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Εργαστήριο Ιστολογίας - Εμβρυολογίας
Ιατρική Σχολή ΕΚΠΑ

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Εθνικόν και Καποδιστριακόν
Πανεπιστήμιον Ἀθηνών
ΙΔΡΥΘΕΝ ΤΟ 1837



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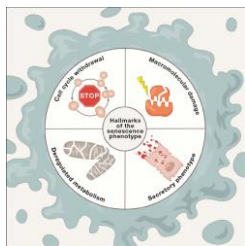
ΚΕΝΤΡΟ ΝΕΩΝ ΒΙΟΤΕΧΝΟΛΟΓΙΩΝ ΚΑΙ ΙΑΤΡΙΚΗΣ ΑΚΡΙΒΕΙΑΣ

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2^Η ΕΠΙΣΤΗΜΟΝΙΚΗ ΗΜΕΡΙΔΑ

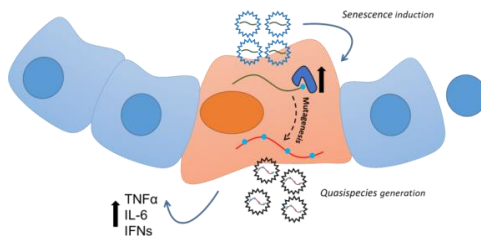
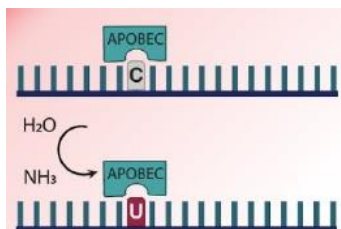
Κυτταρική Γήρανση και COVID-19

Κων/νος Ευαγγέλου
Αναπληρωτής Καθηγητής



Κυτταρική γήρανση: θεμελιώδης μηχανισμός ανταπόκρισης στο stress, ο οποίος μετασχηματίζει τα κύτταρα, προσδίδοντας τους ιδιαίτερα γνωρίσματα, όπως αντίσταση στην απόπτωση και εκκριτικός φαινότυπος

Αυξημένη δραστηριότητα APOBEC



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Cellular Senescence: Defining a Path Forward

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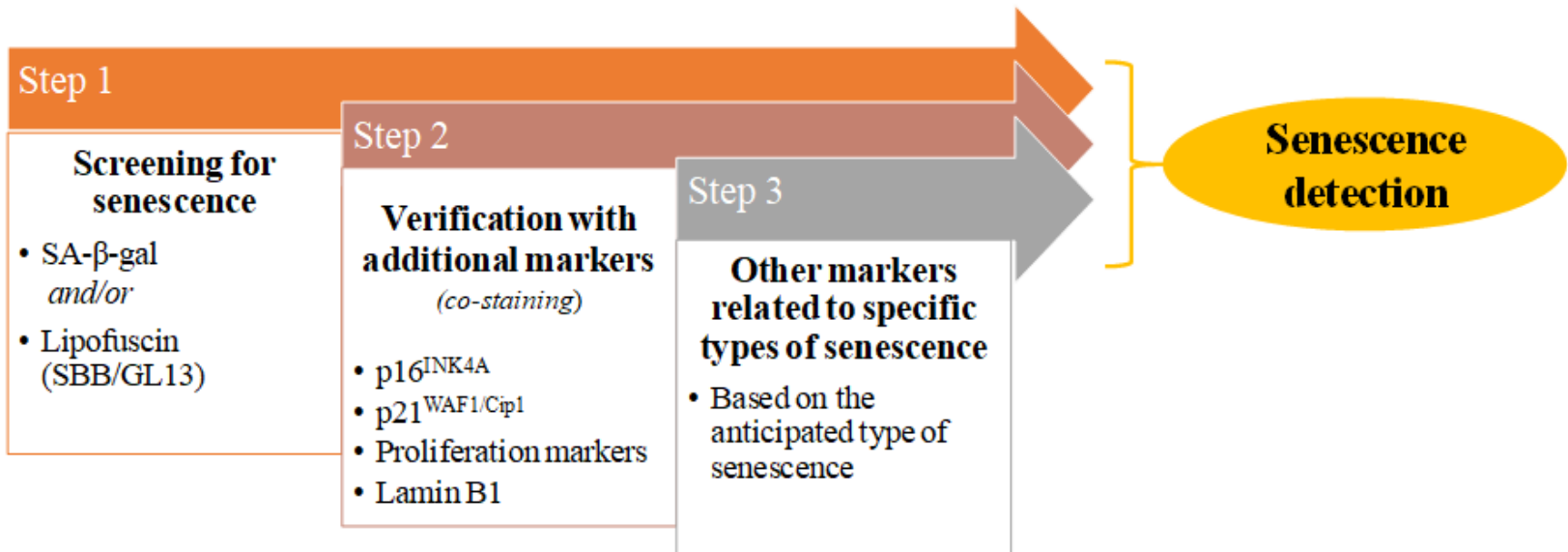
Induction of APOBEC3 Exacerbates DNA Replication Stress and Chromosomal Instability in Early Breast and Lung Cancer Evolution

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REVIEW ARTICLE

Cellular senescence as a source of SARS-CoV-2 quasispecies

Ioannis Karakasiliotis¹, Nefeli Lagopati^{2,3}, Konstantinos Evangelou² and Vassilis G. Gorgoulis^{2,3,4,5,6}



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Cellular Senescence: Defining a Path Forward

