

TB na penitenciária estadual do Rio Grande



Casos de TB de abril de 2010 a abril de 2011

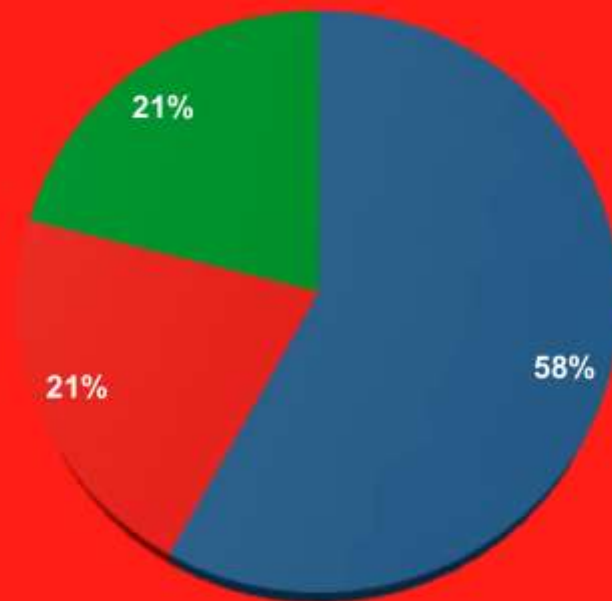
- 22 casos
 - Prevalência de 2.200/100.000
 - 18 Homens/4 Mulheres
- 95% dos pacientes apresentaram falha no tratamento



Co-infecção TB/HIV

Casos de TB

■ HIV+ ■ HIV- ■ não sabem



Perfil dos casos positivos

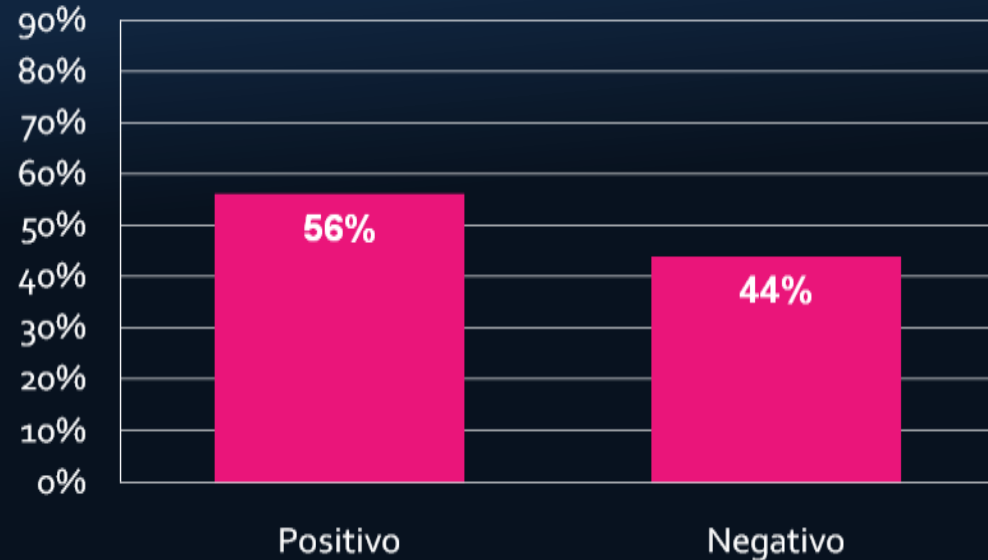
- AMOSTRAS:
 - 6 pacientes diagnosticados em Pronto Atendimento, sem amostra cultivada.
 - 1 caso de infecção por MNT
 - 1 caso de resistência à isoniazida
 - Contribuição da cultura ao diagnóstico: 46%



IGRA

- 186 amostras coletadas
- 121 amostras processadas
 - Serão analisadas amostras dos pacientes HIV+
 - Será cruzado o resultado do IGRA com CD4+ e carga viral

Resultado IGRA





Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Microbes and Infection 7 (2005) 1338–1344

Microbes and
Infection

www.elsevier.com/locate/micinf

Original article

Molecular characterization of *Mycobacterium tuberculosis* isolates in a region of Brazil with a high incidence of tuberculosis

Sibele Borsuk ^a, Marina Mirian Dellagostin ^a, Suselaine de Góes Madeira ^a, Crislaine Lima ^a,
Marta Boffo ^b, Ivo Mattos ^b, Pedro E. Almeida da Silva ^b, Odir Antônio Dellagostin ^{a,*}

- 2005

RESULTS

- Patients and bacterial isolates (1997-2001)
- TB isolates were obtained from 170 patients attending
- either the Health Center in Pelotas and or Rio Grande University
- These isolates represent 20% of all tuberculosis cases
- in this region.

