the Protein Biochemistry, CNR, Napoli, Italy;
- Panel member of the European Commission for proposal evaluation (Chemistry);

2013

- Habilitation to Director of the Institute for Study of Macromolecules, Milan, Italy,(ISMAC-CNR);
- Panel member of the European Commission for proposal evaluation (Chemistry);

2012

- Expert MIUR of the Industrial Research in Italy (Law N. 30/Ric. del 2 February 2012);

2008

- Member of the scientific committee of the ISSBIOSENSE Srl.;

2006

- Principal Investigator of the CNR Project "Advanced Bio-Chips for food safety and health";

Carrier

2012

- Scientific Consultant of the Regione Lombardia, Italy;

2011

- Contract Professor at Faculty of Biotechnology, University of Naples Federico II;

2010

- Scientific Consultant of the SME "Granarolo Spa";

2006

- Course Lecturer at University of North Texas, Fort Worth, TX, USA;
- Scientific Consultant of Vicam- WATERS – MA, USA;

2004

- Scientific Consultant of the SME "Neutron Spa", Italy;

2000 to 2002

- Associate Professor at the University of Maryland, Baltimore, USA;

1997 to 1999

- Research Associate at the University of Maryland, Baltimore, USA;
1997
- Visiting scientist at the University of Negev, Beer-Sheba, Israel (CNR-MOSA project).

Scientific Responsible of National and International Projects

- 34 Principal Investigator of WP in the frame of the Flagship Project “Interomics”;
- 33 Coordinator of the CNR National Project “Premiale of the Department of Biomedicine ””Advanced Bio/sensing approaches for diagnosis and follow-up of celiac disease (2014-2017);
- 32 Principal Investigator CNR and Scientific Responsible of the entire Project – MARIABOX – European FP7 Project (2014-2018);
- 31 Principal Investigator IBP and WP leader of National Cluster “Safe & Smart” (2013-2015);
- 30 Principal Investigator IBP of the project “BIOTYPE EDA” European project “Italy/Spain/France/Germany” for biosensors for microorganism detection funded by European Defence Agency(2013-2015);
- 29 Principal Investigator IBP of the project “Design and realization of an advanced immune-assay for an early diagnosis of endocrine tumors – Italian Flagship Project – NANOMAX funded by CNR (2012-2014);
- 28 Principal Investigator IBP of the project “CAMPUS –QUARK” funded by Regione Campania (2012-2014);
- 27 Principal Investigator IBP of the project “CISIA” funded by Consiglio Nazionale delle Ricerche (2011-2013);
- 26 Principal Investigator IBP of the research task “Biomolecule production for biosensor design for explosive detection” Project “Tastatore” funded by the Ministry of Defense, Italy (PNRM) (2012-2013);
- 25 Principal Investigator of the project “Innovative biosensors for the detection of the aflatoxin M1 in milk” funded by Granarolo Spa (2010-2011);
- 24 Principal Investigator IBP and coordinator of the project “Innovative biosensors An advanced protein-based biosensor for *dulce-de-leche* “ funded by the Ministry for Foreign Affairs (2007);
- 23 Principal Investigator IBP of WP of the project “Innovative biosensors Innovative fluorescence biosensors for glucose detection. Bioteknet. Funded by Campania Region.(2004-2008);
- 22 Principal Investigator IBP and coordinator of the project “Protein scaffold for the design of fluorescence biosensors for explosive detection Italy-Russia” funded by NATO. (2006-2008);
- 21 Principal Investigator IBP of the project “An optical based biosensors for the detection of pollutants” funded by the Italian Centre for Aeronautic Research. (2006);
- 20 Principal Investigator IBP of the project “A fluorescence biosensor for the following-up of celiac disease. Campania Region. (2008);
- 19 Responsible of WP of the project “Advanced Fluorescence Biosensors for analytes involved in aging processes-Italian Space Agency.(2006-2009);
- 18 Principal Investigator IBP of the Subcontract of the E-LIFT FP7 European Project “Italy-Spain-Hungary- Romania“;
- 17 Principal Investigator IBP of the NANOCAP EDA European project “Italy/Spain/Greece/France” for biosensors for TNT detection;
- 16 Principal Investigator IBP of the CUSTOM European FP7 Project “Italy/Finland/Spain/France” for biosensors for drug precursors;
- 15 Coordinator of the NATO Security Project “Italy–Czech Republic” for development of stable biosensors;
- 14 Coordinator of the NATO European project “Italy–Bulgaria–Czech Republic “ for development a new sensing technologies for homeland security;
- 13 Principal Investigator IBP of the research project with University of Vienna, Austria for the characterization of new enzymes for the sugars enzymatic synthesis;
- 12 Principal Investigator IBP of the research project between CNR – South Korea “CNR-Kosef“ for a new FRET biosensor for celiac disease;
- 11 Coordinator of the NATO project with Russian Academy of Science for development of an optical sensor for security;
- 10 Coordinator of the INTAS Project “Italy-Russia” Young fellowship for development of a new

- biosensor for diabetic patients;
- 9 Principal Investigator Grant N 5P41RR008119-14, Glucose sensing application to contact lenses, University of Maryland, 2006;
- 8 Principal Investigator N 5P41RR008119-14 Effect of high hydrostatic pressure on enzyme, University of Maryland, 2006;
- 7 Principal Investigator N 5P41RR008119-14, Fluorescence of thermophilic enzyme, University of Maryland, 2006;
- 6 Principal Investigator N 5P41RR008119-13, Glucose sensing application To contact lenses University of Maryland 2005;
- 5 Principal Investigator N 5P41RR008119-13 Effect of high hydrostatic pressure on enzyme, University of Maryland Baltimore, 2005;
- 4 Principal Investigator N 5P41RR008119-13, Fluorescence of thermophilic enzyme University of Maryland, 2005;
- 3 Principal Investigator N 5P41RR008119-12 Glucose sensing application to contact lenses, University of Maryland Baltimore 2004
- 2 Principal Investigator N 5P41RR008119-12 Effect of high hydrostatic pressure on enzyme University of Maryland, 2004;
- 1 Principal Investigator N. 5P41RR008119-12 Fluorescence of thermophilic enzyme, University of Maryland, 2004.

Participation to Research Projects

- Scientist involved in project PON Dompè (PI Alberto Luini); 2012-2014
- Scientist involved in project PON Biodefensor (PI Giuseppe Manco); 2012-2014
- Scientist involved in project NATO - (Maria Staiano PI); 2006-2009
- Scientist involved in project NATO with “Russian Academy of Science” “Development of an optical sensor for security, N. PSTNRCLG981025; (2004-2005)
- Scientist involved in project Philip Morris – Biosensor for blood lactate monitoring (PI Karol Zygmunt Gryczynski); (2002-2004)
- Scientist involved in project “Biosensori per il glucosio” Legge 297 Eurochem Srl - Pomezia (RM) - (Mosè Rossi PI); 2001-2003
- Scientist involved in project American Diabetic Association – Fluorescence biosensor for glucose monitoring (PI JR. Lakowicz); 2001-2003
- Scientist involved in project MIUR – (Prof. Mosè Rossi PI); 2001-2003
- Scientist involved in project FIRB – L’altra metà del codice genetico - (Prof. Mosè ROSSI PI);
- Scientist involved in Eu project FP5 – (Prof. Mosè Rossi PI); 1997-1999
- Scientist involved in project CNR-MOSA (Dr. Paolo Bazzicalupo PI); 1997-1998
- Scientist involved in project CNR-MOSA (Dr. Roberto Nucci PI). 1996-1997

Responsible for scientific relations with the following industries

- Neutron Spa, Italy;
- Arterra Srl, Italy;
- CIRA Spa, Italy;
- Selex SI (Finmeccanica group), Italy;
- ISS Inc., Urbana, IL, USA;
- Pirelli Photonics, Italy;
- DAS Photonics, Valencia, Spain;
- Tecnalìa, San Sebastian, Spain;
- BTP (Alcatel-based SME), Italy;
- ISSBIOSENSE Srl, Italy;
- Waters Inc, Boston, USA;
- Becton Dickinson, Durham, NC, USA;
- Granarolo Spa, Italy;

- Mastroberadino, Atripalda, Italy;
- Novartis , Boston, MA, USA;
- Alcatel, Paris, France.

Reviewer and Panel Member Activity

Dr. D’Auria has been selected from NIH and NSF as reviewer and Panel Member for the evaluation of different grants (RR grant, R01).

Dr. D’Auria is an evaluator of :

- European Commission for IP, NEST, STREP, PEOPLE proposals;
- Hungarian Scientific Research Fund (OTKA);
- French National Research Agency, France;
- Agency for Science, Research & Technology, Singapore;
- Campus Biomedico, Rome, Italy;
- Italian Ministry for the Economic Development (MISE), Italy;

Dr. D’Auria is an official evaluator of the Italian Ministry of University and Research proposals (MIUR) as reported in the government law N. 30/Ric. 2 February 2012.

Editorial Activity

EDITOR and/or Member of the Editorial Board of the following international Journals:

1. PLOS ONE, USA – Academic Editor;
2. BMC Biochemistry - London – Editor (Section Chemical Biology);
3. Current Chemical Biology, Bentham Science- Associate Editor;
4. Journal of Fluorescence, Plenum Press, USA; Editorial Board
5. Protein Peptide Letters, Bentham Science, USA; Editorial Board
6. International Journal of Celiac Disease, USA; Editorial Board
7. AIMS of Biophysics, USA; Editorial Board
8. Recent patent in DNA and Gene Sequences, Bentham Science, USA; Editorial Board
9. Rivista Italiana di Materiali e Nanotecnologie, Italy. Editorial Board

Mentoring/Tutoring Activity

a) Dr. D’Auria has been the Tutor of the following individuals for their experimental **Master degree thesis**:

2015

- Mrs. Julie V. Coutu, INRS-Institut Armand-Frappie, Laval Québec, Canada;
- Mrs Clotilde Capacchione, Facoltà di Science, University of Salerno, Italy;
- Mrs. Maria Rosaria Tagliatalata Scafati, Facoltà di Biotecnologie Mediche, University of Naples, Italy;
- Mrs. Adelia Majoli, Facoltà di Science, University of Salerno, Italy;

2013

- Mrs. Alessandra Varavallo, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;

2012

- Mr. Carlo Parrillo, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- Mrs. Valentina Dell’Angelo, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- Mr. Stéphane Beauchamp, INRS-Institut Armand-Frappie, Laval Québec, Canada;

2011

- Mrs. Anna Pennacchio, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- Mr. Francesco Chiuso, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- Mrs. Anna Micaela Paduano, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;

2009

- Mr. Maurizio Baldassarre, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;

