CURRICULUM VITAE Dr. Antonio Varriale

LEGAL DECLARATION IN ACCORDANCE WITH THE ACT OF SELF CERTIFICATION
(art. 46 – 47 of DPR 445/2000)

The undersigned Varriale Antonio, born in Naples on 05/09/1978, resident in Naples, in Via Nuova Poggioreale N° 33, 80143 Naples.
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DECLARES

That all the information provided in the following curriculum vitae is true:

June 2013–ongoing: Researcher with a temporary position at the Institute of Protein Biochemistry, Italian National Research Council (CNR), Naples - Italy**.**

EDUCATION

February 2009, PhD in Biochemical Science working at Department of Medicine, Faculty of Medicine University of Perugia (Supervisor Prof. Carlo Fini) and at the Institute of Protein Biochemistry, Italian National Research Council (CNR), Naples (Supervisor Dr. Sabato D'Auria). Experimental thesis entitled: "Study of the Structure and Functions of Odorant-binding protein (OBP) of the porcine nasal mucosa". The research was focused on the pOBP folding- unfolding processes in presence of chemical and physical denaturant agents.

July 2004 "Magistrale" (five years) degree in Industrial Biotechnology at Faculty of Biotechnological Science of University of Naples Federico II. Experimental thesis entitled: "Glutamine-binding protein: purification, characterization and biotechnological applications", working at the Institute of Protein Biochemistry, Italian National Research Council (CNR), Naples (Supervisor Dr. Sabato D'Auria) with the grade 110/110. The research was focused on purification and structural characterization of the Glutamine-binding protein isolated from *E. coli* in order to develop innovative optical biosensors.

PROFESSIONAL EXPERIENCE (LAST TEN YEARS)

September 2010 to June 2013 Post Doc Researcher at the Institute of Protein Biochemistry, Italian National Research Council (CNR) of Naples for the project "Drugs And Precursor Sensing By Complementing Low Cost Multiple Techniques".

September 2008 to February 2010 Chief Executive Officer of ISS BioSense s.r.l. (www.issbiosense.com).

June 2008 to August 2010 Awarded a Fellowship position at the Institute of Protein Biochemistry, Italian National Research Council (CNR) of Naples for the project "Planning and realization of fluorescence biosensors for celiac patients based on the methodology of Single Molecule Detection".

June 2007 to June 2008 Fellowship at the Institute of Protein Biochemistry, Italian National Research Council (CNR) of Naples for the project "Development of a fluorescence biosensor for the determination of lactose in milk caramel".

June 2006 to June 2007 Awarded a researcher grant at the Institute of Protein Biochemistry, Italian National Research Council (CNR) of Naples for the project "Experts in Industrial Biotechnology and in the Management of Innovation in the field of Biotechnology" funded by BioTekNet scarl.

December 2004 Awarded a Fellowship position at Department of Internal Medicine, Faculty of Medicine University of Perugia (Supervisor Prof. Carlo Fini) funded by the Interuniversity Biotechnology Consortium (CIB) for a short training in Biotechnology.

February 2005 to July 2005 Internship as a research student at the R&D division of ISS inc. Urbana- Champaign Illinois, USA for a project focused on the development of innovative biosensors for the diagnosis and follow-up of human diseases.

ADDITIONAL RESEARCH EXPERIENCES

16 May 2008 to 29 May 2008 Internship as researcher at the Academy of Science of St. Petersburg, Russia (Supervisor Prof. Kostantin Turoverov) working on a research project in the field of the functional characterization of proteins through kinetics in the pre-stationary state.

May 2007 to June 2007 Internship as researcher at the Academy of Science of St. Petersburg, Russia (Supervisor Prof. Kostantin Turoverov) working on a research project in the field of structural study of proteins through methodologies of time-resolved fluorescence.

September 2005 to March 2006 Awarded a Fellowship position at Department of Internal Medicine, Faculty of Medicine University of Perugia (Supervisor Prof. Carlo Fini) for the project "Molecular Enzymology of the nucleotide metabolism in Type B chronic lymphatic leukaemia"

May 2003 Internship as researcher at the Laboratory of FT-IR Spectroscopy and Bio-molecular Interactions, Department of Biochemistry of the Faculty of Science at the Polytechnic University of the Marche (Supervisor Prof. Fabio Tanfani).