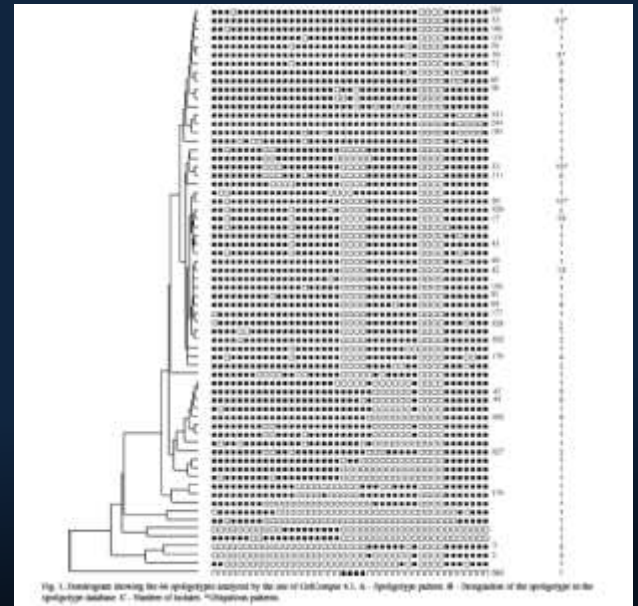


Fig. 1. Dendrogram showing the 160 epidemiology analyzed by the use of IS6110gen v.1.0 - Phylogeny pattern 40 - Investigation of the epidemiology on the epidemiology isolates. * - Number of isolates. ** - Haeften pattern.

S. Borzak et al. / Microbes and Infection 7 (2005) 1338-1344

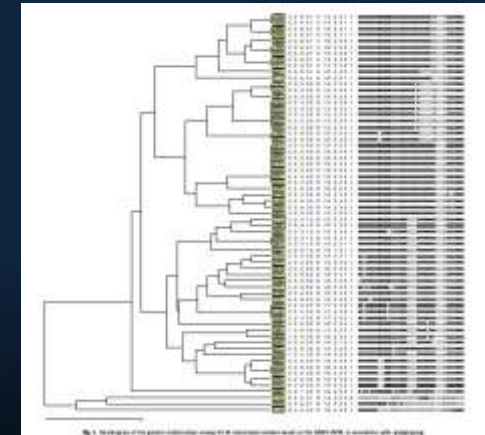
Phylogenetic clade (epitotype)	IS6110 Patterns	Number of isolates
LAM (17)		1
LAM (17)		1
LAM (17)		2
LAM (17)		1
LAM (17)		1
LAM (10)		6
LAM (20)		1
LAM (33)		1
LAM (33)		3
LAM (33)		1
LAM (33)		1
LAM (33)		1
LAM (33)		1
LAM (33)		1
LAM (33)		1
LAM (33)		1
LAM (42)		1
LAM (42)		1
LAM (42)		1
LAM (42)		1
Haeften (50)		2
Haeften (50)		1
Haeften (50)		1
Haeften (2)		1
TI (53)		1
TI (53)		1
TI (53)		1
TI (53)		1
TI (53)		5
TI (53)		1
TI (53)		2
TI (53)		1
TI (53)		3
TI (53)		1

Fig. 2. IS6110 banding patterns of the isolates that belonged to LAM, Haeften or TI clades.

- Besides these ubiquitous types, novel spoligotypes, unique to this geographical region were also identified.

