

## **Curriculum vitae**

Prof. **Alfredo Miccheli**, MD, aggregate professor (confirmed researcher) in the Physical-Chemistry disciplinary sector (CHIM02). Affiliated to the Department of Chemistry, Sapienza University of Roma.

### **Teaching:**

From 2003 to date: Physical Chemistry module (3 CFU, CHIM02), Cellular Biotechnologies course: bachelor degree in Biological Sciences;

from 2006 to date: course “Spectroscopic methods and models for metabolomics: theory and applications” (6 CFU, CHIM02) of the “Laurea Magistralis” in: 1) Genomics and Molecular Biology, 2) Neurobiology;

from 2015 to date: course “Spectroscopic methods and models for metabolomics: theory and applications” (6 CFU, CHIM02) of the “Laurea Magistralis” in Genomic, Industrial and Environmental Biotechnologies.

### **Advanced Teaching:**

2012 to date: member of the board of the research doctorate course in Morpho-functional Sciences (section of Biophysics).

### **Affiliations and membership:**

2014 - : Member of the board of Metabolomics Unit of Sapienza;

2013 - : Associated member of the CNR Institute of Crystallography, research field: application of <sup>1</sup>H multinuclear NMR based in the field of nutrition and food quality;

2011 - 2013: OMICA platform of the CNR Department of Chemical Sciences and Materials, acting as co-manager of the Metabolomics for Nutrition and Nutraceutic Unit;

2009 - 2012: Associated member of the CNR Institute of Chemical Methodologies;

2005 - 2007: Member of the Associazione Italiana di Metabolomica (AssiMet), elected as vice-president;

2005: Member of the “**Metabolomics Standard Initiative**” of Metabolomics Society.

### **Conference organizing committees:**

2015: Member of the Organizing Committee of the 8th European Symposium on Biopolymers (Rome)

2006, 2007: Member of the Organizing Committee, and teacher, of the 1<sup>st</sup> and 2<sup>nd</sup> International Schools on Metabolomics, organized by AssiMet (Latina and Rome, respectively).

2006: Member of the Organizing Committee of the “First Maga Circe Conference on Metabolic Systems Analysis”(Sabaudia).

### **Project managing of public and private scientific initiatives (last five years):**

2016: “Progetto di Ateneo: Attrezzature scientifiche –Grandi attrezzature.” Title: ”High resolution NMR spectroscopy: from molecular structure to foods, nutrition and human health.” Funding: 660.0000 Euros.

2015: “Fondo Europeo Agricolo per lo sviluppo rurale (FEASR)”, Reg. CE 1698/2005, “Programma di Sviluppo rurale Abruzzo 2007/2013; Misura 1.2.4. Progetto G.A.P.INNO.” “Gestione di avanzate pratiche per l’innovazione della filiera orticola del Fucino”. 102.000 Euros;

2013 - 2014: Research private funding (CD investments - Chemistry Department research agreement) for NMR-based metabolomics analysis applied to investigations of the probiotic effects in different diseases. The study was focused to evaluation of the interaction between the microbiota

and the host metabolism by metabolomic analysis on biological fluids (maternal milk, urines, faecal waters, serum and saliva) in different physiopathological states. Funds: 44.000 Euros;

2012 - 2013: Research funding (INRAN - Chemistry Department research agreement, currently CREA-NUT/ Chemistry Department agreement) for NMR-based metabolomics analysis applied to investigations of the probiotic effects in animal obesity model. Funds: 19.000 Euros;

2011 - 2012: Research private funding (CD investments - Chemistry Department research agreement) for NMR-based metabolomics analysis applied to investigations of the probiotic effects in different diseases. Funds: 18.000 Euros.

#### **Participations to International Scientific projects (last five years):**

2015 - : Joint Project Initiative Health Diet –Health Life (HDHL), ENPADASY project, HORIZON 2020, together with prof. Federico Marini (co-proponent of the project). The project concerns data sharing of NMR-based metabolomics applied to nutritional interventional studies;

2011 - 2015: ECOBIOCAP FP7 2011-2015 GA 265669 project (Ecoefficient biodegradable composite Advanced packaging), expert of metabolic analysis of micro organisms by <sup>13</sup>C NMR.

#### **Participations to National Scientific projects (last five years):**

2015: “Fondo Europeo Agricolo per lo sviluppo rurale (FEASR)”, Reg. CE 1698/2005, “Programma di Sviluppo rurale Abruzzo 2007/2013; Misura 1.2.4. Progetto VAL.F.O.O.D” “Gestione di avanzate pratiche per l’innovazione della filiera orticola del Fucino”. 41.000 Euros;

2011 - 2014: CNR project “FaReBio di qualità Farmaci e Reti Biotecnologiche di Qualità”, funded by the Ministero dell’Economia e Finanze.

