

## Evaluative Report of the Department

1. Name of the Department:  
General Medicine
2. Year of Establishment :  
Year 1960
3. Is the Department part of a School/Faculty of the University?  
Institute
4. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):  
UG (MBBS), PG (MD), PH.D.
5. Interdisciplinary courses and departments involved:  
None. Departments of Cardiology, Neurology, Endocrinology, Nephrology and Gastroenterology are involved in teaching and training of both UG and PG students.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.
7. Details of programmes / courses discontinued, if any, with reasons
8. Annual / Semester / Choice Based Credit System:  
UG (Semester based), PG, Ph.D. (Choice Based)
9. Participation of the Department in the courses offered by other departments:
  - M.Sc. (Molecular and Human Genetics)
  - BDS
10. Number of teaching posts sanctioned and filled (Professors / Associate Professors / Asst. Professors)

	Sanctioned	Filled
Professor	04	04
Associate Professors	05	02
Asst. Professors	05	04

11. Faculty profile with name, qualification, designation and specialisation (D.Sc. / D.Litt. / Ph.D. / M.Phil./ etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided for the last 4 years
K. Tripathi	MBBS, MD, DM	Professor	General Medicine	33 years	9
Shyam Sundar	MBBS, MD	Professor	General Medicine	31 years	13
N.K. Singh	MBBS, MD	Professor	General Medicine	31 years	
Ravi Tandon	MBBS, MD	Professor	General Medicine	28 years	
I.S. Gambhir	MBBS, MD	Professor	General Medicine	26 years	1
Madhukar Rai	MBBS, MD, DM	Professor	General Medicine	24 years	7
Kailash Kumar	MBBS, MD	Professor	General Medicine	11 years	
Jaya Chakravarty	MBBS, MD	Assistant Professor	General Medicine	8 years	1
Dhiraj Koshore	MBBS, MD	Assistant Professor	General Medicine	4 ½ years	
Anup Singh	MBBS, MD	Assistant Professor	General Medicine	3 years	
L.P. Meena	MBBS, MD	Assistant Professor	General Medicine	2 years	

12. List of senior Visiting Fellows, Faculty, adjunct faculty, emeritus professors

1. Prof Mary Wilson, USA
2. Prof Jenefer Blackwell, Australia
3. Prof. Paul M. Kaye, UK
4. Dr Upasana Gaur, USA
5. Dr Albert Picado, UK
6. Dr Epco Husker, Belgium
7. Dr David Sacks, USA
8. Dr Nasim Akhtar, USA
9. Dr Micheala Fakiola, UK
10. Dr. Christian Engwerda, Australia
11. Dr. Philip Desjeux, USA
12. Dr. Susanne Nysten, Sweden

13. Percentage of classes taken by temporary faculty – programme-wise information

14. Programme-wise Student Teacher Ratio:

UG: 7 students / teacher /batch

PG: 16:11

15. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Post	Sanctioned	Filled	Vacant
Technical	14	05	09
Administrative Staff	02	02	NIL
Total	16	07	09

16. Research thrust areas recognized by funding agencies:

- Visceral Leishmaniasis
- HIV/AIDS
- Diabetes Mellitus and its related complications
- Geriatrics

17. Number of faculty with ongoing projects from (a) national (b) international funding agencies and (c) Total grants received. Give the names of the funding agencies and grants received project-wise.

Sl. No.	Project Title	Funding Agency	Amount (approx)
<b>Completed</b>			
1.	Efficacy, acceptability and cost-effectiveness of long lasting insecticidal nets in the prevention of Kala-azar	European Commission - Kalanet	Rs. 4,00,00,000.00 crores.
2.	A Phase 1, open Label, dose-escalating study to evaluate the safety, tolerability, and immunogenicity of the Leish-111F+MPL-SE Vaccine (Recombinant three- antigen <i>Leishmania</i> polyprotein with adjuvant MPL-SE) in Healthy adults in India.	Infectious Disease Research Institute (IDRI) USA.	Rs. 80,00,000.00 Lakhs approx.
3.	Implementation strategies for Visceral Leishmaniasis treatment in India	World Health Organization (WHO).	Rs. 30,05,000.00. Lakhs approx.