- Mrs. Maria Grazia Esposito, Facoltà di Scienze, Scienze Biologiche Università di Napoli Federico II;
- Mrs. Rosita Vitale Facoltà di Scienze, Corso in Scienze Biologiche Università di Napoli Federico II;
- 2007
- Mrs. Immacolata Coccozza, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- 2006
- Mrs. Valeria Crudele, Facoltà di Biotecnologie Mediche, Università di Napoli Federico II;
- Mrs. Annalisa Vitale, Facoltà di Scienze, Corso in Scienze Biologiche Università di Napoli Federico II;
- 2005
- Mrs. Luisa Iozzino, tesi di Laurea in Scienze Biologiche presso l'Università di Napoli;
- Mrs. Paola Ringhieri, tesi di Laurea in Scienze Biologiche presso l'Università di Napoli;
- 2003
- Mr. Gianluca Aquino, tesi di Laurea in Biotecnologie Industriali presso l'Università di Napoli;
- Mr. Antonio Varriale, tesi di Laurea in Biotecnologie Industriali presso l'Università di Napoli;
- 2002
- Mr. Fabrizio Alfieri, tesi di Laurea in Biotecnologie presso l'Università di Napoli;
- Mr. Fabrizio Pelella, tesi di Laurea in Biotecnologie presso l'Università di Napoli;

b) Dr. D'Auria has been the Tutor of the following individuals for their **PhD thesis**:

- 2014
- Mr. Stefano Di Giovanni, University of Naples Federico II, Italy (on-going);
- Mr. Andrea Scala, Fellowship at CNR, Napoli, Italy;
- 2013
- Mr. Alessandro Capo, University of Salerno, Italy (on-going);
- 2012
- Dr. Maria Staiano, PhD at Università di Siena;
- Mrs. Anna Pennacchio, PhD at University di Napoli Federico II (on-going);
- Mr. Vincenzo Marzullo, Open University – London, UK (on-going)(co-tutor);
- 2009
- Dr. Annalisa Vitale, PhD at Università di Napoli SUN;
- Dr. Luisa Iozzino, PhD at Università di Napoli Federico II;
- Dr. Elisa Apicella, PhD at Università di Napoli Federico II;
- 2008
- Dr. Roberto Crescenzo, PhD at Università di Parma;
- 2004
- Dr. Viviana Scognamiglio, PhD at Università di Napoli Federico II;
- Dr. Antonio Varriale, PhD at Università di Perugia;
- Dr. Antonietta Parracino, PhD at presso Università di Bari.

Invited Lectures and Seminars

- 2015
- Invited Speaker – World Food Forum – ASTER – 26 March, 2015, Brussels, Belgium;
- Invited Speaker- La Dieta Mediterranea – Emozioni UNESCO. 27 February, 2015, Padula, Salerno, Italy;
- Invited Speaker- Giornata Presentazione ISPAM-CNR, 17 January, 2015 Ponticelli, Napoli, Italy;
- 2014
- Invited Speaker - The Road to Expo: “The Quest of Nano-Particle Detection in Our Food, 5 Dicemer 2014, CNR Roma;
- Invtd Speaker, Luce e Alimentazione – Giornata di Studio “Luce & Futuro” 1 Dicember 2014, CNR, Napoli;
- Invited Speaker- Giornata Presentazione ICB-CNR, 24 October, 2014 Pozzuoli (NA), Italy;
- Invited Seminar at Polytechnics University of Turin, Italy 8 October 2014;

- “Advanced Nanostructured Fluorescence Biosensors for Safety and Health” – NANOFORUM, 24 September 2014, Rome, Italy (Invited Speaker);
 - “Advanced Optical applications in Medicine and Life Sciences” International Congress Bio-2014 at Warsaw, Warsaw, Poland September 9-12, 2014 (Invited Lecture);
 - “Understanding Protein Structure Opens New Diagnostic Avenues”, International Congress Biophysics@Rome, Rome, Italy (Invited Lecture) May 22-23, 2014;
 - Advanced Biosensing Application for Food safety – Science and Technological park, Trieste-Euroclone Spa (Invited Seminar) Trieste, Italy 22 March 2014;
 - Proteins and Biotech Applications – Fondazione San Lucia, Rome, Italy. 22 February, 2014 (Invited seminar);
 - Biosensors: An overview. University of Naples Federico II, Napoli, Italy February 13, 2014 (Invited Seminar);
- 2013
- "Un sistema avanzato di bio-sensori ottici per la sicurezza", Workshop on Research Activity and Innovation for Security and Privacy at CNR, 14 May 2013 at CNR, Rome; (Invited Speaker);
 - Progettazione di nuovi biosensori ottici per una diagnostica avanzata, 7 Giugno 2013 ICRM, CNR, Milan, Italy; (Invited Speaker);
 - Advanced Optical Protein-based Biosensors as New Promising Tools in Diagnostics, The Fourth International Workshop on Advanced Spectroscopy and Optical Materials 14–19 July 2013, Gdansk, Poland (Invited Speaker);
- 2012
- Bioforum- IGB-CNR, Napoli 7-8 June 2012 – Invited speaker;
 - CFG Fotonica Meeting- Selex SI, Roma 27 March 2012 – Invited speaker;
 - University of Florence, New methodologies for an easy sensing, 20 January 2012, Invited Speaker;
 - Università di Salerno “I Martedì” di Bioinformatica” – Advanced optical sensor for analytes of social interest Salerno, Italy 17 January 2012, Invited Speaker;
- 2011
- European FP7 Project CUSTOM meeting – 28-29 September, Thales Research and Technology (TRT) at Palaiseau, Paris, France – Invited Speaker;
 - Advanced fluorescence-based biosensors for analyses of high social interest, Dept. of Physics, Università di Napoli Federico II, Napoli, Italy 25 January 2011, Invited Speaker;
- 2010
- International Conference on Microbial Diversity. 26-28 October 2011, Milan, Italy. Invited Speaker;
 - Advanced bio-sensing approaches for analytes of interest for health and food safety ISPA-CNR, Sala Congressi del CNR-Area della Ricerca di Bari, Bari, Italy, 10 November 2010. Invited Speaker;
 - University of North Texas, Fort Worth, TX, USA. Protein-based sensors for markers of high social interest. Fort Worth, TX, USA 30 July 2010, Invited Speaker;
 - Workshop Nanotech for food, Filarete, Milan, Italy 25 March 2010 (Invited Speaker);
- 2009
- Approcci computazionali alla comprensione dei fenomeni biologici. Workshop Napoli, 11 September 2009- Area della Ricerca di Napoli – Invited Speaker;
 - Advanced Optical Biosensors for analyses of high social interest, Porto Conte Ricerche, 12 December 2009; Invited Speaker;
 - Second SAFE consortium International Congress on Food Safety Congress Title: “Novel Technologies and Microbiological Food Safety”. + Annual General Meeting. Girona, Catalunya, Spain 17-19 April 2009, Invited Speaker;
 - Meeting "Biodiversità Molecolare: concetti di base, tecnologie, applicazioni” CNR Rome 9-19 July 2009, Italy – Invited Speaker;
 - Cost Meeting - Interdisciplinary approaches in the study of *Penicillium expansum*-apple fruit patho-system- 16-17 November 2009, Campobasso, Italy - Invited Speaker;
 - Meeting at the Agriculture and Agri-Food University of Canada, Ottawa, Canada 22 September 2009 – Invited Speaker (Member of the Italian Delegation);
 - Laval Technopole – Institute NaNRS- 23 September 2009 Invited Speaker (Member of the Italian Delegation);
 - Avanzati biosensori ottici per la sicurezza alimentare – ISA- CNR Avellino – Invited Speaker;

- Convegno “La nuova vision della tracciabilità agro-alimentare : l’integrazione con la qualità e la sicurezza alimentare”. RICHMACH 2009 - Fiera Milano - Rho - 27 November 2009 – (Invited Speaker);
- 2008
- Istituto Sperimentale Lazzaro Spallanzani, Milano, 12 November 2008; (Invited Speaker)
 - Nano-Biosensori ottici per analisi ad elevato impatto sociale, centro Nanomates, Università di Salerno, 28 May 2008; (Invited Speaker)
 - International meeting “Extremophiles 2008”. Speaker for selected abstract. Cape Town, South Africa 7-11 September 2008;
 - ‘*Penicillium expansum* –apple patho-system: exploring new frontiers and summarizing present knowledge University of Copenhagen, 16-17 September, 2008, Copenhagen, Denmark; (Invited Speaker)
- 2007
- Universidade Nova de Lisboa, Institute of Chemistry & Biochemistry, 29 July 2007. (Invited Speaker)
 - IV Symposium Advanced Technologies for Defence - Ministry for Defence, 21-22 June 2007, Rome, Italy. (Invited speaker)
 - Optical Biosensors for food safety Italian Spring in Japan, University of Osaka. (Invited Speaker)
 - Fluorescence-based biosensors for analyses of high social interest Campania Region/China Workshop - Beijing, China. (Invited Speaker)
- 2006
- New Trends in Enzyme Science and Technology", (Invited Speaker) Nagoya, Japan
 - International Conference “Extremophiles 2006”, (Invited speaker and Chairman) 17-22 September 2006, Brest, France;
 - Istituto di Biologia e Biotecnologia Agraria . Nuovi approcci biosensoristici per la sicurezza alimentare. 25 May 2006, Milan, Italy. (Invited speaker)
 - Expo Capitale Umana ed Innovazione, Fiera Milano, 17 March 2006, Milan, Italy. Invited speaker
 - Biotecnologie e Biochimica dell’ambiente, Convegno annuale del Gruppo SIB Biochimica marina e dell’ambiente, (Invited Speaker and Chairman). Messina, Italia;
 - Festival della Scienza – Science for Food. Magazzini del Cotone, Genoa, Italy 7 November 2006 (Invited speaker and organizer)
 - Progetto di formazione PNR, Tema 6. Corso “Enzimi da ipertermofili: e nanotecnologie: aspetti applicativi” (Organizer, Chairman, and Speaker) Naples, Italy;
- 2005
- Becton-Dickinson, NC, USA (Invited Speaker);
 - European Science Foundation, Sant Feliu de Guixols, Spagna (Invited Speaker);
 - International Symposium on Extremophiles and their application, Tokio, Japan (Chairman and invited speaker);
 - Becton-Dickinson (Invited speaker) Durham, North Caroline, USA;
 - III Symposium on Advanced Technologies for Defence – Ministry for Defence, 22-23 June 2005, Rome, Italy (Invited speaker);
 - Ricerca e tecnologia per la sicurezza: la collaborazione tra Finmeccanica e il sistema universitario Rome, Italy; (Invited Speaker);
- 2004
- Pico-Quant, Fluorescence Spectroscopy Course, Berlin, Germania (Invited Speaker);
- 2003
- Italy-Japan Symposium: New trends in enzyme science and technology, 9 December 2003, Hotel Majestic, Napoli, Italy (Invited Speaker);
 - Italian Minister for Foreign Affairs, Brussels, Belgium (Invited Speaker);
- 2002
- “Extremophiles 2002,” held in Naples, Italy, 22 to 26 September 2002; Invited Speaker;
 - National Institutes of the Health, Bethesda, USA Structure, function and Biotechnological applications of thermophilic enzymes (Invited Speaker);

Conference Committee involvement

- Meeting of the European Project FP7 MARIABOX, 17-18 September 2014, Salerno, Italy;
- Single Molecule Spectroscopy and Imaging II 22-27 January 2010 San Jose, CA, USA;
- Single Molecule Spectroscopy and Imaging II 24 - 29 January 2009 San Jose, CA, USA;
- Single Molecule Spectroscopy and Imaging 19 - 24 January 2008 San Jose, CA, USA;
- Advanced Biomedical and Clinical Diagnostic Systems VI 19 - 24 January 2008 San Jose, CA, USA;
- Ultrasensitive and Single-Molecule Detection Technologies II 20 - 25 January 2007 San Jose, CA, USA;
- IV Symposium Advanced Technologies for Defence- Ministry for Defence, 21-22 June 2007, Rome, Italy;
- Advanced Biomedical and Clinical Diagnostic Systems V 20 - 25 January 2007 San Jose, CA, USA;
- Advanced Biomedical and Clinical Diagnostic Systems IV 21 - 26 January 2006 San Jose, CA, USA;
- Ultrasensitive and Single-Molecule Detection Technologies 21 - 26 January 2006 San Jose, CA, USA;
- Science for Food – Festival della Scienza di Genova – November 2006, Italy;
- Advanced Biomedical and Clinical Diagnostic Systems III 22 - 27 January 2005 San Jose, CA, USA;
- Biohazard Detection Technologies 24 - 29 January 2004 San Jose, CA, USA.

