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**Hellenic
Society of
Pathology**

6-7 July 2022
GOLDEN AGE Hotel | Athens

Instructions to use the database are available in the form of a manual, a glossary, and a list of frequently asked questions. The database is also accessible via a web browser. The database is a valuable resource for researchers in the field of molecular biology, genetics, and genomics. It provides a comprehensive overview of the genetic information available in the public domain, and is a valuable tool for researchers in the field of molecular biology, genetics, and genomics.

Chemically, DNA consists of two long polymers of simple units called nucleotides, with hydroxyl groups of sugars and phosphate groups joined by ester bonds. These two strands run in opposite directions to each other and are therefore anti-parallel. Attached to each sugar is one of four types of molecule called bases. It is the sequence of these four bases along the backbone that encodes information. This information is read using the genetic code, which specifies the sequence of the amino acids within proteins. The code is read by copying stretches of DNA into the related nucleic acid mRNA, a process called transcription.

Within cells, DNA is organized into long structures called chromosomes. These chromosomes are duplicated before cells divide, in a process called DNA replication. Eukaryotic organisms (animals, plants, fungi, and protists) store most of their DNA inside the cell nucleus and some of their DNA in organelles, such as mitochondria or chloroplasts. In contrast, as prokaryotes (bacteria and archaea) store their DNA only in the cytoplasm. Within the chromosomes, chromatin proteins such as histones compact and organize DNA. These compact structures guide the interactions between DNA and other proteins, helping control which parts of the DNA are transcribed.

The phosphate groups that form phosphodiester bonds between the deoxyribose sugar residues of the DNA backbone are highlighted in red. The nitrogenous base pairs are shown in the center of the helix, connected by hydrogen bonds (indicated by blue lines).

DNA exists in many possible conformations and A-DNA, B-DNA and Z-DNA have been found in only B-DNA and Z-DNA in functional organisms. [10] The conformational change of DNA adopts depends on the hydration of the bases, the amount and direction of the modifications of the bases, the type of metal ions, as well as the presence of other molecules in the solution [29].

The first published reports of A-C patterns—and also B-DNA used Patterson transforms that provided a limited amount of structural information on DNA [30][31]. An alternate analysis by Wilkins *et al.* in 1954, for the low diffraction/scattering patterns of fibers in terms of squares of Bessel functions, was published in the same journal. Watson and Crick's molecular modeling analysis of the diffraction patterns to suggest the double-helix [7].

Although the 'B-DNA form' is more common under the conditions found in cells,[35] it is not a single conformation but a family of related conformations[34] that occur at all levels present in living cells. Their study by x-ray diffraction and scattering pattern analysis of molecular paracrystals with a significant degree of disorder.[35][36]

Compared to B-DNA, the A-DNA is a right-handed spiral, with a shallower helical twist and a narrower, deeper major groove. It occurs under non-physiological conditions, such as in dehydrated samples or in the presence of high concentrations of certain cations. In hybrid pairs of DNA, the A-DNA is produced in regions of high GC content, as well as in enzyme-DNA complexes. Segments of DNA where the base pairing is chemically modified by methylation or other modifications can undergo a larger change in conformation than



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Χαιρετισμός

Αγαπητοί συνάδελφοι και φίλοι,

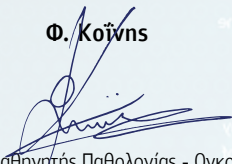
Είναι γνωστό πλέον ότι η εξειδικευμένη θεραπεία των ασθενών με καρκίνο κινείται γοργά, έχοντας εμπεδώσει τη γνώση της πολυπλοκότητας και της ποικιλομορφίας των όγκων, που παραλλάσσουν πρακτικά τόσο όσο και οι αντίστοιχοι ασθενείς.

Η ραγδαία ανάπτυξη της γνώσης μας, για τη Μοριακή Βιολογία και τη Βιοχημεία των διαφόρων τύπων καρκίνου, έχει βοηθήσει σημαντικά στην κατανόηση μερικών εκ των φαινομένων που οδηγούν στην καρκινογένεση αλλά και τη συντήρηση και διασπορά των όγκων. Γνωρίζουμε πλέον βιολογικά μόρια και βιοχημικά μονοπάτια που είναι σημαντικά για την βιολογία του όγκου και οι αναδυόμενες θεραπείες στοχεύουν σε αυτά προκειμένου να ανασχέσουν την πορεία της νόσου. Η έρευνα επί των βιοδεικτών έχει ενταθεί διότι οι βιοδείκτες πέραν της κλασσικής διαγνωστικής και προγνωστικής τους αξίας αποκτούν σημαντική προβλεπτική αξία στην ανάπτυξη θεραπειών. Ετσι, αναδύεται η εξατομίκευση της θεραπείας που πλέον δεν θα βασίζεται αποκλειστικά στην προέλευση του όγκου αλλά στο μοριακό/βιολογικό του προφίλ όπως θα καθορίζεται από τους αντίστοιχους βιοδείκτες οδηγώντας πιθανά σε διαφορετική θεραπευτική προσέγγιση.

