

- \* Latency period  
herpes virus
- \* relapsing fever  
Borrelia recurrentis
- \* Reed-sternberg cells  
Hodgkin Lymphoma
- \* epinephrine and norepinephrine metabolism  
vanillyl mandelic acid
- \* M:E ratio  
myeloid cell to erythroid cell
- \* undulant fever  
brucella
- \* antibody titer  
highest dilution of Ab still able to give positive result in test system
- \* Solid phase in ELISA  
specific Ab
- \* organism produce macro and micro conidia  
yeast
- \* carbon dioxide required  
primary isolation of S. pneumoniae
- \* diagnosis of ANA  
immunofluorescence
- \* diagnosis of HCV  
RIBA
- \* ethidium bromide  
stain for DNA electrophoresis
- \* Renal stone like coffin lid  
Mg phosphate
- \* pleomorphic virus  
doesn't change shape

- \* Metabolic acidosis  
diarrhea
- \* Metabolic alkalosis  
vomiting
- \* respiratory acidosis  
Low pH and high  $PCO_2$
- \* respiratory alkalosis  
high pH and low  $PCO_2$
- \* hyposegment neutrophils  
Pelger huet
- \* hypersegment neutrophils  
Megaloblasti
- \* acetyl Co A in glucose or citric cycle bind to  
oxaloacetate
- \* blank reagent used as  
zeroing instrument
- \* cystic fibrosis  
autosomal recessive
- \* Most important organ in buffering system  
Lung and kidney
- \* hypocalcemia  
Less than 7.5
- \* dermatophyte  
skin disease
- \* Larva cylindrical  
strongloid stercoralis
- \* scotch tap test  
enterobius vermicularis
- \* ammonia in brain  
chronic liver disease



- \* hypersensitivity type 1  
IgE
- \* acidic skin burn  
sodium bicarbonate powder
- \* Fisher race terminology  
describe Rh antigen
- \* auer rods cell  
azurophilic granular in AML
- \* RBCs storage for years by add  
glycerol
- \* precision  
random error
- \* accuracy  
systemic error
- \* sensitivity  
true positive
- \* specificity  
true false
- \* anticoagulant PT  
Na citrate
- \* hyperglycemic hormones  
glycogene
- \* hyperparathyroidism  
high level of Ca
- \* Fixation of thin blood film  
acid alcohol
- \* Dimeric Ab  
Ig A
- \* The storage time of saline adenine glucose mannitol  
(SAGA) is 42 days

- \* Albert stain  
corynebacteria diphtheria
- \* XLD media  
selective
- \* Lactobacilli isolated  
stool
- \* HLA antigen  
chromosome 6
- \* siderocyte are  
red cell contain iron granules
- \* osmotic fragility  
hereditary spherocytosis
- \* paroxysmal cold hemoglobinuria  
anti PAB
- \* hemophilia A  
VIII
- \* kidney function  
creatinin
- \* hypersensitivity and inflammation  
basophilis
- \* infective stage of taenia  
cysticercus
- \* parasite isolated from sputum  
paragonium watermani
- \* infective stage of fasciola  
metacercaria
- \* H-influenza grow  
chocolate agar
- \* Ig present in serum in high concentration  
IgG



- \* oxidase +ve  
pseudomonas, Neisseria, vibrio, hemophilus
- \* parasitic and allergic  
eosinophilia
- \* oriental sore  
Leishmania tropica
- \* pharyngitis  
S. pyogen
- \* optichin  
S. pneumonia
- \* hormone replication RBCs  
erythropoietin
- \* storage temperature of platelet  
22 - 27 °C
- \* vit D deficiency  
Rickets
- \* Differ Between anti I and anti i  
cord cell
- \* To detect hormone amount  
ELISA
- \* bile solubility  
S. pneumonia
- \* ASO  
up to 200 IU/ml
- \* Flask shape  
Giardia lamblia
- \* primary amebic  
Naegleria fowleri
- \* hemophilia  
x-linked recessive

- \* neonatal physiological jaundice  
normal jaundice
- \* trachoma  
chlamydia
- \* plague disease  
Yersinia pestis
- \* Bipolar staining  
Yersinia pestis
- \* green pigment and grape odor  
Pseudomonas aeruginosa
- \* acridine orange stain  
Fluorochrome stain
- \* TCBC  
vibrio cholerae
- \* uric acid  
gout disease
- \* infective stage of schistosoma  
cercaria
- \* Ig inflexible  
IgE
- \* B. coli  
Large intestine cili
- \* amino acid used in indole  
tryptophane
- \* granulocytic leukemia  
CML
- \* Kalazar  
Leishmania donovani
- \* prolonged fasting  
keton in urine



- \* philadelphia  
CML
- \* Mcfadyeen reaction  
bacillus anthracis
- \* wilsons disease  
copper excess
- \* ships wheel disease  
paracoccidiodomycosis
- \* salmonella first week culture in  
blood
- \* Landsteiner test  
to detect harmful Ab
- \* gram tube  
candidia
- \* Elek test  
corynebacteria diphtheria
- \* Pho x  
phagocytic oxidase enzyme
- \* differ btween ALL and AML  
auer rods cell
- \* Fungi  
eukaryotic
- \* amonia in brain  
chronic liver disease
- \* extracellular  
Na
- \* intracellular  
K
- \* complement present in serum in large amount  
C3

- \* CLED  
urine
- \* CA 15-3  
breast cancer
- \* alpha feto protein  
Liver cancer
- \* whooping cough  
bordetella
- \* Motile indole +ve  
E.coli
- \* rotavirus  
diarrhea
- \* Ca<sup>+</sup> & phosphate  
parathyroid hormone
- \* amyLase  
acute pancreatitis
- \* Estrogen  
stimulation contraction of uterus
- \* Gigantism  
hyper secretion of growth hormone in children
- \* Dwarfism  
hypo secretion of growth hormone in children
- \* Acromegaly  
hyper secretion of growth hormone in adult
- \* infection: mono nucleosis  
EBV
- \* adenovirus  
respiratory virus
- \* platelet in blood bank  
5 days



