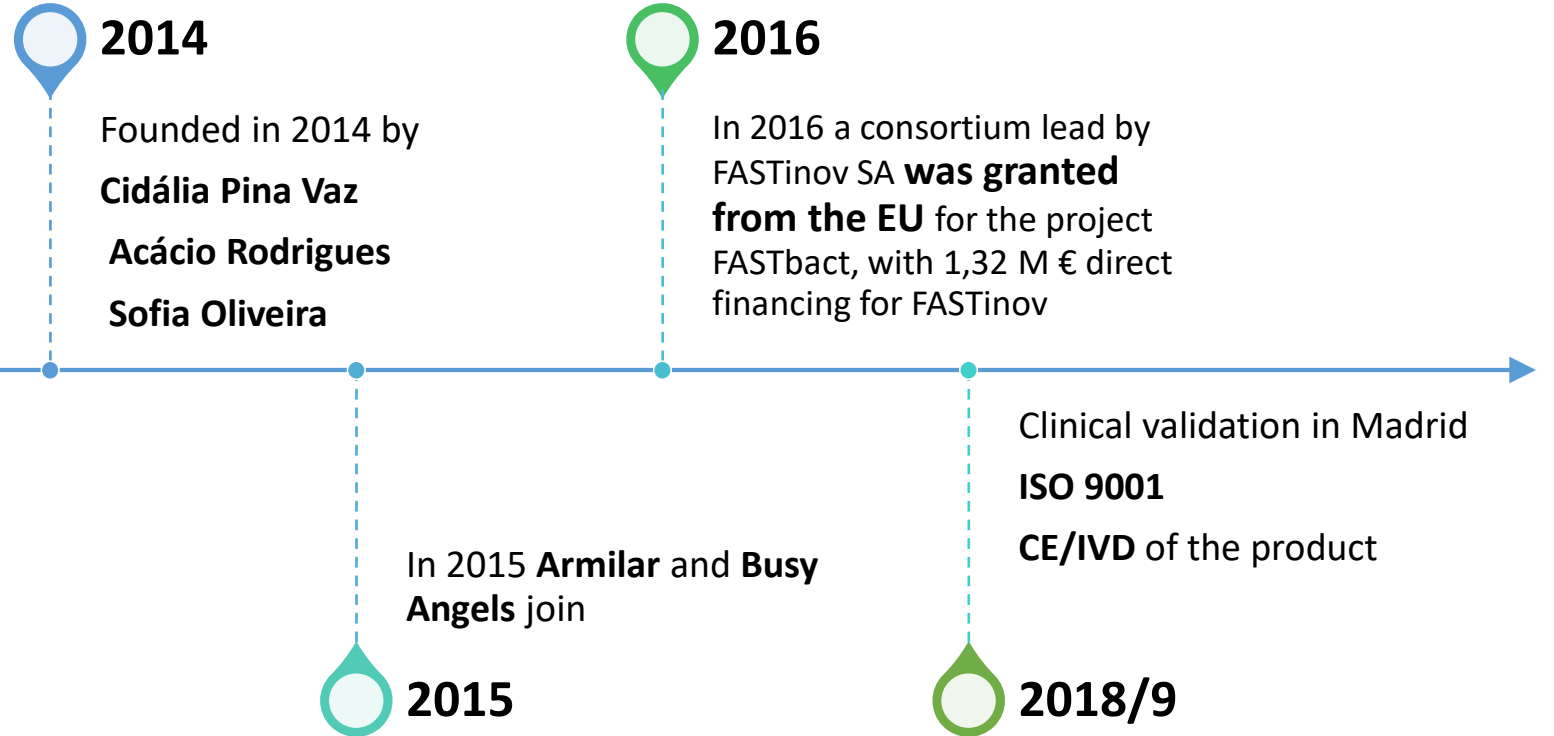




Short BIO of
FASTinov SA

UP Spin off



Antimicrobial resistance a growing concern



"Resistance to antimicrobial drugs:
one of the top global threats to human health and well being"

