Title of Research Project		Identification and characterization of novel coding and
		non-coding genes regulating the innate immunity against
		virus infection and cancer.
Applicant	Institution	Indian Institute of Science Education and Research (IISER),
		Bhopal, Madhya Pradesh, India
	Job title	Dr. (Ph.D), Associate Professor
	and name	
Visiting	Name	Professor Akinori Takaoka
researcher		
Purpose of the Research Project		Host immune response is essential to defend invading pathogen
(approx. 250 words)		(bacteria, viruses, etc) and neoplastic growth induced within the
		host by abrupt deregulation of normal cells. The immune
		responses are the result of a complex network of sensing via
		sensors and cascade of molecular signaling involving, adaptors,
		kinases and transcription factors which are tightly regulated at
		transcriptional, post-transcriptional, translational and
		post-translational levels. We have predicted some novel
		host/viral factors through bioinformatic approaches involved in
		regulation of innate immune sensors dependent signaling which
		plays a pivotal role in the regulation of innate immune signaling
		pathway and hence hypothesized to be critically involved in
		pathogen clearance and elimination or induction of transformed
		host cells. Our prediction was further strengthened by series of
		ex vivo and in-vitro experiments and showed that this novel
		host/viral factors are critical for regulation innate immunity and
		play a key role in disease outcome.
Development of t	the Research	Mr. Ashish Kumar (the Ph.D. Student) and I visited Prof.
Project and Results	3	Akinori Takaoka laboratory, Signaling in Cancer and
(approx 850 word	s)	Immunology Laboratory, IGM, Hokkaido University from
		February 19, 2017, to February 28, 2017. We had performed
		several in vivo experiments with a group member of Prof.
		Takaoka. We have learned several techniques for gene
		manipulation in various cell lines. We are still doing several in
		vivo experiments to find out more about identified molecules
		which paly a key role in innate immunity against microbial
		infection. We also had series of presentation and discussions
		with Prof. Takaoka and his group members for future
		fundamental research as well as some aspect of teaching. Our

	visit was highly fruitful regarding learning and, I believe that
	our visit is an important cornerstone for our highly productive
	future research.
	Additionally, we work on HCMV-induced oncogenesis, and this
	work is under revision in Cell Death & Diseases.
	At last but not least, we also participated in and highly
	entertaining event of teaching immunology to Blueberry English
	Preschool kids known as "Mamolunngers, Protecting our body
	against bacchies."
	Overall our visit not only excels the top fundamental research in
	cancer and immunology but also fueled the enthusiasm for
	immunology to pre-school kids.
Publication	[Conference, symposium, workshop etc.]
*Enter the names of conference	
or journal and its vol. No. where	Not applicable
the above work was presented.	
	[Journals]
	Essential role of HCMV deubiquitinase in oncogenesis by
	targeting anti-viral innate immune signaling pathways, Miss.
	Puja Kumari , Miss Athira N , Miss Irene Saha , Dr. Prafulla
	Tailor , <u>Prof. Akinori Takaoka</u> , Dr. Sathish Narayanan, <u>Dr.</u>
	Himanshu Kumar, Cell Death & Disease (Under revision)