The field of Biotechnology holds the tremendous potential for the betterment of life of all kind of living beings as well as restore the raised imbalances. This believe has generated the idea of exploration of health benefitting microbes for betterment of today’s life. Therefore, PhD journey has started with handling the microbes as the daily part of life. The work was started from selecting mud and to design a multipurpose pot as I have isolated microbes and then explore their potential for different mankind applications. Understanding the potential of microbes has generated the scientific thirst and sometimes, the failure used to remind this quote “Bad times have a scientific value. These are occasions a good learner would not miss”- Ralph Waldo Emerson.

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This work to the best of my knowledge is original, except where acknowledgements and references are made to previous work. Neither this, nor any substantially similar dissertation has been or is being submitted for any other degree, diploma or other qualification at any other university.