Patents

1. Process of Immobilizing Biomolecules In Porous Supports By Using An Electronic Beam. **D'Auria S.** et al., *US Patent 20090036326*, February 5, 2009;
2. Process of Immobilizing Biomolecules In Porous Supports By Using An Electronic Beam. **D'Auria S.** et al., *EP1819434 A1*, August 22, 2008;
3. Process of Immobilizing Biomolecules In Porous Supports By Using An Electronic Beam. **D'Auria S.** et al., *CA 2589838 A1*, May 30 2007;
4. Inactive Enzymes as non-consuming sensors. **D'Auria S.**, et al. *PCT/US2000/024846*;
5. A new Immunological assay for detection of patulin toxin. **D'Auria S.**, et al., *PCT/IT2007/000045*;
6. Un nuovo metodo a fluorescenza per la rilevazione di cadmio nelle acque e negli alimenti. **D'Auria S.**, et al. *Italian Patent NA2007A000020*;
7. Nuovo metodo immunologico per la rilevazione di glutine negli alimenti. **D'Auria S.**, et al., *Italian Patent NA310106PTRTB*;
8. Metodo e dispositivo per il rilevamento di micotossine nel latte e suoi derivati. **D'Auria S.**, et al. (2013) *Italian Patent MI2013A001808*;
9. Nuovo sistema portatile per la rilevazione di tracce di glutine negli alimenti. **D'Auria S.** et al. (2013) *Italian Patent n. TO2013A001057*;
10. Process of Immobilizing Biomolecules In Porous Supports By Using An Electronic Beam. **D'Auria S.** et al., (2013) Canada Patent N. 2,589,838.
11. METODO PER IL RILEVAMENTO DI MICOTOSSINE NEL LATTE, SUOI DERIVATI E PRODOTTI CASEARI. **D'Auria S.** et al: P04265 PCT – 2014.

Awards

2010- Commentary of the Editor-in-Chief on the article published in *Proteomics*, (2010) Vol. 10, 1946-1953;
2007- Research Profile published from American Chemical Society (*Analytical Chemistry* 2007 July 1st page 4746) for cutting-edge research published on detection of gluten.
2003- Award *Civitas Tusciani* for contribution to Science (<http://www.olevano.it/speciale/>).

Figures selected as Cover Front -Image of International Journals

In the last ten years, 9 publications have been gained the Front Cover of International Journals.

1. Analytical Methods, 2012, Vol. 4, 10.
2. Analytical Methods 2012 Vol. 4, 11.
3. Nanoscale 2011, Vol. 3, 1.
4. The Journal of Physical Chemistry 2011, Vol 115, 12.
5. Proteomics, 2010 Vol. 10, 10.
6. Molecular BioSystems, 2010, Vol. 6,4.
7. Biopolymer, 2010 Vol. 93, 8.
8. Molecular BioSystems, 2005, Vol. 1,5-6
9. Biochemical Journal, 2004, Vol. 381

Dr. Sabato D'Auria List of Publications

Publications on peer-reviewed journals

181. A rapid and specific detection of D-serine by a surface acoustic wave biosensor
F. Di Pietrantonio, M. Benetti, D. Cannatà, E. Verona, M. Girasole, M. Fosca, S. Dinarelli, M. Staiano, V.M. Marzullo, A. Varriale, and Sabato D'Auria

In Preparation

180. A Rapid and Sensitive Assay for the Detection of Benzylpenicillin (Pen G) in Food
A. Pennacchio, A. Varriale, MG. Esposito, M. Staiano, and Sabato D'Auria
PLOS ONE (2015) Submitted

179. A Novel Fluorescence Polarization Assay for Determination of Penicillin G in Milk
A. Pennacchio, A. Varriale, A. Scala, VM Marzullo, M. Staiano, and Sabato D'Auria
Food Chemistry (2015) Submitted

178. An Advanced Near-Infrared Fluorescence Bio/sensing Methodology to Detect the Presence of Traces of Patulin Toxin in Real Food Matrices
A. Pennacchio, A. Varriale, MG. Esposito, M. Staiano, Sabato D'Auria
Analytical Biochemistry (2015) In Press

177. Studies of conformational changes of an arginine-binding protein from *Thermotoga maritima* in the presence and the absence of ligand with use of the molecular dynamics simulations with the coarse-grained UNRES force field.
AG. Lipska, AK. Sieradzan, P. Krupa, MA. Mozolewska, Sabato D'Auria, A. Liwo
Journal Molecular Modelling (2015) (3):2609.

176. Antigen delivery by filamentous bacteriophage fd displaying anti-DEC-205 single-chain variable fragment bypasses the need of adjuvants by triggering TLR9 in late endosomes
R. Sartorius, L. D'Apice, M. Trovato, F. Cuccaro, V. Costa, MG. De Leo, VM. Marzullo, C. Biondo, Dr. Sabato D'Auria, MA. De Matteis, A. Ciccodicola, PG De Berardinis
EMBO Molecular Medicine (2015) In Press

175. Tryptophan residues of the D-Glucose/D-Galactose-binding Protein from *E. coli* localized in its active center does not contribute to the change in intrinsic fluorescence upon glucose binding.
OV. Stepanenko, AV. Fonin, OV. Stepanenko, M. Staiano, Sabato D'Auria, IM. Kuznetsova, KK. Turoverov
Journal of Fluorescence (2015) (1):87-94 PMID: 25501855

174. Easy to use plastic optical fiber-based biosensor for detection of butanal
N. Cennamo, S. Di Giovanni, A. Varriale, M. Staiano, F. Di Pietrantonio, A. Notargiacomo, L. Zeni, and Sabato D'Auria
PLOS ONE (2015) 10(3):e0116770. doi: 10.1371
173. Development of a highly specific sandwich elisa for the detection of *Listeria monocytogenes*, an important foodborne pathogen
JV. Coutu, Sabato D'Auria, C. Morissette, S. Salmieri, M. Lacroix
Microbiology Research International (2014) Vol. 2(4), pp. 46-52 ISSN: 2354-2128
172. A surface acoustic wave bio-nose for detection of volatile odorant molecules F. Di Pietrantonio, M. Benetti, D. Cannatà, E. Verona, A. Palla-Papavlu, J.-M. Fernández-Pradas, P. Serra, M. Staiano, A. Varriale, Sabato D'Auria
Biosensors and Bioelectronics (2014) Sep 18. pii: S0956-5663(14)00714-3. doi: 10.1016/j.bios.2014.09.027
171. Novel biosensors based on optimized glycine oxidase
E. Rosini, L. Piubelli, G. Molla, L. Frattini, M. Valentino, A. Varriale, Sabato D'Auria, L. Pollegioni
FEBS Journal (2014) Jun 12. doi: 10.1111/febs.12873
170. A loose domain swapping organization confers a remarkable stability to the dimeric structure of the Arginine Binding Protein from *Thermotoga maritima*
A. Ruggiero, JD Dattelbaum, M. Staiano, R. Berisio, Sabato D'Auria, L. Vitagliano
PLOS ONE (2014) 9(5):e96560;
169. Characterization of bacterial NMN deamidase as a Ser/Lys hydrolase expands diversity of serine amidohydrolases.
Sorci, L., Brunetti, L., Cialabrini, L., Mazzola, F., Kazanov, M.D., Sabato D'Auria, Ruggieri, S., Raffaelli, N.,
FEBS Letters (2014), doi: <http://dx.doi.org/10.1016/j.febslet.2014.01.063>
168. An innovative biophotonic gas sensor for the ultra-sensitive detection of DMMP as a simulant of SARIN
K. Bonnot, F. Cuesta-Soto, M. Rodrigo, B. Siegert, A. Varriale, N. Sanchez, Sabato D'Auria, D. Spitzer and F. Lopez-Royo
Analytical Chemistry (ACS) 2014 86(10):5125-30;
167. The mKO: An orange-emitting fluorescence protein. Structure and stability
A. Ausili, M. Staiano, A. Marabotti, G. D'Auria, JC. Gómez-Fernández, A. Torrecillas, A. Ortiz, Sabato D'Auria
Journal Photochem Photobiol B: Biology (2014) 138C:223-229;
166. A Surface Plasmon Resonance based biochip for the detection of Patulin Toxin
A. Pennacchio, G. Ruggiero, M. Staiano, G. Piccialli, G. Oliviero, A. Lewkowicz, A. Synak, Sabato D'Auria
Optical Materials (2014) Vol. 36,10, 1670-1675.
165. The trehalose/maltose-binding protein as a sensitive element of a glucose biosensor
A.V. Fonin, O.I. Povarova, M. Staiano, Sabato D'Auria, K. K. Turoverov I.M. Kuznetsova
Optical Materials (2014) Vol. 36,10, 1676-1679.
164. Preparation of surface acoustic wave odor sensors by laser-induced forward transfer
A. Palla-Papavlu, A. Patrascioiu, F. Di Pietrantonio, J.-M. Fernández-Pradas, D. Cannatà, M. Benetti, Sabato D'Auria, E. Verona, P. Serra
Sensors and Actuators B: Chemical (2014) 192,369–377