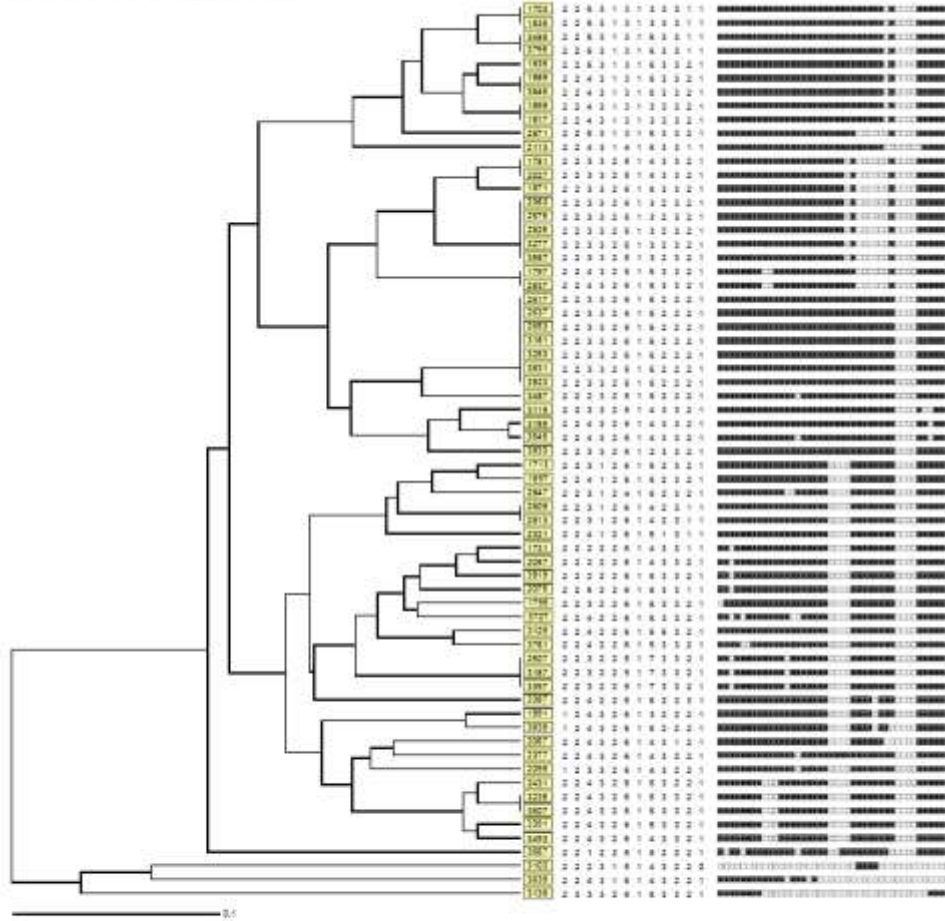


Genotyping (Rio Grande strains 2004-2006)



- DRE-PCR: 45 distinct patterns among the 65 isolates ,with 30 orphans and 15 clusters with two to four isolates,
- SPOLIGOTYPING: 26 patterns among the 65 isolates
- MIRU-VNTR: identified 46 distinct patterns

Genotype	Number of isolates	Frequency
1	30	46%
2	12	18%
3	10	15%
4	10	15%
5	10	15%
6	10	15%
7	10	15%
8	10	15%
9	10	15%
10	10	15%
11	10	15%
12	10	15%
13	10	15%
14	10	15%
15	10	15%
16	10	15%
17	10	15%
18	10	15%
19	10	15%
20	10	15%
21	10	15%
22	10	15%
23	10	15%
24	10	15%
25	10	15%
26	10	15%
27	10	15%
28	10	15%
29	10	15%
30	10	15%
31	10	15%
32	10	15%
33	10	15%
34	10	15%
35	10	15%
36	10	15%
37	10	15%
38	10	15%
39	10	15%
40	10	15%
41	10	15%
42	10	15%
43	10	15%
44	10	15%
45	10	15%
46	10	15%



PADRÃO ST45 SUBIU DE 2,5% PARA 12,5% EM 8 ANOS

Figure 1: Dendrogram of the genetic relationships among 65 *M. tuberculosis* isolates based on the MIRU-VNTR, in association with *spoligotyping*.



UNIVERSIDADE E SERVIÇO DE SAÚDE: INTERAÇÃO PARA QUALIFICAR O CONTROLE DA TUBERCULOSE

Mariana Soares Valença*, Jeane Zanini da Rocha*, Ivy Bastos Ramis[#], Lillian Lucas
Carrion*, Catiúcia Madruga*, Ana Bárbara Scholante*, Daniela Fernandes Ramos[#],
Andrea von Groll^{*}, Pedro Eduardo Almeida da Silva^{*}

Em preparação



Genotipagem

- ★ 84 apresentaram padrão órfão
- ★ 7 distribuídos em 3 *clusters* (Não foi estabelecida relação epidemiológica)