TECHNICAL COMPETENCES

- Microbiology: cultivation and manipulation of microorganisms such as *E. coli* and *S. cerevisie*. Methods of preparation cellular extraction from bacteria and mammalian cell culture.
- Protein purification methods: Protein purification and analisys using chromatographic methods such as Fast Protein Liquid Chromatography (FPLC-Akta and BioLogic system), Affinity Chromatography, Gel filtration and Ion Exchange Chromatography (IAC).
- Protein analysis: Gel electrophoresis in native and in denatured conditions (SDS-PAGE); determination of protein concentration using standard method of analysis (Biureto, Bradford and UV-visible spectroscopy).
- Protein structure analysis: Protein structural analysis using advanced spectroscopy methods such as UV-Visible spectroscopy, Fluorescence spectroscopy (Steady State, Lifetime, Fluorescence correlation spectroscopy and fluorescence front face) and Circular Dichroism.
- Protein manipulation: Protein, antibodies and peptides such as derivatization with fluorescent probe (Protein Labeling) and conjugation with small molecules.
- Interactoma methods: Protein-Protein interaction and analyte-ligand interaction by Surface Plasmon Resonance using Biacore and SensiQ system.
- Immunologic analysis. Production, purification and manipulation antibodies (Fab preparation), immune-assay such as Dot Blotting, Western Blotting and ELISA assay.
- Chemical methods: Chemical synthesis strategies, such as derivatization of small malecules with specific linker for conjugation to protein and peptide carrier.

EDITORIAL ACTIVITIES

Official reviewer of the scientific journals Analyst, RSC UK, and PLOS ONE.

TEACHING SKILLS

March 2014 " *La scuola incontra la Ricerca*" in frame with the education training at the Institute of Protein Biochemistry, Italian National Research Council (CNR) of Naples.

March 2013 to May 2013 taught short course "*Development of advanced diagnostic systems for health and food safety"* at the Liceo Scientifico Statale A. Gallotta" Eboli**.**

Febbruary to July 2011 Taught magistrale degree course of Pharmaceutical Biotechnolgy at the Faculty of Biotechnology, University of Naples Federico II.

December 2009 Taught three-year degree course of Industrial Enzymology in Biological Science at the Faculty of Natural Science, Mathematics and Physics at University of Naples Federico II.

EVENT ORGANIZATION

July 2007 Workshop *"New Trends in Enzyme Science and Nano-biotechnology"* at the Institute of Genetic Engineering and Biotechnology (NIGEB) of Tehran, Iran.

INVITED SPEAKER AT NATIONAL AND INTERNATIONAL CONGRESSES AND CONFERENCES

2007 "Advanced fluorescence biosensor for analyses of high social interest" at International Conference on Coherent and Nonlinear Optics (ICONO 2007) and International Conference on Laser application, and Technologies (LAT 2007). May 28-1 June 2007 Minsk Belarus.

2007 "A Miniaturized Fluorescence-Based Biosensor for Monitoring of Cadmium Traces in Water" at the 12th Conference of the Italian Sensors and Microsystems Association (AISEM). May 20-23 University of Naples Federico II.

2006 "Molecular Adaptation Strategies to High Temperature. D-Trehalose/D-Maltose-binding protein from the hyperthermophilic archaeon *Thermococcus litoralis* as an example" at the XXVIII National Conference on Calorimetry, Thermal analysis and Chemical Thermodynmics. December 11-15 2006 Milan Italy

LIST OF PUBLICATIONS WITH IMPACT FACTORS
(Source: ISI WEB of Knowledge-Google Scholar)
Publications in scientific journals (ISI)

1 Pennacchio A, **Varriale A**, Esposito MG, Staiano M, D'Auria S. A Near-Infrared Fluorescence Assay Method to Detect Patulin in Food. **Anal Biochem**. (2015) May 2. pii: S0003-2697(15)00204-3. doi: 10.1016/j.ab.2015.04.027. **Impact Factor 2.305**

2 Cennamo N, Di Giovanni S, **Varriale A**, Staiano M, Di Pietrantonio F, Notargiacomo A, Zeni L, D'Auria S. Easy to use plastic optical fiber-based biosensor for detection of butanal **PLoS One**. (2015) Mar 19;10(3):e0116770. doi: 10.1371/journal.pone.0116770. 2015. **Impact Factor 3.73**