4.	<p>Visceral Leishmaniasis in Bihar state, India (Part I)</p> <p>Objective 1: Clinical and epidemiological studies of Visceral Leishmaniasis</p> <p>Objective 2: The role of regulatory T cell subsets and cytokines in the pathogenesis of human VL</p> <p>Objective 3: Genetic risk factors for visceral Leishmaniasis</p>	NIAID, NIH, USA	Rs. 18,36,15,550.00 crores approx.,
5.	Comparative Evaluation Of PCR Primers In Diagnosis and Prognosis Of Indian Visceral Leishmaniasis (VL) And Post Kala-Azar Dermal Leishmaniasis (PKDL)	ICMR New Delhi	Rs. 2926000.00 Lakh
6.	Explicating dysfunction of fibroblast in diabetic wound hoaling	ICMR New Delhi	Rs. 5,00,000.00 Lakhs
<b>Ongoing</b>			
1.	<p>Visceral Leishmaniasis in Bihar state, India (Part II)</p> <p>Objective 1: Clinical and epidemiological studies of Visceral Leishmaniasis</p> <p>Objective 2: The role of regulatory T cell subsets and cytokines in the pathogenesis of human VL</p> <p>Objective 3: Genetic risk factors for visceral Leishmaniasis</p>	NIAID, NIH, USA	Rs. 13,00,00,000.00 crores approx.,
2.	Center of Excellence (COE) for HIV care	National AIDS Control Organization, Department of Health and Family Welfare, Government of India	Rs. 1,75,00,000.00
3.	New tools for monitoring drug resistance and treatment response in Visceral Leishmaniasis in the Indian subcontinent".	European Commission	Rs. 2,69,75,000.00 crores approx.,

4.	Epidemiology of Visceral Leishmaniasis in Muzaffarpur District, Bihar	Bill and Melinda Gates Foundation, USA.	Rs. 8,00,00,000.00 crores approx.
5.	Designing Combination immunotherapy and drug treatment to control chronic infectious diseases".	Bilateral Research Project Funds under the Indo-Australian Biotechnology Fund 2011-12	Rs. 1,40,00,000.00 crore approx.
		<b>Total Grant</b>	<b>Rs. 50,65,21,550.00 Crores approx.</b>
		<b>Completed</b>	<b>Rs. 23,80,46,550.00 Crores approx.</b>
		<b>Ongoing</b>	<b>Rs. 26,84,75,000.00 Crores approx.</b>

18. Inter-institutional collaborative projects and grants received

- a) All India collaboration
- b) International

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE, DBT, ICSSR, etc., total grants received.

Sl. No.	Project Title	Funding Agency	Amount (approx)
1.			
2.			

20. Research Facility/centre with

- State recognition
- National recognition :  
**Centre of Excellence for HIV Care**  
**[Centre for Research and Training]**  
**Funded by National AIDS Control Organization,**  
**Govt. of India**
- International recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies

22. Publications:

- Number of papers published in peer reviewed journals (national / International)

International - 243

National - 53

- = Monographs

- = Chapters in Books

International - 14

National - 30

- Edited Books - 6

- Books with ISBN with details of publishers

S.No	Title with page nos.	Book title & Publisher	ISSN/ ISBN No.
1.	Harrison's Principle of Internal Medicine – 18th Edition	McGraw-Hill	0721-832X
2.	<i>Davidson's Principle and Practice of Medicine</i> , 21 <sup>st</sup> Edition, Davidson's Clinical Cases, 2008	Churchill Livingstone/Elsevier	
3.	Antimicrobial resistance in kala-azar. In Antimicrobial Resistance – The Modern Epidemic (Eds. Raghunath D, Nagaraja V, Durga Rao C). pp.73-81.	Antimicrobial Resistance – The Modern Epidemic Current Status and Research Issues (Pub. Macmillan Publishers India Ltd, Delhi. 2009)	10:0230-63824-4
4.	Leishmania Vaccine. In Adult Immunization (Eds. Sharma SK, Singal RK, Agarwal AK). pp. 111-5.	Adult Immunization (Pub Association of Physicians of India, Mumbai. 2009)	978-81-8448-673-5
5.	Anaemia in Visceral Leishmaniasis. In Anaemia in Tropics (Ed. N Mukherjee) pp. 130-34.	Anemia in the Tropics (Pub: Indian College of Physicians, Mumbai. 2009)	
6.	Nosocomial Infection – Prevention and Management. pp 77-86.	Postgraduate Medicine (Ed. YP Munjal) 2008, Vol 22	