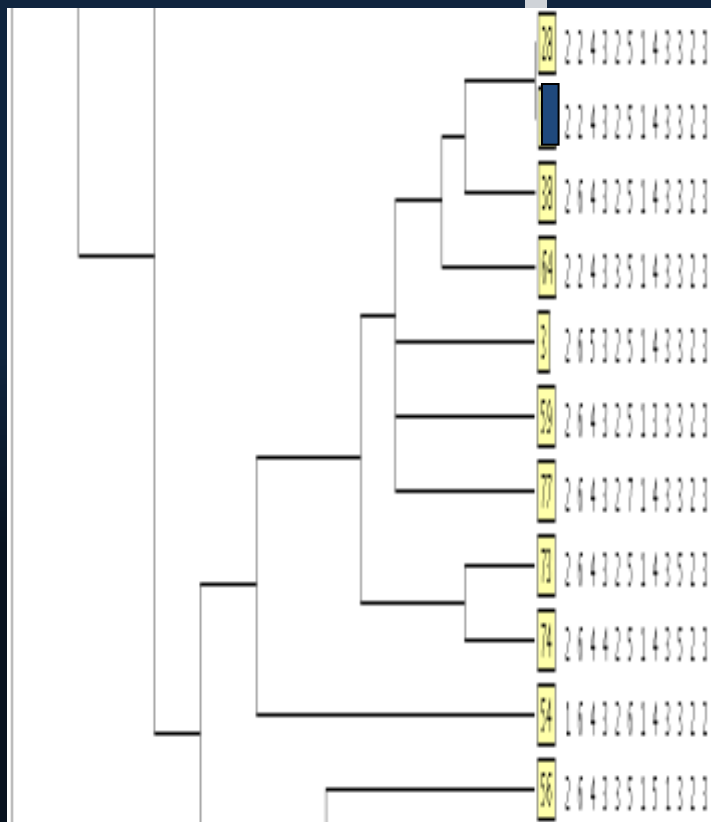
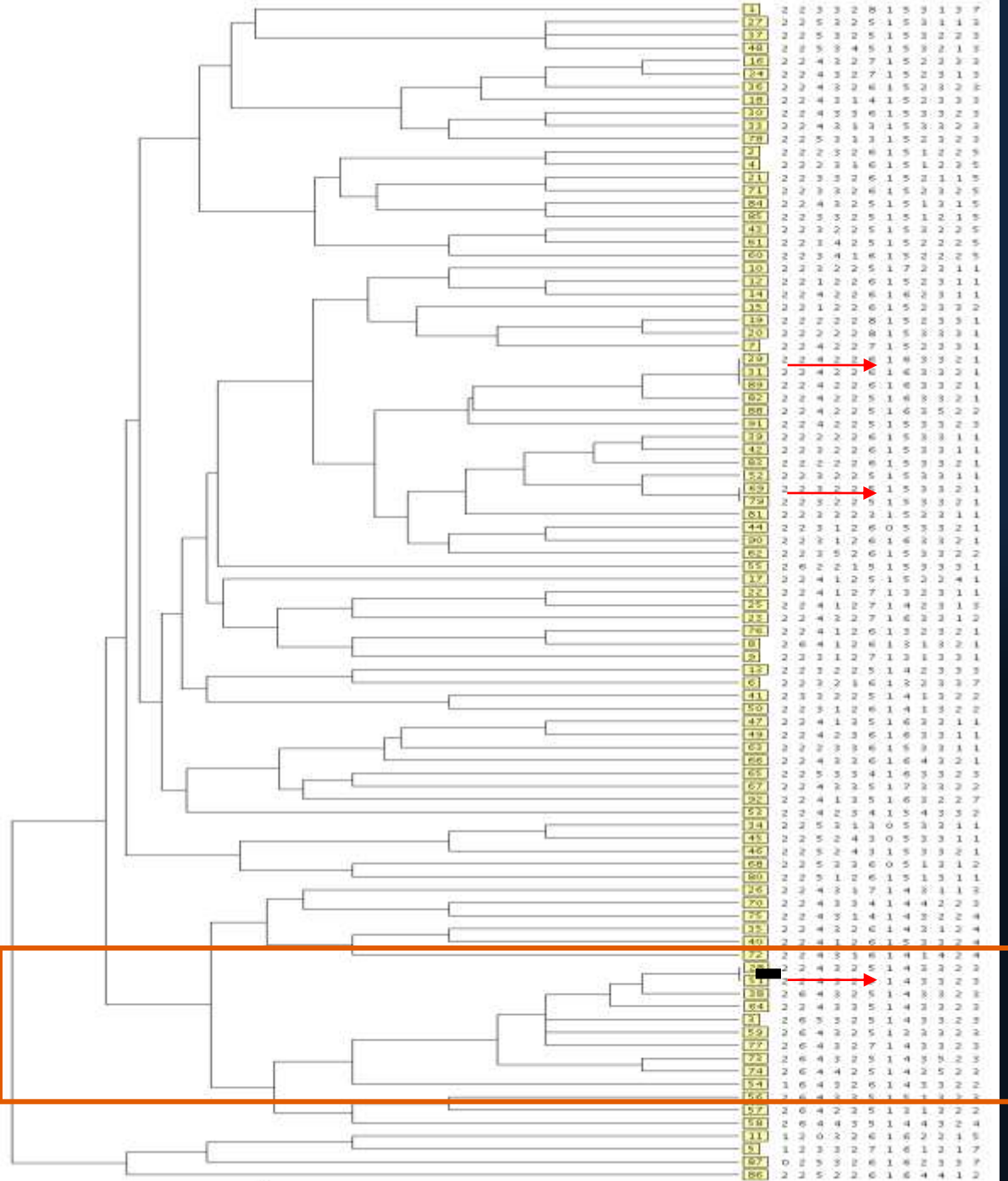


★ O MIRU apresentou um alto poder discriminatório, com um HGDI de 0,999.

★ Os *loci* com maior capacidade discriminatória foram 10, 16, 23, 26, 27 e 40

Os 10 isolados provenientes da penitenciária não possuem um perfil idêntico mas situaram-se próximos no dendograma, diferindo em um ou dois *loci*.