163. Tryptophan-scanning mutagenesis of the ligand binding pocket in *Thermotoga maritima* arginine-binding protein
LJ. Deacon, H. Billones, AA. Galyean, T. Donaldson, A. Pennachio, L. Iozzino, Sabato D'Auria, JD. Dattelbaum
Biochemie (2014) 99:208-14.
162. The Quaternary Structure of the Recombinant Bovine Odorant-Binding Protein is Modulated by Chemical Denaturants
OV. Stepanenko, OV. Stepanenko, M. Staiano, IM. Kuznetsova, KK. Turoverov, Sabato D'Auria
PLOS ONE (2014) Jan 7;9(1):e85169.
161. Extending the range of FRET: the Monte Carlo study of the antenna effect.
Walczewska-Szewc K, Bojarski P, Sabato D'Auria
J Mol Model. (2013) Oct;19(10):4195-201.
160. Tailoring Odorant-Binding protein coatings characteristics for Surface Acoustic Wave biosensor development
F. Di Pietrantonio, M. Benetti, V. Dinca, D. Cannatà, E. Verona, Sabato D'Auria, M. Dinescu
Applied Surface Science (2013) <http://dx.doi.org/10.1016/j.apsusc.2013.10.112>
159. Vesicular and non-vesicular glucosylceramide transport feed distinct glycosylation pathways
G. D'Angelo, T. Uemura, CC Chuang, E. Polishchuk, M. Santoro, HO Rekilä, T. Sato, G. Di Tullio, A. Varriale, Sabato D'Auria, T. Daniele, F. Capuani, L. Johannes, P. Mattjus, F. Platt, A. Harada, MA. De Matteis
Nature (2013) 501(7465):116-20.
158. Fluorescence correlation spectroscopy and molecular dynamics simulations to study the structural futures of the maltotriose-binding protein from *Thermus thermophilus*
A. Varriale, A. Marabotti, G. Mei, M. Staiano, and Sabato D'Auria
PLOS ONE (2013) Jun 4;8(6):e64840.
157. Physicochemical characterization of a thermostable alcohol dehydrogenase from *Pyrobaculum aerophilum*
A. Vitale, N. Thorne, S. Lovellc, KP. Battailed, X. Hu, M. Shen, Sabato D'Auria, DS. Auld
PLOS ONE (2013) Jun 5;8(6):e63828.
156. Interview with Sabato D'Auria, section editor for Chemical Biology
Sabato D'Auria
BMC Biochem. (2013) Jun 14;14(1):14.
155. Amino acid transport in thermophiles: characterization of an arginine-binding protein from *Thermotoga maritima*. 4. A brief thermo-story
A. Ausili, M. Staiano, JD. Dattelbaum, A. Varriale, A. Capo, and Sabato D'Auria
Life (2013) 3(1), 149-160
154. Structural analysis and Caco-2 cell permeability of the celiac-toxic A-gliadin peptide 31-55.
Iacomino G, Fierro O, Sabato D'Auria, Picariello G, Ferranti P, Liguori C, Addeo F, Mamone G.
J Agric Food Chem. (2013) Vol. 61, Issue 5, 1088-1096.
153. Amino acid transport in thermophiles: characterization of an arginine-binding protein from *Thermotoga maritima*. 3. Conformational dynamics and stability
A. Ausili, A. Pennacchio, M. Staiano, J. D. Dattelbaum, D. Fessas, A. Schiraldi, and Sabato D'Auria
J Photochem Photobiol B. (2013) **118:66-73**
152. An Innovative Plastic Optical Fiber-based Biosensor for new Bio/applications. The Case of Celiac Disease

- N. Cennamo, A. Varriale, A. Pennacchio, M. Staiano, D. Massarotti, L. Zeni, and Sabato D'Auria
Sensors Actuators B Chemical (2013) 176:1008–1014.
151. Detection of odorant molecules via surface acoustic wave biosensor array based on odorant-binding proteins
 F. Di Pietrantonio, D. Cannatà, M. Benetti, E. Verona, A. Varriale, M. Staiano, and Sabato D'Auria
Biosens. Bioelectron. 2013 Mar 15;41:328-34
150. Under pressure that splits a family in two. The case of lipocalin family
 S. Marchal, A. Marabotti, M. Staiano, A. Varriale, T. Domaschke, R. Lange, and Sabato D'Auria
PLOS One. 2012;7(11):e50489.
149. A new competitive fluorescence immune-assay for detection of *Listeria Monocytogenes*
 S Beauchamp, Sabato D'Auria, A. Pennacchio, M. Lacroix
Analytical Methods (2012) DOI: 10.1039/C2AY25997D
148. A biophotonic sensor for the specific detection of DMMP vapors at the ppb level
 Bonnot, K, Siegert, B, Piazzon, N, Spitzer, D, Sansano, J, Rodrigo, M, Cuesta-Soto, F, Varriale, A, D'Auria, Sabato, Sanchez, N, Lopez-Royo, F, Sanchez, J.J.
Future Security (2012) Volume 318, Pages 428-31.
147. Determination of benzyl methyl ketone, a commonly used precursor in amphetamine manufacture
 S. Di Giovanni, A. Varriale, VM. Marzullo, G. Ruggiero, M. Staiano, A. Secchi, L. Pierno, AM. Fiorello and Sabato D'Auria
Analytical Methods (2012) 4, 3558-3564.
146. Alcohol dehydrogenase from the hyperthermophilic archaeon *Pyrobaculum aerophilum*: Stability at high temperature
 A. Ausili, A. Vitale, F. Rosso, T. Labella, A. Barbarisi, and Sabato D'Auria
Archives Biochem. Biophys. (2012) 525(1):40-6.
145. Engineering resonance energy transfer for advanced immunoassays: The case of celiac disease
Sabato D'Auria, Apicella E, Staiano M, Di Giovanni S, Ruggiero G, Rossi M, Sarkar P, Luchowski R, Gryczynski I, Gryczynsk Z
Anal Biochem (2012) 1;425(1):13-7.
144. Fluorescence-Based Biosensors
 M. Strianese, M. Staiano, G. Ruggiero, T. Labella, C. Pellecchia, and Sabato D'Auria
Method Mol Biol. (2012) 875:193-216
143. Porous silicon wafer-based "lab on chip" sensor
Sabato D'Auria, A. Varriale, G. Ruggiero, M. Staiano
Encyclopedia of Metalloproteins (2012) V. Uversky, RH, Kretsinger, E A. Permyakov (Eds), Springer, New York
142. A surface plasmon resonance-based biochip to reveal traces of ephedrine
 A. Varriale, M. Staiano, M. Strianese, M. Marzullo, G. Ruggiero, A. Secchi, M. Dispensa, AM. Fiorello and Sabato D'Auria
Analytical Methods (2012) 4, 1940-44.
141. D-Serine-Dehydratase from *Saccharomyces cerevisiae*. A Pyridoxal -5'-phosphate-Dependent Enzyme for Advanced Biotech Applications
 M. Staiano, M. Strianese, A. Varriale, S. Di Giovanni, D. Scotto di Mase, V. Dell'Angelo, G. Ruggiero, T. Labella, C. Pellecchia and Sabato D'Auria
Protein Peptide Letters (2012) Vol. 19, No. 5, 2012.

140. Extending Förster resonance energy transfer measurements beyond 100 Å using common organic fluorophores: enhanced transfer in the presence of multiple acceptors.
Maliwal BP, Raut S, Fudala R, D'Auria Sabato, Marzullo VM, Luini A, Gryczynski I, Gryczynski Z.
J Biomed Opt. (2012) Jan;17(1):011006.
139. New insight in protein-ligand interactions. 2. Stability and properties of two mutant forms of the D-galactose/D-glucose-binding protein from *E. coli*.
Stepanenko OV, Fonin AV, Stepanenko OV, Morozova KS, Verkhusha VV, Kuznetsova IM, Turoverov KK, Staiano M, and D'Auria Sabato
J Phys Chem B. (2011) Jul 28;115(29):9022-32
138. Long-distance FRET analysis: a Monte Carlo simulation study.
Bojarski P, Kulak L, Walczewska-Szewc K, Synak A, Marzullo VM, Luini A, and D'Auria Sabato.
J Phys Chem B. (2011) Aug 25;115(33):10120-5.
137. Crystallization and preliminary X-ray crystallographic analysis of ligand-free and arginine-bound forms of *Thermotoga maritima* arginine-binding protein.
Ruggiero A, Dattelbaum JD, Pennacchio A, Iozzino L, Staiano M, Luchansky MS, Der BS, Berisio R, D'Auria Sabato, Vitagliano L.
Acta Crystallogr Sect F Struct Biol Cryst Commun. 2011 Nov 1;67(Pt 11):1462-5
136. New insight into protein-ligand interactions. The case of the D-galactose/D-glucose-binding protein from *E. coli*.
OV. Stepanenko, OV. Stepanenko, OI. Povarova, AV. Fonin, IM. Kuznetsova, KK. Turoverov, M. Staiano, A. Varriale, and Sabato D'Auria
Journal Physical Chem B (2011) 115(12):2765-73
135. Myoglobin as a fluorescence probe to sense H₂S
M. Strianese, F. De Martino, C. Pellecchia, G. Ruggiero, and Sabato D'Auria
Protein Peptide Letters (2011) 18(3):282-6
134. Absorption into fluorescence. A method to sense biologically relevant gas molecules
M. Strianese, A. Varriale, M. Staiano, C. Pellecchia, and Sabato D'Auria
Nanoscale (2011) 3:298-302
133. The archeal topoisomerase reverse girase is a helix-destabilizing protein that unwinds four-way DNA functions
A. Valenti, G. perugino, A. Varriale, M. Rossi, Sabato D'Auria, M. Ciaramella
J Biol Chem (2010) 285: 36532-36541.
132. Denaturation of Proteins with beta-barrel topology induced by guanidinium hydrochloride.
OV. Stepanenko, IM. Kuznetsova, VV. Verkusha, M. Staiano, Sabato D'Auria, KK. Turoverov
Spectroscopy (2010) 24, 367-373.
131. High stability of trehalose/maltose binding protein from *Thermococcus litoralis* makes it a good candidate as a sensitive element in biosensor systems for sugar control.
OI. Povarova, OV. Stepanenko, AI. Sulatskaya, IM. Kuznetsova, KK. Turoverov, M. Staiano, A. Vitale, and Sabato D'Auria
Spectroscopy (2010) 24: 349-353.
130. Structure and stability of D-galactose/D-glucose-binding protein. The role of D-glucose binding and Ca ion depletion
OV. Stepanenko OI. Povarova, OV. Stepanenko, AV. Fonin, IM. Kuznetsova, KK. Turoverov, M. Staiano, and Sabato D'Auria
Spectroscopy (2010) 24: 355-359.