World Health Organization

"AMR is an increasingly serious threat to
global public health"

"Patients with MDR are associated with higher
medical costs, morbidity and mortality"

"Antibiotic-resistant infections currently claim for
700,000 lives per year in the world"

We need new drugs but also new and faster AST



Nowadays... with sub-culture step



Culture

BACTEC Result

Positive



Gram staining



ID



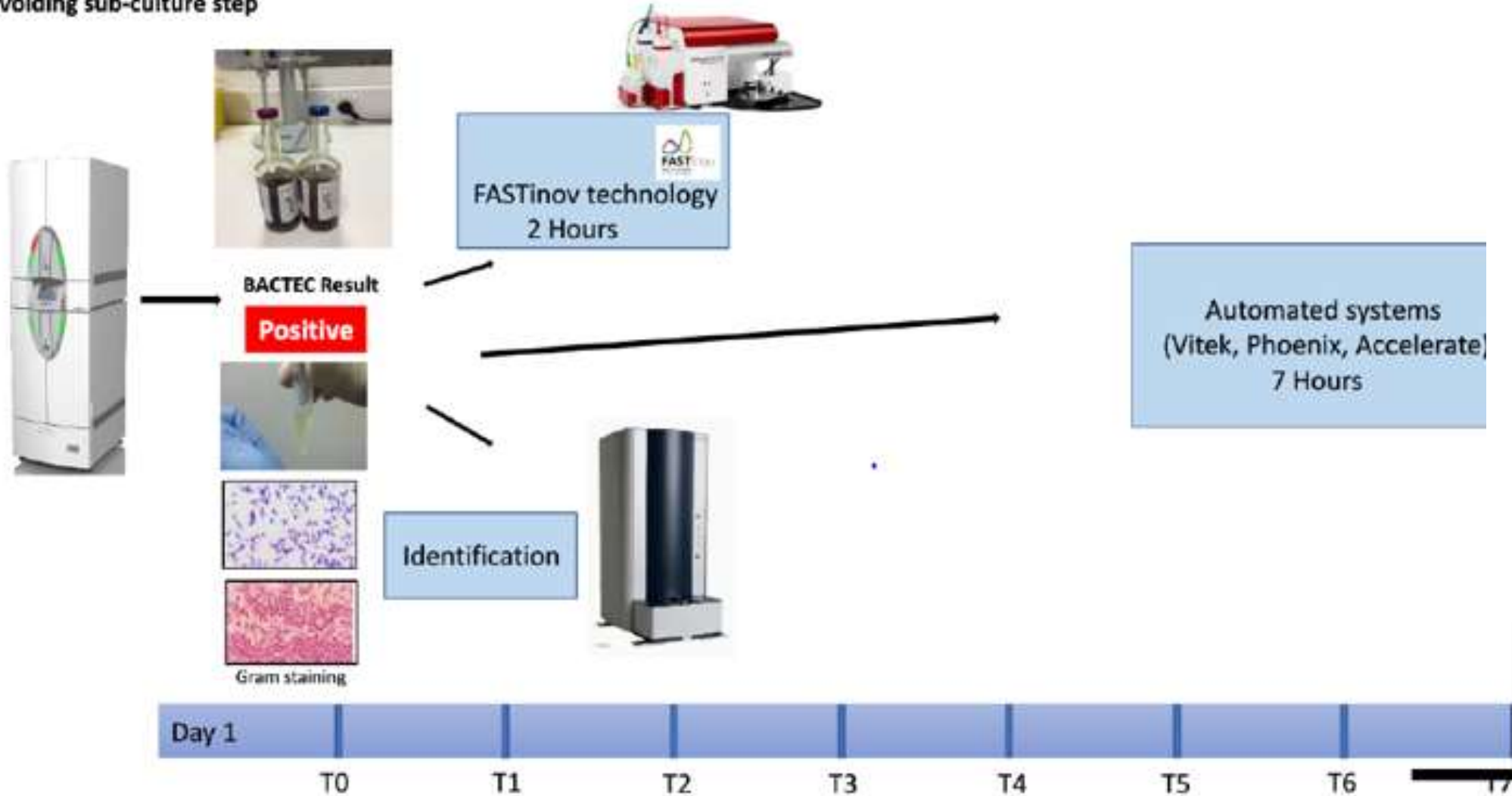
AST

Day 1

Day 2

Day 3

Avoiding sub-culture step



BACTEC Result
Positive



Gram staining

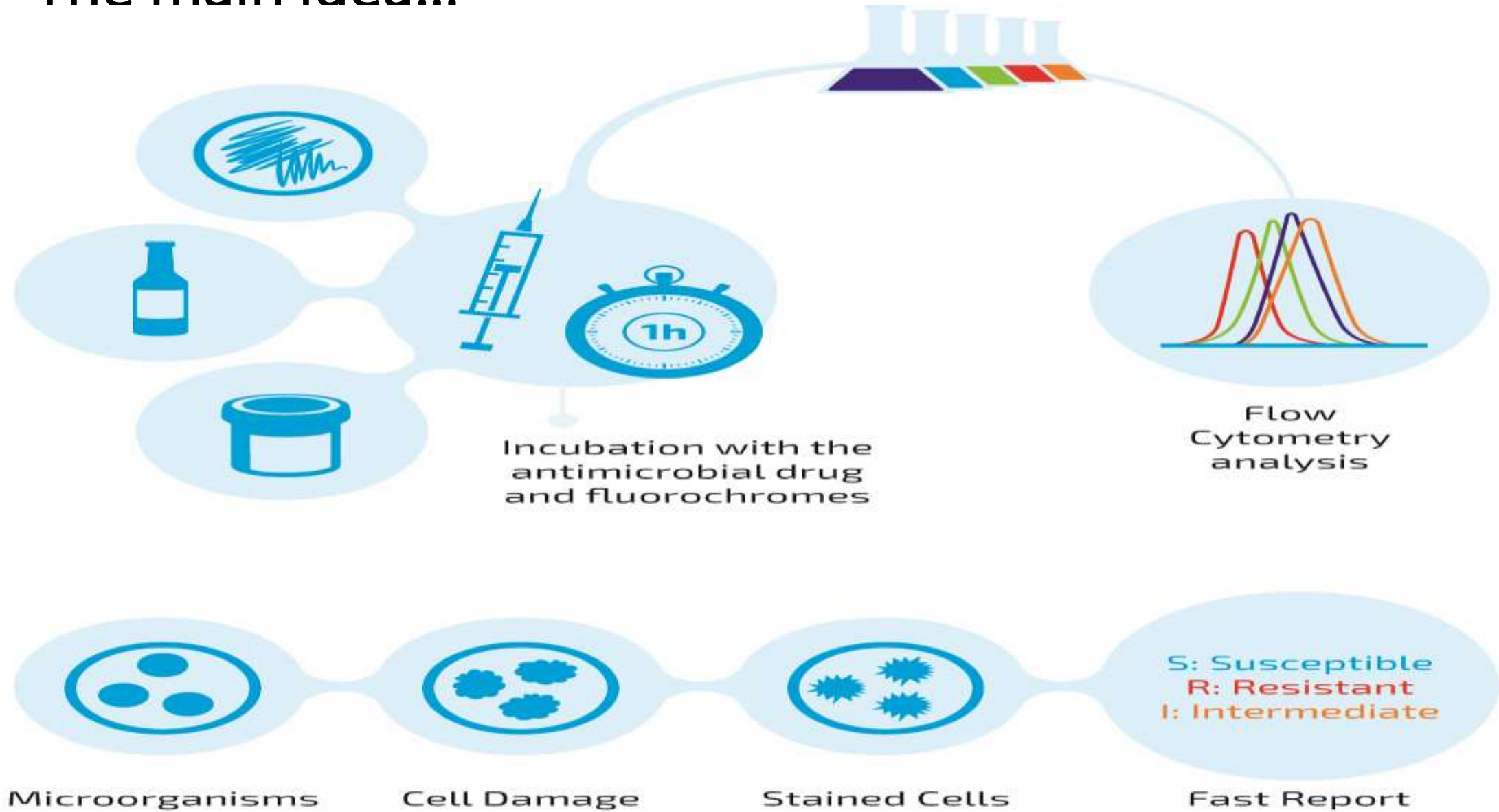
FASTinov technology
2 Hours

Identification

Automated systems
(Vitek, Phoenix, Accelerate)
7 Hours



The main idea...



The
United
States
of
America



The Director of the United States
Patent and Trademark Office

