Curriculum Vitae

Informazioni personali

Nome(i) / Cognome(i)	Orazio Cantoni
Indirizzo(i)	Abitazione: Via Cà Mignone 14, - 61029 Urbino (PU) Lavoro: Università degli Studi di Urbino "Carlo Bo" Dipartimento di Scienze Biomolecolari Sezione di Farmacologia e Farmacognosia Via S. Chiara 27 61029 Urbino (PU)
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Cittadinanza	Italiana
Data di nascita	25 Luglio 1954
Sesso	Maschio

Occupazione /Settore professionale

Professore Ordinario di Farmacologia, Settore disciplinare BIO/14

Esperienza professionale

Date	1977 - Laurea in Farmacia (cum laude) presso l'Università degli Studi di Urbino "Carlo Bo". 1981 - Laurea in Scienze Biologiche (cum laude) presso l'Università degli Studi di Urbino "Carlo Bo". 1981 - Visiting Scientist presso il Laboratory of Preclinical Pharmacology, NIMH, Washington D.C. 1982-1983 - Post-Doctoral Fellow presso il Department of Pharmacology, University of Texas, Houston. 1983 - Ricercatore presso l' Istituto di Farmacologia e Farmacognosia dell' Università degli Studi di Urbino. 1984-1985 (4 mesi) - Visiting Scientist nei Departments of Physics (1984, 4 mesi) e Experimental Radiotherapy dell'MD Anderson Hospital, Houston. 1992 - Professore Associato (BIO/14), presso la Facoltà di Farmacia dell'Università degli Studi di Urbino "Carlo Bo". 2000 - Professore Ordinario (BIO/14), presso la Facoltà di Farmacia dell'Università degli Studi di Urbino "Carlo Bo". 2009 - Preside della Facoltà di Farmacia dell'Università degli Studi di Urbino "Carlo Bo". Attualmente il Prof Cantoni è direttore del Dipartimento di Scienze Biomolecolari dell'Università degli Studi di Urbino "Carlo Bo". Dal 2016 ad oggi ricopre la carica di Prorettore alla Ricerca 2018: Presidente Eletto della Società Italiana di Tossicologia

Lavoro o posizione ricoperti	Il Prof. Cantoni ha ricevuto diversi premi, tra cui quelli dell' "Associazione Italiana per la Lotta contro i Tumori" (1985), della "Fondazione Assicurazioni Generali" (1986), "Menzione di merito" della Commissione giudicatrice della Società Italiana di Farmacologia del "Premio Benedicenti" (1988) e, nel 1990, il "Premio Benedicenti" della Società Italiana di Farmacologia. Il Prof. Cantoni è stato membro del Consiglio Direttivo della Society for Free Radical Research – Europe. Attualmente è membro del direttivo della Società Italiana di Tossicologia.. E' stato reviewer per numerosi giornali sientifici, tra cui: Free Radical Research, Free Radical Biology and Medicine, Biochimica Biophysica Acta, Biochemical Pharmacology, Journal Biological Chemistry Hoppe-Seyler, Cell Death and Differentiation, Drugs, Expert Opinion on Investigational Drugs, Experimental Cell Research, Journal of Neurochemistry e The Proceedings of the National Academy of Science (USA). Attualmente membro dell Editorial Board di Pharmacological Research. • Number of scientific articles (international journals with peer review) in extenso: 190 • H-index (Scopus – December 2017): 33 • Total citations (Scopus – December 2018): 5170 • Total impact factor of publications (5-year impact factor da ISI Web of Knowledge, Journal of Citation Reports 2016): 721,57 Average impact factor: 4,15 • Journal rankings in the subject category of scientific articles (SCImago Journal & Country Rank 2014): Q1: 140 articles; Q2: 37 articles; Q3: 13 articles.
Principali attività e responsabilità	*Attività scientifica:* Il lavoro di ricerca condotto durante il post-doctoral training, presso il Department of Pharmacology della University of Texas, Houston, è stato svolto con il fine di individuare le lesioni del DNA mediate da specifici composti metallici cancerogeni. Dal 1984 è stato attivamente coinvolto in studi sui meccanismi di tossicità mediata da specie reattive dell'ossigeno. Il Prof. Cantoni ha contribuito in modo sostanziale allo sviluppo, ed al crescente interesse, di questo campo di ricerca con alcuni dei primi lavori sugli effetti del perossido di idrogeno. Successivamente, egli ha spostato i propri interessi sugli effetti di idroperossidi organici e, durante questo periodo ha prodotto importanti risultati che indicavano che l'accumulo mitocondriale di ioni calcio portava alla formazione di specie cito-geno-tossiche. Il Prof Cantoni ha recentemente dimostrato che l'acido arachidonico promuove fosforilazione (tirosina kinasi-dipendente) ed inattivazione della nitrossido sintasi costitutiva degli astrociti. Questo evento era critico per l'espressione di geni NFkB-dipendenti in cellule stimolate con LPS-IFNgamma. Un ulteriore contributo in questo campo è stato l'identificazione dei meccanismi attraverso cui cellule del lineaggio monocitico/macrofagico resistono al perossinitrito, il prodotto dell'interazione tra nitrossido e superossido. Questi studi sono stati stimolati dalla semplice considerazione che queste cellule, nei siti infiammatori, producono diverse specie reattive e tossiche, tra cui il perossinitrito, e debbono pertanto essere provviste di un efficiente sistema di difesa. Si è visto che, mentre "committed" alla transizione della permeabilità della membrana mitocondriale interna (MPT), queste cellule rispondono all'acido arachidonico con l'attivazione di un signalling di sopravvivenza che previene MPT e morte. Un ulteriore importante scoperta è stata che la tossicità, rilevabile solo dopo esposizione ad elevate concentrazioni di perossinitrito, era indipendente dall'entità del danno accumulato dalle cellule ed era infatti mediata dall'inibizione del signalling di sopravvivenza. Nel suo insieme, l'informazione fornita da questi studi, è consistente con la nozione che queste cellule sopravvivono al perossinitrito utilizzando molecole segnale che sono tossiche per altri tipi cellulari. Inoltre, queste cellule possono sopravvivere nonostante l'accumulo di un danno esteso ed eventualmente muoiono, quando il signalling di sopravvivenza viene inibito, attraverso un meccanismo altamente regolato di morte necrotica. Più recentemente, si è interessato del trasporto e della compartimentalizzazione sub-cellulare della vitamina C. In questo ambito, un importante contributo è rappresentato dalla scoperta del trasportatore sodio-dipendente della vitamina nei mitocondri. Questo trasportatore viene riconosciuto da anticorpi anti-SVCT2 ed è caratterizzato da una elevata affinità anche in presenza di basse concentrazioni di sodio, normalmente presenti nel distretto intracellulare (< 10 mM). Questo dato è in forte contrasto con quanto osservato con il trasportatore espresso nella membrana plasmatica, che richiede per l'attività di trasporto massimale concentrazioni di sodio superiore a 120 mM.Infine le attività dei trasportatori delle vitamina C localizzati nelle membrane plasmatiche e mitocondriali era sensibile a basse concentrazione di acido deidroascorbico, la forma ossidata dell vitamina C.
Nome e indirizzo del datore di lavoro	Università degli Studi di Urbino “Carlo Bo” Via Saffi 2 61029 Urbino (PU)