#### **Editorial board membership:**

Current Metabolomics

#### **Reviewer of Eu projects:**

2016: reviewer of Eu-Project FP7 : MD PAEDIGREE; scientific monitoring of the 2th year.

#### **Reviewer of National projects:**

2014 - 2015: reviewer of SIR projects as an expert in metabolomics and systems biology

#### **Reviewer for International journals as an expert of metabolomics**

Nature group: Nature Communications, Int.J.Obesity,

American Chemical Society: Journal of Proteomics Research, Analytical Chemistry, Journal of Agricultural and Food Chemistry;

Journal of Nutrition, PLOS ONE; Metabolomics, Int. J Cancer, Gene and Nutrition, Proteomics, Applied Biochemistry and Biotechnology, European Journal of Nutrition, Pediatric Obesity, Nutrition Review, Aging, Food Control, New Biotechnology, Current Metabolomics.

Author of more than 77 scientific publications on international journals, over the last 15 years his scientific activity has been addressed to the development of the application of NMR spectroscopy to metabolomic analysis in biological systems. His research activities have attained mainly the following research fields: 1) in vivo NMR imaging and spectroscopy; 2) in vitro and in vivo studies of metabolism of cells, perfused organs and living tissues by multinuclear NMR spectroscopy; 3) structure and properties of hydrogel matrices; 4) functional and metabolic evaluation of bioreactors for entrapped cells in hydrogel matrices by NMR techniques; 5) NMR-based metabolic profiling

and metabolomic analysis of microorganisms, cells, tissue, plants, animals and human; 6) Microbiota and host interaction studies by NMR-based metabolomics; 7) food quality control by NMR spectroscopy.

Pubblicazioni aggiornate al 21 02 2018 fonte Scopus.

Villano, M., Paiano, P., Palma, E., Miccheli, A., Majone, M.  
Electrochemically Driven Fermentation of Organic Substrates with Undefined Mixed Microbial Cultures  
(2017) *ChemSusChem*, 10 (15), pp. 3091-3097. Cited 2 times.

Tursi, A., Mastromarino, P., Capobianco, D., Elisei, W., Miccheli, A., Pratico, G., Picchio, M., Brandimarte, G.  
Urinary metabolic profiling and symptomatic uncomplicated diverticular disease of the colon  
(2017) *Clinics and Research in Hepatology and Gastroenterology*, 41 (3), pp. 344-346.

Del Chierico, F., Nobili, V., Vernocchi, P., Russo, A., Stefanis, C.D., Gnani, D., Furlanello, C., Zandonà, A., Paci, P., Capuani, G., Dallapiccola, B., Miccheli, A., Alisi, A., Putignani, L.  
Gut microbiota profiling of pediatric nonalcoholic fatty liver disease and obese patients unveiled by an integrated meta-omics-based approach  
(2017) *Hepatology*, 65 (2), pp. 451-464. Cited 34 times.

Zanni, E., Schifano, E., Motta, S., Sciubba, F., Palleschi, C., Mauri, P., Perozzi, G., Uccelletti, D., Devirgiliis, C., Miccheli, A.  
Combination of metabolomic and proteomic analysis revealed different features among *Lactobacillus delbrueckii* subspecies *bulgaricus* and *lactis* strains while in vivo testing in the model organism *Caenorhabditis elegans* highlighted probiotic properties  
(2017) *Frontiers in Microbiology*, 8 (JUN), art. no. 1206, .

Mannina, L., Sobolev, A.P., Aru, V., Bellomaria, A., Bertocchi, F., Botta, B., Cagliani, L.R., Caligiani, A., Capozzi, F., Çela, D., Marincola, F.C., Ciampa, A., Cocoo, L.D., Consonni, R., Corsaro, C., Delfini, M., Tullio, V.D., Fanizzio, F.P., Gallo, V., Ghirga, F., Gianferri, R., Girellio, C.R., Ingallina, C., Laghi, L., Latronico, M., Longobardi, F., Luchinat, C., Mallamace, D., Mammi, S., Mandaliti, W., Marini, F., Mastrorilli, P., Mazzei, P., Miccheli, A., Micozzio, A., Miloneo, S., Mucci, A., Nepravishtha, R., Paci, M., Palisi, A., Piccolo, A., Picone, G., Proietti, N., Randazzo, A., Righi, V., Rotondo, A., Salvo, A., Scano, P., Scano, P., Sciubba, F., Trimigno, A., Tenori, L., Schievano, E., Turano, P., Vasi, S., Capitani, D.  
NMR methodologies in food analysis  
(2017) *Analytical Chemistry: Developments, Applications and Challenges in Food Analysis*, pp. 103-156.

