

# Supporting Blood-Bank Personnel introductory and continuous Education

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## Continuous education in Blood Bank

- Freshly engaged Blood Bank personnel need introductory training, in order to be integrated efficiently into the existing organizational structure.
- On the other hand, the remarkable advances in Molecular Biology and Biomedical Technology require the arrangement of continuous education to keep the personnel up to date, especially in the very responsible field of Transfusion Medicine.
- This presentation concerns primarily technical and managerial aspects of the job, and endeavors to accustom the new employees to their particular activities or the senior personnel to new tasks.

## The main settings of the problem

- On-line educational means, developed for a specific Blood Bank, could minimize the necessary time of both, the trainees and the instructors.
- The modern Blood Bank consists of several functional units, which contribute to the achievement of the common goals, which are set for the entire Department.
- However, they maintain a relative autonomy and perform unique roles, starting from Volunteer Donors Recruitment up to the prevention of viral infections.

## Theoretical, methodological, and technical-managerial issues

- Further, each unit, on the one hand, adopts similar methodological approaches to its function, but on the other, it informs these approaches with the corresponding concrete content peculiar to its scope.
- In order to achieve the synthesis of the technical-managerial subject matter, to the theoretical and methodological issues, we have developed an HTML based training system, supporting following activities:

## **Supported Activities in the Blood Bank**

- Volunteer Donors Recruitment.
- Blood Donation.
- In site Transfusion.
- Blood Processing & Conservation.
- Blood Serology.
- Screening for Infectious Diseases.
- Hematology Laboratory.
- Blood Bank and Haematology Equipment
- Abnormal Hemoglobin Screening.
- Patient Records & Statistics.
- Other useful Information.

# Volunteer Donors Recruitment - Blood Donation

ΕΘΝΙΚΗ ΥΠΗΡΕΣΙΑ ΑΙΜΟΔΟΣΙΑΣ  
ΣΤΑΘΜΟΣ ΑΙΜΟΔΟΣΙΑΣ ΠΕΙΡΑΙΑ  
Π.Γ.Ν.Π. «ΤΖΑΝΕΙΟ»

ΠΕΙΡΑΙΑΣ 12/9/97

**ΔΕΛΤΙΟ ΑΙΜΟΔΟΤΗ**

Α. ΣΤΟΙΧΕΙΑ ΑΙΜΟΔΟΤΗ (προσπελάσιμα σε μητροκάρτες)

ΕΠΩΝΥΜΟ: Σταυρίδης ΟΝΟΜΑ: Βασίλειος  
 ΟΝΟΜΑ ΠΑΤΡΟΣ: Νικόλαος ΕΠΑΓΓΕΛΜΑ: ΥΠΟ ΤΕΙ  
 ΕΤΟΣ ΓΕΝΝΗΣΗΣ: 1953 ΤΟΠΟΣ: Θεσ/νίκη  
 ΔΙΕΥΘΥΝΣΗ ΟΔΟΣ: Θαμίου Αριθμός: 46 Στοιχεία: Π.Θαμίου  
 Πόλη: Αθήνα Τ.Κ.: 11562 Τηλέφωνο: 9811964

ΕΧΕΤΕ ΚΑΡΤΑ ΕΒΕΛΟΝΤΗ ΑΙΜΟΔΟΤΗ  ΜΗ  ΟΧΙ

Ισχύει: Α.Μ. κάρτας αδειολογίας αρμόδιας  ΜΗ  ΟΧΙ

Ισχύει: Θέλετε να γίνει ΕΒΕΛΟΝΤΗΣ ΑΙΜΟΔΟΤΗΣ  ΜΗ  ΟΧΙ

ΟΝΟΜΑ ΛΕΒΗΝΟΥΣ για τον οποίο δίνετε αίμα: Δ. Σ. Τζαμπί, Λαυρέας  
 ΝΟΣΟΚΟΜΕΙΟ: Τζαμπί ΤΜΗΜΑ: Β.Ο.