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.)
- Citation Index – range / average : **Total 7720**
- SNIP
- SJR
- Impact Factor – range / average : **0.175-53.48 / 4.86**
- H-index : **46**

23. Details of patents and income generated

24. Areas of consultancy and income generated

25. Faculty selected nationally / internationally to visit other laboratories in India and abroad:

26. Faculty serving in

- a) National committees
- b) International committees
- c) Editorial Boards
- d) Any other (please Specify)

Member - WHO, Geneva Expert Panel on leishmaniasis

Member - TDR, WHO Disease Reference Group

Member - Scientific Advisor Committee, TDR, WHO Committee on VL Elimination

Member - Govt of India, Ministry of Health Expert Committee on Kala-azar

Editor-in-Chief – World Journal of Clinical Infectious Diseases

Editor – Journal of Tropical Medicine

Editor – Journal of Global Infectious Diseases

Member, Editorial Board- Asian Journal of Medical Sciences

Member, Scientific Advisory Committee – Visceral Leishmaniasis, TDR/WHO, Geneva

Founder President – Leishmania Research Society (India)

Member – Scientific Working Group of Leishmaniasis, TDR/WHO, Geneva

Advisor – DNDi (Drugs for Neglected Diseases Initiative), Geneva

Member - AmBisome Consultative Group, WHO, Geneva

Advisor – World Health Organization, SEARO, New Delhi

Chairman – Expert group on Diagnosis and Treatment of Kala-azar, Govt. of India

Advisor – Government of Nepal Expert Committee on leishmaniasis

Member, Leishmaniasis Reference Group, World Health Organization/TDR, Geneva, Switzerland

Technical Expert – For leishmaniasis, Indian Council of Medical Research  
Member – Project Review Committee, Indian Council of Medical Research  
Expert – Technical committee on Antiretroviral Therapy, NACO, Govt. of India  
Expert – Technical committee on Opportunistic Infections in HIV infection, NACO, Govt. of India  
Member, PDT of Miltefosine – World Health Organization/TDR, Geneva, Switzerland  
Member, PDT of Aminosidine – World Health Organization/TDR, Geneva, Switzerland  
Member, Scientific Advisory Committee – Institute of One World Health, San Francisco, USA  
Former Editor – International Journal of Infectious Diseases, New York, USA.  
Asst Editor, Journal of the Association of Physicians of India  
Member, Scientific Advisory Committee- Institute of Pathology, New Delhi  
Member, Scientific Advisory Committee- Rajendra Memorial Institute of Medical Sciences, Patna  
Member, Governing Body, Association of Physicians of India, 2006-2011  
Chairman, Association of Physicians of India, (UP Chapter) 2008

27. Faculty recharging strategies

28. Student Projects

- Percentage of students who have done in-house projects including inter-departmental projects
- Percentage of students doing projects in collaboration with other universities / industry / institute - 100% [from 2007-2012 total 20 students]

29. Awards / recognitions received at the national and international level by

= Faculty

**Important Fellowships:**

- Fellow (FRCP): Royal College of Physicians, London
- Fellow (FNA): Indian National Science Academy, India
- Fellow (FAMS): National Academy of Medical Sciences, India
- Fellow (FNASc): National Academy of Sciences, India
- Fellow (FASc): Indian Academy of Sciences, India

#### Awards

- Vice- Chancellor's Medical Research Award, 2012
  - PC Sengupta Memorial Oration – School of Tropical Medicine, Kolkata 2011
  - Dr S Nath Memorial Award – Indian Medical Association, 2011
  - Anne Maurer Cecchini 2010 Award Anne Maurer Cecchini Foundation, Geneva Switzerland, 2010
  - Best research poster in the category clinical Medicine at the State level Bio-Medical research competition. 2010
  - Vice-Chancellor's Medical Research Award Banaras Hindu University, 2010
  - Dr VR Joshi Award- Journal of Association Of Physicians Of India, 2009
  - IAMS Chairman Appreciation Award- Indian Academy of Medical Specialities, 2008
- o Doctoral / postdoctoral fellows