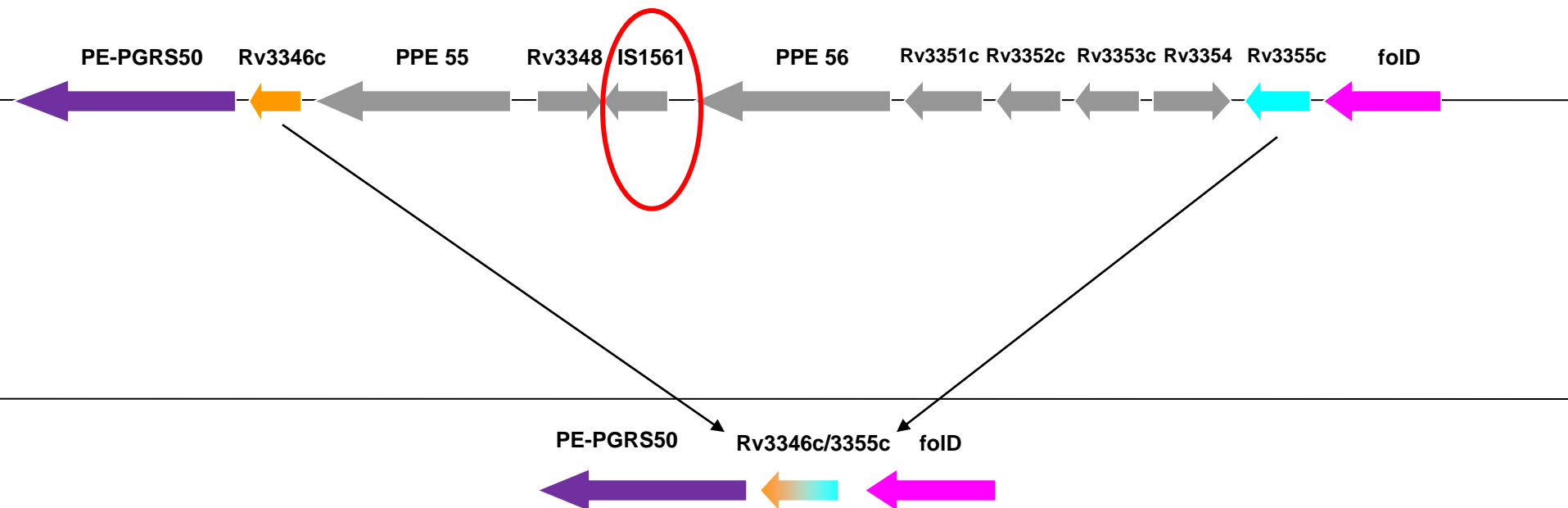


RD^{RIO} STRAINS



Discovery of a Novel *Mycobacterium tuberculosis* Lineage That Is a Major Cause of Tuberculosis in Rio de Janeiro, Brazil[†]

Luiz Claudio Oliveira Lazzarini,^{1,2,‡} Richard C. Huard,^{1,‡,§} Neio L. Boechat,² Harrison M. Gomes,³
Maranibia C. Oelemann,³ Natalia Kurepina,⁴ Elena Shashkina,⁴ Fernanda C. Q. Mello,²
Andrea L. Gibson,¹ Milena J. Virginio,³ Ana Grazia Marsico,² W. Ray Butler,⁵
Barry N. Kreiswirth,⁴ Philip N. SUFFYS,³ Jose Roberto Lapa e Silva,^{1,2}
and John L. Ho^{1*}





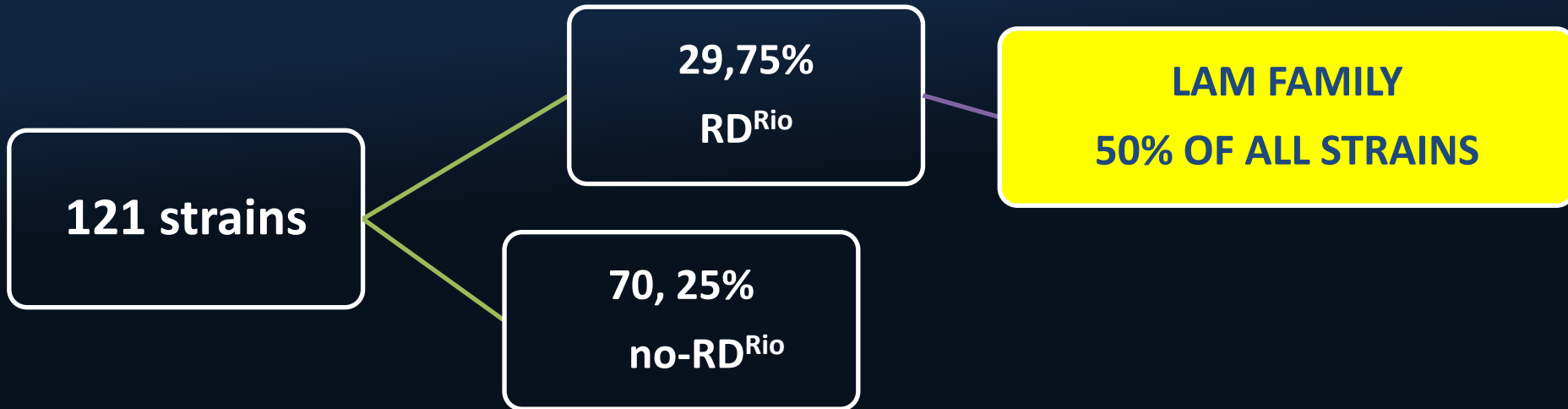
RESEARCH ARTICLE

Fitness study of the RD^{Rio} lineage and Latin American–Mediterranean family of *Mycobacterium tuberculosis* in the city of Rio Grande, Brazil