\* urine after 2 h  
reject

\* Leukemia in children  
ALL

\* india ink  
capsule

\* normally found in urine  
chlorid

\* ALT  
liver disease

\* (U) unit use to evaluation  
enzymatic activity

\* in pregnancy test we measure  
beta HCG

\* coombs test use for  
auto antibodies on surface RBCs

\* beta HCG result  
mIU/mL

\* positive nagler reaction  
clostridium perfringens

\* Naglar body  
herpes virus under microscope

\* progesterone  
essential during pregnancy

\* diagnosis of HCV  
RIBA

\* tissue culture  
virus

\* donate with skin lesions  
send to doctors

- \* organism produce mycelium  
Filamentous Fungi
- \* APO B 100  
LDL
- \* Fungi  
have 80 s ribosomes
- \* prolactin hormone  
milk secretion
- \* sample for diagnosis N.gonorrhoea  
From cervix
- \* Plasma contain  
Fibrinogen
- \* polycythemia vera  
erythrocytes increase despite decrease EPO
- \* downs syndrome  
trisomy 21
- \* bacitracin  
differ strepto group A from other
- \* syphilis  
T. palidium
- \* gastritis viral  
rotavirus
- \* prozone  
excess of Ab
- \* post zone  
excess of Ag
- \*  $LDH_1 < LDH_2$   
Flipped (MI)
- \* cushing syndrome  
↑ ACTH



\* negri bodies

eosinophilic (inclusion body Found in the cytoplasm of nerve cells)

\* heterophile antibody test

EBV (Epstein - Barr virus)

\* steatorrhea

Fat in stool

\* prion cause

creutzfeldt - Jakob disease (CJD)

(cause brain damage)

\* prion is

proteinacious infectious

\* turbidity measure by

nephelometer

\* bactericidal

substance kill bacteria

\* tumor marker for HIV

CD4

\* breast cancer

CA 15-3 , CA 27-29 , CA 125

\* hepatocellular carcinoma

alpha feto protein

\* B<sub>12</sub> deficiency

pernicious anemia

\* Folate and B<sub>12</sub> deficiency

Megaloblastic anemia

\* HBV vaccine

anti HBs +ve , anti HBC -ve

\* Aldosterone stimulation

Na and water reabsorption



- \* cystic fibrosis inheritance  
autosomal recessive
- \* cushing syndrome  
hypercortisolism
- \* pheochromocytoma  
tumor of medulla in adrenal gland  
(measuring catecholamines and metanephrines  
in plasma and 24-hour urine collection)
- \* bone  
osteon
- \* oxytocin hormone  
stimulate contraction of uterus
- \* Lancefield grouping  
Strepto spp
- \* Lactic acid bacteria  
Enterococcus
- \* endotoxin  
strong immune outer membrane of G-ve
- \* anti toxin  
antibody have ability to neutralize  
specific toxin
- \* RNA in protein synthesis  
tRNA
- \* Burkitt cell  
EBV (Epstein Barr Virus)
- \* calibrator sera  
primary STD
- \* calculating molarity  
$$\frac{\text{number of mole solute}}{\text{volume of solution (liter)}}$$



- \* serum contain  
Fibrin
- \* Flotation technique disadvantages  
Delay in examination can result in distortion  
Larvae and some fluke eggs do not concentrate  
Frequent checking of specific gravity
- \* gastroenteritis virus  
rotavirus
- \* E. coli diarrhea in children  
EPEC (enteropathogenic E. coli)
- \* Loa Loa collection specimen  
10 am - 2 pm
- \* stool specimen transport media  
cary blair
- \* multiple sclerosis in CSF associated with  
myelin cell
- \* bite cell  
seen in G6PD deficiency
- \* paroxysmal cold hemoglobin (PCH)  
cause by anti p antibody
- \* congenital dyserythropoietic anemia  
ineffective erythropoiesis  
(↑ unconjugated bilirubin)
- \* poliovirus diagnosis  
stool culture
- \* white piedra cause by  
Trichosporon beigeli
- \* diagnosis of superficial mycosis  
10% KOH + culture
- \* copper reduction test  
used to detect glucose in urine



- \* electrolyte measure by  
Flamphotometer and ion exchange
- \* glycolysis  
oxidation of glucose (in cytoplasm)
- \* gluconeogenesis  
synthesis of glucose from non CHO
- \* glycogenolysis  
breakdown of glycogen to glucose
- \* glycogenesis  
Formation of glycogen from glucose
- \* E. coli cause hemolytic uremic syndrome  
E. coli O157 : H7
- \* bacteria have low infectious dose  
shigella
- \* to prevent spreading of pathogen  
isolate pateint
- \* genetic alteration seen in  
toxoplasmosis and plasmodium
- \* H. pylori cause  
peptic ulcer
- \* Factor IX obtained from  
single donor plasma
- \* Ketogenic amino acid  
Leucine - lysine
- \* PCR copies in first cycle  
4. copies
- \* PCR copies in one cycle  
2 copies
- \* shigella in maconkey  
colorless



\* shigella in xLD

pink

\* entero test

giardia

\* B. coli

Large intestine

\* rice watery diarrhea

vibrio

\* sensitivity virus test for

envelope

\* Legionnaires disease

Legionella pneumophila

\* Ig associated with viral infection

IgM

\* pancreatic

C19-9

\* Normal Flora in vagina

Lactobacilli

\* gonadotropin

FSH - LH

\* gonadotropin

polypeptide hormone

\* measles

MMR vaccine

\* ovarian

CA 125

\* strong urease +ve

proteus

\* trachoma

chlamydia trachomatis

\* shigella in macconkey  
colorless

\* primary hyperthyroidism  
 $\uparrow T_3$   $\uparrow TT_4$  &  $FT_4$   $\downarrow TSH$  &  $TRH$

\* secondary hyperthyroidism  
 $\uparrow T_3$   $\uparrow TT_4$  &  $FT_4$  normal  $TSH$  &  $TRH$

\* primary hypothyroidism  
 $\downarrow T_3$   $\downarrow TT_4$  &  $FT_4$   $\uparrow TSH$  &  $TRH$

