

# **CERTIFICATE**

## **DEPARTMENT OF BIOCHEMISTRY**

**FACULTY OF SCIENCE**

**THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA, VADODARA  
VADODARA- 390 002, GUJARAT, INDIA**

***STATEMENT UNDER O. Ph.D.8/(iii) OF  
THE M. S. UNIVERSITY OF BARODA, VADODARA***

This is to certify that the work included in present thesis entitled “**Role of (p)ppGpp synthetase (*relA*) and 23S rRNA methyltransferase (*rumA*) in conferring low level of multiple antibiotic resistance in *Escherichia coli*.**” has been actually carried out by **Krishma M. Tailor**, under my direct supervision and guidance. The work accomplished in the thesis is original and with innovative findings. The thesis has not been submitted in any other form for award or any degree, diploma, unless otherwise stated. The thesis appraises an original work gratifying the criteria more excellently for the award of the degree of **Doctor of Philosophy** in Biochemistry from The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India.

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## **DECLARATION**

I, hereby declare that the work embodied in this thesis entitled “ **Role of (p)ppGpp synthetase (*relA*) and 23S rRNA methyltransferase (*rumA*) in conferring low level of multiple antibiotic resistance in *Escherichia coli*.**” for the degree of “Doctor of Philosophy”, is an authentic work accomplished under the supervision of **Dr. Jayashree Pohnerkar**, Department of Biochemistry, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara -390002, India.

I also declare that the contents in the thesis have not been previously produced in any form for the award of any degree, diploma, fellowship, associateship or any other similar title or recognition.

Date: 20<sup>th</sup> March, 2015

**(Krishma M. Tailor)**

Place: Vadodara