

purpose of MicroBio - ID

Identification of
Causative microorganisms
in a sample.

AST After ID we have to

give Antimicrobial
susceptibility pattern

This is found by
AST.

(Antimicrobial susceptib.
Testing).

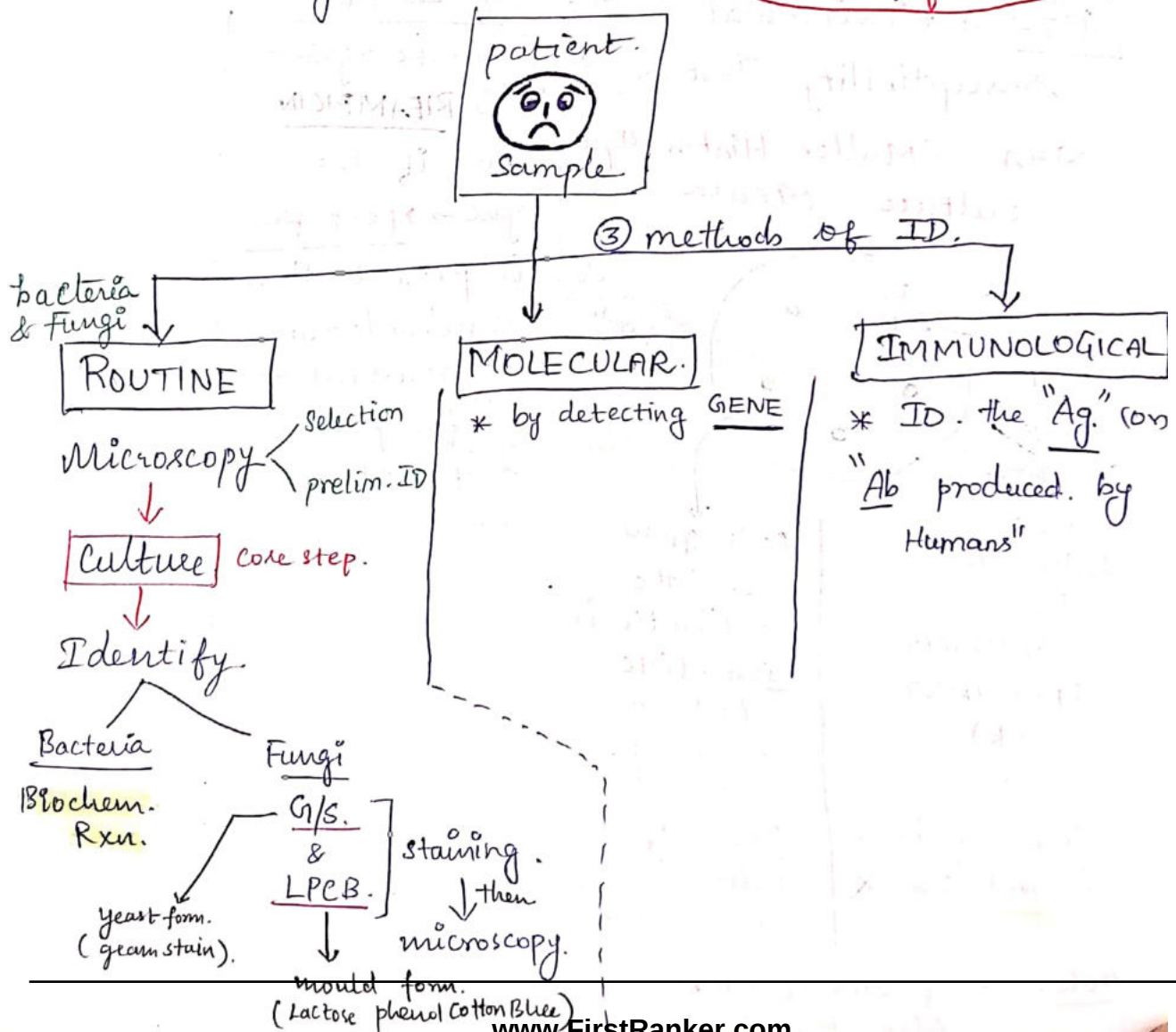
Why microscopy
done before culture?

* Microscopy aids in
SELECTION OF CULTURE media

* if virus/parasites ID
then culture is v. diff.
so not used.

* microscopy helps in ID
of Preliminary Identif.
of organism

Gold std.
↓
Routine method
of ID.



Routine

microscopy.

↓
culture.

↓
ID.

Bacteria

↓
Biochem rxn

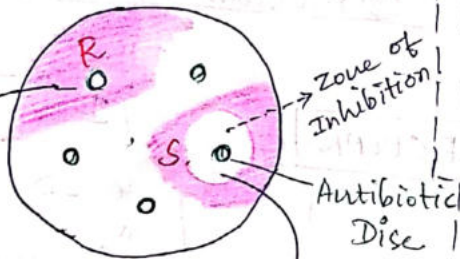
Fungi.

↓
mould
↓
LPCB.

yeast
↓
g/s

AST Antimicrobial
Susceptibility Test.

MHA - Muller Hinton Agar
Culture media



can grow
around
Antibiotic
↓
so Antibiotic
RESISTANT (R)

↓
Zone of inhibn
is Not seen X

can't grow
so the
Antibiotic is
Sensitive (S) (or
Working
↓
Zone of
inhibition
is seen ✓

Note size of zone of inhibn is
also important

Molecular
(Gene)

↓
AST

* Bacteria like
Mycobacterium are
difficult to grow
in culture. So..
this method is...

↓
**ID the Antibiotic
Resistant "GENE"**

For Mycobacterium.
the CORE ANTIBIOTIC
which works against
it is RIFAMPICIN

Now if the
gene → rpo-B gene
is present then
Mycobacterium
is resistant to
Rifampacin.
& if not----

Immunologic

↓
AST X

For ID
③ methods
but for AST
only ②
methods!

have attained the power
to Resist Antibiotics?

Refer - GENETICS.

Topics to be learnt

- ① Scientists
- ② Sterilizatⁿ & ID
- ③ Morphology & Growth
of Bacteria
- ④ Microscopy
- ⑤ Culture.
- ⑥ Biochem Tests.
- ⑦ Molecular method of
ID.
- ⑧ AST.
- ⑨ Genetics.

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