\* secondary hypothyroidism  
 $\downarrow T_3$   $\downarrow TT_4$  &  $FT_4$  normal  $TSH$  &  $TRH$

\* ALT (alanine transaminase)  
specific for liver

\* AST (aspartate transaminase)  
liver and heart

\* ALP (alanine phosphatase)  
specific for bile duct also increase in liver and bone

GGT  $\Rightarrow$  liver cirrhosis

\* Complement Fixation (+ve)  
No hemolysis

\* Complement Fixation (-ve)  
hemolysis

\* ASO test (+ve)  
agglutination

\* ASO test (-ve)  
No agglutination

\*  $R_1 R_1$   
CDe  
+++

\*  $R_2 R_2$   
EDc  
+++



- \* identification of E.V  
recovery egg in perianal skin
- \* whooping cough  
Bordetella pertussis
- \* border gongour media  
Bordetella
- \* citrate test +ve  
Salmonella
- \* atherosclerosis  
cardiovascular disease  
( $\uparrow$  LDL,  $\downarrow$  HDL) (LDL:HDL ratio more than 3=1)
- \* scalded skin syndrome  
S. aureus
- \* cellular immunity  
T. lymphocyte
- \* AST / sGOT  
liver and heart
- \* ALT / sGPT  
liver
- \* influenza virus antigen  
hemagglutinin and neuraminidase
- \* microfilaria  
diagnostic stage
- \* Mannose-binding lectin  
lectin pathway
- \* thrombus in myocardial infraction  
angina
- \* non glucose ferment  
shigella, pseudomonas
- \* antibiotic inhibit RNA synthesis  
rifampicin

- \* antibiotic inhibit protein synthesis  
aminoglycosides
- \* mycology  
study of fungi
- \* Fungi  
80 S ribosom - eukaryotic
- \* dimorphic fungi  
yeast and mold
- \* yeast  
round and ovale, unicellular, asexual
- \* mold  
produce hypha, multicellular
- \* culture media  
SDA, BHA
- \* gram tube  
Candida
- \* capsule  
Cryptococcus neoform
- \* ringworm  
dermatophytosis
- \* superficial mycosis  
tinea
- \* cutaneous mycosis  
Microsporum, Trichophyton and epidermophyton
- \* systemic mycosis due to primary pathogens  
Candida
- \* systemic mycosis due to opportunistic pathogens  
Candidiasis, cryptococcosis and aspergillois
- \* absent of eukaryotic  
mesosome



- sedimentation  
center fuge
- Ig Found in allergic infection  
IgE or IgG
- high ACTH or hypercortisol  
cushing syndrome
- common cell abundant in blood smear  
RBCs
- megaloblastic anemia  
B12 and Folate deficiency
- heterophil Ab  
EBV
- systemic lupus erythromyctosis (SLE)  
ANA (antinuclear antibody)
- Albert stain  
coryobacteria diphtheria
- Media of Fungi  
sabroud dextrose agar (SDA)
- candida albican stain by  
Gram stain (blue color)
- candida albican growth in  
sabroud dextrose agar (SDA)
- vi for  
capsule
- other group different from GBS  
CAMP test
- different S. pneumonia from other  
bile solubility and optichin disk
- Granulocyte  
CML

- Cardiac enzyme  
CK mb
- analytical error  
calibration
- microbiological sample after 2 hrs  
reject
- Ascars lumbercoid infective stage  
embryonated egg
- vibrio cholera in TCBS  
yellow colony
- media inhibitor antibiotic called
- hashimtus disease  
 $\downarrow T_3 \downarrow T_4, \uparrow TSH$
- PCR steps  
denaturation - annealing - extension
- denaturation temperature  
 $94 - 96^\circ C$
- coffin lid  
Mg phosphate
- cylindrical larvae  
strongloid stercularis
- lipid associated atherosclerosis  
LDL
- UTI colony by loop measure  
0.001
- protein increase and glucose normal  
viral meningitis
- PCV divided by RBCs  
MCV



- universal donor

group O negative

- absent in eukaryotic  
mesosome

- small virus

picorna virus

- causes of keton

Long Fast and prolonged starvation

- Not found in parasitic infection  
lymphocyte

- hormone causes glucose urea  
glycogen

- DAT

sensitized RBCs in patient blood (invivo)

- IDA

sensitized antibody in patient serum (invitro)

- smudge cell

prevent contact two slide or pressure 2 slide

- cause of IDA

serum ferritin

- mRNA to DNA

RT reverse transcriptase

- cutaneous mycosis

dermatophyte

- CPD preservative blood for  
21 days

- syphilis causes by  
T. pallidum

- RPR test for  
syphilis

- DNA storage in DNA bank
- Ig the resently w̄ viral Ig M
- Ig the resently w̄ worm Ig G
- Heinz body nuclear remant
- Rh antigen 5 Rh DEeCc
- mold produce hyphae
- amoebic dysentery E. histolytica
- different blw manu and automated prepration of sample
- Low in all blood pancytopenia
- RBCs break down in RES ⇒ spleen
- Life span of RBCs 90-120 days
- Oocyst in Found Feaces Toxoplasma
- indian ink stain use for capsule
- Type of water. use in Lab Type II
- sedimentation use Formal either



- post analytic error

preparation of result or report

- Taq polymerase use

PCR

- which contain capsule

*Cryptococcus neoformans*

- which decrease absorption of iron

TIBC

- blood group that is Ag is secreted from tissue and absorb to RBCs and not synthesis by the RBCs

