

UNIVERSITÀ DEGLI STUDI DI MILANO

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[Nome e cognome] CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	VERZILLO
NOME	VITTORIO
DATA DI NASCITA	6 MAGGIO 1966

INSERIRE IL PROPRIO CURRICULUM (non eccedente le 30 pagine)

CURRICULUM VITAE

Vittorio Verzillo PhD,
e-mail:vittver@gmail.com

EDUCATION

Ph.D. thesis title: "Molecular diversity techniques in the study of Alzheimer's Disease"- defended on 10/24/2000 at International School for Advanced Studies, Trieste, Italy;
PhD Course at the Laboratory of Molecular Neurobiology SISSA-ICGEB Padriciano (Trieste, Italy); large part of the experimental work done at Los Alamos National Laboratory, (Los Alamos, NM, USA).
3/1994 "Laurea in Scienze Biologiche", 104/110. Università degli studi "Federico II", Napoli, Italy. Graduation thesis: "Gene transfer techniques in mammalian cells and uses in gene therapy". Secondary thesis: "'In vitro' memory and learning".
6/1984 "Diploma di Maturità Classica", 57/60. Liceo ginnasio statale Gneo Nevio, S. Maria C. V. (CE) Italy.

WORK/RESEARCH/DIDACTICS/TECHNIQUES

Oct. 2017- present; private didactic activity in Biology, Chemistry, Biochemistry, Italian.
Manuscript: "A new obscurantism: how global monopolistic corporate powers smother biology and produce a dysfunctional medicine". Python approaches to AI- Q-learning, big-data and text (DNA sequences) processing. Project "Enerboa": a proposal for an innovative, top/down scalable,

flexible,
solid method for efficient extraction of electrical energy from waves, wind and currents.
Sept. 2016-Sept. 2017; Company --- confidential; GC and GC-MS detection of PCBs, pesticides, herbicides in environmental and forensic samples. Experiments on novel sensitive methods for glyphosate derivatization and detection.
Jan.-Dec. 2014; SUNY Suffolk Community College as Instructor ; Courses of Modern Biology I
Nov. 2012-Dec. 2013; private didactic services in Biology, Chemistry, Biochemistry. Python applications for random events
Apr. 2010- Oct. 2012; as Research Scientist, Department of Biochemistry, SUNY Downstate Medical Center, Brooklyn, NY;
-Determination of sex-specific differences in mRNAs contents of specific splice variants of the mu opioid receptor, a GPCR, in a tolerance/addiction model and assessment of functional differences between transfected variants on agonists induced changes of cAMP levels by a non-radioactive cell assays. These studies allowed important observations on the biology of the mu opioid receptor and suggested possible ways to effectively reduce/eliminate addiction and withdrawal problems.
Nov. 2009-Mar. 2010; private didactic services in Biology, Chemistry, Biochemistry. Python/computer science self learning, uses of arrays and lists.
Jun. 2009-Oct. 2009; Proposal on filariases: "A phage display approach to target molecular transport and motility in Wuchereria/Brugia", proposed to LKRI, Weill Cornell Medical Center, NY
Nov. 2008-May. 2009; Institute for Human Genetics and Biochemistry, c/o Laboratory for AIDS virus research, Weill Cornell Medical College, NY, as Associate Director.
- Initial feasibility study for an assay for the determination of peripheral lymphocytes without blood sampling.
Jan. 2007- Jun. 2008; Pall Corporation, Port Washington, NY, as Principal Scientist and Director of the Prion Testing Laboratory, Pall Scientific and Laboratory Services (SLS).
- Advanced prion testing setup, staffing and management; exploring novel concepts in prion testing; elimination of circulating prions by filtration. Design and setup of a modified, improved CDI assay for prions. Early sensitive detection of spleen accumulation of prions. Coordination of a worldwide network of experts on infective prions titer determinations. Design and evaluation of studies on endogenous blood infectivity in prion diseases.
Jan. 2005 - May 2006; The Scripps Research Institute (TSRI) Florida, US, as Senior Research Associate.
-Testing for the presence of nucleic acids in infective prion preparations; membrane DNA preps from lymphocytes; exploring the feasibility of prion strains typing using antibodies arrays;
use of a protozoan target (Leishmania) for recombinant antibodies selection; studies and applications of sample treatment and antibody array formats for prion diseases.
- Selection of single chain antibodies (as a possible Leishmania therapeutic) against a protozoan pathogen target;
- Preliminary proof of principle for a multiplexed sandwich assay for prions on chip (antibody arrays) aimed to strains determination and to the identification of strain-specific binders/aptamers;
- Investigations on the use of a library of ligands as an analytical tool for prion absorption to steel and surgical instruments.
Jan 2005; The Scripps Research Institute (TSRI), San Diego, US. Three weeks as Visiting Researcher;
-subtractive recombinant antibody library selection/panning on metastatic cancer cell.
Dec. 2002- Dec. 2004; Institute for Neurodegenerative Diseases, University of California, San Francisco (IND/UCSF), as Assistant Adjunct Professor.
- cloning of an anti-prion antibody recognizing a structural epitope, having potential for the detection of prions and relative applications (unpublished);
- development of various basic solid phase and ELISA experimental assays for prions detection;
- demonstration of the inhibitory effect of trehalose on prion propagation in cellular models (Abstract and Lecture at the "17th annual Javits Meeting: major issues in prion research"