ΣΥΝΑΦΟΣ ΕΒΕΛΟΝΤΩΝ: \_\_\_\_\_ ΕΛΕΥΘΕΡΟΣ ΕΒΕΛΟΝΤΗΣ: \_\_\_\_\_

ΠΑΡΑΚΑΛΟΥΜΕ ΑΣΙΑΝΤΗΤΕ ΣΤΟ ΕΡΓΟΣΤΗΜΑΤΟΛΟΓΙΟ ΤΗΣ ΠΕΡΙΣ ΣΕΛΩΔΑΣ

Β. ΣΤΟΙΧΕΙΑ ΙΑΤΡΙΚΗΣ ΕΞΕΤΑΣΗΣ (συμπληρώνεται από το Γιατρό)

Βάρος σώματος: \_\_\_\_\_ Α.Π. 120/85 Σπύρος: 78  
 ΗΜ 14.5 g/l Ht \_\_\_\_\_ Ht \_\_\_\_\_ HT \_\_\_\_\_

ΓΕΝΙΚΗ ΕΝΤΥΠΩΣΗ: av

Γ. ΕΛΕΓΧΟΣ ΜΟΝΟΚΩΣ ΑΜΑΤΟΣ (συμπληρώνεται από το Γιατρό/γιατρίνα)

ΟΜΑΔΑ Α Β Ο: 0 RHESUS: (+) ΘΑΝΟΤΥΠΟΣ: \_\_\_\_\_  
 ΗΒΑΔ: (-) ΗCV: (-) ΗIV 1-2: (-) ΗΤLV 1-2: (-) PR (VDR): (-)

**Important Forms**



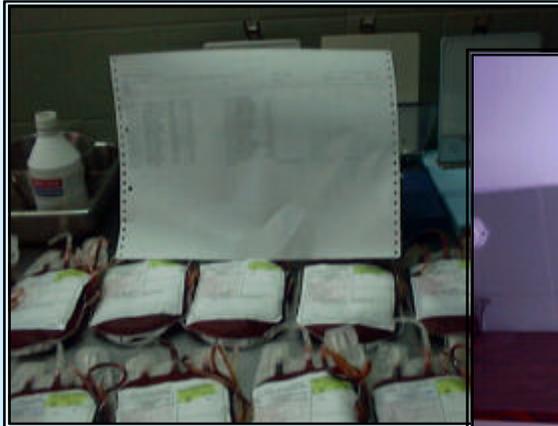
**Steps Description**



# In site Transfusion



# Blood Processing and Conservation



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*AMIA 2000, Los Angeles, CA*

# Blood Serology

Ομάδα **O**  
Rh αρνητικό  
ως προς CDE

ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ  
ΥΠΟΥΡΓΕΙΟ ΥΓΕΙΑΣ ΚΑΙ ΠΡΟΝΟΙΑΣ  
ΠΕΡΙΦΕΡΕΙΑΚΟ ΓΕΝΙΚΟ ΝΟΣΟΚΟΜΕΙΟ ΠΕΙΡΑΙΑ "ΤΖΑΝΕΙΟ"  
ΕΘΝΙΚΗ ΥΠΗΡΕΣΙΑ ΑΙΜΟΔΟΣΙΑΣ  
ΣΤΑΘΜΟΣ ΑΙΜΟΔΟΣΙΑΣ ΠΕΙΡΑΙΑ

Η μονάδα αίματος με αριθμό.....  
Ομάδας.....Rh  
βρέθηκε ΣΥΜΒΑΤΗ με το αίμα του αρρώστου  
ΕΠΩΝΥΜΟ:..... ΟΝΟΜΑ:  
ΟΝΟΜΑ ΠΑΤΡΟΣ:..... ΕΤΟΣ ΓΕΝΝ:  
ΟΜΑΔΑΣ:.....Rh  
της.....Κλάσης  
ΗΜΕΡΟΜΗΝΙΑ  
Ο ενεργήσας τις εξετάσεις (υπογρ.)