Lewis

- septicemia cause by

*Clostridium perfringens*

- Elek test

*Corynebacteria diphtheria*

- crystal violet in macconkey

inhibit gram +ve enterococci

- kalaazar causes by

*Leishmania donovani*

- oriental sore causes by

*Leishmania tropica*

- Löffler test for

*Corynebacteria diphtheria*

- cystic fibrosis inheritance

autosomal recessive

- blood media

enrichment and differential media

- important hormone for water balance

ADH

- harmful cholesterol carrier on

LDL

- Most extracellular iron  
serum iron
- change  $72^{\circ}\text{F}$  to  $^{\circ}\text{C}$   
 $22^{\circ}\text{C}$
- phenyle alanin aspirate and argnin letter  
PDR
- hypothyrodism  
 $\downarrow$  Total  $\text{T}_4$  and  $\downarrow$  Free  $\text{T}_4$
- pateint B-hemolytic Gram +ve cocci culster  
resist penicillin and oxacillin what antibiotic take  
erythromycin
- Latency virus  
herps
- respiratory syncytical virus (RSV) effect causes  
branchatit's in young infant
- pateint hypoglycemia and high insulin  
insulinemia
- second structure of protein  
alpha helix
- Trisomy 21  
down syndrome
- croup disease cause by  
parainfluenza virus
- parasite causes abcess in liver  
E. histolytica
- measure the pH by  
pH meter
- Following test we doing in emergancy case except  
albumin
- turbidity measure by  
Nephelometric



- color of tube use of sugar analysis  
green
- test effect by slight hemolysis  
potassium
- erythropoietin secreted from  
kidney
- Function of estrogen  
increase Oogenesis
- increase thalassemia  
HbF
- different between salmonella and shigella  
Motility
- Largest cell in blood film  
monocyte
- different between plasma and serum  
Fibrinogen
- AML different from all leukemia  
auer rod
- The (U) unit use to evaluated  
enzymatic activity
- media use antibiotic sensitivity  
muellen Hinton
- amoebia stain by  
iodine eosin stain
- infective stage of hook worm  
Larvae
- Factor of hemophilia A  
F VIII
- Factor of hemophilia B  
F IX

- Lamb in Flow cytometer  
tengistine or halogen

- Lamb in spectrophotometer  
Laser

- monospot test is done to diagnosis  
infectious mononucleosis

- enzymes detect liver and cardiac disease  
AST

- length PCR primer must not exceed  
30 bp

- enzymes detect liver and bone disease  
ALP

- picture under flurcent for diagnosis under microscope

- anticoagulant of PT  
sodium citrate

- different b/w sickle ~~cell~~ minor and sickle major

- normal range of uric acid  
3-7 mg/dL

- virus causes nasopharyngeal carcinoma burkette  
lymphoma  
EBV

- HIV intersty of AIDS disease lymphocytosis  
reduced to  
200

- characterized condition causes by accumiluton  
eye lens  
galactose

- MCV elevated in all except  
IDA



- albuminism
  - Thyrosinase defect
- PCR prob length
  - 20-200
- main enzymes carbohydrate
  - amylase
- E. coli
  - peritrichous
- different E. coli VTEC from other
- main enzymes sensitive to alcohol
  - GGT
- meningitis predominant in adult
  - S. pneumoniae, N. meningitidis, E. coli
- Bacteria meningitis cause food poisoning
  - Listeria monocytogenes
- glycoprotein hormone secreted from
  - anterior pituitary gland
- smudge cell
  - CLL
- Trachoma cause by
  - Chlamydia
- different between staph and strepto
  - catalase
- septicemia and gas gangrene cause by
  - Clostridium perfringens
- candida albicans
  - germ tube
- Reed-Sternberg cell
  - Hodgkin disease

- Normal in urine  
chlorid
- hydate cyst  
E. granulosis
- Fungi  
80 S ribosome
- nematode come from uncooked meat  
T. spiralis
- virus like sand  
arena virus
- martin bell syndrome  
genetic syndrom x chromosome
- Yellow colonies S. aureus in MSA due to  
manitol fermentation
- Mycobacterium  
ZN stain and AFB
- Sample send to Lab immediatly  
C.S.F
- Female sex hormone  
estrogen
- Genetic study  
Hereditary
- T. vaginalis easy to detect  
wet preparation
- cause wound infection  
S. aureus
- Fishy a pour cause by  
proteus
- CPDA storage for  
35 days



- amount of blood entry kidney per day

1200 - 1500

- patient from accident come hospital when sever injury  
take whole blood

- For measure electrode  
iron selective electrode

- Dionization of water  
exchange of protons and electrons

- Duke method bleeding time  
2 - 5 min

- Facultative anaerobic bacteria  
all bacteria facultative anaerobic except (pseudomonas, mycobacteria, brucella)

