AarogyaAI®

Precision Medicine for Anti-Microbial Resistance using Genomics and AI.

Asks:

1. Hospital connects for pilot deployment of Tuberculosis DST software.
2. Raising ₹ 5 Cr, ₹ 2 Cr committed by previous investors.

FOUNDERS

ADVISORS

Praapti Jayaswal, PhD
Co-founder & CEO
Molecular & Microbiologist, 13+ years

Avlokita Tiwari, M.S.
Co-founder & CTO
Bioinformatician, 8 + years

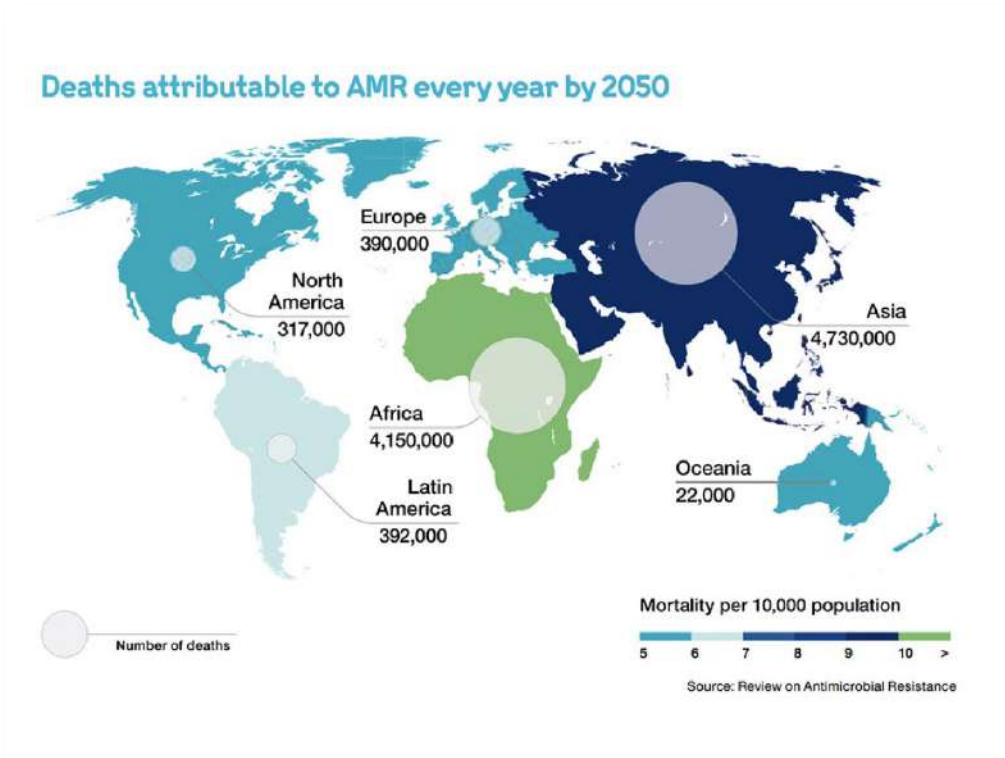**Dr. Soumya Swaminathan**
Chief Scientist,
World Health Organization

Dr. Nerges Mistry
Director,
Foundation for Medical Research

2

Superbugs will cause the next pandemic

Deaths attributable to AMR every year by 2050

Europe
390,000

North America
317,000

Asia
4,730,000

Africa
4,150,000

Oceania
22,000

Latin America
392,000

Number of deaths

Mortality per 10,000 population

5   6   7   8   9   10   >

Source: Review on Antimicrobial Resistance

- Antimicrobial resistance is steadily rising.

- **10 Million** deaths annually by 2050 and cost $100 Trillion

- Tuberculosis is the most lethal infectious disease in the world, today (pre-COVID).

O'Neill, J., 2018. Tackling drug-resistant infections globally: Final report and recommendations. 2016. *HM Government and Welcome Trust: UK*.

AarogyaAI

6th Edition
CAHOTECH 2021

India has one third of the global Tuberculosis burden

Private and Confidential

- **13 Million** presumptive TB cases in India, today.

- **2.7 Million** new TB cases in India, annually.

- Drug- resistant TB and its delayed diagnosis exacerbates the problem.

- Govt. of India aims to eliminate TB in India by 2025.