*Has received an application for a patent for
a new and useful invention. The title and
description of the invention are enclosed.
The requirements of law have been compli-
ed with, and it has been determined that
a patent on the invention shall be granted
under the law.*

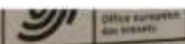
Therefore, this

United States Patent

*Grants to the person(s) having title to this
patent the right to exclude others from mak-
ing, using, offering for sale, or selling the
invention throughout the United States of
America or importing the invention into the
United States of America, and if the inven-
tion is a process, of the right to exclude oth-
ers from using, offering for sale or selling
throughout the United States of America, or
importing into the United States of
America, products made by that process,
for the term set forth in 35 U.S.C. 154(a)(2)
or (c)(1), subject to the payment of mainte-
nance fees as provided by 35 U.S.C. 41(b).
See the Maintenance Fee Notice on the
inside of the cover.*

Michelle K. Lee

Director of the United States Patent and Trademark Office



EUROPEAN PATENT SPECIFICATION

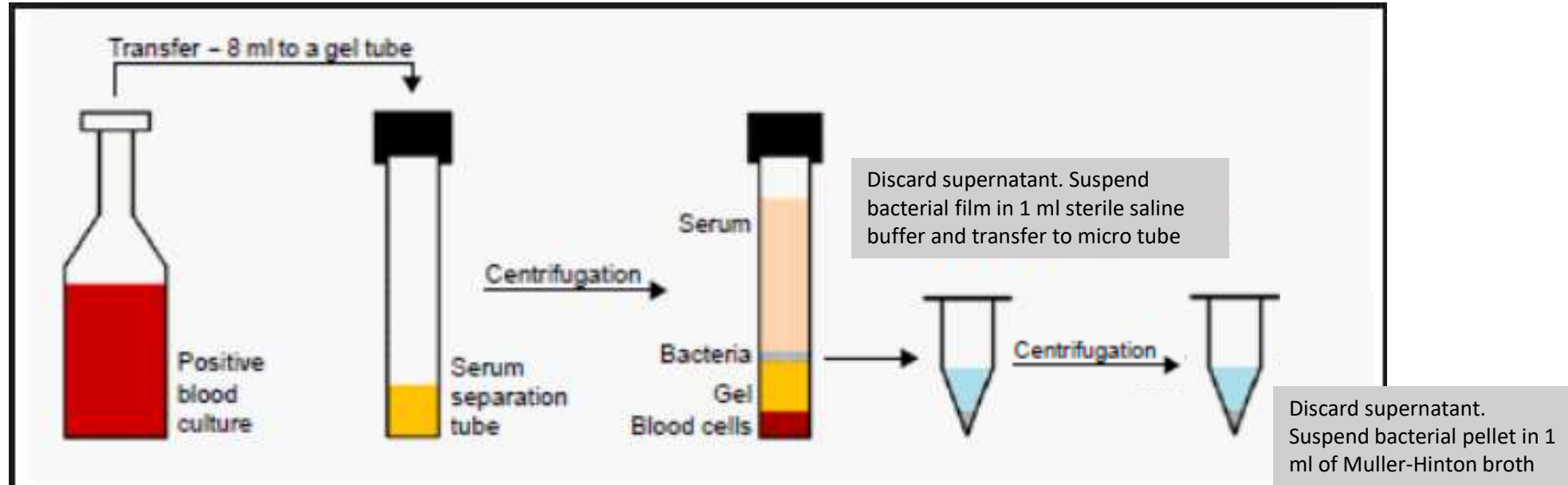
- (2)
- (5) Date of publication and mention
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20.09.2017 Bulletin 2017/38
- (1) Application number: 12738605.0
- (2) Date of filing: 04.06.2012
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C12Q 1/04 (2006.01) C12Q 1/18 (2006.01)
- (86) International application number:
PCT/IB2012/052807
- (87) International publication number:
WO 2012/164547 (06.12.2012 Gazette 2012/44)