UCSF, San Francisco, CA);

- production of a high quality cDNA display library from mouse cerebellum and relative target selections for prion diseases;
- definition of the concepts for a novel method for high throughput single molecule detection and

immunoassay (in NIH proposal -not funded) ;

- selection of short peptides binding to mouse PrPsc; such peptides can stop/reverse the formation of PrP aggregates;

- selection of a polyclonal ScFvs mix against PrPsc with distinct powerful biological activity and high therapeutic potential;

Oct. 2000- Dec. 2002; as Postdoc; Bioscience Division B-1, Los Alamos National Laboratories, Los Alamos, NM; -"Applications of Phage Display Technology in functional genomics and for neurodegenerative diseases".

- design, engineering and testing of two vectors for intracellular stability/solubility of ScFvs (antibody fragments);

- design and creation of (relative to the above) unselected and antigen-selected libraries;

- production of a library of improved soluble/stable ScFvs;

- selection of ligands against many enzymes and bio-threat toxins using different libraries and schemes for panning;

- production of several ligands against one of the most powerful toxin (unpublished);

- development of faster and more effective selection schemes for ScFvs phage libraries; ligands in three days from 10^{10} complexity libraries (unpublished);

Feb.- Apr. 2001; Laboratory of Molecular Biology, MRC, Cambridge, UK; Protein and antibody arrays using arraying robots (K-biosystems, Q-bot), as Visiting Researcher.

-Attempts to select Tau isoform specific ScFvs, using one system for recombinant antibody arrays.

Observations about how differences in clonal expression rate impaired the suitability of that particular method.

Jun. 1998 – Sept. 1998; Sept. 1999- Oct. 2000; as GRA (Graduate Research Associate) at the Bioscience Division B-1, Los Alamos National Laboratories, Los

Alamos, NM; -"Applications of molecular diversity techniques to Alzheimer's Disease".

Oct 1995-Aug. 1999; Biophysics sector of SISSA, Laboratory of Molecular Neurobiology SISSA-ICGEB Padriciano (Trieste, Italy), as PhD student. Research activity and study about modifications and role of tau protein in the aetiology of Alzheimer's Disease.

Phage display techniques; C-terminal peptide display used for epitope mapping, protein-protein interactions; Tau isoform specific antibodies.

- complete definition of the epitope degeneracy of the MN 423 antibody (an antibody that specifically recognizes Alzheimer's disease brains);

- construction of tau mutants that provided the final proof that Tau (MAP involved in Alzheimer's disease) is a substrate for caspase 3;

- design, construction and analysis of a peptide library and analysis-determination of the mis-behavior of an experimental protein interaction/c-terminal/display cloning vector (improved pJuFo, unpublished);

May 1994-Nov. 1994; Sector of Embriology (ConSDABI (BN)- Dipartimento di Scienze Zootechniche, Portici (NA)). As sponsored Graduate Student, -research activity and study of embryo splitting, nuclear transfer, embryo derived stem cells, optimizing conditions for oocytes maturation, transgenic animals.

May 1989-Feb. 1990; International Institute of Genetics and Biophysics (IIGB), Naples, Italy, as Undergrad Student.

-research activity and study on human homeobox genes.

SELECTED PUBLICATIONS

-Mu-opioid receptor splice variants: Sex-dependent regulation by chronic morphine.

Verzillo V, Madia PA, Liu NJ, Chakrabarti S, Gintzler AR.

J Neurochem. 2014 May 22. doi: 10.1111/jnc.12768. [Epub ahead of print]

-Methods in Molecular Biology, Coauthor in (book) Antibody Engineering, Methods and Protocols, Edited by Benny K. C. Lo, MRC Laboratory of Molecular Biology, University of Cambridge, Cambridge, UK

-Predicting antigenic peptides suitable for the selection of phage antibodies.