129. Properties and evolution of an alcohol dehydrogenase from the Crenarchaeota *Pyrobaculum aerophilum*.
Vitale A, Rosso F, Barbarisi A, Labella T, and Sabato D'Auria
Gene (2010) 1,1-2, 26-31.
128. Amino acid transport in thermophiles: characterization of an arginine-binding protein in *Thermotoga maritima*. 2. Molecular organization and structural stability
A. Scirè, A. Marabotti, M. Staiano, L. Iozzino, MS. Luchansky, BS. Der, JD. Dattelbaum, F. Tanfani, and Sabato D'Auria
Mol Biosyst. (2010) Apr;6(4):687-9
127. New trends in bio/nanotechnology. Stable proteins as advanced molecular tools for health and environment
M. Staiano, M. Baldassarre, M. Esposito, R. Vitale, V. Aurilia and Sabato D'Auria
Environmental Technology (2010) (8-9), 935-42.
126. Crystal structure of an S-formylglutathione hydrolase from *Pseudoalteromonas haloplanktis* TAC 125
V. Alterio, V. Aurilia, A. Romanelli, A. Parracino, M. Saviano, Sabato D'Auria, G. De Simone
Biopolymers (2010) 8,669-677.
125. Human galectin-3 interacts with two anticancer drugs: a spectroscopic study
V. Bogoeva, A. Varriale, CM. Costance, and Sabato D'Auria
Proteomics (2010) 10,10,1948-53.
124. Amino acid transport in thermophiles: characterization of an arginine-binding protein in *Thermotoga maritima*
MS Luchansky, BS. Der, D'Auria Sabato, G. Pocsfalvi, L. Iozzino, JD Dattelbaum
Mol Biosyst. (2010) 1:132-41
- 123 Surface acoustic wave biosensor based on a recombinant bovine odorant-binding protein
Di Pietrantonio, F, Zaccari, I, Benetti, M, Cannatà, D, Verona, E, Crescenzo, R, Scognamiglio, V, and Sabato D'Auria
Lecture Notes in Electrical Engineering (2010), 201-205
122. Nanostructured silver-based surfaces: new emergent methodologies for an easy detection of analytes
Staiano M., Matveva E. Rossi, M, Crescenzo r., Iozzino, L., Gryczniski, I., Gryczniski, Z, and Sabato D'Auria
ACS Appl. Mater. Interfaces, (2009) 1 (12), 2909–291.
121. Pressure Effects on the structure and stability and of the hyperthermophilic trehalose/maltose-binding protein from *Thermococcus litoralis*
Marchal S., Staiano M, Marabotti A., Vitale A., varriale, A., Lange R., and D'Auria Sabato
J Phys Chem B. (2009) 113(38):12804-8.
120. Tumor specific protein human galectin-1 interacts with anticancer agents
D'Auria Sabato, Petrova L., John C., Russev G., Varriale, A., Bogoeva V
Mol Biosyst. (2009) 11:1331-6.
119. FCS-based sensing for the detection of Ocratoxin A and Neomycin in food
A. Varriale, M. Staiano, L. Iozzino, L. Severino, A. Anastasio, ML Cortesi, and Sabato D'Auria
Protein Peptide Letters (2009) 16,12, 1425-1429.
118. Structure and dynamics of cold-adapted enzymes as investigated by phosphorescence spectroscopy and molecular dynamics studies. 2. The case of an esterase from *Pseudoalteromonas haloplanktis*"
D'Auria, Sabato, Aurilia V., Marabotti A., Gonnelli M., Strambini G.
J Phys Chem B. (2009) 113(40):13171-8.

117. Structure and stability of a rat odorant-binding protein. Another brick in the wall"
Scire, A., Marabotti A., Staiano M., Briand L., Varriale A., Bertoli E., Tanfani F., and Sabato D'Auria
J Proteome Res. (2009) (8):4005-13.
116. Structure and Dynamics of Cold-Adapted Enzymes as Investigated by FT-IR Spectroscopy and MD.
The Case of an Esterase from *Pseudoalteromonas haloplankti*
Aurilia V, Rioux-Dubé JF, Marabotti A, Pézolet M, and Sabato D'Auria
J Phys Chem B. (2009) 113(22):7753-7761.
115. Wild-type and mutant bovine odorant-binding proteins to probe the role of the quaternary structure organization in the protein thermal stability
Marabotti A, Scirè A, Staiano M, Crescenzo R, Aurilia V, Tanfani F, and Sabato D'Auria
J Proteome Res. (2008) Dec;7(12):5221-9.
114. On the Molecular Strategies for Protein Stabilization. The case of Trehalose/Maltose-Binding Protein from *Thermus thermophilus*
A. Scirè, A. Marabotti, V. Aurilia, M. Staiano, P. Ringhieri, L. Iozzino, R. Crescenzo, F. Tanfani, and Sabato D'Auria
Proteins (2008) Dec;73(4):839-50.
- 113- Is Asparagine Deamidation in the Porcine Odorant-binding Protein related to the odour molecules binding?
G. Mamone, and Sabato D'Auria
Protein Peptide Letters (2008) 15(9):895-9
- 112- Advanced spectroscopy techniques for the detection of gluten in food
R. Crescenzo, and Sabato D'Auria
Agro Food Industry High Tech (2008) 19,2, 14-17
- 111- Nanobeads-based Assays. The case of gluten detection
I. Venditti, M.V. Russo, I. Fratoddi, S. Bellucci, R. Crescenzo, L. Iozzino, M. Staiano, V. Aurilia, A. Varriale, M. Rossi, and Sabato D'Auria
Journal of Physics Cond Matt (2008) 20(47):474202-7
- 110- Carbon Nanotubes-based Biosensors
Ramoni R., Staiano M., Bellucci S., Gryczynski I., Crescenzo C, Iozzino L., Bharill S., Grolli S, and Sabato D'Auria
Journal of Physics Cond Matt (2008) 20(47):474201
- 109- Time-resolved fluorescence spectroscopy and molecular dynamics simulations point out the effects of pressure in the stability and dynamics of the porcine odorant-binding protein.
Staiano M, Saviano M, Herman P, Gryczynski Z, Fini C, Varriale A, Parracino A, Kold AB, Rossi M, and Sabato D'Auria
Biopolymers. (2008) 89(4):284-291
- 108- Microbial carbohydrate esterases in cold-adapted environments
V. Aurilia, A. Parracino, and Sabato D'Auria
Gene (2008) 410(2):234-240
- 107- Mink Growth Hormone Structural-Functional Relationships: Effects of Renaturing and Storage Conditions.
Borromeo V, Sereikaite J, Bumelis VA, Secchi C, Scirè A, Ausili A, Sabato D'Auria, Tanfani F.
Protein J. (2008) 27(3):170-180.

- 106- Mutant bovine odorant-binding protein: temperature affects the protein stability and dynamics as revealed by infrared spectroscopy and molecular dynamics simulations
A. Marabotti, T. Lefreve, M. Staiano, R. Crescenzo, A. Variale, M. Rossi, M. Pezolet, and Sabato D'Auria
Proteins (2008) 72(2):769-778.
- 105- The tryptophan phosphorescence of porcine and mutant bovine odorant-binding proteins: a probe for the local protein structure and dynamics
Sabato D'Auria, M. Staiano, A. Variale, M. Gonnelli, A. Marabotti, M. Rossi, G. Strambini
Journal of Proteome Research (2008) 7(3):1151-1158.
- 104 - The differences in the microenvironment of the two tryptophan residues of the glutamine-binding protein from *Escherichia coli* shed light on the binding properties and the structural dynamics of the protein
Sabato D'Auria, M. Staiano, A. Variale, M. Gonnelli, A. Marabotti, M. Rossi, G. Strambini
Proteins (2008) 71(2):743-750.
- 103- Hydrophobic interactions and ionic networks play an important role in thermal stability and denaturation mechanism of the porcine odorant-binding protein
O.V. Stepanenko, A. Marabotti, I.M. Kuznetsova, K.K. Turoverov, C. Fini, A. Variale, M. Staiano, and Sabato D'Auria
Proteins (2008) 71(1):35-44.
- 102- Enzymes and proteins from extremophiles as hyperstable probes in nanotechnology: the use of D-trehalose/D-maltose-binding protein from the hyperthermophilic archaeon *Thermococcus litoralis* for sugars monitoring.
L. De Stefano, A. Vitale, I. Rea, M. Staiano, L. Rotiroti, T. Labella, I. Rendina, V. Aurilia, M. Rossi, and Sabato D'Auria
Extremophiles (2008) 12(1):69-73.
- 101- A strategic fluorescence labelling of D-galactose/D-glucose-binding protein from *E. coli* helps to shed light on the protein structural stability and dynamics
V. Scognamiglio, A. Scire, V. Aurilia, M. Staiano, R. Crescenzo, C. Palmucci, E. Bertoli, M. Rossi, F. Tanfani, and Sabato D'Auria
Journal of Proteome Research (2007) 6(11):4119-4126.
- 100- Stability and Dynamics of the Porcine Odorant-Binding Protein
M. Staiano, Sabato D'Auria, A. Variale, M. Rossi, A. Marabotti, C. Fini, O. Stepanenko, I.M. Kuznetsova, K.K. Turoverov
Biochemistry (2007) 46(39):11120-7
- 99- High-affinity binding of cadmium ions by mouse metallothionein prompting the design of a reversed-displacement protein-based fluorescence biosensor for cadmium detection
A. Variale, M. Staiano, M. Rossi, and Sabato D'Auria
Analytical Chemistry (2007) 79(15):5760-2
- 98- Fluorescence correlation spectroscopy assay for gliadin in food.
A. Variale, M. Rossi, M. Staiano, E. Terpetschnig, B. Barbieri, M. Rossi, and Sabato D'Auria
Analytical Chemistry (2007) 79(12):4687-9.
- 97- Temperature modulates selectivity and affinity binding properties of the D-trehalose/D-Glucose-binding protein from the hyperthermophilic archaeon *Thermococcus litoralis*.
P. Herman, I. Barvik (Jr.), M. Staiano, A. Vitale, J. Vecer, M. Rossi, and Sabato D'Auria
BBA Proteins and Proteomics (2007) 1774(5):540-4.
- 96- Tryptophan Phosphorescence studies allow a molecular portrait of the D-galactose/D-Glucose-binding protein
Sabato D'Auria, A. Variale, M. Gonnelli, M. Saviano, M. Staiano, M. Rossi, G. Strambini

Journal of Proteome Research (2007) (4):1306-12.

95- Advanced Nanotechnological Approaches for Designing New Protein-based “Lab-on-Chips” on Porous Silicon Wafer

S. Borini, M. Staiano, M. Rocchia, A.M. Rossi, M. Rossi, and Sabato D’Auria

Recent Patents on DNA & Genes (2007) 1, 1-7.

94- New emergent nanotechnologies in medical and biochemical applications: advanced fluorescence protein-based nanosensors

M. Staiano, M. de Champdore’, S. Borini, A.M. Rossi, M. Rossi, and Sabato D’Auria

Current Chemical Biology (2007) 1, 3-9

93- Advanced Biotechnological Applications of Proteins Isolated from Extremophiles

M. de Champdoré, M. Staiano, M. Rossi, and Sabato D’Auria

Journal of Royal Society Interface (2007) 4(13):183-91

92- A new fluorescence competitive assay for the detection of patulin toxin.

M. de Champdore’, P. Bazzicalupo, L. De Napoli, D. Montesarchio, G. di Fabio, I. Coccozza, A. Parracino, M. Rossi, and Sabato D’Auria

Analytical Chemistry (2007) 79(2):751-7

91- The psychrophilic bacterium *Pseudoalteromonas halosplanktis* TAC125 possesses a gene coding for a cold-adapted feruloyl esterase activity that shares homology with esterase enzymes from γ -proteobacteria and yeast.

V. Aurilia, A. Parracino, M. Saviano, Mose' Rossi, and Sabato D’Auria

Gene (2007) 397(1-2):51-7.

90- Molecular adaptation strategies to high temperature and thermal denaturation Mechanism of the D-trehalose/D-maltose-binding protein from the hyperthermophilic archaeon *Thermococcus litoralis*

D. Fessas, M. Staiano, A. Barbiroli, A. Marabotti, A. Schiraldi, A. Varriale, M. Rossi, and Sabato D’Auria

Proteins (2007) 67(4):1002-9.