3 Di Pietrantonio F., Benetti M., Cannatà D., Verona E., Palla-Papavlu A., Fernández-Pradas J.M., Serra P., Staiano M., **Varriale A**, D'Auria S. A surface acoustic wave bio-electronic nose for detection of volatile odorant molecules. **Biosens Bioelectron.** (2014) Sep 18. pii: S0956-5663(14)00714-3. doi: 10.1016/j.bios.2014.09.027. **Impact Factor: 5.437**

4 Rosini E., Piubelli L., Molla G., Frattini L., Valentino M., **Varriale A**., D'Auria S. and Pollegioni L. *Novel biosensors based on optimized glycine oxidase.* **FEBS J. (2014) 281(15): 3460-72. Impact Factor: 3.986**

5 Bonnot K, Cuesta Soto F, Rodrigo M, Varriale A, Sanchez N, D'Auria S, Spitzer D, Lopez-Royo F. *A Biophotonic Ring Resonator for an Ultra-Sensitive Detection of DMMP as a Simulant for Organosphosphorus Agents*. **Anal Chem. (2014) 20; 86(10): 5125-30**. **Impact Factor: 5.712.**

6 D'Angelo G, Uemura T, Chuang CC, Polishchuk E, Santoro M., Ohvo-Rekilä H, Sato T, Di Tullio G, **Varriale A**, D'Auria S, Daniele T, Capuani F, Johannes L, Mattjus P, Monti M, Pucci P, Williams RL, Burke JE, Platt FM, Harada A, De Matteis MA. *Vesicular and non-vesicular transport feed distinct glycosylation pathways in the Golgi.* **Nature (2013) Sep 5; 501(7465): 116-20**. **Impact Factor: 38.579**

7 **Varriale A**., Marabotti A., Mei G., Staiano M., D'Auria S. *Correlation Spectroscopy and Molecular Dynamics Simulations to Study the Structural Features of Proteins.* **PLOS ONE (2013) 4;8(6): 64840. Impact Factor 3.73**

8 Cennamo N., Varriale A., Pennacchio A., Staiano M., Massarotti D., Zeni L. and D'Auria S. *An innovative plastic optical fiber-based biosensor for new bio/applications. The case of celiac disease.* **Sensors and Actuators B (2013) 176; 1008– 1014. Impact Factor: 3.535**

9 Marchal S., Marabotti A., Staiano M., **Varriale A.**, Domaschke T., Lange R. and D'Auria S. Under Pressure That Splits a Family in Two. The Case of Lipocalin Family. **PLOS ONE (2012) 7 (11) 50489. Impact Factor 3.73**

10 Di Giovanni S., **Varriale A**., Marzullo VM, Ruggiero G., Staiano M., Secchi A., Pierno M., Fiorello AM and D'Auria S. *Determination of benzyl methyl ketone- a commonly used precursor in amphetamine manufac*ture. **Anal. Methods (2012) 4, 3558-3564 Impact Factor: 1.885**

11 **Varriale A**., Staiano M, Marzullo VM, Strianese M, Di Giovanni S., Ruggiero G., Secchi A., Dispenza M., Fiorello AM and D'Auria S. *A surface plasmon resonance-based biochip to reveal traces of ephedri*ne. **Anal. Methods (2012) 4, 1940-1944 Impact Factor: 1.885**

12 Di Pietrantonio F., Cannatà D., Benetti M., Verona E., **Varriale A**., Staiano M., D'Auria S. *Detection of odorant molecules via surface acoustic wave biosensor array based on odorant-binding proteins*. **Biosens Bioelectron**. **(2013) 15;41:328-34 Impact Factor: 5.437**

13 Staiano M., Strianese M., **Varriale A.**, Di Giovanni S., Scotto di Mase D., Dell'Angelo V., Ruggiero G., Labella T., Pellecchia C., D'Auria S. *D-Serine-Dehydratase from Saccaromyces cerevisiae. A Pyridoxal 5'-phosphate-Dependent Enzyme for Advanced Biotech Applications*. **Protein Pept. Lett.** (2012) **1;19(6):592-5. Impact Factor : 1.994**