Vassilis Gorgoulis,^{1,20,25,26,*} Peter D. Adams,^{2,27,28} Andrea Alimonti,^{3,29,30,31} Dorothy C. Bennett,⁴ Oliver Bischof,⁵ Cleo Bishop,¹ Judith Campisi,⁷ Manuel Collado,⁸ Konstantinos Evangelou,¹ Gerardo Ferbeyre,¹⁰ Jesús Gil,^{11,32} Eiji Hara,¹² Valery Krizhanovsky,¹³ Diana Jurk,¹⁴ Andrea B. Maier,^{15,33} Masashi Narita,¹⁶ Laura Niedernhofer,¹⁷ João F. Passos,¹⁴

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<https://doi.org/10.1038/s41596-021-00505-5>

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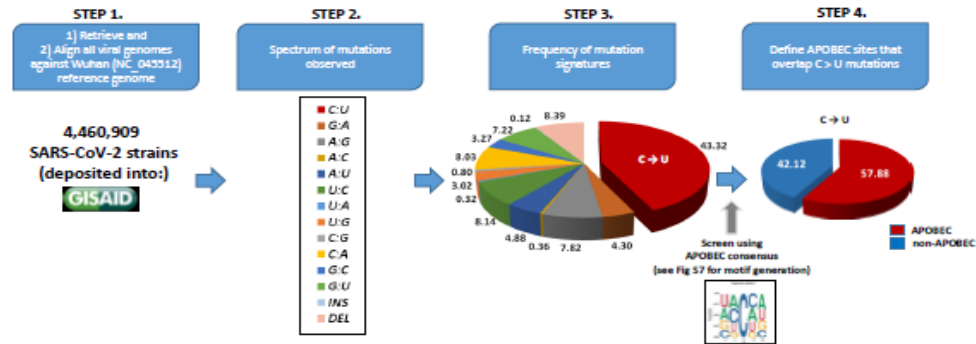
Algorithmic assessment of cellular senescence in experimental and clinical specimens

J. Kohli^{1,7}, B. Wang^{1,7}, S. M. Brandenburg¹, N. Basisty², K. Evangelou³, M. Varela-Eirin¹, J. Campisi², B. Schilling², V. Gorgoulis^{3,4,5,6,52} and M. Demaria^{1,25}

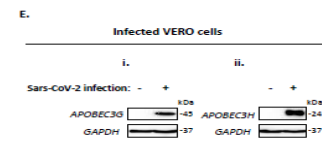
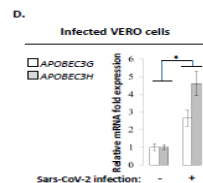
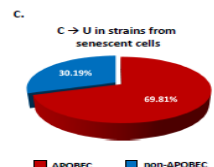
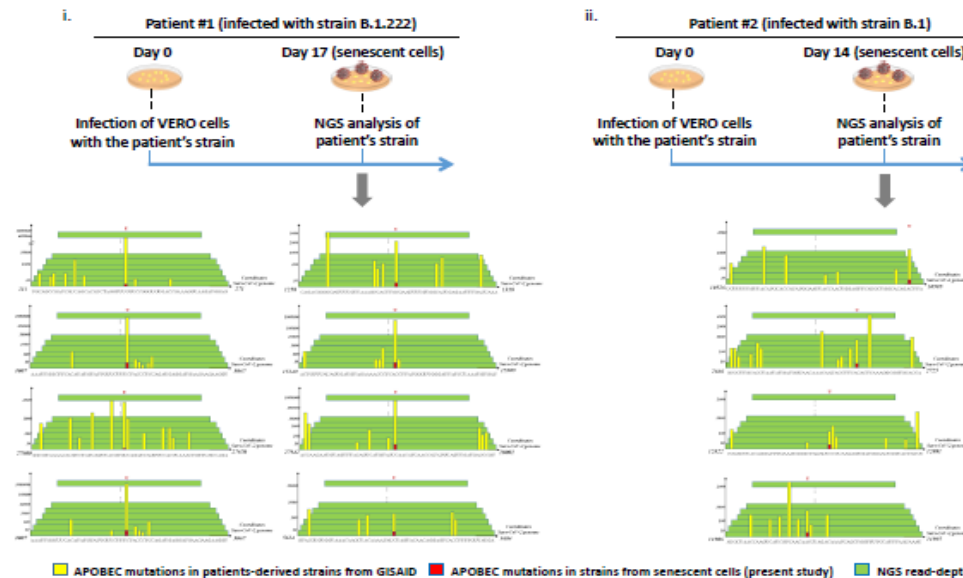
Το συχνότερο πρότυπο μετάλλαξης SARS-CoV-2 είναι αποτύπωμα APOBEC μηχανισμού

In vitro αναπαράσταση μεταλλάξεων στον SARS-CoV-2 από τον APOBEC μηχανισμό

A. Bioinformatic screening and identification of accumulating mutations in the genome of Sars-CoV-2 isolates from patients



B. SARS-CoV-2 mutations acquired in senescent cells in strains isolated from patients





Pulmonary infection by SARS-CoV-2 induces senescence accompanied by an inflammatory phenotype in severe COVID-19: possible implications for viral mutagenesis

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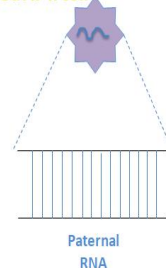
'Zombie' cells COVID risk News from the College

by Claudia Cannon, Hayley Dunning, Ryan O'Hare, Conrad
Duncan

25 February 2022

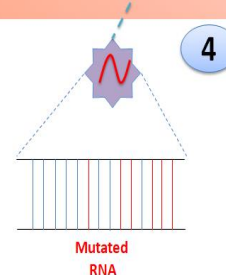
<https://www.imperial.ac.uk/news/234194/modified-mosquitoes-zombie-cells-news-from/>

SARS-CoV-2 infected AT-II cell



Mutagenesis

Quasispecies generation



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