Proietti, N., Capitani, D., Aru, V., Bellomaria, A., Bertocchi, F., Botta, B., Cagliani, L.R., Caligiani, A., Capozzi, F., Çela, D., Marincola, F.C., Ciampa, A., Coco, L.D., Consonni, R., Corsaro, C., Delfini, M., Fanizzio, F.P., Gallo, V., Ghirga, F., Gianferri, R., Girellio, C.R., Ingallina, C., Laghi, L., Latronico, M., Longobardi, F., Luchinat, C., Mallamace, D., Mammi, S., Mandaliti, W., Mannina, L., Marini, F., Mastrorilli, P., Mazzei, P., Miccheli, A., Micozzio, A., Miloneo, S., Mucci, A., Nepravishtha, R., Paci, M., Palisi, A., Sobolev, A.P., Piccolo, A., Picone, G., Randazzo, A., Righi, V., Rotondo, A., Salvo, A., Savorani, F., Scano, P., Schievano, E., Sciubba, F., Tenori, L., Trimigno, A., Turano, P., Vasi, S., Tullio, V.D.  
NMR applications in food analysis: Part B

(2017) Analytical Chemistry: Developments, Applications and Challenges in Food Analysis, pp. 255-296.

Sobolev, A.P., Mannina, L., Aru, V., Bellomaria, A., Bertocchi, F., Botta, B., Cagliani, L.R., Caligiani, A., Capozzi, F., Ćela, D., Marincola, F.C., Ciampa, A., Del Coco, L., Consonni, R., Corsaro, C., Delfini, M., Di Tullio, V., Fanizzio, F.P., Gallo, V., Ghirga, F., Gianferri, R., Girello, C.R., Ingallina, C., Laghi, L., Latronico, M., Longobardi, F., Luchinat, C., Mallamace, D., Mammi, S., Mandaliti, W., Marini, F., Mastroianni, P., Mazzei, P., Miccheli, A., Micozzio, A., Miloneo, S., Mucci, A., Nepravishita, R., Paci, M., Palisi, A., Piccolo, A., Picone, G., Proietti, N., Randazzo, A., Righi, V., Rotondo, A., Salvo, A., Savorani, F., Scano, P., Schievano, E., Sciubba, F., Tenori, L., Trimigno, A., Turano, P., Vasi, S., Capitani, D.

NMR applications in food analysis: Part A  
(2017) Analytical Chemistry: Developments, Applications and Challenges in Food Analysis, pp. 157-253.

Tomassini, A., Sciubba, F., Di Cocco, M.E., Capuani, G., Delfini, M., Aureli, W., Miccheli, A.  
1H NMR-Based Metabolomics Reveals a Pedoclimatic Metabolic Imprinting in Ready-to-Drink Carrot Juices

(2016) Journal of Agricultural and Food Chemistry, 64 (25), pp. 5284-5291. Cited 2 times.

Valletta, A., De Angelis, G., Badiali, C., Brasili, E., Miccheli, A., Di Cocco, M.E., Pasqua, G.  
Acetic acid acts as an elicitor exerting a chitosan-like effect on xanthone biosynthesis in *Hypericum perforatum* L. root cultures

(2016) Plant Cell Reports, 35 (5), pp. 1009-1020. Cited 4 times.

Brasili, E., Miccheli, A., Marini, F., Praticò, G., Sciubba, F., Di Cocco, M.E., Cechinel, V.F., Tocchi, N., Valletta, A., Pasqua, G.

Metabolic profile and root development of *hypericum perforatum* L. in vitro roots under stress conditions due to chitosan treatment and culture time

(2016) Frontiers in Plant Science, 7 (APR2016), art. no. 507, . Cited 3 times.

Gentili, A., Miccheli, A., Tomai, P., Baldassarre, M.E., Curini, R., Pérez-Fernández, V.

Liquid chromatography-tandem mass spectrometry method for the determination of vitamin K homologues in human milk after overnight cold saponification

(2016) Journal of Food Composition and Analysis, 47, pp. 21-30. Cited 6 times.

Tursi, A., Mastromarino, P., Capobianco, D., Elisei, W., Miccheli, A., Capuani, G., Tomassini, A., Campagna, G., Picchio, M., Giorgetti, G.M., Fabiocchi, F., Brandimarte, G.

Assessment of fecal microbiota and fecal metabolome in symptomatic uncomplicated diverticular disease of the colon

(2016) Journal of Clinical Gastroenterology, 50, pp. S9-S12. Cited 4 times.

Gorietti, D., Zanni, E., Palleschi, C., Delfini, M., Uccelletti, D., Saliola, M., Puccetti, C., Sobolev, A.P., Mannina, L., Miccheli, A.

<sup>13</sup>C NMR based profiling unveils different  $\alpha$ -ketoglutarate pools involved into glutamate and lysine synthesis in the milk yeast *Kluyveromyces lactis*

(2015) Biochimica et Biophysica Acta - General Subjects, 1850 (11), pp. 2222-2227. Cited 3 times.