- the pair pyrimidine  
in DNA ... T & C / in RNA ... U & C

- metabolic acidosis  
diarrhoea

- metabolic alkalosis  
vomiting

- FSH & LH are ..... hormone  
gonadotropin

- during circulation Fatigue body depend on which energy  
anaerobic glycolysis

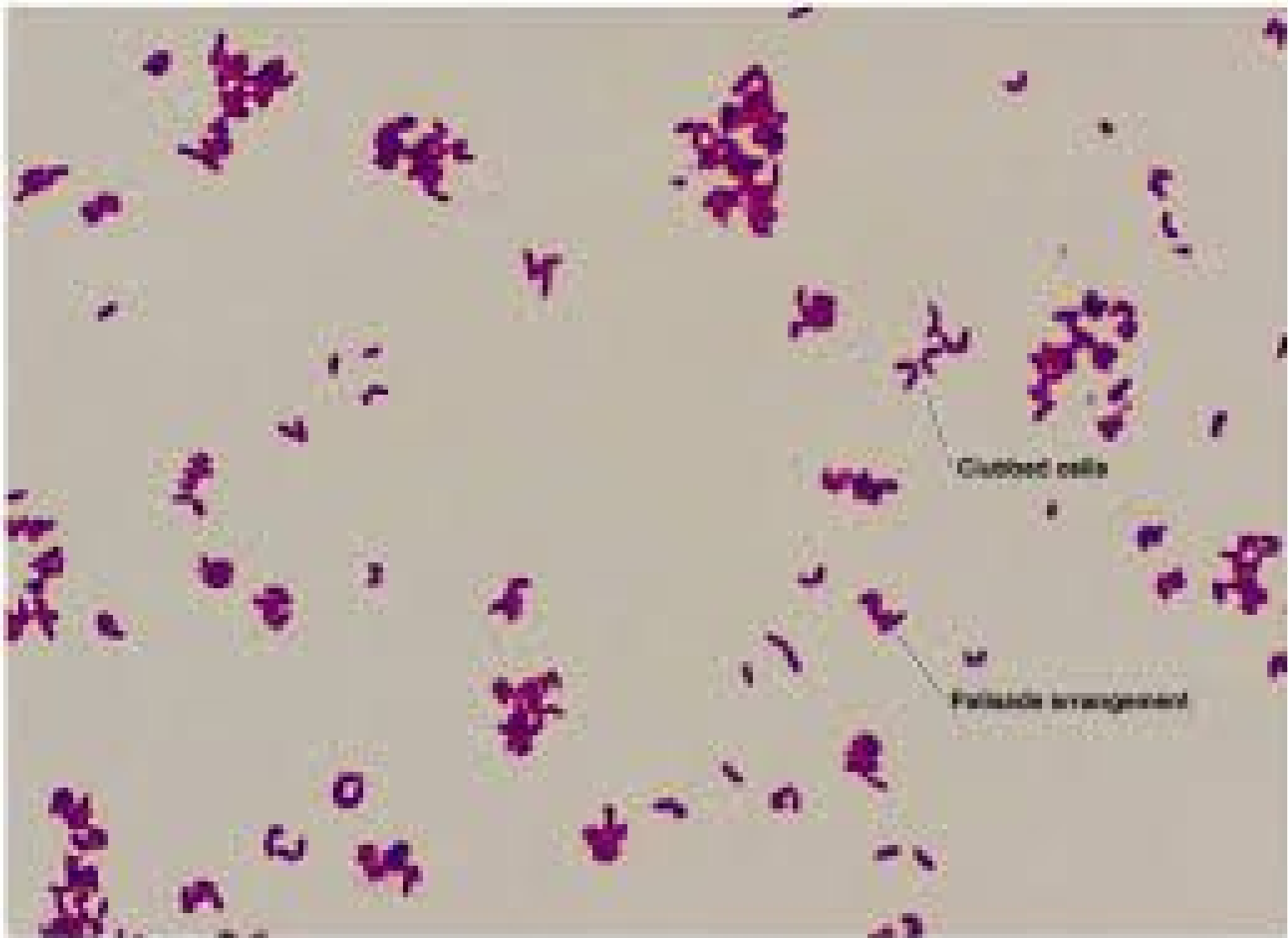
- parasite infection  
eosinophil

-  $\begin{matrix} \cup & \cup & \cup & \cup & \cup & \cup \\ A & B & AB & A_2 & B & AB \end{matrix}$

A<sub>2</sub>B

- 

Acell	Bcell	AB cell	antiA	antiB	antiAB
+1	+4	-ve	+4	+4	+ve



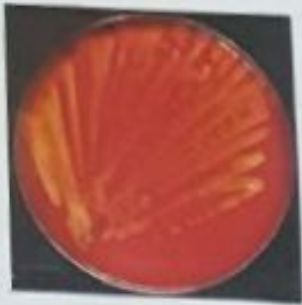
Copyright © 2004 Pearson Education, Inc. Publishing as Benjamin Cummings.



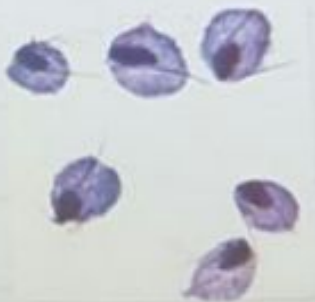
**Paleta**<sup>®</sup>  
Clopidogrel

- B-hemolytic  $\Rightarrow$  Pyogen.

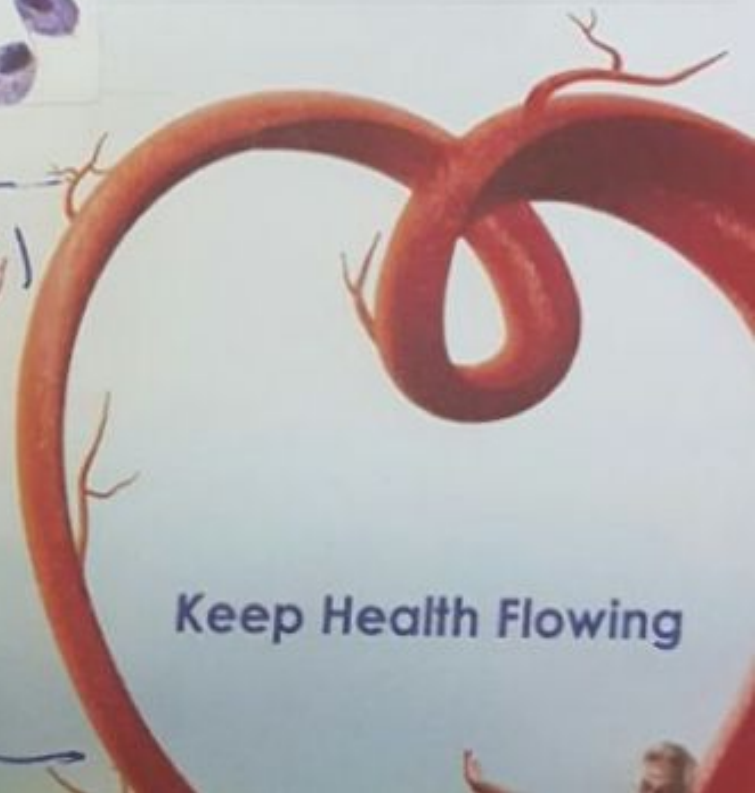
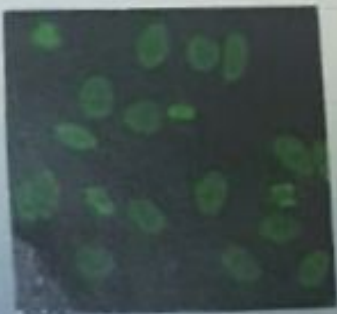
- بدمية اليتا هيوليتيك



- Trichomonas vaginalis. (T.V)

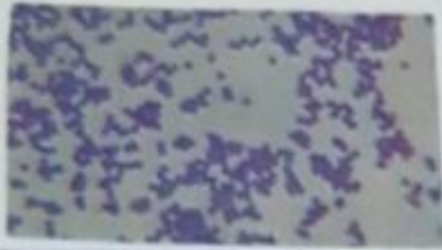


- ANA (Antinuclear Antibody)