13314002

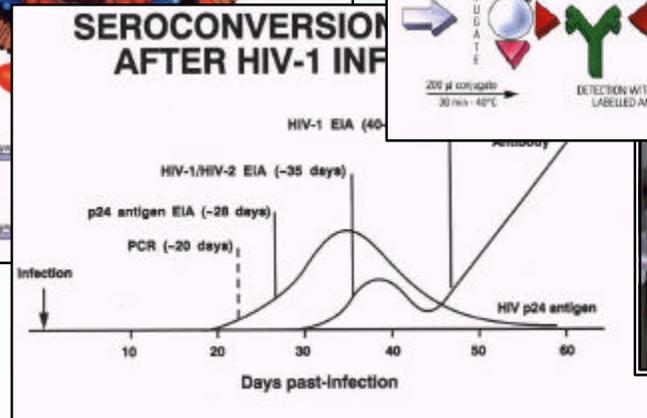
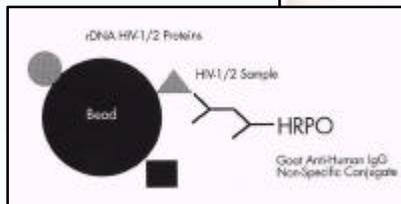
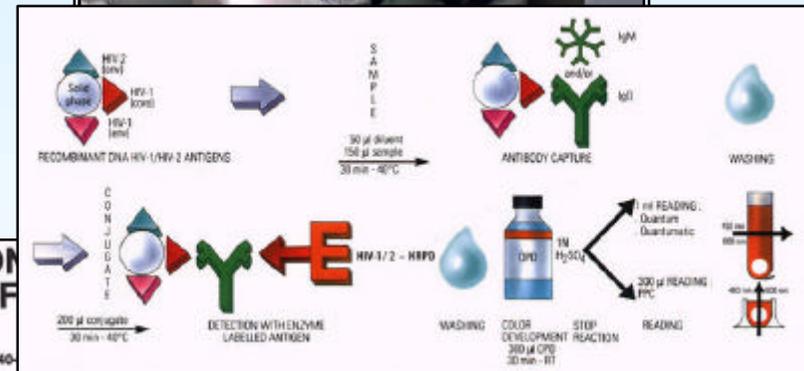
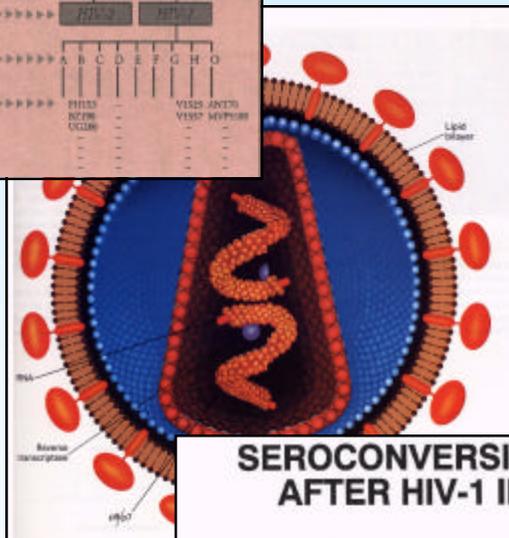
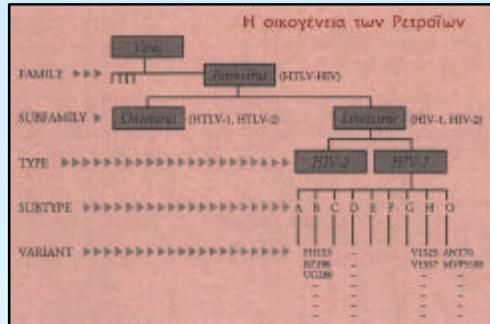
Ομάδα **A**  
Rh Θετικό