Andrea Von Groll^{1,2}, Anandi Martin¹, Carolina Felix², Pedro Fernandes Sanmartin Prata², Günther Honscha³, Françoise Portaels¹, Peter Vandame⁴, Pedro Eduardo Almeida da Silva² & Juan Carlos Palomino¹

¹Mycobacteriology Unit, Institute of Tropical Medicine, Antwerp, Belgium; ²Laboratório de Micobactérias, Universidade Federal do Rio Grande, Rio Grande, RS, Brazil; ³Laboratório de Tisiologia da Prefeitura Municipal de Rio Grande, Rio Grande, RS, Brazil; and ⁴Laboratorium voor Microbiologie, Universiteit Gent, Gent, Belgium

E



Mycobacterium tuberculosis BELONGING TO FAMILY LAM AND SUBLINEAGE

RD^{Rio}: COMMON STRAINS IN SOUTHERN BRAZIL FOR OVER 10 YEARS

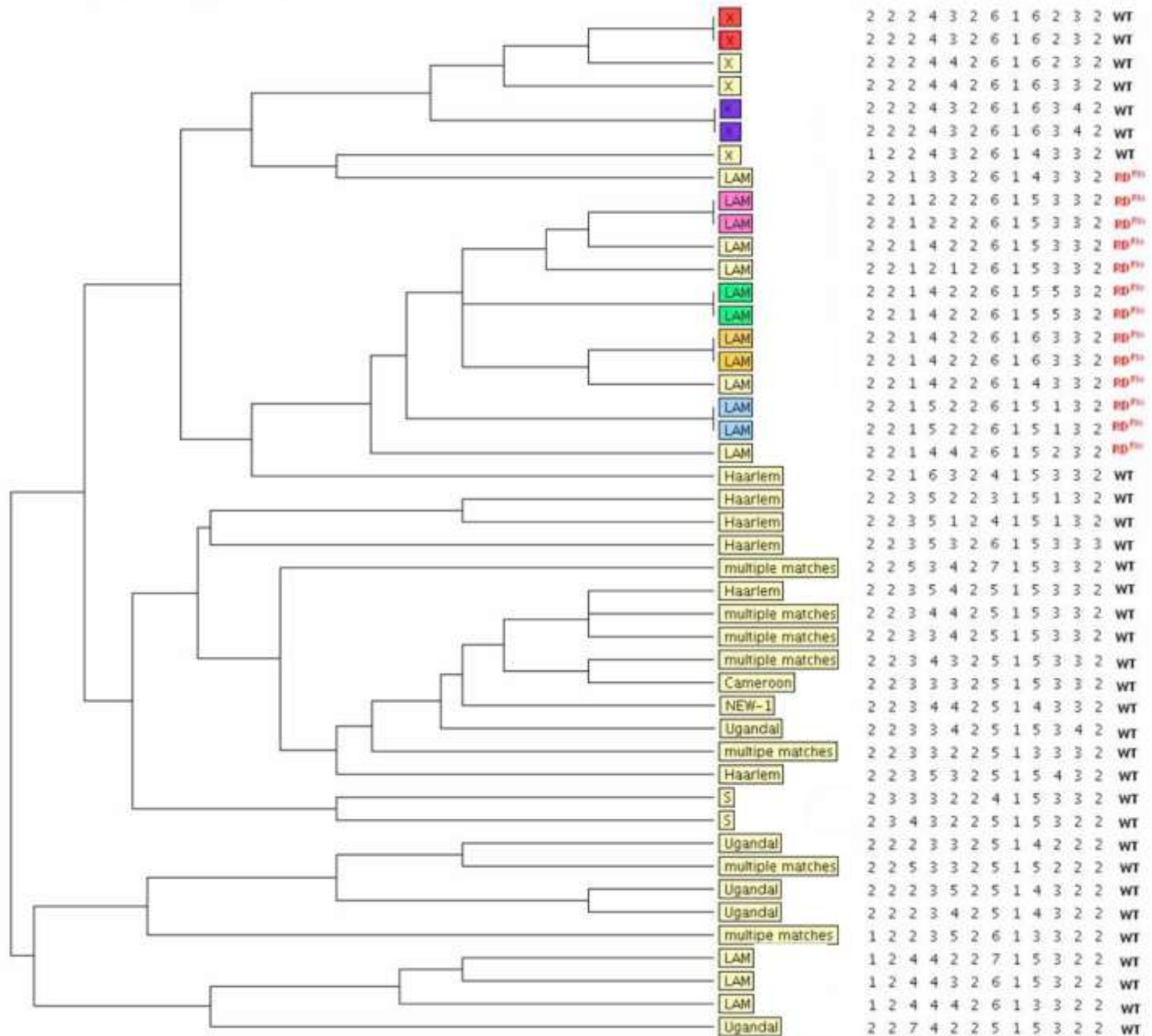
RENATA OLIVEIRA SOARES¹

MAÍRA BIDART DE MACEDO²

ANDREA VON GROLL³

PEDRO EDUARDO ALMEIDA DA SILVA^{*4}





RD^{Rio} *Mycobacterium tuberculosis* Infection Is Associated with a Higher Frequency of Cavitory Pulmonary Disease[∇]