Del Chierico, F., Vernocchi, P., Petrucca, A., Paci, P., Fuentes, S., Praticò, G., Capuani, G., Masotti, A., Reddel, S., Russo, A., Vallone, C., Salvatori, G., Buffone, E., Signore, F., Rigon, G., Dotta, A., Miccheli, A., De Vos, W.M., Dallapiccola, B., Putignani, L.  
Phylogenetic and metabolic tracking of gut microbiota during perinatal development  
(2015) PLoS ONE, 10 (9), art. no. e0137347, . Cited 18 times.

Mastromarino, P., Capobianco, D., Miccheli, A., Praticò, G., Campagna, G., Laforgia, N., Capursi, T., Baldassarre, M.E.  
Administration of a multistrain probiotic product (VSL#3) to women in the perinatal period differentially affects breast milk beneficial microbiota in relation to mode of delivery  
(2015) Pharmacological Research, 95-96, pp. 63-70. Cited 17 times.  
Miccheli, A., Capuani, G., Marini, F., Tomassini, A., Praticò, G., Ceccarelli, S., Gnani, D., Baviera, G., Alisi, A., Putignani, L., Nobili, V.  
Urinary <sup>1</sup>H-NMR-based metabolic profiling of children with NAFLD undergoing VSL#3 treatment  
(2015) International Journal of Obesity, 39 (7), pp. 1118-1125. Cited 9 times.

Praticò, G., Capuani, G., Tomassini, A., Baldassarre, M.E., Delfini, M., Miccheli, A.  
Exploring human breast milk composition by NMR-based metabolomics  
(2014) Natural Product Research, 28 (2), pp. 95-101. Cited 27 times.

Calvani, R., Brasili, E., Praticò, G., Sciubba, F., Roselli, M., Finamore, A., Marini, F., Marzetti, E., Miccheli, A.  
Application of NMR-based metabolomics to the study of gut microbiota in obesity  
(2014) Journal of Clinical Gastroenterology, 48, pp. S5-S7. Cited 6 times.

Brasili, E., Praticò, G., Marini, F., Valletta, A., Capuani, G., Sciubba, F., Miccheli, A., Pasqua, G.  
A non-targeted metabolomics approach to evaluate the effects of biomass growth and chitosan elicitation on primary and secondary metabolism of *Hypericum perforatum* in vitro roots  
(2014) Metabolomics, 10 (6), pp. 1186-1196. Cited 9 times.

Calvani, R., Brasili, E., Praticò, G., Capuani, G., Tomassini, A., Marini, F., Sciubba, F., Finamore, A., Roselli, M., Marzetti, E., Miccheli, A.  
Fecal and urinary NMR-based metabolomics unveil an aging signature in mice  
(2014) Experimental Gerontology, 49 (1), pp. 5-11. Cited 22 times.

Gorietti, D., Zanni, E., Palleschi, C., Delfini, M., Uccelletti, D., Saliola, M., Miccheli, A.  
Depletion of casein kinase i leads to a NAD(P)<sup>+</sup>/NAD(P)H balance-dependent metabolic adaptation as determined by NMR spectroscopy- metabolomic profile in *Kluyveromyces lactis*  
(2014) Biochimica et Biophysica Acta - General Subjects, 1840 (1), pp. 556-564. Cited 8 times.

Tomassini, A., Vitalone, A., Marini, F., Praticò, G., Sciubba, F., Bevilacqua, M., Delfini, M., Di Sotto, A., Di Giacomo, S., Mariani, P., Mammola, C.L., Gaudio, E., Miccheli, A., Mazzanti, G.  
<sup>1</sup>H NMR-based urinary metabolic profiling reveals changes in nicotinamide pathway intermediates due to postnatal stress model in rat  
(2014) Journal of Proteome Research, 13 (12), pp. 5848-5859. Cited 6 times.

Brasili, E., Mengheri, E., Tomassini, A., Capuani, G., Roselli, M., Finamore, A., Sciubba, F., Marini, F., Miccheli, A.

Lactobacillus acidophilus La5 and bifidobacterium lactis BB12 induce different age-related metabolic profiles revealed by <sup>1</sup>H-NMR spectroscopy in urine and feces of mice 1-3  
(2013) *Journal of Nutrition*, 143 (10), pp. 1549-1557. Cited 13 times.

Calvani, R., Miccheli, A., Bernabei, R., Marzetti, E.  
Diet and Aging: Role in Prevention of Muscle Mass Loss  
(2013) *Bioactive Food as Dietary Interventions for the Aging Population*, pp. 109-120.

Tomassini, A., Capuani, G., Delfini, M., Miccheli, A.  
NMR-Based Metabolomics in Food Quality Control  
(2013) *Data Handling in Science and Technology*, 28, pp. 411-447. Cited 5 times.