Student	Fellow	Supervisor	Travel Award	Country Visited
Kamlesh Gidwani	CSIR-SRF	Prof. Madhukar Rai	WHO	Kenya & Bangladesh
			European Commission	Belgium
			LETI Laboratory	Spain
			ISID	UK
Pankaj Srivastava		Prof. Shyam Sundar	Kaladrug	Belgium
				Italy
Subodh Kumar	CSIR-JRF	Prof. Shyam Sundar	IDRI	USA
Dr. Manisha Vaish		Prof. Shyam Sundar	CSIR	USA
Rajiv Kumar Srivastava	ICMR-JRF	Prof. Shyam Sundar	CSIR	South Africa
			DST	Italy
			NIH-TMRC	USA
Vijay Kumar Prajapati	ICMR-JRF	Prof. Madhukar Rai	European Commission	Belgium
			DST	Italy

			ICMR	Germany
Sanjana Mehrotra	CSIR-JRF	Prof. Shyam Sundar	NIH-TMRC	Australia
			Boehringer	Germany
Shalini Gautam	ICMR	Prof. Madhukar Rai	NIH-TMRC	Iowa, USA
			ICMR	Boston, USA
Om Prakash Singh	CSIR-SRF	Prof. Shyam Sundar	NIH-TMRC	Maryland, USA
			CSIR	Italy
			ASTMH, USA	Atlanta, USA
Medhavi Sudarshan	CSIR-JRF	Prof. Shyam Sundar		
Puja Tiwary	CSIR-JRF	Prof. Madhukar Rai	DBT	Italy
Dinesh Kumar	CSIR-JRF	Prof. Shyam Sundar	DST	Italy
Tootika Singh	ICMR-JRF	Dr. Jaya Chakravarty	BHU	Italy
Abhishek Singh	ICMR-JRF	Prof. Madhukar Rai		
Neetu Singh	UGC-JRF	Prof. Shyam Sundar		
Shyam Lal M	UGC-JRF	Prof. Madhukar Rai		
Bhavana Singh	CSIR-JRF	Prof. Shyam Sundar		

• Students

1. International society of Infectious disease research award-2011: Kamlesh Gidwani
2. "RANBAXY Research Scholar-2011 " award to Vijay Kumar Prajapati
3. American society of Tropical Medicine and Hygiene (ASTMH) premiers travel award-2012- Om Prakash Singh

30. Seminars / Conferences / Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

**Organised International/national CME/Updates/Conferences:**

1. Organiser – 4<sup>th</sup> World congress on Leishmaniasis, 2009
2. KALA Drug-R first Clinical and Pharmaco Vigilance Meeting, 2009
3. Organising Secretary, VIIIth National Annual Conference of Indian Academy of Geriatrics (IAG) and 15<sup>th</sup> Biennial National conference of Association of Gerontology, India (AGI) from 12-14 November 2010 at KN Udupa Auditorium BHU, Varanasi

31. Code of ethic for research followed by the departments – Department follows the ICH/GCP and ICMR guidelines for human and CPSCA guidelines for animal research.

32. Student profile course-wise

Name of the Course (refer to question no. 4)	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
Ph.D.	94	10	10		

33. Diversity of students

Name of the Course (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
Ph.D.	9/20	7/20	4/20	

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give Details category wise

CSIR NET	ICMR NET	GATE	UGC NET
6	5	22	3

35. Student progression

Student progression	Percentage against enrolled
UG to PG	100%
PG to M.Phil.	NA
PG to Ph.D.	Nil
Ph.D. to Post-Doctoral	8
Employed	2
Campus selection	
Other than campus recruitment	
Entrepreneurs	

36. Diversity of staff

Percentage of faculty who are graduates	100%
Of the same university	81.18%
From other universities within the State	0
From the universities from other states	18.81%
From the universities outside the country	0

37. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period

38. Present details of infrastructural facilities with regard to

- a) Library : 1
- b) Internet facilities for staff and students : Yes
- c) Total number of class rooms : 3
- d) Class rooms with ICT facility : 1
- e) Students' laboratories: 3
  - Size 14 x 20 Sq.Ft
  - Size 14 x 20 Sq.Ft
  - Size 14 x 20 Sq.Ft
- f) Research laboratories: 3
  - Size 1428 Sq. Ft.
  - Size 2553 Sq. Ft.
  - Size 405 Sq. Ft.