AarogyaAI

Genomics + Artificial Intelligence = Precision Diagnosis
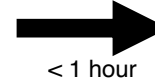
Extract Bacterial DNA from Specimen

Whole Genome Sequencing

< 1 hour

Patient ID: MHSP3	Age: 33 Y	Gender: F	Received: 22/11/2020 02:00:00 PM
Lab ID: 118872		Referred by: Dr. XXX YY	Reported: 24/11/2020 11:00:00 AM

Test Name:

Anti-tuberculosis drug susceptibility test for first- and second-line antibiotics

Drug Name	Susceptibility Result
Rifampicin	Resistant
Isoniazid	Susceptible
Ethambutol	Resistant
Kanamycin	Susceptible
Ethionamide	Resistant
Ofloxacin	Resistant
Moxifloxacin	Resistant
Amikacin	Susceptible
Pyrazinamide	Resistant

Analyzed by: AarogyaAI Innovations Private Limited

Verified by:

Dr. XXX (Head, microbiology department)

................End of Report............

Comprehensive Drug Susceptibility Report

100 X faster

than the existing gold standard for tuberculosis.

AarogyaAI® - A Continuous Learning Platform

C G T

Drug	Genes
Amikacin	gidB, rrs, tlyA
Capreomycin	gidB, rrs, tlyA
Ciprofloxacin	gyrA, gyrB

Identify Mutations

Genetic correlation for drug resistance

Novel findings are fed back to the algorithm
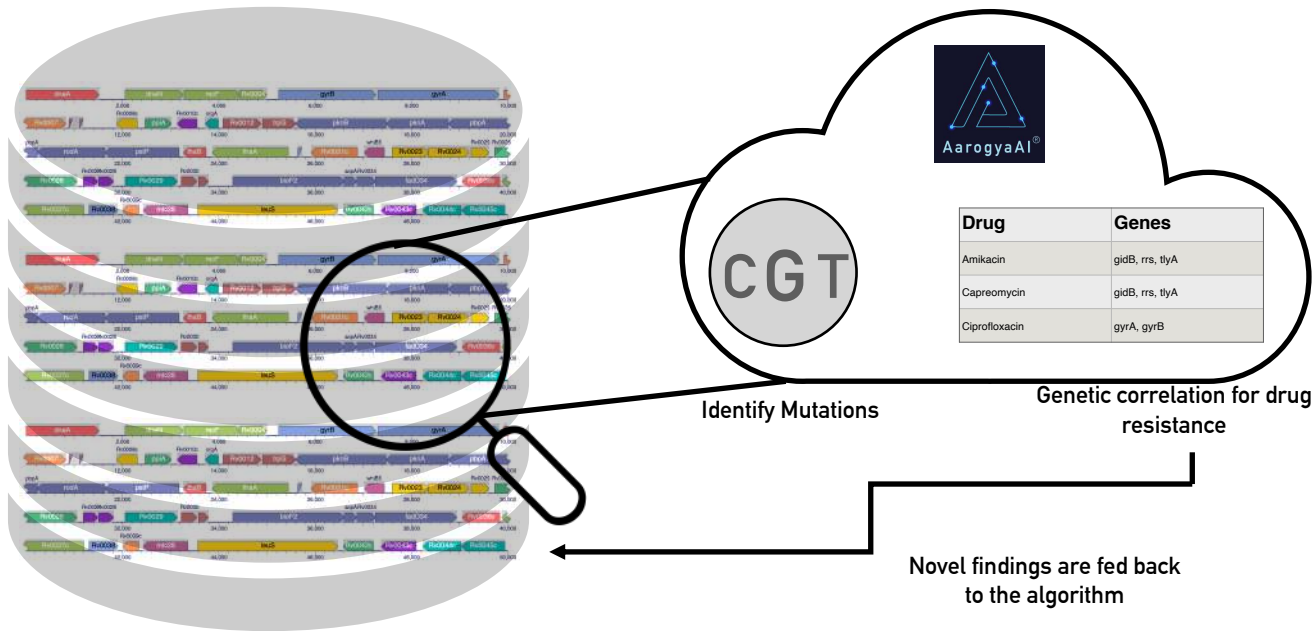
AarogyaAI® Bioinformatics Pipeline

Machine Learning Model

Patent filed. Clinical Validation Underway.