Capitani, D., Mannina, L., Proietti, N., Sobolev, A.P., Tomassini, A., Miccheli, A., Di Cocco, M.E., Capuani, G., De Salvador, F.R., Delfini, M.  
Metabolic profiling and outer pericarp water state in zespri, CI.GI, and hayward kiwifruits  
(2013) *Journal of Agricultural and Food Chemistry*, 61 (8), pp. 1727-1740. Cited 20 times.

Calvani, R., Joseph, A.-M., Adihetty, P.J., Miccheli, A., Bossola, M., Leeuwenburgh, C., Bernabei, R., Marzetti, E.  
Mitochondrial pathways in sarcopenia of aging and disuse muscle atrophy  
(2013) *Biological Chemistry*, 394 (3), pp. 393-414. Cited 82 times.

Ciggin, A.S., Orhon, D., Capitani, D., Miccheli, A., Puccetti, C., Majone, M.  
Aerobic metabolism of mixed carbon sources in sequencing batch reactor under pulse and continuous feeding  
(2013) *Bioresource Technology*, 129, pp. 118-126. Cited 11 times.

Massimi, M., Tomassini, A., Sciubba, F., Sobolev, A.P., Devirgiliis, L.C., Miccheli, A.  
Effects of resveratrol on HepG2 cells as revealed by <sup>1</sup>H-NMR based metabolic profiling  
(2012) *Biochimica et Biophysica Acta - General Subjects*, 1820 (1), pp. 1-8. Cited 24 times.

Capitani, D., Mannina, L., Proietti, N., Sobolev, A.P., Tomassini, A., Miccheli, A., Di Cocco, M.E., Capuani, G., De Salvador, R., Delfini, M.  
Monitoring of metabolic profiling and water status of Hayward kiwifruits by nuclear magnetic resonance  
(2010) *Talanta*, 82 (5), pp. 1826-1838. Cited 30 times.

Calvani, R., Miccheli, A., Capuani, G., Tomassini Miccheli, A., Puccetti, C., Delfini, M., Iaconelli, A., Nanni, G., Mingrone, G.  
Gut microbiome-derived metabolites characterize a peculiar obese urinary metabotype  
(2010) *International Journal of Obesity*, 34 (6), pp. 1095-1098. Cited 105 times.

Cruz Viggi, C., Dionisi, D., Miccheli, A., Valerio, M., Majone, M.  
Metabolic analysis of the removal of formic acid by unacclimated activated sludge  
(2010) *Water Research*, 44 (11), pp. 3393-3400. Cited 3 times.

Villano, M., Beccari, M., Dionisi, D., Lampis, S., Miccheli, A., Vallini, G., Majone, M.  
Effect of pH on the production of bacterial polyhydroxyalkanoates by mixed cultures enriched under periodic feeding  
(2010) *Process Biochemistry*, 45 (5), pp. 714-723. Cited 58 times.

Miccheli, A., Marini, F., Capuani, G., Miccheli, A.T., Delfini, M., Di Cocco, M.E., Puccetti, C., Paci, M., Rizzo, M., Spataro, A.

The influence of a sports drink on the postexercise metabolism of elite athletes as investigated by nmr-based metabolomics

(2009) *Journal of the American College of Nutrition*, 28 (5), pp. 553-564. Cited 35 times.

Colafranceschi, M., Capuani, G., Miccheli, A., Campo, S., Valerio, M., Tomassini, A., Giuliani, A., Arseni, B., Rossi, S., De Santis, R., Carminati, P., Ruggiero, V., Conti, F.

Dissecting drug and vehicle metabolic effects in rats by a metabonomic approach

(2007) *Journal of Biochemical and Biophysical Methods*, 70 (3), pp. 355-361. Cited 5 times.

Conti, F., Manganaro, M., Miccheli, A.

Metabolomics and medical practice [Metabolomica e pratica medica]

(2006) *Clinica Terapeutica*, 157 (6), pp. 549-552. Cited 7 times.

Miccheli, A.T., Miccheli, A., Di Clemente, R., Valerio, M., Coluccia, P., Bizzarri, M., Conti, F.  
NMR-based metabolic profiling of human hepatoma cells in relation to cell growth by culture media analysis

(2006) *Biochimica et Biophysica Acta - General Subjects*, 1760 (11), pp. 1723-1731. Cited 32 times.

Cucina, A., Biava, P.-M., D'Anselmi, F., Coluccia, P., Conti, F., Clemente, R.D., Miccheli, A., Frati, L., Gulino, A., Bizzarri, M.

Zebrafish embryo proteins induce apoptosis in human colon cancer cells (Caco2)

(2006) *Apoptosis*, 11 (9), pp. 1617-1628. Cited 44 times.