14 Stepanenko O., Stepanenko O., Povarova O., Fonin A.Kuznetsova, Irina; Turoverov, Konstantin; Staiano, M. **Varriale A**. D'Auria S. *New Insight in Protein-Ligand Interactions. The Case of the D-Galactose/D-Glucose-Binding Protein from E. Coli.* **J Phys Chem B. 2011 Mar 31;115(12):2765-73. Impact Factor: 4.189.**

15 **Varriale A.** ,Strianese M., Staiano M., Pellecchia C., D'Auria S. *Absorption into fluorescence. A method to sense biologically relevant gas molecules.* **Nanoscale 2010 12;3(1):298-302 Impact Factor : 6.233** 6

16 Valenti A, Perugino G, **Varriale A**, D'Auria S, Rossi M, Ciaramella M.*The archaeal topoisomerase reverse gyrase is a helix-destabilizing protein that unwinds four-way DNA junctions.* **J Biol. Chem. 2010 Nov 19; 285(47):36532-41. Impact Factor: 5.328**

17 Bogoeva V., **Varriale A**., John C.M. and D'Auria S. *Human galectin-3 interacts with two anticancer drugs.* **Proteomics 2010 10(10):1946-53. Impact Factor: 5.479**

18 D'Auria S., Petrova L., John C.M., Russev G., **Varriale A.** and Bogoeva V. *Tumor-specific protein human galectin-1 interacts with anticancer agents.* **Mol Biosyst. 2009 Nov;5(11):1331-6. Impact Factor: 4.236.**

19 **Varriale A.,** Staiano M., Iozzino L., Severino L., Anastasio A., Cortesi M.L. and D'Auria S. *FCS-Based Sensing for the Detection Of Ochratoxin and Neomycin In Food*. **Protein Pept Lett. 2009;16(12):1425-8. Impact Factor: 1.281.**

20 Marchal S., Staiano M., Marabotti A., Vitale A., **Varriale A.**, Lange R., D'Auria S. *Pressure Effects on the Structure and Stability of the Hyperthermophilic Trehalose/Maltose-Binding Protein from Thermococcus litoralis*. **J Phys Chem B. 2009 Sep 24;113(38):12804-8. Impact Factor: 4.189.**

21 Scirè A., Marabotti A., Staiano M., Briand L., **Varriale A.**, Bertoli E., Tanfani F., D'Auria S. *Structure and Stability of a Rat Odorant-Binding Protein: Another Brick in the Wall.* **J Proteome Res. 2009 Aug;8(8):4005-13**. **Impact Factor: 5.684.**

22 Venditti I., Fratoddi I., Russo M.V., Bellucci S., Crescenzo R., Iozzino L., Staiano M., Aurilia V., **Varriale A**., Rossi M. and D'Auria S. *Nanobeads-based Assays. The case of gluten detection***. J. Phys.: Condens. Matter 2008;20 474202-474205. Impact Factor: 1.9.**

23 Marabotti A., Lefèvre T., Staiano M., Crescenzo R., **Varriale A.**, Rossi M., Pézolet M., D'Auria S. *Mutant bovine odorant-binding protein: Temperature affects the protein stability and dynamics as revealed by infrared spectroscopy and molecular dynamics simulations.* **Proteins 2008 Aug;72(2):769-78. Impact Factor: 3.419.**

24 D'Auria S., Staiano M., **Varriale A.**, Gonnelli M., Marabotti A., Rossi M., Strambini G.B. *The tryptophan phosphorescence of porcine and mutant bovine odorant-binding proteins: a probe for the local protein structure and dynamics*. **J Proteome Res. 2008 Mar;7(3):1151-8**. **Impact Factor: 5.684**.

