

BIO1403: "Molecular organization of life" 2021**SEMINAR 1 FORTH/ POTONTA Γ****B. Transcriptional, Post-transcriptional and Epigenetic regulation of gene expression****Δευτέρα, 18 Οκτώβριος 2021****POTONTA Γ****10:00-12:00****RNA mediated gene regulation K.Kalantidis***a. RNA mediated phenomena in the cell: prokaryots vs eukaryots**b. RNA silencing pathways in fungi, plants and animals**c. miRNA mediated gene regulation***B. Transcriptional, Post-transcriptional and Epigenetic regulation of gene expression****Τρίτη, 19 Οκτώβριος 2021****POTONTA Γ****10:00-12:00****Genome instability, transcription and replication G.Garinis***a. Genome Instability and replicative stress**b. Genome Instability and transcriptional blockage***A. Origin and diversification of life****12:30-14:30****When and how did the life originate? E.Ladoukakis***a. Probiotic synthesis**b. Methods for looking for the Last Universal Common Ancestor (LUCA)**c. How did LUCA look like?**d. How many times did life originate?**e. What are the evolutionary relationships of the three domain of life (bacteria-archaea-eukaryotes)*

Τετάρτη, 20 Οκτώβριος 2021	
	<i>Presentations Diploma Theses Biology</i>
Πέμπτη, 21 Οκτώβριος 2021	POTONTA Γ
10:00-12:00	Epigenetic regulation J.Papamatheakis
	<i>a. Nucleosomes and histone tail modifications. Histone variants, chromatin & gene expression</i>
	<i>b. Co-activators and co-repressors: Subunit composition and enzymatic activities</i>
	<i>c. Epigenetic pathology.</i>
	<i>d. Epigenetic Evolution. Epigenetics of the Non coding Genome</i>
13:00-15:00	Nuclear dynamics. C.Spilianakis
	a. Chromosome packaging and structure.
	b. Trans-allelic phenomena. (Transvection, Paramutation, Repeat-induced point mutation, Parental Imprinting, X-chromosome inactivation, interchromosomal interactions).
	c. Chromosome territories, Sub-nuclear compartments.
	d. Imaging techniques to study gene localization and expression.
Παρασκευή, 22 Οκτώβριος 2021	
	<i>Master Students' presentations</i>
Δευτέρα, 25 Οκτώβριος 2021	POTONTA Γ
10:00-13:00	Paper discussion Garinis
13:00-16:00	Paper discussion Kalantidis
C. Signal-dependent gene expression in development, differentiation and pathogenesis	
Τρίτη, 26 Οκτώβριος 2021	POTONTA Γ

10:00-12:00	Signal transduction mechanisms. A.Kretsovali
	<i>a. Cytokine signaling: Jak-Stat pathway</i>
	<i>b. Ser/Thr kinase receptors the TGFbeta pathway and SMAD factors</i>
	<i>c. The wnt pathway</i>
13:00-15:00	Paper discussion Papamatheakis
Τετάρτη, 27 Οκτώβριος 2021	Seminar 1 FORTH
10:00-12:00	The TRK/Ras/Erk pathway.G.Mavrothalassitis
	a. Ligands and receptors
	b. Diversity of signaling outcomes
	<i>c. Quantitative and qualitative transcriptional control by signaling pathways</i>
13:00-15:00	Genetic and epigenetic regulation of stem cell fate A. Kretsovali
	<i>a. Embryonic stem cells. Self renewal versus differentiation.</i>
	b.Transcription factors of pluripotency and reprogramming.
	<i>c. Signaling pathways</i>
	<i>d. Epigenetic regulation of the differentiation status.</i>
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Παρασκευή, 29 Οκτώβριος 2021	Seminar 1 FORTH
15:00-17:00	Signaling network integration. The MEK hub. G.Mavrothalassitis
18:00-20:00	The Notch pathway-communication by touch. C.Delidakis
Δευτέρα, 1 Νοέμβριος 2021	
13:00-15:00	Deregulation of signal transduction in cancer Γ. Μόσιαλος ΑΠΘ
	ZOOM

Τρίτη, 2 Νοέμβριος 2021	Seminar 1 FORTH
10:00-12:00	"Long non-coding RNAs and RNA modifications in regulation of gene expression" E.Ntini Keywords: LncRNAs, pervasive transcription, enhancers, eRNAs, RNA modifications, epitranscriptomics
13:00-15:00	Paper discussion Kretsovali
Τετάρτη, 3 Νοέμβριος 2021	Seminar 1 FORTH
10:00-12:00	Paper discussion Mavrothalassitis
13:00-15:00	
Πέμπτη, 4 Νοέμβριος 2021	Seminar 1 FORTH
10:00-12:00	Paper discussion Delidakis
13:00-15:00	Chromatin regulation and dynamics during gene-regulation by non-coding transcription. Fabien Moretto
Friday , November 5	Seminar 1 FORTH
10:00-12:00	Paper discussion Fabien Moretto
13:00-15:00	Paper discussion Evgenia Ntini
Friday , November 12	Seminar 1 FORTH
10:00-13:00	EXAM