Tipo di attività o settore	Professore Ordinario (BIO/14 - Farmacologia)

Istruzione e formazione

Date	
Titolo della qualifica rilasciata	
Principali tematiche/competenze professionali acquisite	
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	
Livello nella classificazione nazionale o internazionale	

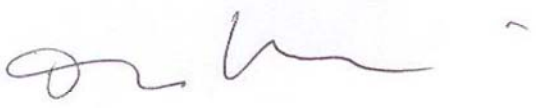
Capacità e competenze personali

Madrelingua(e)	**Italiano**
Altra(e) lingua(e)	**Inglese**

Autovalutazione	Comprensione		Parlato		Scritto
Livello europeo (*)	Ascolto	Lettura	Interazione orale	Produzione orale	
Lingua	C1	C1	C1	C1	C1
Lingua					

Capacità e competenze sociali	
Capacità e competenze organizzative	
Capacità e competenze tecniche	
Capacità e competenze informatiche	
Capacità e competenze artistiche	
Altre capacità e competenze	
Patente	

Ulteriori informazioni

Allegati	Elenco delle pubblicazioni
Firma	

Allegato

Pubblicazioni Prof. Orazio Cantoni

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GUIDARELLI A, CARLONI S, FIORANI M, A, BALDUINI W, CANTONI O (2016). Mitochondrial ascorbic acid prevents mitochondrial $O_{2^{-}}$ formation, an event critical for U937 cell apoptosis induced by arsenite through both autophagic-dependent and independent mechanisms. BIOFACTORS, vol. 42, p. 190-200.

GUIDARELLI ANDREA, FIORANI MARA, CARLONI SILVIA, CERIONI LIANA, BALDUINI WALTER, CANTONI ORAZIO (2016). The study of the mechanism of arsenite toxicity in respiration-deficient cells reveals that NADPH oxidase-derived superoxide promotes the same downstream events mediated by mitochondrial superoxide in respiration-proficient cells. TOXICOLOGY AND APPLIED PHARMACOLOGY, vol. 307, p. 35-44.

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GUIDARELLI A, FIORANI M, AZZOLINI C, CANTONI O. (2010). A Novel Mechanism, Uniquely Dependent on Mitochondrial Calcium Accumulation, Whereby Peroxynitrite Promotes Formation of Superoxide/Hydrogen Peroxide and the Ensuing Strand Scission of Genomic DNA. ANTIOXIDANTS & REDOX SIGNALING, ISSN: 1523-0864

PALOMBA L, CERIONI L, CANTONI O. (2010). Arachidonic acid inhibits neuronal nitric oxide synthase elicited by proinflammatory stimuli and promotes astrocyte survival with both exogenous and endogenous peroxynitrite via different mechanisms. JOURNAL OF NEUROSCIENCE RESEARCH, vol. 88; p. 2459-2468, ISSN: 0360-4012

GUIDARELLI A, CERIONI L, FIORANI M, CANTONI O. (2009). Differentiation-associated loss of ryanodine receptors: a strategy adopted by monocytes/macrophages to prevent the DNA single-strand breakage induced by peroxynitrite. JOURNAL OF IMMUNOLOGY, vol. 183; p. 4449-4457, ISSN: 0022-1767

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