25 Staiano M., Saviano M., Herman P., Grycznyski Z., Fini C., **Varriale A.**, Parracino A., Kold A.B., Rossi M., D'Auria S. *Time-resolved fluorescence spectroscopy and molecular dynamics simulations point out the effects of pressure on the stability and dynamics of the porcine odorant-binding protein*. **Biopolymers. 2008 Apr;89(4):284-91. Impact Factor: 2.307.**

26 D'Auria S., Staiano M., **Varriale A.**, Gonnelli M., Marabotti A., Rossi M., Strambini G.B. *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*. **Proteins. 2008 May 1; 71(2):743-50. Impact Factor: 3.419.**

27 Stepanenko O.V., Marabotti A., Kuznetsova I.M., Turoverov K.K., Fini C., **Varriale A.**, Staiano M., Rossi M., D'Auria S. *Hydrophobic interactions and ionic networks play an important role in thermal stability and denaturation mechanism of the porcine odorant-binding protei*n. **Proteins. 2008 Apr; 71(1):35-44. Impact Factor: 3.419.**

28 Staiano M., D'Auria S., **Varriale A.**, Rossi M., Marabotti A., Fini C., Stephanenko O., Kuznetsova I.M. and Turoverov K.K. *Stability and Dynamics of the Porcine Odorant-Binding Protein*. **Biochemistry 2007 Oct 2; 46(39): 11120-11127. Impact Factor: 3.379**

29 **Varriale A.**, Staiano M., Rossi M and D' Auria S. *High-Affinity Binding of Cadmium Ions by Mouse Metallothionein Prompting the Design of a Reversed-Displacement Protein-Based Fluorescence Biosensor for Cadmium Detection.***Anal Chem. 2007 Aug 1; 79(15): 5760-2. Impact Factor: 5.712.**

30 **Varriale A.**, Rossi M., Staiano M, Terpetschnig E., Barbieri B., Rossi M. and D'Auria S. *Fluorescence correlation spectroscopy assay for gliadin in food* **Anal Chem. 2007 Jun 15; 79(12): 4687-9. Impact Factor: 5.712.**

31 Fessas D., Staiano M., Barbiroli A., Marabotti A, Schiraldi A., **Varriale A.**, Rossi M. and D'Auria S. *Molecular Adaptation Strategies to High Temperature and Thermal Denaturation Mechanism of the D-Trealose/D-Maltose-binding protein from the hyperthermophilic archeon Thermococcus litoralis* **Proteins. 2007 Jun 1; 67(4): 1002-9. Impact Factor: 3.419.**

32 Ramoni R., Bellucci S.**,** Grycznyski I., Grycznyski Z., Grolli S., Staiano M., De Bellis G., Micciulla F., Pastore R., Tiberia A, Conti V., Merli E., **Varriale A.**, Rossi M. and D'Auria S. *The protein scaffold of the Lipocalin Odorant-Binding Protein is suitable for the design of advanced biosensor for the detection of explosive components.* **J. Phys.: Condens. Matter 19 2007: 395012-19. Impact Factor: 1.9.**

[33] D'Auria S., **Varriale A.**, Gonnelli M., Saviano M., Staiano M., Rossi M. and Strambini G.B. *Tryptophan Phosphorescence Studies of the D-Galactose/D-Glucose-Binding Protein from Escherichia coli provide a Molecular Portrait with Structural and Dynamics Features of the Protein.* **J Proteome Res. 2007 Apr; 6(4): 1306-12. Impact Factor: 5.684.**

34 Marabotti A., Ausili A., Staiano M., Scirè A., Tanfani F., Parracino A., **Varriale A.**, Rossi M., and D'Auria S. *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. **Biochemistry 2006 Oct 3; 45(39): 11885-94. Impact Factor: 3.379.**

35 D'Auria S., Staiano M., **Varriale A.**, Scognamiglio V., Rossi M., Parracino M., Campopiano S., Cennamo N., Zeni L.*The Odorant-binding protein from Canis familiaris as probe for a refractive index-based biosensor: new perspectives in biohazard assessment*. **Protein Pept Lett. 2006; 1 3(4): 349-52. Impact Factor: 1.281.**

36 Herman P., Staiano M., Marabotti A, **Varriale A.**, Scirè A., Tanfani F., Vecer J. ,Rossi M. and D' Auria S. *D-Trehalose/D-Maltose- binding protein from the hyperthemophilic Archaeon Thermococcus litoralis. The Binding of trehalose and maltose results in different protein conformational states.* **Proteins 2006 63(4):754-67. Impact Factor: 3.419.**

37 D'Auria S., Ausili A., Marabotti A., **Varriale A.**, Scognamiglio V., Staiano M., Bertoli E., Rossi M. and Tanfani F. *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.* **J. Biochem (Tokyo) 2006 ; 139(2):213-21. Impact Factor: 1.878.**