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AarogyaAI creates value by rapidly generating a comprehensive drug susceptibility report
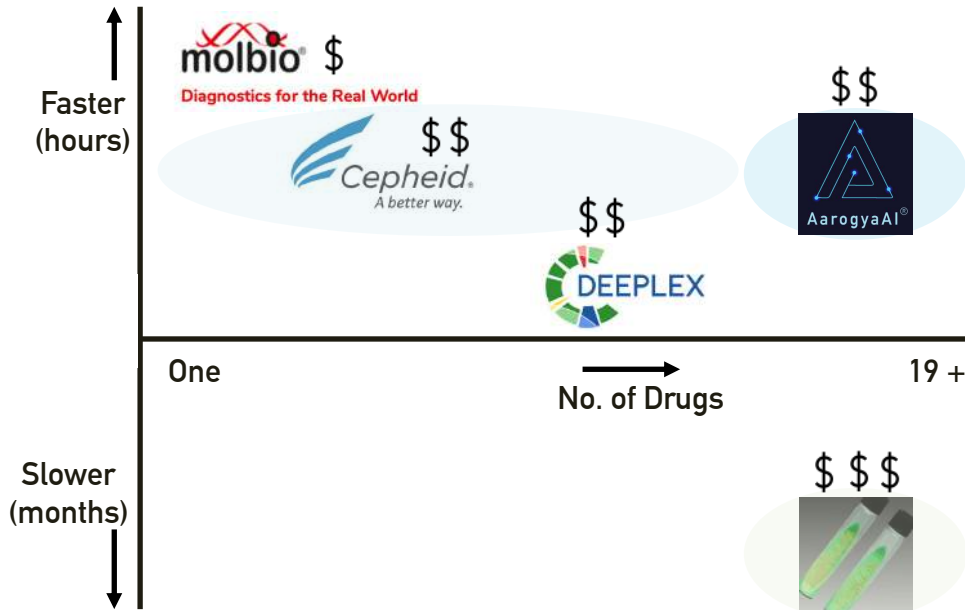
Our Key Differentiators:

1. Culture-free Approach
2. Whole-genome Sequencing
3. Proprietary Informatics & Database
4. Predictions of Future Drug Resistance Patterns
5. Scalable to other Diseases

Current Solutions: Rapid or Comprehensive

AarogyaAI- largest database of Indian TB samples in the world

13 million presumptive TB in India

2.7 million new cases of TB in India annually

$$$

AarogyaAI
Proprietary Data

1. Pharmaceutical Companies

2. Public Health Organizations

3. Institutional Research
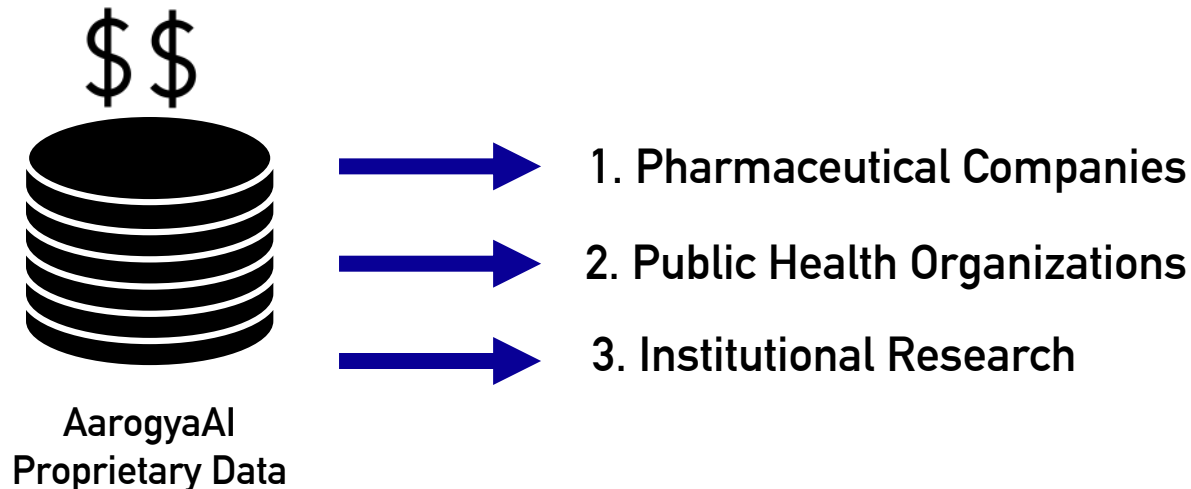
Achievements

1. Winner of the BIRAC – JanCare Innovation Challenge, 2021 (₹ TBD).

2. Winner of ANIC-ARISE grant from Niti Aayog, Govt. of India, 2021 (₹ 49 lakhs).

3. BIRAC-TiE WInER Award 2020 (₹ 5 lakhs) .

4. Winner - Startup India Western Digital Innovation Bazaar 2020 (₹ 12 lakhs).

5. Finalist - Aayushman Bharat - PMJAY Startup Challenge 2020.

6. NIDHI PRAYAS Grant by DST via Venture Centre, Pune (₹ 10 lakhs).

Times of India, 5th May, 2021.

Current Status:

1. Product ready for deployment at pilot site through BIRAC JanCare Innovation challenge.

    2. AarogyaAI's TB test has preliminary sensitivity and specificity of 86 – 99 %.

3. First 100 TB genomes sequenced in partnership with strategic investors - Illumina Inc.

4. AarogyaAI's Machine learning algorithm is predicting novel mutations that confer drug resistance, IP protection underway.

5. AarogyaAI has adapted the pipeline for analyzing SARS CoV2 genome.

AarogyaAI ®

Towards a disease-free world

https://aarogya.ai/
praapti@aarogya.ai