Keep Health Flowing

- cocci cluster? staph



staph  
R1110

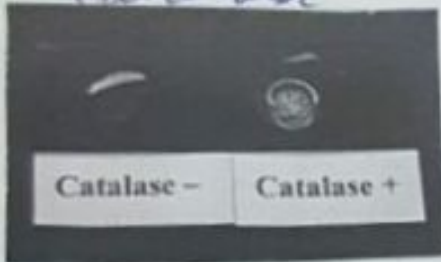
- blood agar, catalase +ve, coagulase +ve

⇒ S. aureus

catalase

coagulase tube

staph  
blood  
agar



دا shaker فقد القزاز له لينة يكونوا

يسحبوا الدم من يتبع  
بهرت الدم مع anticoagulant

ولمعة يوصل 450 mL

يوقف .

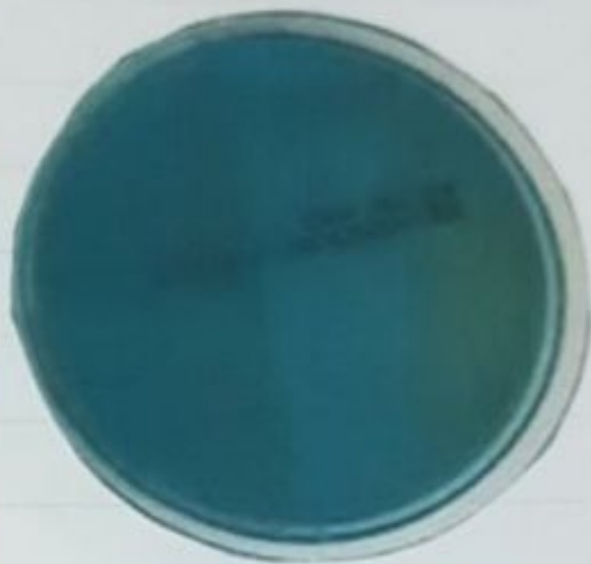
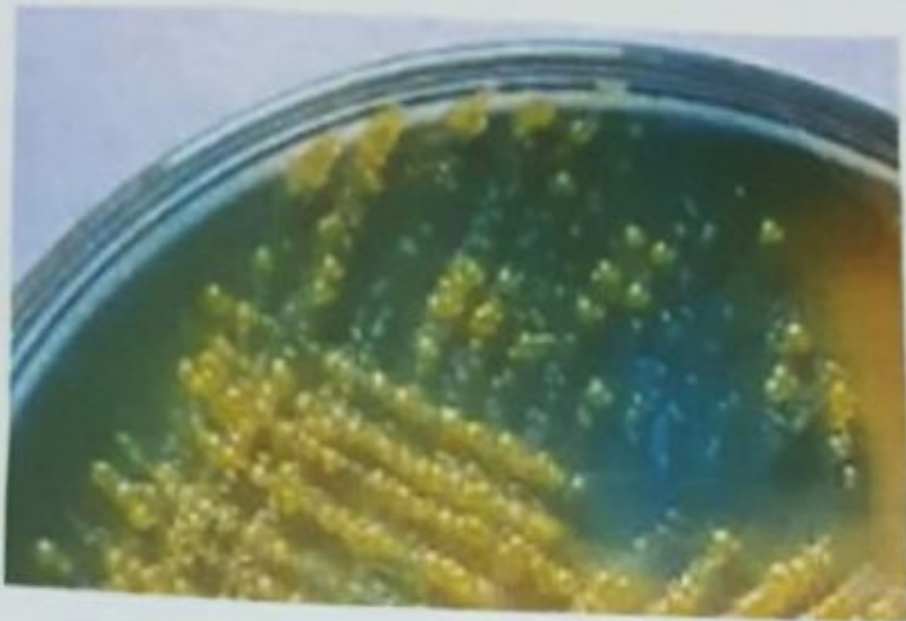