38 Marabotti A., Herman P., Staiano M., **Varriale A.**, De Champdore' M., Rossi M., Gryczynski Z. and D'Auria S. *Pressure Effect on the Stability and Conformational Dynamics of the D-Galactose/D-Glucose Binding Protein from Escherichia col.* **Proteins. 2005 November 17; 62(1): 193-201. Impact Factor: 3.419.**

39 Herman P., Vecer J., Barvik I. (Jr.), Scognamiglio V., Staiano M., De Champdore' M., **Varriale A.**, Rossi M. and D'Auria S. *The role of Calcium in the Conformational Dynamics and thermal Stability of D-Galactose/D-Glucose-Binding Protein from Escherichia coli* . **Proteins. 2005 Oct 1; 61(1): 184-95. Impact Factor: 3.419**

40 D'Auria S., Scirè A., **Varriale A.**, Scognamiglio V., Staiano M., Ausili A., Marabotti A., Rossi M. and Tanfani F. *Binding of glutamine to the glutamine-binding protein from Escherichia coli induces changes in protein structure and increases protein stability.* **Proteins: 2005 January 1; 58(1): 80-7. Impact Factor: 3.419.**

Figures selected as Cover Image of International Journals

Analytical Methods 2012, Vol. 4

Analytical Methods 2012, Vol. 3

Journal of Physical Chemistry B 2001, Vol. 12

Nanoscale 2011, Vol. 12

Proteomics , 2010, Vol. 10

Reviews and Chapters in books and collective volumes

Kuznetsova I.M., Povarova O., Stepanenko O., Turoverov K.K., Crescenzo R., **Varriale A**., Staiano M. and D'Auria S.
New perspectives in protein-based biosensors: The glucokinase from B. stearothermophilus and the odorant-binding protein from C. familiaris as probes for non-consuming analyte sensors.
Proceedings of SPIE - The International Society for Optical Engineering 6733, 2007 art. no. 673318.

PATENTS

Varriale A., Staiano M., Baldassarre M., Strianese M. and D'Auria S.
A new optical method for a rapid and simple determination of analytes
Italian Patent N. NA2009A000042

Varriale A., Rossi M. and D'Auria S.
A new fluorescence method for the identification of cadmium in water and food
Italian Patent N. NA2007A0000

CONFERENCE PARTECIPATIONS

8 to 10 September 2013 Methods and Analysis in Fluorescence (MAF 2013) in Genova, Italy.

26 to 29 October 2009 Italian-Japanese Symposium: *"New Trends in Enzyme Science and Technology"* at the Institute of Protein Biochemistry, C.N.R., Naples.

26 to 30 October 2007 participation on "*The Short Course on Cellular and Molecular Fluorescence University"* at the University of Texas "North Texas Health Science Center", Fort Worth TX U.S.A.

12 to 14 February 2007 12th Conference of the Italian Association of Sensors and Microsystems (AISEM), at the University of Naples "Federico II".

26 to 27 June 2006 course *"Hyperthermophilic Enzymes and Nanotechnologies: Applications"* organized by the PNR Training Project, "Advanced Biotechnologies" theme 6 in collaboration with the Institute of Protein Biochemistry, C.N.R. Naples.

24 May 2006 seminar *"Purity or Perish: Current Challenger in Biotech Industry"* organized by Sartorius and the Regional Center of Competence In Industrial Biotechnologies CRdC BioTekNet Naples.

15 to 17 May 2006 course *"Functionalization of surfaces via plasma for biotechnological applications"*organized by Plasma Solution s.r.l and the Regional Center of Competence In Industrial Biotechnologies CRdC BioTekNet Naples.

27 to 28 September 2004 course of "*Molecular Modelling From Structural Genomics to Drug Discovery",* at the University of Parma.

21 November 2003 training course: *"Molecular Mechanisms of replication and repair of DNA"* at the Institute of Protein Biochemistry, C.N.R, Naples.

4 November 2003"Seminar Tour": *"From gene to Functional Protein"*, organized by Amersham Biosciences at the Institute of Protein Biochemistry, C.N.R., Naples.

15 to 18 September 2003 48th National Congress organized by the Italian Society of Biochemistry and Molecular Biology, at the University of Ferrara**.**

Naples 17/03/2015

Signature

Antonio Varriale