Luiz Claudio Oliveira Lazzarini,^{1,3} Silvana Miranda Spindola,⁴ Heejung Bang,² Andrea L. Gibson,¹ Scott Weisenberg,¹ Wania da Silva Carvalho,³ Claudio José Augusto,⁶ Richard C. Huard,^{1,7} Afrânio L. Kritski,³ and John L. Ho^{1,4*}

In summary, the available data suggest that RD^{Rio} *M. tuberculosis* strains are a major contributor to TB in Brazil and in several countries in the world. The current data suggest that RD^{Rio} LAM sublineage may cause more severe disease and/or may transmit more efficiently in certain ethnic populations. Larger prospective cohort studies are needed to provide more direct and conclusive evidence that RD^{Rio} LAM sublineage causes more severe forms of TB and/or transmits better than other lineages. Moreover, a





RESEARCH ARTICLE

Fitness study of the RD^{Rio} lineage and Latin American–Mediterranean family of *Mycobacterium tuberculosis* in the city of Rio Grande, Brazil

Andrea Von Groll^{1,2}, Anandi Martin¹, Carolina Felix², Pedro Fernandes Sanmartin Prata², Günther Honscha³, Françoise Portaels¹, Peter Vandame⁴, Pedro Eduardo Almeida da Silva² & Juan Carlos Palomino¹

¹Mycobacteriology Unit, Institute of Tropical Medicine, Antwerp, Belgium; ²Laboratório de Micobactérias, Universidade Federal do Rio Grande, Rio Grande, RS, Brazil; ³Laboratório de Fisiologia da Prefeitura Municipal de Rio Grande, Rio Grande, RS, Brazil; and ⁴Laboratorium voor Microbiologie, Universiteit Gent, Gent, Belgium

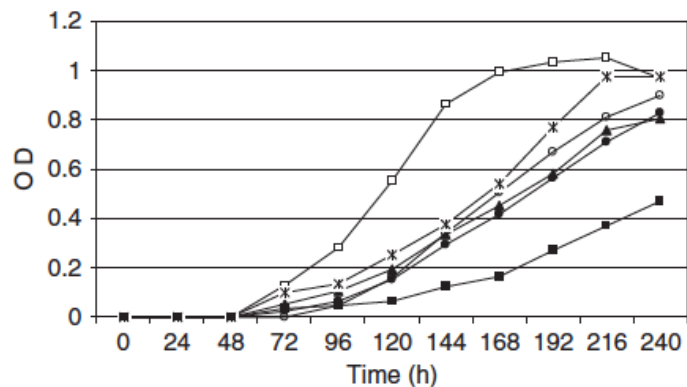


Table 3. Comparison of the rate of growth between RD^{Rio} and non-RD^{Rio} lineage members (Analysis 1) and between strains belonging to LAM and non-LAM family (Analysis 2)

	Lineage	No. of samples	Median (h)	95% CI	P
Analysis 1	RD ^{Rio}	17	32.2	27.7–36.8	0.2505
	Non-RD ^{Rio}	23	35.8	31.4–40.2	
Analysis 2	LAM	21	30.8	27.0–34.7	0.0153*
	Non-LAM	19	38.1	33.5–42.7	

*Significant difference of the rate of growth ($P < 0.05$) by *t*-test.

Journal of Antimicrobial Chemotherapy Advance Access published May 9, 2011

J Antimicrob Chemother
doi:10.1093/jac/dkr173

**Journal of
Antimicrobial
Chemotherapy**

Molecular basis and mechanisms of drug resistance in *Mycobacterium tuberculosis*: classical and new drugs

Pedro Eduardo Almeida Da Silva¹ and Juan Carlos Palomino^{2*}



- 1 Fluoroquinolone resistance in *Mycobacterium tuberculosis* and mutations in
- 2 *gyrA* and *gyrB*
- 3
- 4 Running title: *M. tuberculosis* resistance to fluoroquinolones
- 5
- 6
- 7 Authors:
- 8 Andrea VON GROLL¹, Anandi MARTIN¹, Pontus JUREEN², Sven HOFFNER²,
- 9 Peter VANDAMME³, Françoise PORTAELS¹, Juan Carlos PALOMINO¹, Pedro
- 10 ALMEIDA DA SILVA^{4*}