Ομάδα **AB**  
Rh αρνητικό  
ως προς CDE  
Όριο χρήσης  
13314013

Ομάδα **B**  
Rh Θετικό  
Όριο χρήσης  
13314008

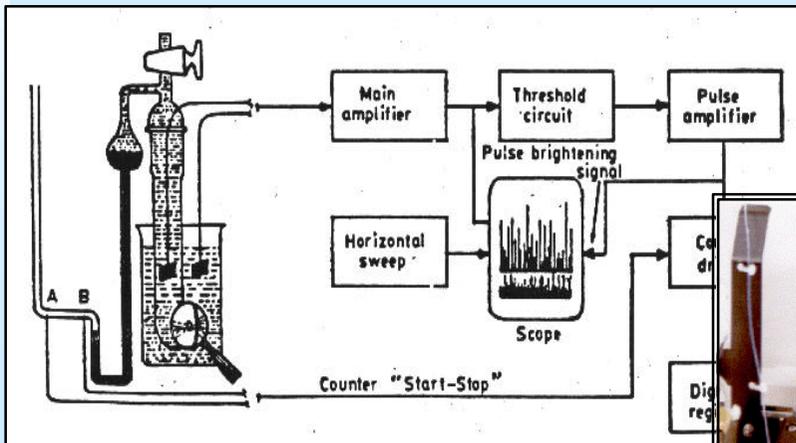
# Screening for Infectious Diseases



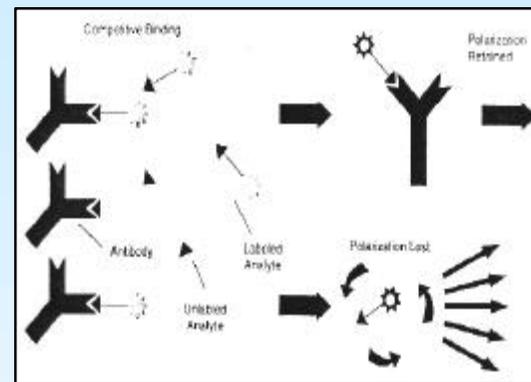
# Hematology Laboratory



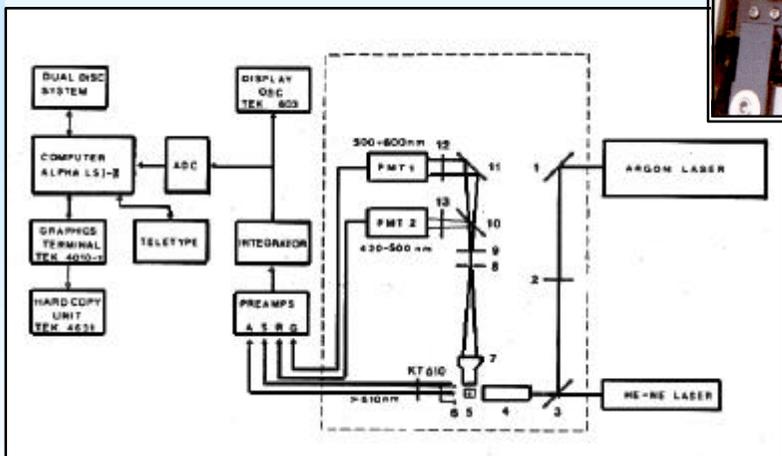
# Blood Bank and Haematology Equipment



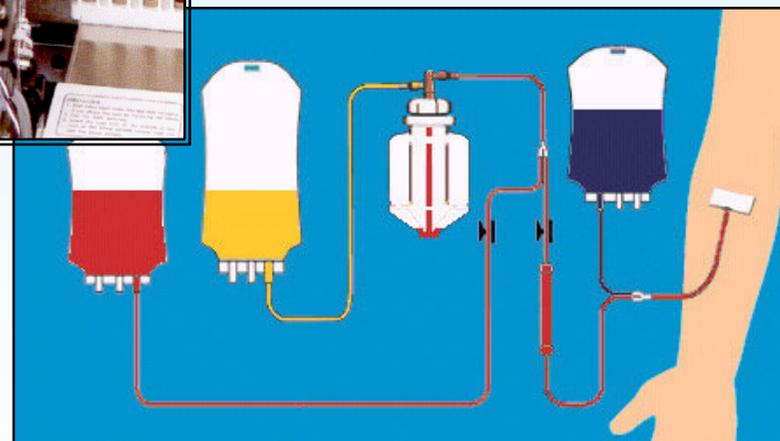
**Coulter Counter**



**Polarized Immunofluorescence**



**Flow Cytometry**



**Haemapheresis**

# Abnormal Hemoglobin Screening

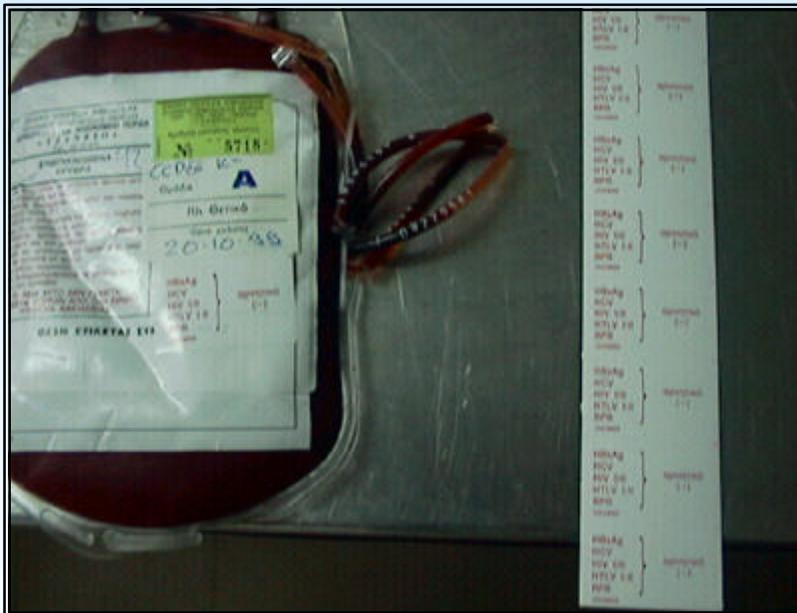


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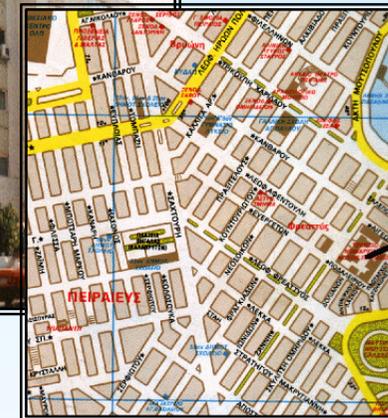
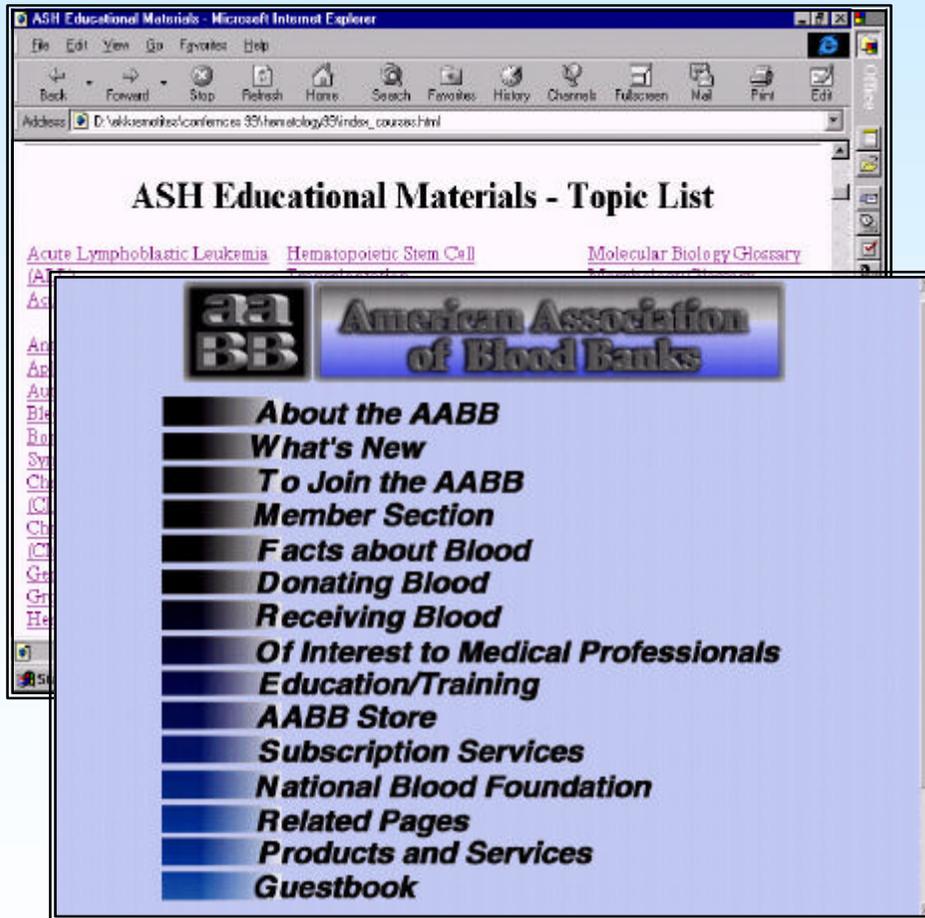
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# Quality Assurance, Patient Records and Statistics



# Other useful Information



**Information about other Hospital Departments and Clinics**



**Useful links to relevant Web Sites**

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## The structure of the system

- The developed information system is loaded on the Blood Bank Intranet, allowing easy access, even during the routine work of the personnel, if necessary.
- The system is composed in Greek and partially also in English language.
- Further, the system, is also located on a controlled-access Web-site, and, thus, allows for admittance to users from other Hospital Departments and from Blood Banks staff of different Hospitals.
- Finally, some additional related topics of general interest, are unconstrained accessible.

## Methodology

- The system provides a series of structured on-line courses, which concern educational needs deriving out of the material conditions, the implementation of methods and equipment, and the management of the infra-structure, in the elementary units of the “Tzaneion” Hospital Blood Bank.
- Common commercial formats are used for the text, graphics, audio and video components of the system, optimizing the accessibility of the system. Numerous references and links to specialized relevant sites are also provided.

## Hypertext and Multimedia courseware

- Hypertext and Multimedia courseware are gaining importance in University education.
- Transforming conventional lectures or textbook material into an electronic format, offers limited benefits.
- Thus, the structure and the content of a course should be changed in order to take advantage of the technology.
- HTML-based teaching tools interact both with teachers and students and they may influence our understanding of the scientific subject matter under consideration.

## Conclusions



- The developed system supports the trainee to perceive the subject matter under consideration.
- Further, it releases partially the trainers, and offers them more time to interact substantively with the individual junior colleague.