89- Direct writing of a protein microarray: lab-on-a-chip for multipurpose sensing

M. Rocchia, S. Borini, A.M. Rossi, M. Rossi, and Sabato D’Auria

Ultrasensitive and SingleMolecule Detection Technologies II, (2007)

SPIE Vol. 6444,; doi: 10.1117/12.697923, Edited by J Enderlein, Z Gryczynski

88- Confocal imaging of protein distribution in porous silicon optical structures

L. De Stefano and Sabato D’Auria

Journal Optical Physics Solid Matter (2007) 19 No 39 (3 October 2007) 395009 (7pp).

87- The protein scaffold of the Lipocalin Odorant Binding Portien is suitable for the development of biosensors for the detection of explosive components.

Ramoni R, Bellucci S, Gryczynski I, Gryczynski Z, Grolli S, Staiano M, Giannini G, Micciulla F, Pastore R, Tiberia A, Conti V, Merli E, Varriale A, Rossi M, and Sabato D’Auria

Journal Optical Physics Solid Matter (2007) 19 No 39 (3 October 2007) 395012 (7pp)

86- Biochips at work: porous silicon microbiosensor for proteomic diagnostic

L. De Stefano, I. Rendina, A.M. Rossi, M. Rossi, L. Rotoroti, and Sabato D’Auria

Journal Optical Physics Solid Matter (2007) 19 No 39 (3 October 2007) 395007 (5pp).

85- Porous silicon-based optical microsensor for the detection of L-Glutamine

L. De Stefano, L. Rotiroti, I. Rendina, L. Moretti, V. Scognamiglio, M. Rossi, and Sabato D’Auria

Biosensors Bioelectronics. 2006 Feb 15;21(8):1664-7.

- 84- Exploring the cupin-type metal-coordinating signature of acetylacetonate dioxygenase Dke1 with site-directed mutagenesis: catalytic reaction profile and Fe²⁺ binding stability of Glu-69→Gln mutant. G. D. Straganz, S. Egger, G. Aquino, Sabato D'Auria, B. Nidetzky
Journal Molecular Catalysis: Enzymatic (2006), 39, 171-178.
- 83- Thermostable Proteins as Probe for the Design of advanced Fluorescence Biosensor M. de Champdore', M. Staiano, V. Aurilia, O. Stepanenko, A. Parracino, M. Rossi, and Sabato D'Auria
Reviews in Environ Science/Biotechnology (2006) DOI 10.1007/s11157-006
- 82- Resonant cavity enhanced optical microsensor for molecular interactions based on porous silicon L. Destefano, L. Rotiroti, I. Rendina, M. Rossi, and Sabato D'Auria
Physica Status Solidi (a) (2006)1, 1-6.
- 81- Nanostructured silicon-based biosensors for the selective identification of analytes of social interest Sabato D'Auria, M. deChampdore', M. Staiano, V. Aurilia, A. Vitale, A. Parracino, M. Rossi, L. Rotiroti, I. Rea, I. Rendine, L. Destefano
Journal Optical Physics Solid Matter (2006),18, 2019-2028
- 80- Pressure affects the structure and the dynamics of the D-galactose/D-glucose-binding protein from Escherichia coli by perturbing the C-terminal domain of the protein A. Marabotti, A. Ausili, M. Staiano, A. Scire, F. Tanfani, A. Parracino, a. Variale, M. Rossi, and Sabato D'Auria
Biochemistry (2006) 45, 11885-11889.
- 79- Glutamine-binding protein from Escherichia coli specifically binds a wheat gliadin peptide allowing the design of a new porous silicon-based optical biosensor. De Stefano L, Rossi M, Staiano M, Mamone G, Parracino A, Rotiroti L, Rendina I, Rossi M, and Sabato D'Auria.
J Proteome Res. 2006 May;5(5):1241-5
- 78- Glutamine-binding protein from Escherichia coli specifically binds a wheat gliadin Peptide. 2. Resonance energy transfer studies suggest a new sensing approach for an easy detection of wheat gliadine Staiano M, Scognamiglio V, Mamone G, Rossi M, Parracino A, Rossi M, and Sabato D'Auria.
J Proteome Res. 2006 Sep;5(9):2083-6.
- 77- D-Trehalose/D-maltose-binding protein from the hyperthermophilic archaeon *Thermococcus litoralis*: the binding of trehalose and maltose results in different protein conformational states. Herman P, Staiano M, Marabotti A, Variale A, Scire A, Tanfani F, Vecer J, Rossi M, and Sabato D'Auria.
Proteins 2006 Jun 1;63(4):754-67.
- 76- Structure/function of KRAB repression domains: structural properties of KRAB modules inferred from hydrodynamic, spectroscopic and FTIR analyses R. Mannini, V. Riviaccio, Sabato D'Auria, F. Tanfani, A. Ausili, A. Facchiano, C. Pedone, G. Grimaldi
Proteins (2006) Mar 15;62(3):604-16
- 75- Pressure effects on the stability and conformational dynamics of the D-galactose-D-glucose-binding protein from E. coli A. Marabotti, P. Herman, M. Staiano, M. De champdore', A. Variale, Z. Gryczniski, M. Rossi, and Sabato D'Auria
Proteins. (2006) Jan 1;62(1):193-201
- 74- Odor-binding protein as probe for a refractive index-based biosensor: new perspectives in biohazard assessment. Sabato D'Auria, M. Staiano, V. Scognamiglio, , M. Rossi, S. Campopiano, N. Cennamo, L. Zeni
Proteins Peptide Letters (2006);13(4):349-52.

- 73- Binding of glucose to the D-galactose/D-glucose-binding protein from *Escherichia coli* restores the native protein secondary structure and the thermostability that are lost upon calcium depletion
Sabato D'Auria, A. Ausili, A. Varriale, V. Scognamiglio, M. Staiano, E. Bertoli, M. Rossi, F. Tanfani
J. Biochem ,(2006) Feb;**139(2):213-21**.
- 72- The binding of glutamine to the glutamine-binding protein from *Escherichia coli* induces changes in the protein structure and increases the protein stability
Sabato D'Auria, A. Scirè, A. Varriale, V. Scognamiglio, M. Staiano, A. Ausili, M. Rossi, F. Tanfani
Proteins (2005) **58**, 80-87.
- 71- Expression, purification and partial characterization of the Kruppel-associated box (KRAB) from the human ZNF2
V. Rivieccio, R. Mannini, L. Concilio, Sabato D'Auria, C. Pedone, G. Grimaldi
Protein Peptide Letters (2005) **58**, 80-87.
- 70- The combined use of fluorescence spectroscopy and X-ray crystallography greatly contributes to elucidating structure and dynamics of proteins
Sabato D'Auria, M. Staiano, IM Kuznetsova, K K. Turoverov
Annual Reviews Fluorescence Spectroscopy (2005) **2**, 25-61.
- 69- Intrinsic fluorescence properties of Glutamine-binding protein from *Escherichia coli* and its complex with glutamine. Tryptophan and tyrosine residues location, characteristics of their microenvironment and contribution to the bulk fluorescence of the protein.
I.M. Kuznetsova, O.V. Stepanenko, K.K. Turoverov M. Staiano, V. Scognamiglio, M. Rossi, and Sabato D'Auria
Journal Proteome Research (2005) **2:417-23**.
- 68- Unfolding-Refolding of the Glutamine-Binding Protein from *Escherichia coli* and Its Complex with Glutamine Induced by GdnHCl: Equilibrium and Kinetic studies.
M. Staiano, V. Scognamiglio, M. Rossi, Sabato D'Auria, Kuznetsova I.M., Stepanenko Olga V., Turoverov KK
Biochemistry (2005) **44(15):5625-33**
- 67- Structural and Thermal Stability of the Calcium-Depleted D-Galactose/D-Glucose-Binding Protein from *Escherichia coli*
P. Herman, J. Vecer, I. Barvik (Jr.), V. Scognamiglio, A. Varriale, M. Staiano, M. Rossi, and Sabato D'Auria
Proteins (2005)**1;61(1):184-95**
- 66- Writing 3D protein nanopatterns onto a silicon nanosponge
S. Borini, Sabato D'Auria, M. Rossi, A. M. Rossi
Lab-on-a-Chip (2005) Oct;**5(10):1048-52**
- 65- Advanced Protein-Based Biosensors: Glucose Biosensors as a Model for Analyses of High Social Interest
M. Staiano, P. Bazzicalupo, M. Rossi, and Sabato D'Auria
Molecular BioSystems (2005)Dec;1(5-6):354-62.
- 64- The structure and stability of the glutamine-binding protein from *Escherichia coli* and its complex with glutamine
Stepanenko OV, Kuznetsova IM, Turoverov KK, Scognamiglio V, Staiano M, and Sabato D'Auria.
Tsitologiia. (2005);47(11):988-1006
- 63- Stability and structural characterization of the Galactose/Glucose-binding protein from *E. coli*.
Sabato D'Auria, F. Alfieri, M. Staiano, F. Pelella, A. Scire, F. Tanfani, M. Rossi, Z. Gryczniski, J.R. Lakowicz

Biotechnology Progress (2004) 6;20(1):330-337.

62- Theoretical model of the three-dimensional structure of a sugar binding protein from *Pyrococcus horikoshii*: structural analysis and sugar binding simulations

A. Marabotti, Sabato D'Auria, M. Rossi, AM Facchiano

Biochem J. (2004) Jun 15;380(Pt 3):677-84.

61- Conformational stability and domain coupling in galactose/glucose-binding protein from *Escherichia coli*.

G. Piszcheck, Sabato D'Auria, M. Staiano, M. Rossi, A. Ginsburg

Biochem J. (2004) Jul 1;381(Pt 1):97-103.

60- Protein-based biosensors for diabetic patients

V. Scognamiglio, M. Staiano, M. Rossi, and Sabato D'Auria.

Journal of Fluorescence in press (2004) 14,5,491-498.

59- A Recombinant Glutamine-Binding Protein from *Escherichia coli*: Effect of the Ligand-Binding on the Protein Conformational Dynamics.

P. Herman, J. Vecer, V. Scognamiglio, M. Staiano, M. Rossi, and Sabato D'Auria

Biotechnology Progress (2004) 20,1847-1854.

58- A putative thermostable sugar-binding protein from the archaeon *Pyrococcus horikoshii* as a probe for the development of a fluorescence biosensor for diabetic patients.

M. Staiano, MR Sapio, V. Scognamiglio, A. Marabotti, AM Facchiano, P. Bazzicalupo, M. Rossi, and Sabato D'Auria

Biotechnology Progress (2004) 5:1572-7

57- Release of the self-quenching of fluorescence near silver metallic surfaces.

J.R. Lakowicz, J. Malicka, Sabato D'Auria, Gryczniski, I.

Analytical Biochem (2003) 320, 13-20.

56- Effects of Metallic Silver Particle on Resonance Energy Transfer Between Fluorophores Bound to DNA.

JR Lakowicz, Y. Shen, J. Malicka, Sabato D'Auria, Z. Gryczynski, I. Gryczynski.