Manetti, C., Bianchetti, C., Casciani, L., Castro, C., Di Cocco, M.E., Miccheli, A., Motto, M., Conti, F.

A metabonomic study of transgenic maize (*Zea mays*) seeds revealed variations in osmolytes and branched amino acids

(2006) *Journal of Experimental Botany*, 57 (11), pp. 2613-2625. Cited 57 times.

Miccheli, A., Tomassini, A., Puccetti, C., Valerio, M., Peluso, G., Tuccillo, F., Calvani, M., Manetti, C., Conti, F.

Metabolic profiling by <sup>13</sup>C-NMR spectroscopy: [1,2-<sup>13</sup>C]<sub>2</sub>glucose reveals a heterogeneous metabolism in human leukemia T cells

(2006) *Biochimie*, 88 (5), pp. 437-448. Cited 52 times.

Murtas, S., Capuani, G., Dentini, M., Manetti, C., Masci, G., Massimi, M., Miccheli, A., Crescenzi, V.

Alginate beads as immobilization matrix for hepatocytes perfused in a bioreactor: A physico-chemical characterization

(2005) *Journal of Biomaterials Science, Polymer Edition*, 16 (7), pp. 829-846. Cited 28 times.

Manetti, C., Bianchetti, C., Bizzarri, M., Casciani, L., Castro, C., D'Ascenzo, G., Delfini, M., Di Cocco, M.E., Laganà, A., Miccheli, A., Motto, M., Conti, F.

NMR-based metabonomic study of transgenic maize

(2004) *Phytochemistry*, 65 (24), pp. 3187-3198. Cited 49 times.

Dionisi, D., Majone, M., Miccheli, A., Puccetti, C., Sinisi, C.  
Glutamic acid removal and PHB storage in the activated sludge process under dynamic conditions

(2004) *Biotechnology and Bioengineering*, 86 (7), pp. 842-851. Cited 10 times.

Giuliani, A., Zbilut, J.P., Conti, F., Manetti, C., Miccheli, A.

Invariant features of metabolic networks: A data analysis application on scaling properties of biochemical pathways

(2004) *Physica A: Statistical Mechanics and its Applications*, 337 (1-2), pp. 157-170. Cited 29 times.

Miccheli, A., Puccetti, C., Capuani, G., Di Cocco, M.E., Giardino, L., Calzà, L., Battaglia, A., Battistin, L., Conti, F.

[1-13C]glucose entry in neuronal and astrocytic intermediary metabolism of aged rats: A study of the effects of nicergoline treatment by 13C NMR spectroscopy

(2003) *Brain Research*, 966 (1), pp. 116-125. Cited 11 times.

Pescosolido, N., Miccheli, A., Manetti, C., Iannetti, G.D., Feher, J., Cavallotti, C.

Metabolic changes in rabbit lens induced by treatment with dexamethasone

(2001) *Ophthalmic Research*, 33 (2), pp. 68-74. Cited 10 times.

Falasca, L., Miccheli, A., Sartori, E., Tomassini, A., Devirgiliis, L.C.

Hepatocytes entrapped in alginate gel beads and cultured in bioreactor: Rapid repolarization and reconstitution of adhesion areas

(2001) *Cells Tissues Organs*, 168 (3), pp. 126-136. Cited 22 times.

Aureli, T., Di Cocco, M.E., Capuani, G., Ricciolini, R., Manetti, C., Miccheli, A., Conti, F.

Effect of long-term feeding with acetyl-L-carnitine on the age-related changes in rat brain lipid composition: A study by 31P NMR spectroscopy

(2000) *Neurochemical Research*, 25 (3), pp. 395-399. Cited 23 times.

Capuani, G., Miccheli, A., Tomassini, A., Falasca, L., Aureli, T., Conti, F.

Cellular volume determination of alginate-entrapped hepatocytes by MRI diffusion measurements

(2000) *Artificial Cells, Blood Substitutes, and Immobilization Biotechnology*, 28 (4), pp. 293-305. Cited 2 times.

Miccheli, A., Tomassini, A., Capuani, G., Di Cocco, M.E., Sartori, E., Falasca, L., Devirgiliis, L.C., Manetti, C., Conti, F.

Energy metabolism and re-establishment of intercellular adhesion complexes of gel entrapped hepatocytes

(2000) *Cytotechnology*, 32 (3), pp. 219-228. Cited 6 times.

Annesini, M.C., Castelli, G., Conti, F., Conti De Virgiliis, L., Marrelli, L., Miccheli, A., Satori, E.

Transport and consumption rate of O<sub>2</sub> in alginate gel beads entrapping hepatocytes

(2000) *Biotechnology Letters*, 22 (10), pp. 865-870. Cited 7 times.