Keep Health Flowing

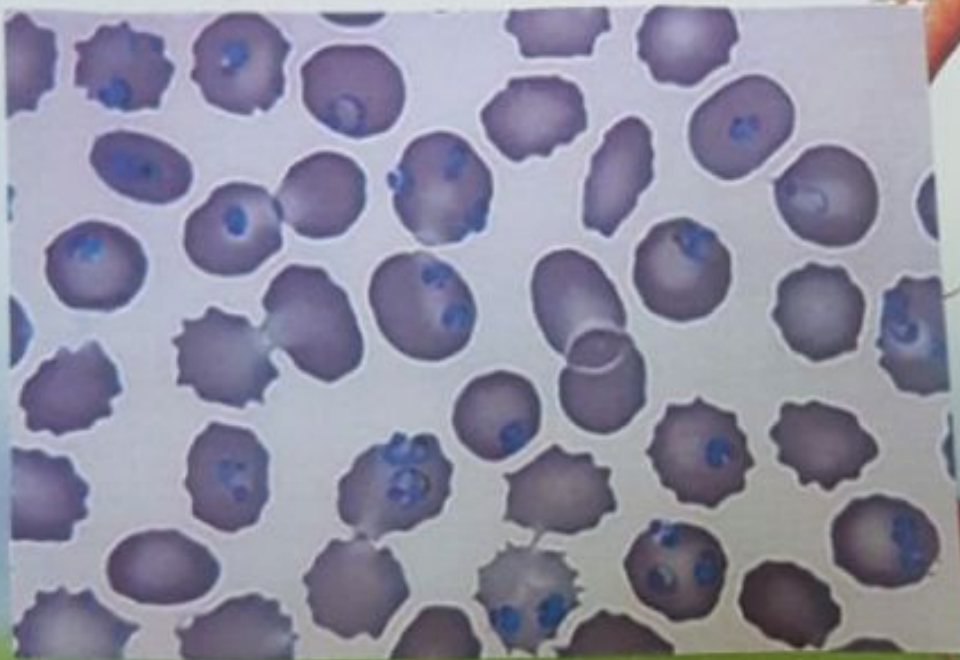


**Plavix**  
Clopidogrel

- CLED agar



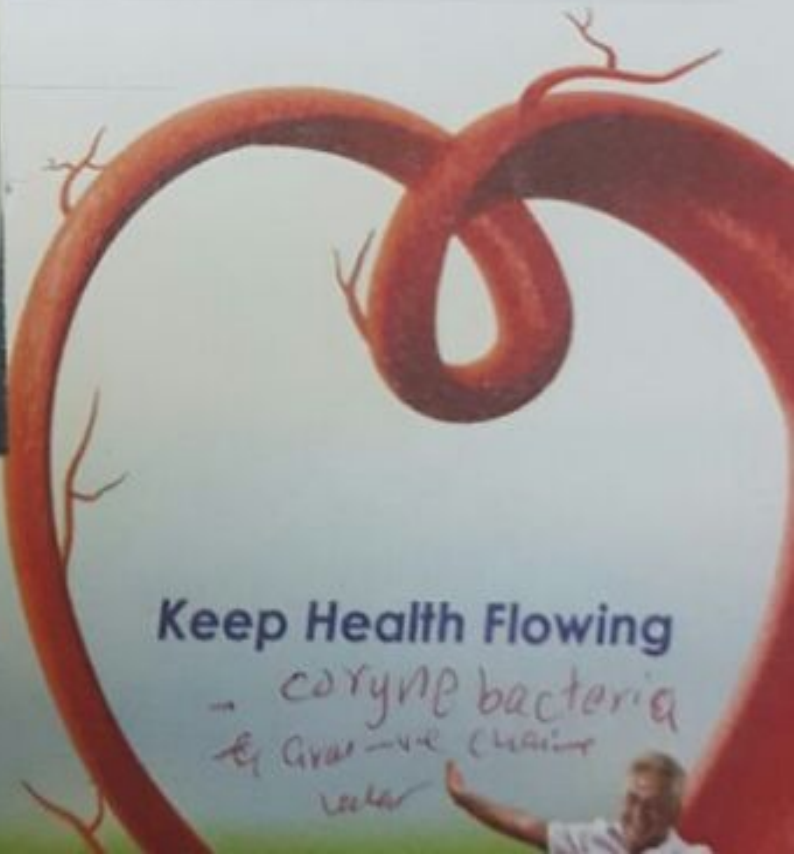
- Ring stage Babesia



**Paleta**<sup>®</sup>  
Clopidogrel



**SAFETY PRACTICES**





Clopidogrel

- pic. of C. diphtheria under microscope, what the organism?



- Bacillus or collestnelium.



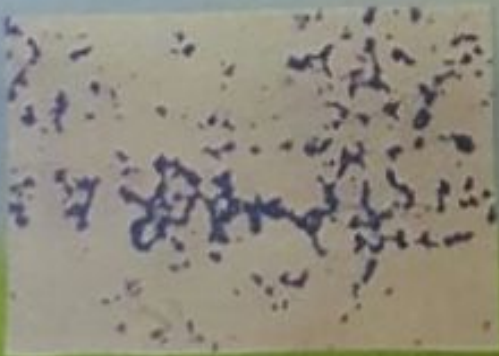
collestnelium



Bacillus



- G+ve cocci



Keep Health Flowing



Clopidogrel

- gravis · (Tenia)



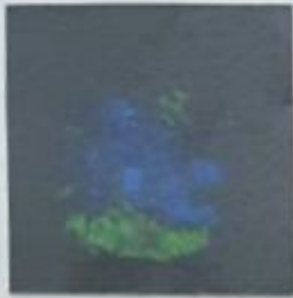
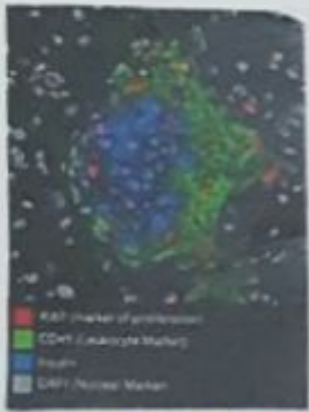
Taenia solium gravid segment



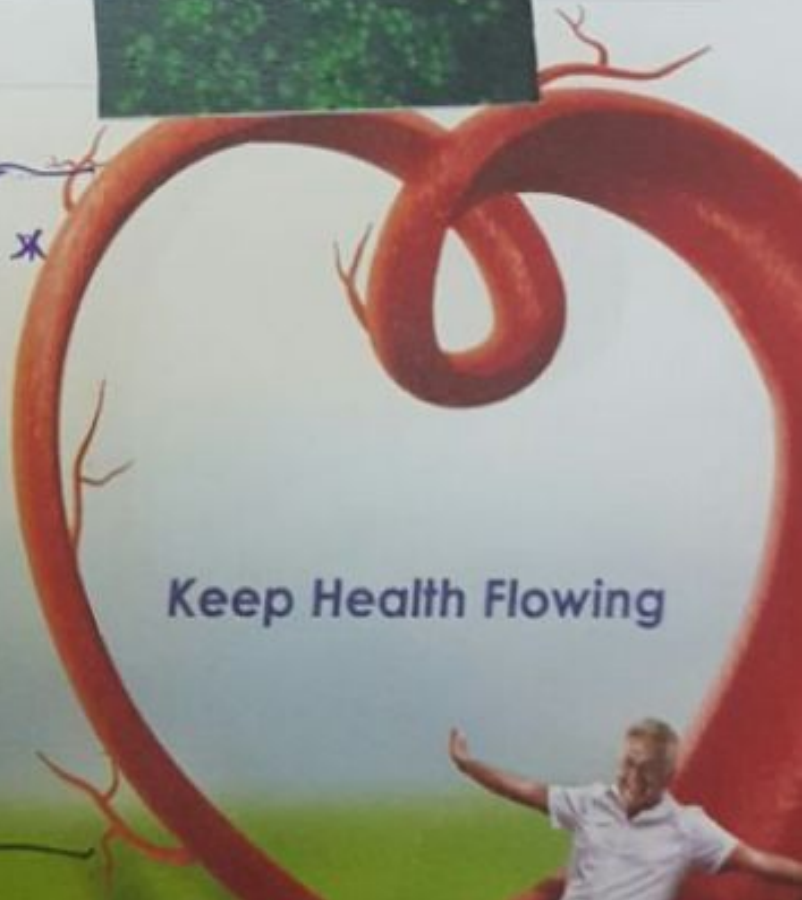
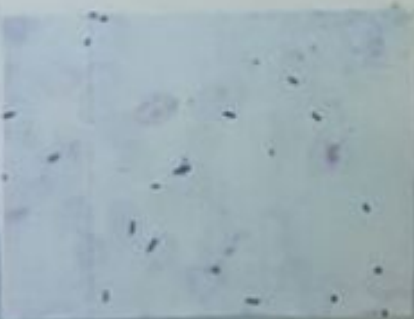
Taenia Gravid Proglottid



- picture of immune fluorescence?