Journal of Fluorescence (2003)13, 69-79.

55- Fluorescence of proteins, an editorial overview.

Sabato D'Auria

Journal of Fluorescence (2003)13,1.

54- Stability and Conformational Dynamics of Metallothioneins from the Antarctic Fish *Notothenia coriiceps* and Mouse.

C. Capasso, O. Abugo, F. Tanfani, A. Scire', V. Carginale, E. Parisi, and Sabato D'Auria

Proteins Structure Function Genetics (2002) 46,3, 259-267.

53- Radiative Decay Engineering

JR Lakowicz, Y. Shen, Sabato D'Auria, J. Malicka, Z. Gryczynski, I. Gryczynski

Analytical Biochemistry (2002) 301(2):261-277

52- A Novel Fluorescence Competitive Assay for Glucose Determinations by Using a Thermostable Glucokinase from the Thermophilic Microorganism *Bacillus Stearothermophilus*.

Sabato D'Auria, N. DiCesare, M. Staiano, Z. Gryczynski, M. Rossi, JR Lakowicz

Analytical Biochemistry (2002) 303 (2):138-44.

51- Structural properties of cytosolic human glyoxalase ii in the absence and in the presence of phospholipid membranes

A. Scirè, F. Saccucci, E. Bertoli, MT Cambria, Sabato D'Auria, G. Principato, F.Tanfani

Proteins Structure Function Genetics (2002) 48 1:126-33.

50- Structural characterization and thermal stability of *Notothenia coriiceps* metallothionein.
Sabato D'Auria, V. Carginale, R. Scudiero, E. Parisi, C. Capasso
Biochemical Journal (2001) 354, 291-299.

49- Enzyme fluorescence as a sensing tool: new perspectives in biotechnology.
Sabato D'Auria, JR Lakowicz
Curr. Opinions in Biotechnol. (2001) 12,1, 99-104.

48- On the effect of SDS on the conformational dynamics of β -galactosidase from *E. coli*.
Sabato D'Auria, N. Di Cesare, I. Gryczynski, JR Lakowicz, M. Rossi.
J. Biochemistry (2001) 130, 13-18.

47- Intrinsic Fluorescence from DNA Can Be Enhanced by Metallic Particles
JR Lakowicz, B. Shen, Z. Gryczynski, Sabato D'Auria, I. Gryczynski
Biochem. Biophys. Res. Commun. (2001) 286,5, 875-879.

46- Oxyanion-mediated protein stabilization: differential roles of phosphates for preventing inactivation of bacterial α -glucan phosphorylases.
R. Griebler, M. Pickl, Sabato D'Auria, F. Tanfani, B. Nidetzky
Biocatalysis and Biotransformation (2001) 19, 5-6, 379-398.

45- Mass spectrometry study of 5'-ecto-nucleotidase from bull seminal plasma.
C. Fini, A. Amoresano, A. Andolfo, Sabato D'Auria, A. Floridi, S. Paolini, P. Pucci.
Eur J Biochem. (2000) 267, 4978-4987

44- Conformational dynamics of ASCUT-1 from *Ascaris lumbricoides*.
Sabato D'Auria, P. Bazzicalupo, M. Rossi, I. Gryczynski, JR. Lakowicz.
J. Fluorescence (2000) 10, 1, 27-35

43- Stability and conformational dynamics of the esterase from *Archaeoglobus fulgidus*.
Sabato D'Auria, P. Herman, J.R. Lakowicz, E. Bertoli, F. Tanfani, M. Rossi, G. Manco.
Proteins Structure, Function, Genetics (2000) 38, 351-360

42- Pyruvate kinase from the thermophilic eubacterium *Bacillus acidocaldarius* as probe to monitor the concentration of sodium in the blood.
Sabato D'Auria, M. Rossi, P. Hermann, JR. Lakowicz.
Biophys. Chemistry (2000) 84, 167-176

41- Mechanism of thermal denaturation of maltodextrin-phosphorylase from *Escherichia coli*.
R. Griebler, Sabato D'Auria, F. Tanfani, B. Nidetzky.
Biochem J. (2000) 346 Pt 2:255-63

40- Cloning, overexpression and properties of a new thermophilic and thermostable esterase with sequence similarity to hormone sensitive lipase subfamily from the archaeon *Archaeoglobus fulgidus*.
G. Manco, E. Giosue', Sabato D'Auria, P. Herman, G. Carrea, M. Rossi
Arch Biochem Biophys (2000) 373, 182-92.

39- Conformational transitions of α -glucosidase from the hyperthermophilic Archaeon *Sulfolobus solfataricus* expressed in *E. coli* studied by spin and fluorescence labeling methods.
Shames R. Nucci, Sabato D'Auria, F. Febbraio, C. Vaccaro, E. Loznisky, M. Rossi, G. Lichtenstein.
Applied Magn. Resonance (2000) 18, 515-526.

- 38- The esterase from the moderate thermophilic eubacterium *Bacillus acidocaldarius*: structure and dynamics at high temperatures, and comparison with the esterase from the hyperthermophilic archaeon *Archaeoglobus fulgidus*.
Sabato D'Auria, P. Herman, J.R. Lakowicz, F. Tanfani, E. Bertoli, G. Manco, M. Rossi
Proteins Structure, Function, Genetics, (2000) 40, 473-481.
- 37- Interaction of starch phosphorylase from *Corynebacterium callunae* provides extremely efficient stabilization of protein structure against thermal denaturation.
R. Griebler, Sabato D'Auria, F. Tanfani, B. Nidetzky.
Protein Science (2000) 9, 6, 1149-61
- 36- A Protein Biosensor for Lactate
Sabato D'Auria, M. Rossi, I. Gryczynski, Z. Gryczynski, JR. Lakowicz
Analytical Biochemistry (2000) 283,83-88.
- 35- A thermophilic apo-glucose dehydrogenase as non-consuming glucose sensor.
Sabato D'Auria, N. Di Cesare, Z. Gryczynski, I. Gryczynski, M. Rossi, JR Lakowicz
Biochem Biophys Res. Commun. (2000) 274, 727-731.
- 34- Different effects of microwave energy and conventional heat on the activity of a thermophilic β -galactosidase from *Bacillus acidocaldarius*.
F. La Cara, M.R. Scarfi', Sabato D'Auria, G. d'Ambrosio, G. Franceschetti, M. Rossi, M. De Rosa.
Bioelectromagnetics (1999) 20(3): 172-176.
- 33- Purification and characterization of a lipoxygenase enzyme from durum wheat semolina.
R. Barone, R. Briante, Sabato D'Auria, F. Febbraio, L. Del Giudice, C. Borrelli, R. Nucci.
J. Agric Food Chemistry (1999) 47, 5, 1924-1931.
- 32- Microwave exposure effect on a thermophilic alcohol dehydrogenase.
F. La Cara, Sabato D'Auria, M.R. Scarfi', O. Zeni, R. Massa, G. d'Ambrosio, G. Franceschetti, M. Rossi.
Protein Peptide Letters (1999) 6,3,155-162.
- 31- The β -glycosidase from the Archaeon *Sulfolobus solfataricus*: structure and activity in the presence of alcohol.
Sabato D'Auria, R. Nucci, M. Rossi, I. Gryczynski, H. Malak, JR. Lakowicz
J. Biochemistry (1999) 126,3,545-552.
- 30- The β -glycosidase from the Archaeon *Sulfolobus solfataricus*: Structure and conformational dynamics above 100°C.
Sabato D'Auria, R. Nucci, M. Rossi, I. Gryczynski, Z. Gryczynski, JR Lakowicz
Biophys. Chemistry (1999) 81,23-31.
- 29- The fluorescence emission of the apo-glucose oxidase from *Aspergillus niger* as probe to estimate glucose concentrations.
Sabato D'Auria, P. Herman. M. Rossi, J.R. Lakowicz
Biochemical Biophysical Research Communications (1999) 263,2,550-553.
- 28- Temperature effects on the structural and functional properties of membrane-bound and soluble Bull seminal plasma 5'-Nucleotidases.
C. Fini, M. Coli, A. Floridi, Sabato D'Auria, M. Staiano, R. Nucci, M. Rossi.
J. Biochemistry (1998) 123, 269-274.
- 27- Structural analysis of recombinant ASCUT-1, a protein component of the cuticle of the *Ascaris lumbricoides*.
Sabato D'Auria, M. Rossi, F. Tanfani, E. Bertoli, G. Parise, P. Bazzicalupo
Eur. J. Biochem (1998) 255, 588-594.

- 26- Guanidine-induced denaturation of β -glycosidase from *Sulfolobus solfataricus* expressed in *Escherichia coli*.
F. Catanzano, G. Graziano, B. De Paola, G. Barone, Sabato D'Auria, M. Rossi, R. Nucci
Biochemistry (1998) 37, 14484-14490.
- 25- Structure-function studies on β -glycosidase from *Sulfolobus solfataricus*. Molecular bases of thermostability.
Sabato D'Auria, M. Moracci, F. Febbraio, F. Tanfani, R. Nucci, M. Rossi.
Biochemie (1998) 80,949-957.
- 24- Multitryptophan-fluorescence-emission decay of β -glycosidase from the extremely thermophilic archaeon *Sulfolobus solfataricus*.
E. Bismuto, G. Irace, Sabato D'Auria, M. Rossi, R. Nucci.
European Journal of Biochemistry (1997) 244, 53-58.
- 23- Effect of SDS, temperature and pH on the structural features of β -glycosidase from archaeon *Sulfolobus solfataricus*.
Sabato D'Auria, R. Barone, M. Rossi, R. Nucci, G. Barone, D. Fessas, E. Bertoli, F. Tanfani.
Biochemical Journal (1997) 323, 833-840.
- 22- Perturbation of conformational dynamics, enzymatic activity and thermostability of β -glycosidase from archaeon *Sulfolobus solfataricus* by pH and sodium dodecyl sulfate detergent.
Sabato D'Auria, M. Rossi, R. Nucci, G. Irace, E. Bismuto.
Proteins Structure Function Genetics (1997) 27, 71-79.
- 21- Identification of the active site nucleophile in the thermostable β -glycosidase from *Sulfolobus solfataricus* expressed in *E. coli*.
F. Febbraio, R. Barone, Sabato D'Auria, M. Rossi, R. Nucci, G. Piccialli, L. De Napoli, S. Orru, P. Pucci.
Biochemistry (1997) 36, 11, 3068-3075.
- 20- Temperature Effect on the Structural Features of β -glycosidase from *Sulfolobus solfataricus*: An Infrared Study.
Sabato D'Auria, M. Rossi, R. Nucci, E. Bertoli, F. Tanfani.
Protein and Peptide Letters (1997) 4,2, 123-130.
- 19- Purification and characterization of *Sulfolobus solfataricus* β -glycosidase expressed in *Saccharomyces cerevisiae*.
Sabato D'Auria, A. Morana, F. Febbraio, C. Vaccaro, M. De Rosa, R. Nucci.
Protein Expression and Purification, (1996) 7, 299-308.
18. Immobilization on Chitosan of a thermophilic β -glycosidase expressed in *Saccharomyces cerevisiae*.
Sabato D'Auria, F. Pellino, F. La Cara, R. Barone, M. Rossi, R. Nucci.
Applied Biochemistry and Biotechnology (1996) 61, 157-166.
17. Temperature induced denaturation of a β -glycosidase from the Archaeobacterium *Sulfolobus solfataricus*.
Sabato D'Auria, M. Rossi, R. Nucci, G. Barone, F. Catanzano, P. Del Vecchio, G. Graziano.
J. Biochemistry (1996) 120, 292-300.
- 16- A Thermophilic NAD-dependent alcohol dehydrogenase from *Bacillus acidocaldarius* not reactive towards ketones.
Sabato D'Auria, F. La Cara, F. Nazzaro, N. Vespa, M. Rossi.
J. Biochemistry, (1996) 120, 498-504.