Di Marzo, L., Miccheli, A., Sapienza, P., Tedesco, M., Mingoli, A., Capuani, G., Aureli, T., Giuliani, A., Conti, F., Cavallaro, A.

<sup>31</sup>P phosphorus magnetic resonance spectroscopy to evaluate medical therapy efficacy in peripheral arterial disease a pilot study

(1999) *Panminerva Medica*, 41, pp. 283-290. Cited 7 times.

Aureli, T., Di Cocco, M.E., Puccetti, C., Ricciolini, R., Scalibastri, M., Miccheli, A., Manetti, C., Conti, F.

Acetyl-L-carnitine modulates glucose metabolism and stimulates glycogen synthesis in rat brain

(1998) *Brain Research*, 796 (1-2), pp. 75-81. Cited 25 times.

Scopinaro, F., Manni, C., Miccheli, A., Massa, R., De Vincentis, G., Schillaci, O., Ierardi, M., Danieli, R., Banci, M., Iorio, F.

Muscular uptake of Tc-99m MIBI and Tl-201 in Duchenne muscular dystrophy

(1996) *Clinical Nuclear Medicine*, 21 (10), pp. 792-796. Cited 10 times.

Di Cocco, M.E., Capuani, G., Miccheli, A.

Nuclear magnetic resonance spectroscopy: in vivo determinations of pH, cations and metabolites

(1995) *Analisis*, 23 (2), pp. M9-M12.

Aureli, T., Miccheli, A., Di Cocco, M.E., Ghirardi, O., Giuliani, A., Ramacci, M.T., Conti, F.

Effect of acetyl-L-carnitine on recovery of brain phosphorus metabolites and lactic acid level during reperfusion after cerebral ischemia in the rat - study by <sup>13</sup>P- and <sup>1</sup>H-NMR spectroscopy

(1994) *Brain Research*, 643 (1-2), pp. 92-99. Cited 56 times.

Miccheli, A., Tomassini, A., Ricciolini, R., Di Cocco, M.E., Piccolella, E., Manetti, C., Conti, F.

Dexamethasone-dependent modulation of cholesterol levels in human lymphoblastoid B cell line through sphingosine production

(1994) *BBA - Molecular Cell Research*, 1221 (2), pp. 171-177. Cited 6 times.

Ricciolini, R., Miccheli, A., Di Cocco, M.E., Piccolella, E., Marino, A., Sammartino, M.P., Conti, F.

Dexamethasone-dependent modulation of human lymphoblastoid B cell line through sphingosine production

(1994) *BBA - Molecular Cell Research*, 1221 (2), pp. 103-108. Cited 8 times.

Corsico, N., Nardone, A., Lucreziotti, M.R., Spagnoli, L.G., Pesce, D., Aureli, T., Di Cocco, M.E., Miccheli, A., Conti, F., Arrigoni Martelli, E.

Effect of propionyl-L-carnitine in a rat model of peripheral arteriopathy: A functional, histologic, and NMR spectroscopic study

(1993) *Cardiovascular Drugs and Therapy*, 7 (2), pp. 241-251. Cited 26 times.

Pescosolido, N., Accorinti, M., Delfini, M., Guglielmelli, F., Lazzari, M., Manetti, C., Miccheli, A.

Clobetasone-17-Butyrate and Cataract <sup>31</sup>P, <sup>1</sup>H, <sup>13</sup>C NMR Study

(1993) *Drug Investigation*, 6 (2), pp. 83-89.

Cacciafesta, M., Ferri, C., Scuteri, A., Piccirillo, G., Bellucci, C., Persichino, L., Ariani, A., Marigliano, V., Delfini, M., Miccheli, A.  
23Na NMR evaluation of human erythrocytes Na<sup>+</sup>/K<sup>+</sup>/CL-cotransport. A study in elderly hypertensives.  
(1992) Cellular and Molecular Biology, 38 (8), pp. 877-884. Cited 2 times.

Capuani, G., Aureli, T., Miccheli, A., Di Cocco, M.E., Ramacci, M.T., Delfini, M.  
Improved resolution of 31P nuclear magnetic resonance spectra of phospholipids from brain  
(1992) Lipids, 27 (5), pp. 389-391. Cited 16 times.

Ricciolini, R., Miccheli, A., Peluso, G., Delfini, M., Conti, F.  
31P and 1H NMR studies of ethanolamine-linked phosphoglycerides metabolism in human T lymphocytes  
(1991) Cellular and Molecular Biology, 37 (7), pp. 705-711. Cited 7 times.

Giuliani, A., Capuani, G., Miccheli, A., Aureli, T., Ramacci, M.T., Conti, F.  
Multivariate data analysis in biochemistry: A new integrative approach to metabolic control in brain aging  
(1991) Cellular and Molecular Biology, 37 (6), pp. 631-638. Cited 14 times.