Pavlik P, Siegel RW, Marzari R, Sblattero D, Verzillo V, Collins C, Marks JD, Bradbury A.
 Hum Antibodies 2003 12:4 99-112
 -Antibodies in proteomics II: screening, high-throughput characterization and downstream applications. Bradbury A, Velappan N, Verzillo V, Ovecká M, Chasteen L, Sblattero D, Marzari R, Lou J, Siegel R, Pavlik P
 Trends Biotechnol 2003 Jul 21:7 312-7
 -Antibodies in proteomics. Bradbury AR, Velappan N, Verzillo V, Ovecká M, Marzari R, Sblattero D, Chasteen L, Siegel R, Pavlik P
 Methods Mol Biol 2004 248: 519-46e** Antibodies in proteomics I: generating antibodies. Bradbury A, Velappan N, Verzillo V, Ovecká M, Chasteen L, Sblattero D, Marzari R, Lou J, Siegel R, Pavlik P
 -Trends Biotechnol 2003 Jun 21:6 275-81
 Mapping the C terminal epitope of the Alzheimer's disease specific antibody MN423. Khuebachova M, *Verzillo V, Skrabana R, Ovecká M, Vaccaro P, Panni S, Bradbury A, Novak M
 J Immunol Methods 2002 Apr 1 262:1-2 205-15
 (co-first author)
 -e* Antibodies in haystacks: how selection strategy influences the outcome of selection from molecular diversity libraries.
 Lou J, Marzari R, Verzillo V, Ferrero F, Pak D, Sheng M, Yang C, Sblattero D, Bradbury A
 -The neuronal microtubule-associated protein tau is a substrate for caspase-3 and an effector of apoptosis.
 Fasulo L, Ugolini G, Visintin M, Bradbury A, Brancolini C, Verzillo V, Novak M, Cattaneo A
 J Neurochem 2000 Aug 75:2 624-33

and the following limited diffusion abstracts:

-Molecular diversity techniques for the study of prions
 Vittorio Verzillo
 16th Annual Javits Meeting, IND/UCSF: Major Issues in Prion Research, 2003 May 15th
 -Finding needles in haystacks: phage libraries as tool for studying prion biology
 Vittorio Verzillo, Joanne Lee, Giuseppe Legname, Stanley B. Prusiner
 Prion Newsletter, Fairchild meeting, IND/UCSF, 2004 Jan
 -Development, characterization and improvement of new reagents for prion detection using molecular diversity techniques.
 -The effect of simple sugars on prion propagation
 Vittorio Verzillo, Joanne Lee, Giuseppe Legname, Stanley B. Prusiner
 17th Annual Javits Meeting, IND/UCSF: Major Issues in Prion Research, 2004 May 18 th

Numerous undisclosed corporate internal scientific abstracts, executive summaries and SOPs.

INVITED LECTURES and COURSES, ABSTRACTS, POSTERS, PEER EDITING

-July 1991 "Simposio di genetica dei microrganismi", Università degli Studi "Federico II", Naples (Italy), Pres.: "I vettori YAC (Yeast Artificial Chromosome)" reviewed by Vittorio Verzillo.
 -Nov. 1996 "Selecting from phage display libraries", EMBO-SISSA-ICGEB Course, Trieste (Italy), as scientific staff.
 -Apr. 1997 "The biomedical and biotechnological use and further development of phage display", Slovak Academy of Sciences, Smolenice (Slovakia).
 -"The use of phage display to study protein protein interactions in Alzheimer's disease". Pavlik P., Klackova K., Verzillo V., Novak M.
 July 1998. "International Conference on AD and related diseases".
 -Amsterdam (The Netherlands). "In vitro molecular reconstruction of the tau truncation in AD: expression of recombinant truncated tau proteins and their functional impairment". Fasulo L, Visintin M, Verzillo V, Novak M, Bradbury A, Cattaneo A
 -Jan. 1999. "International Conference on Functional Genomics". Oakland, CA,

USA. ABS. "The use of phage display in functional genomics". Pavlik P, Siegel R, Sblattero D, Verzillo V, Marzari R, and Bradbury A

-Apr. 1999. "Society for Neuroscience 29th Annual Meeting". Miami Beach, Florida, October 1999. ABS "Tau fragments as effectors of apoptosis". Visintin. M., Ugolini G., Fasulo L., Bradbury A., Verzillo V., Novak M. and Cattaneo A.