Ο στόχος του “Masterclass on Tumor Biomarkers”, είναι να προάγει τη γνώση για την αναδυόμενη μοριακή ετερογένεια των όγκων με συνέπεια την εξατομίκευση της θεραπείας αλλά και την ανάδειξη της σημασίας της υγρής βιοψίας (κυκλοφορούντα καρκινικά κύτταρα, DNA, micro RNAs, εξωσώματα) στην παρακολούθηση της κλινικής πορείας της νόσου και της αποτελεσματικότητας της θεραπείας. Η θεματολογία του Εκπαιδευτικού σεμιναρίου θα παρουσιασθεί με ένα επαγωγικό και διδακτικό τρόπο με στόχο να συνδέσει τη σημερινή μας γνώση με τις μελλοντικές προοπτικές των βιοδεικτών. Πιστεύουμε ότι η προσπάθειά μας αυτή θα προσφέρει θετικό αποτέλεσμα στην διαδικασία της Εκπαίδευσης και ενημέρωσης στα θέματα της ανάπτυξης και χρήσης των βιοδεικτών και ελπίζουμε ότι η παρουσία σας και οι παρατηρήσεις σας θα βοηθήσουν όλους μας στην περαιτέρω εξέλιξη.

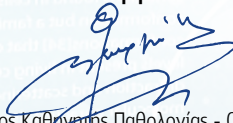
Σας ευχαριστούμε θερμά,

Φ. Κοϊνός



Επίκουρος Καθηγητής Παθολογίας - Ογκολογίας,
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Masterclass on Tumor Biomarkers

Wednesday July 6th, 2022

08.45

Welcome

F. Koinis, V. Georgoulas

09.00-09.30 **Lecture**

Chairs: **V. Georgoulas, F. Koinis**

Personalized Medicine: a new and evolving reality
in clinical oncology

Ch. Antonopoulos

09.30-11.00 **Session 1**

Chairs: **G. Lypas, Th. Rampias**

09.30-09.50 The emerged importance of pathologist
beyond the diagnostic workup

D. Papachristou

09.50-10.10 The need for NGS analysis using polygenic panels
for tumor molecular profiling

G. Nasioulas

10.10-10.30 RNA sequence: Could be emerged as a new tool
for personalized treatment in cancer?

Str. Kosmidis

10.30-10.50 HRD score: A new biomarker for PARP inhibitors

P. Constantoulakis

10.50-11.00 Discussion

11.00-11.30 **Coffee Break**

11.30-12.00 **Lecture**

Chairs: **V. Georgoulas, F. Papageorgiou**

The importance of Liquid Biopsy as a tool for the understanding
of the natural history and the metastatic process

E. Lianidou

12.00-13.10 **Liquid Biopsy (CTCs) in Breast Cancer: Session 2**

Chairs: **A. Markou, N. Xenidis**

12.00-12.20 The phenotypic heterogeneity of Circulating
Tumor Cells in breast cancer

G. Kallergi

12.20-12.40 The molecular heterogeneity of Circulating Tumor Cells
in breast cancer

A. Strati

12.40-13.00 ESR1 mutation as a marker for hormone
resistance treatment

D. Stergiopoulou

13.00-13.10 Discussion

13.10-14.00 **Liquid Biopsy (ctDNA) in Breast Cancer: Session 3**

Chairs: **E. Lianidou, D. Tryfonopoulos**

13.10-13.30 Clinical applications of Circulating Tumor Cells
in breast cancer

N. Xenidis

13.30-13.50 Clinical applications of ctDNA in breast cancer

O. Fiste

13.50-14.00 Discussion

14.00-15.00 **Light Lunch**

15.00-16.10 **Liquid Biopsy: Session 4**

Masterclass on Tumor Biomarkers

Chairs: **A. Strati, F. Koinis**

15.00-15.20 The clinical relevance of CTC in prostate cancer

15.20-15.40 The emerging importance of CTC in NSCLC

15.40-16.00 the exosomes as a potential tool of tumor biomarkers

16.00-16.10 Discussion

Z. Zafeiriou

A. Markou

A. Xagara

16.10-17.00 Tumor Biomarkers (I): Session 5

Chairs: **G. Nasioulas, D. Stefanou**

16.10-16.30 Newer biomarkers in NSCLC (EGFR exon 20 mut, KRAS mut, MET exon 14 mut)

