



**Department of Biotechnology  
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[stage 3]

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**TO WHOM IT MAY CONCERN**

This is to certify that Prasanta Kumar Bera, M. V. Sc., has worked under my supervision at the Department of Biotechnology, University of North Bengal, for Ph.D. thesis entitled **“Phenotypic and Molecular Characterization of Siri (*Bos indicus*) cattle breed from Eastern Sub-Himalayan Region”**. I am forwarding his thesis for the Ph.D. degree (Science) of the University of North Bengal. I recommend that he has fulfilled all requirements according to the rules of the University of North Bengal regarding the works embodied in his thesis. No part of the thesis has formed the basis for the award of any degree or fellowship previously.

*Dipanwita Saha*  
(Dipanwita Saha) 15/5/2017

Supervisor *Dipanwita Saha*  
Assistant Professor  
Department of Biotechnology  
University of North Bengal  
Darjeeling

Date: 15. 5. 2017

Place: University of North Bengal



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**Professor (Dr.) Sankar Kumar Ghosh, FNASc.**  
Vice-Chancellor

### TO WHOM IT MAY CONCERN

This is to certify that the thesis entitled "**Phenotypic and Molecular Characterization of Siri (*Bos indicus*) cattle breed from Eastern Sub-Himalayan Region**" submitted by Prasanta Kumar Bera, M. V. Sc., for the award of the degree of Doctor of Philosophy in Biotechnology, is based on the results of experiments carried out by him. He has worked under my co-supervision at the Department of Biotechnology, Assam University, Silchar, Assam. I recommend that he has fulfilled all requirements according to the rules of the University of North Bengal. No part of the thesis has formed the basis for the award of any degree or fellowship previously. His thesis is being forwarded for the Ph. D. degree (Science) in Biotechnology of the University of North Bengal.

**Sankar Kumar Ghosh**

**Former Professor, Assam University**

**Co-supervisor**