-Aug.-Sept. 1999 EMBO "Theoretical and Practical Course on Phage Display Technology", Maastricht, The Netherlands, as teaching staff.

-Feb. 2000, "DOE Contractor - Grantee Workshop ", Santa Fe, NM, USA. ABS "Developing general methods to select phage antibodies against gene products". Pavlik P., Siegel R., Sblattero D., Verzillo V., Marzari R., Lou J., Marks J., Bradbury A.

-2000 The 14th International Mouse Genome Conference; "Using Phage Display in Functional Genomics"

Peter Pavlik, Rob Siegel, Daniele Sblattero, Vittorio Verzillo, Jianlong Lou, Roberto Marzari, Jim Marks, Andrew Bradbury.

-Feb. 2000, "BIOSENSORS", Santa Fe, NM, "Application of single chain variable fragments antibodies derived by phage display in proteomics", Siegel R W, Allen B, Sblattero D, Verzillo V, Marks D J, Lehnert B, Bradbury A.

-Dec. 2000, "Antibody engineering", San Diego, CA, USA. "Predicting antigenic peptides suitable for selections of antibodies from phage display libraries", Pavlik P, Siegel R W, Marzari R, Sblattero D, Verzillo V, Marks J D, Bradbury A.

-June 2001, "Functional genomics course and training", Los Alamos National Lab, HRL-1, seminar on "Protein Arrays"; Vittorio Verzillo .

-Jan. 2002, "DOE Contractor - Grantee Workshop IX", Oakland, CA, USA. Poster "Toward automation of phage antibodies selection". Pavlik P, Siegel R W, ...Verzillo V. Bradbury A.

-July 2002, "Method for a folding driven selection of antigen-specific intracellular ScFvs". invited lecture at the University of Texas, Southwestern Medical Center, Dallas, TX.

-Jan 2003- Dec 2004. Several lectures and seminars as didactic activity on prion diseases at IND/UCSF, Vittorio Verzillo; Institute for Neurodegenerative Diseases, University of California, San Francisco.

-August 2004, "Bio-molecular diversity techniques for the study of prions; Effect of simple sugars on prion replication in cell cultures", Vittorio Verzillo, FAU (Florida Atlantic University), Boca Raton, FL

-October 2004, "The use of phage display of antibodies and peptides in the study of prion diseases. Effect of simple sugars on prion replication in cell culture"; invited lecture at UCLA (University of California, Los Angeles).

-Member of "Panel of Experts" CIVR (Comitato di Indirizzo per la Valutazione della Ricerca, Italy)- MIUR 2005.

-June 2006. "Phages as a tool for drug discovery: examples of functional display of recombinant antibodies, domains and peptides", Seattle, WA.

-July 2006. "Libraries of molecules from natural biodiversity: methods and uses in drug discovery", Perth, Australia.

-October 2006. "Bio-molecular diversity techniques in the study of prions. Strategies for sensitive detection", Port Washington, NY.

OTHER SELECTED COURSES AND MEETINGS ATTENDED

-Sept. 1989 "Corso di genetica formale degli eucarioti" (International Institute of Genetics and Biophysics), Palazzo Serra di Cassano, Naples (Italy).

-Sept. 1994 "10th scientific meeting of the European Embryo Transfer Association", Ecole Normale Supérieure, Lyon (France).

-Sept. 1994 "Corso base di metodologia statistica" (A.S.P.A.-Associazione Scientifica Produzione Animale), Assisi (Italy).

-1995-1996 "Neurobiology", SISSA-ICGEB Courses, Trieste (Italy).-1996 "DNA metabolism and cell cycle", SISSA-ICGEB Courses, Trieste (Italy).

-Feb. 1998 "Intracellular Antibodies." SISSA, Trieste (Italy)

-May 1998 "The biomedical and biotechnological use and further development of phage display", Maastricht (The Netherlands).

-May 1999 "Phage Club Meeting", Montpellier (France).

- Dec. 2000, "Antibody Engineering", La Jolla (CA)
- Apr. 2002, 1)"Recombinant Antibodies"; 2)"Phage Display", MIT, Cambridge, MA.
- Oct. 2003, -"Prion Diseases: from basic research to intervention concepts", Munich, Germany.
- Sept. 2007, "Prion Risk", Edinburgh, Scotland.

Data

17-7-2019

Luogo

S. Maria C.V. (CE)

A handwritten signature in black ink, appearing to read "Vittorio Venzke". The signature is written in a cursive, flowing style with some capitalization.