Miccheli, A., Ricciolini, R., Lagana, A., Piccolella, E., Conti, F.  
Modulation of the free sphingosin levels in Epstein Barr virus transformed human B lymphocytes by phorbol dibutyrate  
(1991) BBA - Molecular Cell Research, 1095 (1), pp. 90-92. Cited 6 times.

Miccheli, A., Ricciolini, R., Piccolella, E., Delfini, M., Conti, F.  
Modulation of human lymphoblastoid B cell line by phorbol ester and sphingosine. A 31P-NMR study  
(1991) BBA - Molecular Cell Research, 1093 (1), pp. 29-35. Cited 21 times.

Aureli, T., Miccheli, A., Ramacci, M.T., Conti, F.  
Transient cerebral ischemia in the rat: a study by nuclear magnetic resonance spectroscopy.  
(1991) Italian Journal of Neurological Sciences, 12 (3 Suppl 11), pp. 39-43. Cited 2 times.

Aureli, T., Miccheli, A., Ricciolini, R., Veneziale, E., Galluci, M., Settembrini, L., Conti, F.  
31P nuclear magnetic resonance spectroscopy study on kidney preservation. Effect of verapamil  
(1990) Cellular and Molecular Biology, 36 (4), pp. 439-448. Cited 1 time.

Aureli, T., Miccheli, A., Ricciolini, R., Di Cocco, M.E., Ramacci, M.T., Angelucci, L., Ghirardi, O., Conti, F.  
Aging brain: effect of acetyl-L-carnitine treatment on rat brain energy and phospholipid metabolism. A study by 31P and 1H NMR spectroscopy  
(1990) Brain Research, 526 (1), pp. 108-112. Cited 76 times.

Parasassi, T., Stasio, G.D., Miccheli, A., Bruno, F., Conti, F., Gratton, E.  
Abscisic acid-induced microheterogeneity in phospholipid vesicle. A fluorescence study  
(1990) Biophysical Chemistry, 35 (1), pp. 65-73. Cited 18 times.

Gaudio, C., Miccheli, A., Ricci, R., Pizzuto, F., Puddu, P.E., Reale, A.  
Angulated transverse tomographic sections to measure cardiac dimensions by magnetic resonance imaging: A comparison with 2D-echocardiography  
(1989) *Cardiologia*, 34 (6), pp. 513-516. Cited 4 times.

Miccheli, A., Salvatore, A.M., Delfini, M., Conti, F., Calissano, P.  
A<sup>31</sup>P NMR study of the NGF action on PC12 cell phospholipid metabolism  
(1989) *Neuroscience Research Communications*, 4 (1), pp. 33-39. Cited 5 times.

Miccheli, A., Aureli, T., Delfini, M., Di Cocco, M.E., Viola, P., Gobetto, R., Conti, F.  
Study on influence of inactivation enzyme techniques and extraction procedures on cerebral phosphorylated metabolite levels by <sup>31</sup>P NMR spectroscopy  
(1988) *Cellular and Molecular Biology*, 34 (6), pp. 591-603. Cited 46 times.

Manganaro, M., Luparini, M.R., Ricciolini, R., Calio, F., Miccheli, A., Conti, F.  
An investigation on the action of lonidamine on *Trypanosoma lewisi* in vitro and in vivo  
(1988) *Giornale di Malattie Infettive e Parassitarie*, 40 (1), pp. 44-52.

Manganaro, M., Luparini, M.R., Ricciolini, R., Calio, F., Miccheli, A., Conti, F.  
*Trypanosoma lewisi*: Study of the activity of lonidamine in vitro and in vivo in rats  
(1988) *Cellular and Molecular Biology*, 34 (5), pp. 517-528. Cited 1 time.

Manganaro, M., Luparini, M.R., Ricciolini, R., Fianchini, A., Miccheli, A., Calio, F., Sebastiani, A.  
*Trypanosoma lewisi* in liquid culture: findings and comparisons with different types of media. Culture medium for *Trypanosoma lewisi*.  
(1986) *Bollettino dell'Istituto sieroterapico milanese*, 65 (1), pp. 32-39.

Manganaro, M., Miccheli, A., Delfini, M., Gaudio, E., Marinozzi, G., Conti, F.  
Phosphate metabolites and organ preservation: <sup>31</sup>P NMR study on rat kidney  
(1985) *Cellular and Molecular Biology*, 31 (2), pp. 89-96. Cited 3 times.

Manganaro, M., Belli, M., Cunego, A., Ialongo, P.L., Miccheli, A., Meineri, G., Porcu, S., Boniforti, L., Guiducci, M., Ziemacki, G.  
Possible indicators of the toxic action of environmental factors [Possibili indicatori dell'azione tossica di fattori ambientali.]  
(1983) *Rivista di medicina aeronautica e spaziale*, 48 (1-4), pp. 69-92.