Aurora Piombarolo

PRESENTAZIONE

Dottoressa in Chimica e Tecnologie Farmaceutiche, attualmente Dottoranda afferente al 38° ciclo del Dottorato di Ricerca in Medicina Molecolare

ESPERIENZA LAVORATIVA

[01/11/2022 – Attuale]

Dottorato Medicina Molecolare

Università "La Sapienza"

Città: Roma
Paese: Italia
Attività di ricerca in ambito cellulare e chimico analitiche.

[01/02/2022 – 31/10/2022]

Borsa di studio

Sgb lab, dip. medicina e chirurgia "P. Valdoni", Università "La Sapienza"

Città: Roma
Paese: Italia
Attività di ricerca nell'ambito cellulare.
Competenze acquisite in campo di culture cellulari, pcr-real time, estrazione proteica, quantizzazione proteica.

ISTRUZIONE E FORMAZIONE

[25/07/2022]

Abilitazione alla professione di Farmacista

Ordine dei Farmacisti di Roma

Indirizzo: Via Alessandro Torlonia, 00161, Roma, Italia

[01/10/2016 – 21/10/2021]

Laurea Magistrale in Chimica e Tecnologia Farmaceutiche

Università "La Sapienza"

Indirizzo: Piazzale Aldo Moro. 5, 00185, Roma, Italia
Campi di studio: Chimico-Farmaceutico
Voto finale: 110/110 e lode
Tesi: Tesi sperimentale dal titolo "Studio, identificazione e sintesi di nuovi inibitori delle isoforme IX e XII dell'anidrasi carbonica a scaffold cumarinico"

COMPETENZE LINGUISTICHE

Lingua madre: italiano

Altre lingue:

inglese

ASCOLTO B1 **LETTURA** B1 **SCRITTURA** B1

PRODUZIONE ORALE B1 **INTERAZIONE ORALE** B1

spagnolo

ASCOLTO A2 **LETTURA** A2 **SCRITTURA** A2

PRODUZIONE ORALE A2 **INTERAZIONE ORALE** A2

COMPETENZE DIGITALI

Pacchetto Office, pacchetto OpenOffice, pacchetto LibreOffice | Piattaforma Google | Microsoft | Windows | Gestione posta email

PUBBLICAZIONI

[2022]

Space Biomedicine: A Unique Opportunity to Rethink the Relationships between Physics and Biology

Riferimento: https://doi.org/ 10.3390/biomedicines10102633

Space biomedicine has provided significant technological breakthroughs by developing new medical devices, diagnostic tools, and health-supporting systems. Many of these products are currently in use onboard the International Space Station and have been successfully translated into clinical practice on Earth. However, biomedical research performed in space has disclosed exciting, new perspectives regarding the relationships between physics and medicine, thus fostering the rethinking of the theoretical basis of biology. In particular, these studies have stressed the critical role that biophysical forces play in shaping the function and pattern formation of living structures. The experimental models investigated under microgravity conditions allow us to appreciate the complexity of living organisms through a very different perspective. Indeed, biological entities should be conceived as a unique magnification of physical laws driven by local energy and order states overlaid by selection history and constraints, in which the source of the inheritance, variation, and process of selection has expanded from the classical Darwinian definition. The very specific nature of the field in which living organisms behave and evolve in a space environment can be exploited to decipher the underlying, basic processes and mechanisms that are not apparent on Earth. In turn, these findings can provide novel opportunities for testing pharmacological countermeasures that can be instrumental for managing a wide array of health problems and diseases on Earth.

[2022]

Paradoxical Behavior of Oncogenes Undermines the Somatic Mutation Theory

Riferimento: https://doi.org/10.3390/ biom12050662

The currently accepted theory on the influence of DNA mutations on carcinogenesis (the Somatic Mutation Theory, SMT) is facing an increasing number of controversial results that undermine the explanatory power of mutated genes considered as “causative” factors. Intriguing results have demonstrated that several critical genes may act differently, as oncogenes or tumor suppressors, while phenotypic reversion of cancerous cells/tissues can be achieved by modifying the microenvironment, the mutations they are carrying notwithstanding. Furthermore, a high burden of mutations has been identified in many non-cancerous tissues without any apparent pathological consequence. All things considered, a relevant body of unexplained inconsistencies calls for an in depth rewiring of our theoretical models. Ignoring these paradoxes is no longer sustainable. By avoiding these conundrums, the scientific community will deprive itself of the opportunity to achieve real progress in this important biomedical field. To remedy this situation, we need to embrace new theoretical perspectives, taking the cell–microenvironment interplay as the privileged pathogenetic level of observation, and by assuming new explanatory models based on truly different premises. New theoretical frameworks dawned in the last two decades principally focus on the complex interaction between cells and their microenvironment, which is thought to be the critical level from which carcinogenesis arises. Indeed, both molecular and biophysical components of the stroma can dramatically drive cell fate commitment and cell outcome in opposite directions, even in the presence of the same stimulus. Therefore, such a novel approach can help in

solving apparently inextricable paradoxes that are increasingly observed in cancer biology.

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".