- picture about G+ve diplococci? Nisseria

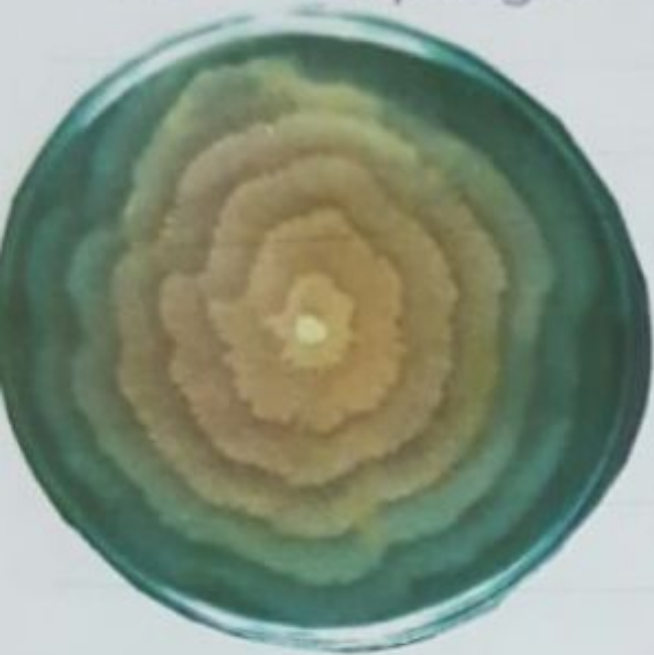


Keep Health Flowing



Clonidogrel

→ swarming media, proteus



Klebsiella

Proteus



Keep Health Flowing

Clopidogrel

- ptc - of MacConky from urian sample  
indole +ve  $\Rightarrow$  E-Coli



• • • Setup of Urine Culture

- Setup
- 1 Selective agar: MacConkey
- 1 Nonselective agar: Blood
- OR B-Plate



urine culture in MacConky.

Indole positive • Ecoli

- A Rh positive



- Ca<sup>+</sup> oxalate.



Keep Health Flowing



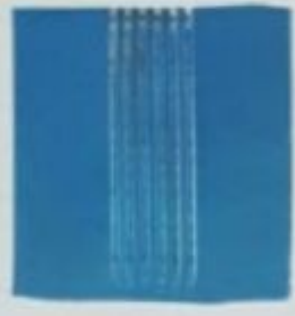


**Paleta**

Clopidogrel

ملاقطه / الاقنية نفس الشبر

- mouth pipette and mohr pipette



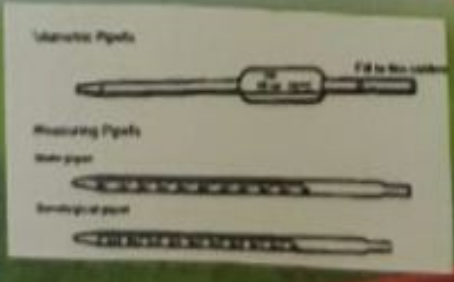
- picture micro pipette?



- Automated pipette:



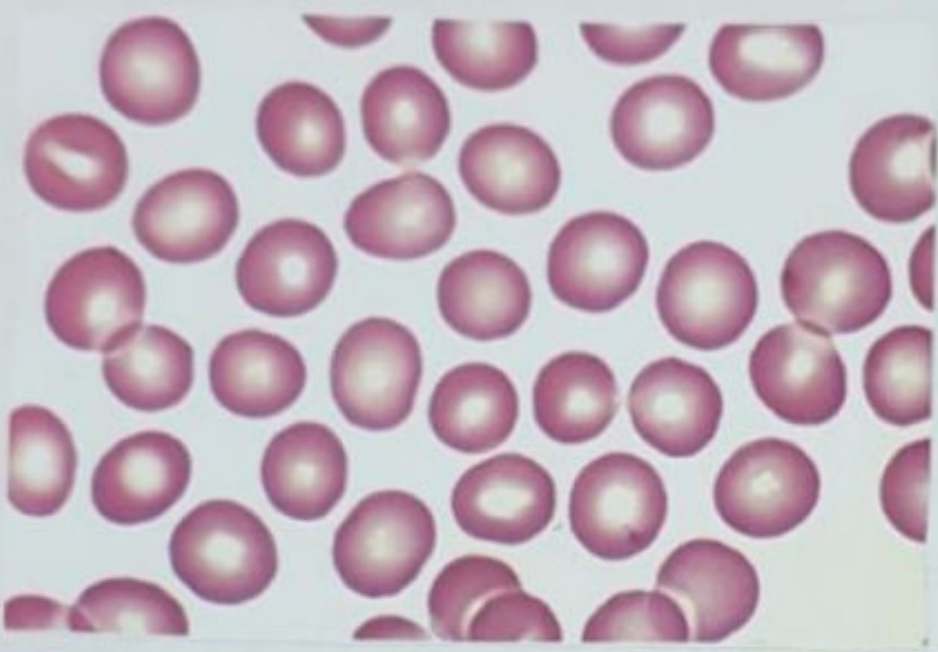
- Volumetric pipette



Keep Health Flowing

**Paleta**<sup>®</sup>  
Clopidogrel

- Blood film? (normal)  
blood film.



- type of candida?