Herein we showed that a mutation in Asn-533→Thr of *gyrB* was associated with resistance to moxifloxacin and gatifloxacin but interestingly, not to ofloxacin. We



segunda-feira, 23 de maio de 2011 09:30

Subject: Decision on manuscript JCM00168-11 Version 3

Date: segunda-feira, 9 de maio de 2011 21:52

From: kcedrev@jhmi.edu

To: zaha <zaha@cbiot.ufrgs.br>

Cc: <nandaspies@gmail.com>, <andrezzaw@yahoo.com.br>, Daniela Ramos <daniferamos@gmail.com>, <martaoso@terra.com.br>, <amartin@itg.be>, <jcpalomino@itg.be>, <mrossett@terra.com.br>, PEDRO SILVA <pedrefurg@gmail.com>, zaha <zaha@cbiot.ufrgs.br>

Dr. Arnaldo Zaha

Centro de Biotecnologia, UFRGS

Centro de Biotecnologia

Avenida Bento Gonçalves, 9500, Bloco IV, Predio 43421

Porto Alegre, RS 91501-970

Brazil

Re: Streptomycin resistance and lineage specific polymorphisms in Mycobacterium tuberculosis gidB gene (JCM00168-11 Version 3)

Dear Dr. Zaha:

Your manuscript has been accepted, and I am forwarding it to the ASM Journals Department for publication. For your reference, ASM Journals' address is given below. Before it can be scheduled for publication, your manuscript must be checked by the ASM production editor to make sure that all elements meet the technical requirements for publication. Charles Brown, the production editor for the Journal of Clinical Microbiology (JCM), or his assistant will contact you if anything needs to be revised before copyediting and production begin.



RESEARCH ARTICLE

Antimycobacterial activity of usnic acid against resistant and susceptible strains of *Mycobacterium tuberculosis* and non-tuberculous mycobacteria

Daniela Fernandes Ramos^{1,2}, Pedro Eduardo Almeida da Silva^{1,2}

¹*Universidade Federal do Laboratório de Micobacteriologia Rio Grande, FURG, Brazil, and* ²*Programa de Pós-graduação em Ciências da Saúde, FURG, Brazil*





Contents lists available at ScienceDirect

Bioorganic & Medicinal Chemistry Letters

journal homepage: www.elsevier.com/locate/bmcl



Synthesis and antituberculosis activity of new fatty acid amides

Caroline Da Ros Montes D'Oca^a, Tatiane Coelho^b, Tamara Germani Marinho^a, Carolina Rosa Lopes Hack^a, Rodrigo da Costa Duarte^a, Pedro Almeida da Silva^{b,†}, Marcelo Gonçalves Montes D'Oca^{a,*,†}



ELSEVIER

International Journal of Antimicrobial Agents 32 (2008) 139–144

INTERNATIONAL JOURNAL OF
**Antimicrobial
Agents**

www.ischemo.org

Synthesis and in vitro antimycobacterial activity of 3-substituted 5-hydroxy-5-trifluoro[chloro]methyl-4,5-dihydro-1 *H*-1-(isonicotinoyl) pyrazoles

Pedro E. Almeida da Silva^{a,*}, Daniela F. Ramos^a, Helio G. Bonacorso^b,
Agustina I. de la Iglesia^c, Marli R. Oliveira^b, Tatiane Coelho^a, Jussara Navarini^b,
Hector R. Morbidoni^c, Nilo Zanatta^b, Marcos A.P. Martins^b

DRUG DISCOVERY AND RESISTANCE

Activity of β -lapachone derivatives against rifampicin-susceptible and -resistant strains of *Mycobacterium tuberculosis*

Tatiane S. Coelho^a, Raphael S.F. Silva^b, Antonio V. Pinto^b, Maria C.F.R. Pinto^b, Carlos J. Scaini^a, Kelly C.G. Moura^b, Pedro Almeida da Silva^{a,*}

^aUniversidade Federal do Rio Grande, Brazil

^bUniversidade Federal do Rio de Janeiro, Brazil



Revista Brasileira de Farmacognosia
Brazilian Journal of Pharmacognosy
19(1A): 20-25, Jan./Mar. 2009

Received 1 January 2009; Accepted 1 March 2009

Artigo

Initial antimicrobial activity studies of plants of the riverside forests of the southern Uruguay River

Ana Bertucci,¹ Cristina Olivaro,¹ Pedro Almeida da Silva,² Daniela Ramos,²
Maria Pia Cerdeiras,³ Alvaro Vázquez^{*,1}

RECURSOS HUMANOS

- MESRADO CONCLUIDO = 2 (SMS) + 2
- MESTRANDOS = 3
- DOUTORA = 1
- DOUTORANDOS = 2
- IC = 4



COLABORAÇÕES

- IMT – BÉLGICA
- UFPEL - CENBIOT
- SMS - PELOTAS
- UNIVERSIDADE DE LISBOA
- UGM
- FEPPS
- UDELAR
- PASTEUR – IRAN
- UFSM
- UFRJ - FARMÁCIA
- FURG – QUIMICA/OCEANOLOGIA
- INPA
- UNIVERSIDADE LISBOA



Transferência de tecnologia para o
setor operacional é uma tarefa
fácil?







- O melhor método diagnóstico é o exequível



- OBRIGADO!!!!!!!

