

Soggetto coordinatore	Istituto di Scienze delle Produzioni Alimentari CNR
Titolo del progetto	Messa a punto di dispositivi nanotecnologici (biosensori) per il rilevamento di allergeni in alimenti di origine animale e vegetale
Acronimo	RF-IZP-2008-1160478
Descrizione del progetto	Il progetto è finalizzato alla messa a punto di immunosensori e metodiche basate su anticorpi specifici multipli in parallelo, per la detezione di antigeni/ proteine allergeniche, e dei protocolli ottimizzati per uno screening rapido e ad elevate sensibilità.
TA/SG	TA6-SG11
Riferimento Bando	Ministero della Salute, Ricerca sanitaria finalizzata
Valore del progetto	€ 69.00,00
Pubblicazioni	<p>TA di riferimento: TA1, TA3, TA4. TA6 TA6 for CBRNE detection (6.1, 6.2, 6.3, 6.4) TA6.4 Tecnologie microfluidiche accoppiate a nanostrutture molecolari per la detezione di biohazard Capability (detection of intentional contamination of food and environment) DNA, sonde specifiche, Real Time PCR Blaiotta G., Fusco V., Ercolini D., Pepe O., Coppola S. Diversity of <i>Staphylococcus</i> strains based on partial kat (catalase) gene sequences and designs of a PCR RFLP assay for identification and differentiation of coagulase positive species (<i>S. aureus</i>, <i>S. delphini</i>, <i>S. hyicus</i>, <i>S. intermedius</i>, <i>S. pseudintermedius</i>) JOURNAL OF CLINICAL MICROBIOLOGY 2010, 48, 192-201</p> <p>Fusco Va, Quero G.M., Morea M., Blaiotta G., Visconti A. Rapid and reliable identification of <i>Staphylococcus aureus</i> harbouring the enterotoxin gene cluster (<i>egc</i>) and quantitative detection in raw milk by real time PCR. Journal of Food Microbiology, 2011, 144, 528 - 537</p> <p>LC-MS, chimica analitica</p> <p>Lattanzio V.M.T., Della Gatta S., Godula M., Visconti A Quantitative analysis of mycotoxins in cereal foods by Collision Cell Fragmentation - High Resolution Mass Spectrometry: performances and comparison with triple stage quadrupole detection. FOOD ADDITIVES AND CONTAMINANTS 2011, 28, 1424-1437</p>

Lattanzio V.M.T., Della Gatta S., Suman M., Visconti A Development and in-house validation of a robust and sensitive solid phase extraction - LC-MS/MS method for the quantitative determination of aflatoxins B1, B2, G1, G2, ochratoxin A, deoxynivalenol, zearalenone, T-2 and HT-2 toxins in cereal based foods. RAPID COMMUNICATIONS IN MASS SPECTROMETRY 2011, 25:1869-1880.

Lattanzio V.M.T., Solfrizzo M., De Girolamo A., Chulze S.N., Torres A.M., Visconti A. LC-MS/MS characterization of the urinary excretion profile of the mycotoxin deoxynivalenol in human and rat . JOURNAL OF CHROMATOGRAPHY B 2011, .: 879, 707- 715

Monaci L., De Angelis E., Visconti A Determination of deoxynivalenol, T-2 and HT-2 toxins in a bread model food by liquid chromatography - high resolution - Orbitrap - Mass Spectrometry equipped with a high-energy collision dissociation cell Journal of Chromatography A, 2011, 1218, 8646-8654.

Solfrizzo M., Gambacorta L., Lattanzio V.M.T., Powers S., Visconti A. Simultaneous LC-MS/MS determination of aflatoxin M1, ochratoxin A, deoxynivalenol, de-epoxydeoxynivalenol, \pm and ²-zearalenols and fumonisin B1 in urine as a multi-biomarker method to assess exposure to mycotoxins. ANALYTICAL AND BIOANALYTICAL CHEMISTRY 2011, 401, 2831-2841

Immunoassays, Lateral flow, protein chips, Quantum dots, nanodispositivi

Lippolis V., Pascale M., Valenzano S., Pluchinotta V., Baumgartner S., Krska R., Visconti A. A rapid fluorescence polarization immunoassay for the determination of T-2 and HT-2 toxins in wheat ANALYTICAL AND BIOANALYTICAL CHEMISTRY 2011, 401: 2561- 2571

Cimaglia F., Aliverti A., Chiesa M., Poltronieri P, De Lorenzis E., Santino A., Sechi L.A. Quantum dot nanoparticle-based lateral flow assay for rapid detection of Mycobacterium species using anti- FprA antibodies. Nanotechnology Development, (2012), Vol 2, No 1:e5.

De Girolamo A., McKeague M., Miller J.D., De Rosa M.C., Visconti A. Determination of ochratoxin A in wheat after clean-up through a DNA aptamer-based solid phase extraction column. FOOD CHEMISTRY, 2011, 127, 1378-1384

Poltronieri P, Cimaglia F, Santino A, De Blasi MD, Krizkova-Kudlikova I, Liu S, Wang Y-U, Wang Y. Protein chips for detection of mite allergens using Kunitz-type protease inhibitors. Biotechnol. J., 2010, vol 5, n. 6, 582 -587.

Poltronieri P, Shaoyang Liu, Cimaglia F., Santino A., Wang Y. Characterization of Kunitz-type inhibitor B1 performance using protein chips and AFM. Sensor Actuators B, Chemical, 2012, Available online 2012 doi:10.1016/j.snb.2012.04.013

Ragona M., Mazzocchi M., Zanolli A., Alldrick A.J., Solfrizzo M., van

	<p>Egmond H.P. Testing a toolbox for impact assessment of food safety regulations: maximum levels for T-2 and HT-2 toxins in the EU. QUALITY ASSURANCE AND SAFETY OF CROPS & FOODS 2011 3, 12-23</p> <p>Solfrizzo M., De Girolamo A., Gambacorta L., Visconti A., van Egmond H.P., Stroka J. Determination of fumonisins B1 and B2 in corn based foods for infants and young children by LC with Immunoaffinity column clean-up: interlaboratory validation study. JOURNAL OF AOAC INTERNATIONAL 2011, 94, 900-908</p>
Curriculum	