4) METHOD OF DETECTING THE RESISTANT MICROORGANISMS TO A THERAPEUTIC AGENT
VERFAHREN ZUM NACHWEIS VON GEGENÜBER EINEM THERAPIEMITTEL RESISTENTER
MIKROORGANISMEN
PROCÉDÉ DE DÉTECTION DES MICROORGANISMES RÉSISTANT À UN AGENT
THÉRAPEUTIQUE

- 4) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR
- 7) Priority: 03.06.2011 PT 11105744
- 1) Date of publication of application:
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- 1) Proprietor: Universidade Do Porto
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- (56) References cited:
EP-A1- 0 118 274 WO-A1-2009/095258
- C PINA-VAZ: "Safe susceptibility testing of Mycobacterium tuberculosis by flow cytometry with the fluorescent nucleic acid stain SYTO JOURNAL OF MEDICAL MICROBIOLOGY, vol. no. 1, 1 January 2005 (2005-01-01), pages 7 XP55038987, ISSN: 0022-2615, DOI: 10.1099/jmm.0.45627-0
 - PINA-VAZ C ET AL: "CYTOMETRIC APPROACH FOR A RAPID EVALUATION OF SUSCEPTIBILITY OF CANDIDA STRAINS TO ANTIFUNGALS" CLINICAL MICROBIOLOGY AND INFECTION WILEY-BLACKWELL PUBLISHING LTD, UNITED KINGDOM, SWITZERLAND, vol. 7, no. 11, 1 November 2001 (2001-11-01), pages 609-61 XP001128799, ISSN: 1198-743X, DOI: 10.1046/J.1198-743X.2001.00307.X
 - PINA-VAZ C ET AL: "Novel Method Using a Scanning Cytometer for Detection of ..."

CURRENT WORKFLOW

SAMPLE PREP



15 MINUTES

TESTING



Make a 0.5 MacFarland suspension 5 ml



Select the adequate panel



Dilute 1:10 or 1:2 in case of cocci in grappes. Inoculate the microplate with 75 ul per well.