- 15- Characterization of redox proteins from extreme thermophilic archaeobacteria: Studies on alcohol dehydrogenase and thioredoxins.
C.A. Raia, *Sabato D'Auria*, A. Guagliardi, S. Bartolucci, M. De Rosa, M. Rossi.
Biosensor and Bioelectronics, (1995) **10**, 135-140.
- 14- A thermostable β -glycosidase from *Sulfolobus solfataricus*: Temperature and SDS effects on its functional and structural properties.
R. Nucci, *Sabato D'Auria*, F. Febbraio, C. Vaccaro, A. Morana, M. De Rosa, M. Rossi.
Biotechnology and Applied Biochemistry, (1995) **21**, 135-145.
- 13- Elimination of twinning in crystals of *Sulfolobus solfataricus* alcohol dehydrogenase holoenzyme by growth in agarose gels.
F. Sica, D. Demasi, L. Mazzarella, A. Zagari, S. Capasso, L.H. Pearl, *Sabato D'Auria*, C.A. Raia, M. Rossi.
Acta Crystallographica, (1994) **50**, 508-511.
- 12- NAD-dependent alcohol dehydrogenase from *Sulfolobus solfataricus*: Structural and functional features.
C.A. Raia, *Sabato D'Auria*, M. Rossi.
Biocatalysis, (1994) **11**, 143-150.
- 11- *Sulfolobus solfataricus* alcohol dehydrogenase. Structural and functional relationships to other alcohol dehydrogenases.
C.A. Raia, *Sabato D'Auria*, V. Carratore, N. Vespa., M. Rossi.
The Italian Journal of Biochemistry, (1994) **43**, 164-165.
- 10- Reversible inhibition studies on the \square -glycosidase from *Sulfolobus solfataricus*.
F. Febbraio, *Sabato D'Auria*, C. Vaccaro, M. Rossi, R. Nucci.
The Italian Journal of Biochemistry, (1994) **43**, 201-202.
- 9- Crystallization and preliminary X-ray analysis of an NAD-dependent alcohol dehydrogenase from the extreme thermophilic archaeobacterium *Sulfolobus solfataricus*.
L.H. Pearl, D. Demasi, A.M. Hemmings, F. Sica, L. Mazzarella, C.A. Raia, *Sabato D'Auria*, M. Rossi.
Journal of Molecular Biology, (1993) **229**, 782-784.
- 8- Thermostable NAD-dependent alcohol dehydrogenase from *Sulfolobus solfataricus*: Gene and protein sequence determination and relationship to other alcohol dehydrogenases.
S. Ammendola, C.A. Raia, C. Caruso, L. Camardella, *Sabato D'Auria*, M. De Rosa and M. Rossi.
Biochemistry, (1992) **31**, 12514-12523.
- 7- Purification and characterization of a thermostable carboxypeptidase from the extreme thermophilic archaeobacterium *Sulfolobus solfataricus*.
S. Colombo, *Sabato D'Auria*, P. Fusi, L. Zecca, C.A. Raia, P. Tortora.
Eur. Journal Biochemistry, (1992) **206**, 349-357.
- 6- Patchy expression of lactase protein in adult rabbit and rat intestine
L. Maiuri, M. Rossi, V. Raia, *Sabato D'Auria*, D. Swallow, A. Quaroni and S. Auricchio.
Gastroenterology, (1992) **103**, 1739-1746.
- 5- Coenzymatic properties of macromolecular derivatives of NAD and NADP with two thermostable dehydrogenases from the archaeobacterium *Sulfolobus solfataricus*.
A. Guagliardi, C.A. Raia, R. Rella, AF Buckmann, *Sabato D'Auria*, M. Rossi, S. Bartolucci.
Biotechnology and Applied Biochemistry, (1991) **13**, 25-35.
- 4- Purification and properties of a thermophilic and thermostable DNA polymerase from the archaeobacterium *Sulfolobus solfataricus*.
R. Rella, C.A. Raia, FM Pisani, *Sabato D'Auria*, R. Nucci, A. Gambacorta, M. De Rosa and M. Rossi.
The Italian Journal of Biochemistry (1990) **39**, 83-99.

3- Determination of hybrid transfer stereospecificity of NADH dependent alcohol aldehyde ketone oxidoreductase from *Sulfolobus solfataricus*.

A. Trincone, L. Lama, R. Rella, Sabato D'Auria, C.A. Raia and B. Nicolaus.

Biochimica Biophysica Acta, (1990) 1041, 94-96.

2- A possible role of zinc ions in alcohol dehydrogenase from *Sulfolobus solfataricus*.

C.A. Raia, Sabato D'Auria, R. Rella, FM Pisani, C. Vaccaro and M. Rossi.

The Italian Journal of Biochemistry, (1988) 37, 325-326.

1- Preproenkephalin mRNA in Neuroblastoma x Glioma, NG 108-15, hybrid cells and in parental cell lines: Mouse Neuroblastoma, N18, and Rat Glioma, C6.

A. Palmisano, Sabato D'Auria, G. Sannia, G. Marino and G. Tocco.

Neuropeptides (1987) 10, 321-327

Book chapters and Invited Contributions

- Proteins from extremophiles as probes for advanced fluorescence biosensors for analyses of high social interest.

M. Staiano, V. Scognamiglio, V. Aurilia, A. Parracino, A. Varriale, M. deChampodorè, A. Vitale, G. Aquino, M. Rossi, and Sabato D'Auria

Proceedings of the International Symposium on Extremophiles and their applications ISEA (2007) 302-309.

- Advanced Fluorescence Biosensors for Diabetic patients

Sabato D'Auria, V. Scognamiglio, M. De Champdore', M. Staiano, G. Ghirlanda, M. Rossi

Topics in Fluorescence Spectroscopy, (2005) Vol 10, Plenum Press, New York, USA

- Odor binding protein as probe for a refractive index-based biosensor: new perspectives in biohazard assessment.

Sabato D'Auria, V. Scognamiglio, M. Staiano, M. Rossi, S. Campopiano, N. Cennamo, L. Zeni.

Advances in Fluorescence Sensing Technology (2004), Lakowicz JR and Thompson R.B. Editors Vol. (in press).

- DNA arrays in genetic and medical applications.

Sabato D'Auria, M. Rossi, J. Malica, Z. Gryczynski, I. Gryczynski.

Topics in Fluorescence Spectroscopy, (2003) Vol. 7, DNA Technology, Plenum Press, New York, USA .

- Fluorescence spectral engineering. Biophysical and biomedical applications.

J.R. Lakowicz, Y. Shen, Sabato D'Auria, J. Malicka, Z. Gryczynski, I. Gryczynski

Fluorescence Spectroscopy, Imaging and Probes: New Tools in Chemical, Physical and Life Sciences (2002) pp 43-68

Kraayenhof, R., *Vrije Universiteit, Amsterdam, The Netherlands*; Visser, A. J.W.G., *University of Wageningen, The Netherlands*; Gerritsen, H. C., *University of Utrecht, The Netherlands* (Eds.) Springer-Verlag Heidelberg

- Radiative decay engineering: Biomedical applications.

J.R. Lakowicz, Y. Shen, Sabato D'Auria, J. Malicka, I. Gryczynski, Z. Gryczynski.

SPIE, Vol.4626 Tools for molecular analysis and high throughput screening. 4626-84. January 19-25, 2002, San Jose', California, USA

- Glucose-sensing proteins from mesophilic and thermophilic bacteria as new tool in diabetes monitoring

Sabato D'Auria, M. Rossi, J. R. Lakowicz.

Advances in Fluorescence Sensing Technology (2001) Vol.V, Lakowicz JR and Thompson R.B. Editors Vol. 4252, 21-31.

- Fluorescence of extreme thermophilic proteins.

Sabato D'Auria, M. Rossi, I. Gryczynski, J.R. Lakowicz.

Topics in Fluorescence Spectroscopy, (2000) Vol. VI, 12, 285-306, JR Lakowicz Ed, Kluwer Ny, USA

- Enzymes act as non-consuming substrate sensors

Sabato D'Auria

Sensor Technology Alert September 1st, 2000, John Wiley & Sons, Inc USA.

- Alcohol Dehydrogenase

Sabato D'Auria

Handbook of Food Enzymology

(2003) J Withaker Editor, Decker, New York, USA

- Protein-based fluorescence sensors of glucose, lactose, and glutamine.

J. R. Lakowicz, L. Tolosa, J. D. Dattelbaum, Sabato D'Auria

Advances in Fluorescence Sensing Technology V Conference 4252Conv. Ctr: A5 Wednesday-Thursday 24-25 January 2001 *Proceedings of SPIE* Vol. 4252.

- Influence of microwave radiation on the deactivation process of thermophilic enzymes.

F. d'Ambrosio, Sabato D'Auria, M. De Rosa, G. Franceschetti, F. La Cara, R. Massa, M. Rossi, M.R. Scarfi', O. Zeni.

In Microwave and High Frequency Heating (1997) Editors A. Breccia, R. De Leo, AC Metaxas, pp377-380.

- Stability and stabilization of α -1,4-D-glucan phosphorylases.

R. Griebler, B. Muller, Sabato D'Auria, F. La Cara, B. Nidetzky.

Stability and Stabilization of Biocatalysts, (1997) A. Ballesteros, FJ. Plou, JL Iborra, PJ. Halling, Editors, Elsevier, New York.

Articles published in Italian Journals without review process

- Design and development of advanced nanosensors and nanochips for human health and food safety

M. Staiano, V. Aurilia, T. Labella, P. Orlando, M. Rossi, and Sabato D'Auria

Nanotec IT, (2007) **8**, 21-24

- Biosensori e biochip basati sulla nanotecnologia del silicio poroso

L. De Stefano, I. Rendina, A.M. Rossi, M. Rossi, Sabato D'Auria.

Rivista Italiana di Nanotecnologie, (2005),1, 61-63.

- Le nanotecnologia in campo diagnostico al servizio dei diabetici e dei celiaci

M. Rossi, M. Staiano, A. Parracino, V. Aurilia, M. de Champdore', A. Varriale, G. Aquino, A. Vitale, I. Coccozza, V. Scognamiglio, M. Rossi, and Sabato D'Auria

Rivista Italiana di Nanotecnologie, (2006),2, 55-58.