G. Oikonomopoulos

16.30-16.50 Newer biomarkers in NSCLC (NTRK, RET, HER2 mut)

E.-G. Fergadis

16.50-17.00 Discussion

17.00-17.30 Coffee break

17.30-19.00 Liquid Biopsy in clinical use: Session 6

Chairs: **A. Kotsakis, Th. Tegos**

17.30-17.50 Clinical applications of liquid biopsy in NSCLC

F. Papageorgiou

17.50-18.10 Monitoring of ctDNA for treatment efficacy in colorectal cancer patients

I. Samaras

18.10-18.30 Monitoring the Minimal Residual Disease using Liquid Biopsy assays

A. Voutsina

18.30-18.50 The Signatera R platform for the detection of MRD

N.Tsoulos

18.50-19.00 Discussion

Masterclass on Tumor Biomarkers

Thursday July 7th, 2022

09.00-10.10 Biomarkers for GI Tumors: Session 7

Chairs: **P. Constantoulakis, O. Katopodis**

- 09.00-09.20 Emerging molecular subgroups in Colorectal cancers using NGS technology
- 09.20-09.40 Biomarkers in pancreatic and biliary tract carcinomas
- 09.40-10.00 The NTRK fusions as a biomarker for personalized treatment
- 10.00-10.10 Discussion

A. Assi

E. Karatrasoglou

A. Kyriazoglou

10.10-12.10 Biomarkers in Immuno-Oncology: Session 8

Chairs: **I. Vamvakaris, Ch. Valavanis**

- 10.10-10.30 The prognostic and predictive value of TILs
- 10.30-10.50 Is PD-L1 a real biomarker for treatment with ICIs?
- 10.50-11.10 Tumor Mutation Burden (TMB): When and How
- 11.10-11.30 Intergrading MSI/MMR testing in the daily clinical practice
- 11.30-11.50 Immunoscore: A new tool for treatment de-escalation in early stage colorectal cancer
- 11.50-12.10 Discussion

I. Pateras

Ch. Masaoutis

G. Tsaousis

A. karampeazis

D. Hatzibougias

12.10-12.40 Lecture

Chairs: **A. Kotsakis, F. Koinis**

The emergence of Tissue-Agnostic treatment in clinical oncology

N. Pistamaltzian

12.40 Closing Remarks

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Masterclass on Tumor Biomarkers

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Masterclass on Tumor Biomarkers

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Masterclass on Tumor Biomarkers

Γενικές Πληροφορίες

Διοργάνωση



Ερευνητικό & Εκπαιδευτικό Ινστιτούτο Κλινικής Ογκολογίας «ΕΡΕΙΚΟ»

Τίτλος

Masterclass on Tumor Biomarkers

Ημερομηνία διεξαγωγής

6-7 Ιουλίου 2022

Τόπος διεξαγωγής

Ξενοδοχείο Golden Age, Αθήνα

Υπό την Αιγίδα των



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Μοριοδότηση – Πιστοποιητικό

Το Συνέδριο μοριοδοτείται με **11 μόρια (Credits)** Συνεχιζόμενης Ιατρικής Εκπαίδευσης. Απαραίτητη προϋπόθεση για την χορήγηση Πιστοποιητικού είναι η συμπλήρωση ελάχιστου ποσοστού 60% επί των συνολικών ωρών του επιστημονικού προγράμματος και η συμπλήρωση της φόρμας αξιολόγησης. Ο σύνδεσμος λήψης του πιστοποιητικού σας θα εμφανιστεί αμέσως μετά τη λήξη της εκδήλωσης και θα παραμείνει ενεργός για μία εβδομάδα.

Γραμματεία Οργάνωσης Συνεδρίου

Η γραμματεία θα λειτουργεί κατά τη διάρκεια του συνεδρίου σύμφωνα με το επιστημονικό πρόγραμμα



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