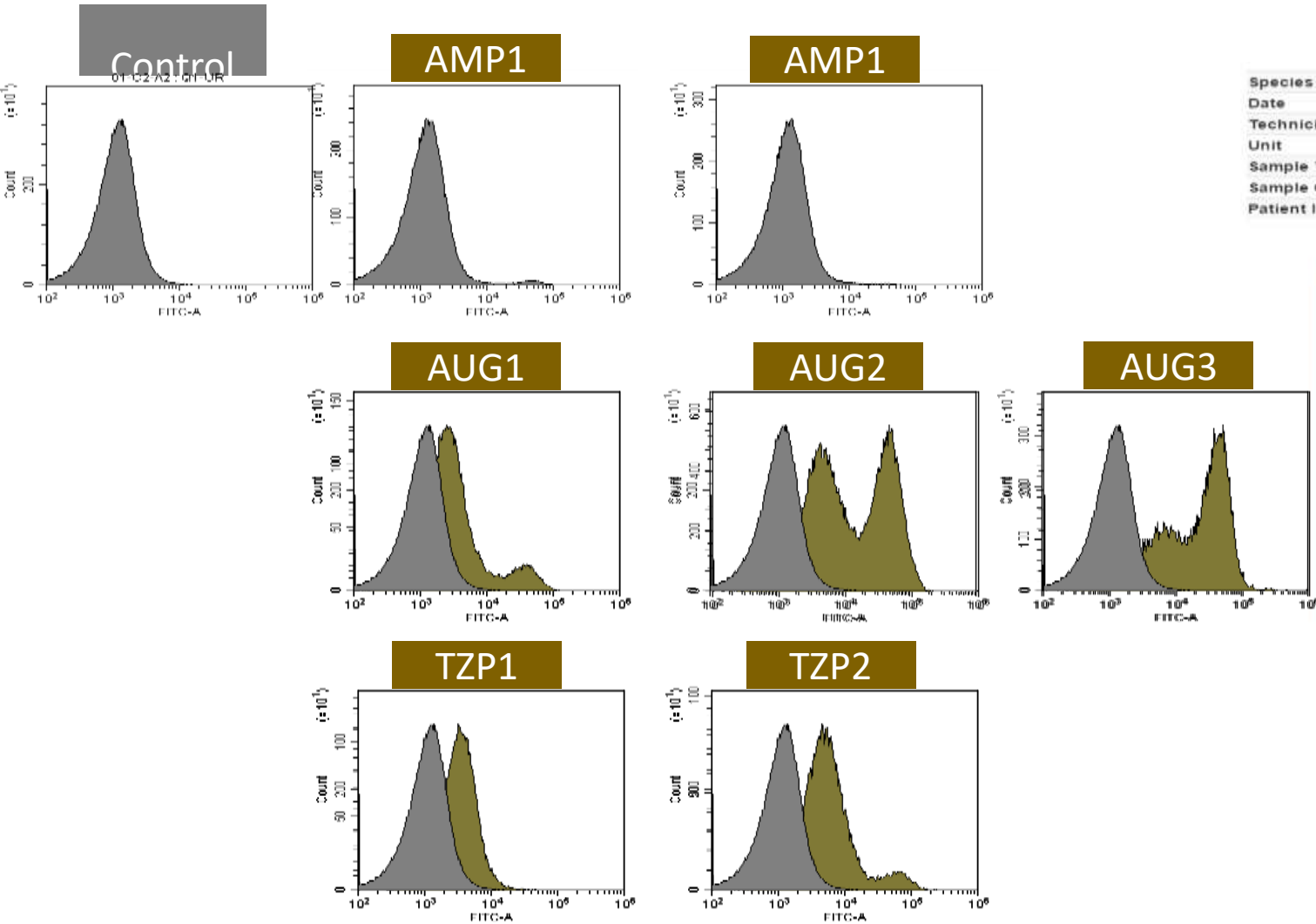
Incubate the microplate at 37°C, with slow orbital shaking, for 1 hour



Analyse in a flow cytometer

90 MINUTES

An example...



Species	Escherichia coli
Date	11/12/2018 16:11
Technician	
Unit	
Sample Type	Blood culture
Sample Code	
Patient ID	

AST Version	1.0
Plate	SW ENTEROBACTERIACEAE MGN2

Antimicrobial Susceptibility Pattern	
Drug	
Ampicillin	Resistant
Amoxicillin + Clavulanic Acid	Susceptible
Piperacillin + Tazobactam	Susceptible
Cerataxime	Susceptible
Ceftazidime	Susceptible
Ceftazone+tazobactam	Susceptible
Meropenem	Susceptible
Imipenem	Susceptible
Gentamicin	Resistant
Amikacin	Susceptible
Ciprofloxacin	Susceptible
Colistin	Susceptible

The new paradigm



ID



Flow
Antimicrobial
Susceptibility
Test

TTR-2 h



Main benefits



Target therapy
Health cost reductions
Avoid spread of *superbugs*
Avoid increase of AMR
Improve public health