The list of Equipments, other facilities and resources available at BHU laboratory for the work is given below:

**Microscopy:**

Zeiss phase contrast microscope, Zeiss inverted microscope, Light microscope

**Centrifugation:**

Three Beckman Coulter Allegra centrifuge, Sigma cooling centrifuge, Heraeus centrifuge, Remi cooling centrifuge, Optima Max-XP ultracentrifuge, Three eppendorf minispinwin.

**Culture:**

Two Nuaire biosafety cabinet, Klenzaid's vertical laminar flow hood, Nuaire horizontal laminar flow hood, Three Sanyo air jacketed CO<sub>2</sub> incubators, Two Calton BOD incubator, Two Nuaire air filter, Innova incubator shaker, Nuve water bath shaker, Clifton circulating water bath

**Refrigeration:**

Two Sanyo medicool 4°C cabinets and six refrigerators, Three horizontal and one -20°C freezers, Four -80°C freezers, and one Sanyo -156 °C freezer.

**Chemical and electrophoresis:**

Two pH meter, power supplies, Gel electrophoresis unit: SDS-PAGE and DNA electrophoresis, Biorad Dcode electrophoresis unit, Biorad-Protean IEF cell.

**Molecular Biology:**

Two PCR machines (ABI), Peltier Thermal Cycler MJR, Real Time PCR machine(ABI), Combi-H hybridization incubator, Nanodrop spectrophotometer, Picodrop spectrophotometer, Alpha Innotech gel imager Fluorchem Taqman 48 analyzer, Alpha Innotech gel imager, Fluorchem Taqman 48 analyzer, Genei transilluminator, Bioplex luminex, Labnet accublock digital dry bath, BD FACS caliber

**Others:**

Sanyo soniprep sonicator, Biotek plate reader, Biorad semidry transfer cell, Magnetic stirrer, Shimadzu digital weighing balance, Sartorius weighing balance, Ice flaker, Neolab shaker, Spinix vortex, Three NSW-143 Oven, Kenstar microwave, Three hp laserjet printers, ELISA plate reader, Liquid handling system, Two Distilled water unit, Autoclave unit

39. List of doctoral, post-doctoral students and Research Associates

a) from the host university

Doctoral	- 9
Post doctoral	- 0
Research Associates	- 1

b) from other universities

Doctoral	- 7
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40. Number of post graduate students getting financial assistance from the university: 1

41. Was any need assessment exercise undertaken before the development of new programmes(s)? If so, highlight the methodology.

42. Does the department obtain feedback from:
- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
  - Students of staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
  - Alumni and employers on the programmes offered and how does the department utilize the feedback?
43. List the distinguished alumni of the department (maximum 10)
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
- Ravi Durvasula:** Center for Global Health, Department of Internal Medicine, University of New Mexico and New Mexico VA Health Care System, Albuquerque, New Mexico, USA
  - D.J. Perkins:** Department of Internal Medicine, University of New Mexico and New Mexico
  - Marleen Boelart:** Institute of Tropical Medicine, Belgium
  - Christian Engweards:** Queensland Institute of Medical Research, Australia
45. List the teaching methods adopted by the faculty for different programmes.
- Didactic lectures, Case discussions, Bedside teaching, Group discussions and distance learning by I-Tech India.**
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
- The entire students programme is graded and students are required to fill Log Books. Students are periodically assessed after completion of lecture series by objective and structured questions.**
47. Highlight the participation of students and faculty in extension activities.
48. Give details of “beyond syllabus scholarly activities” of the department.
49. State whether the programme / department is accredited / graded by other agencies? If yes, give details.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

51. Future plans of the department:

The Department is the world leader in the field of Leishmania and nationally recognized Centre of Excellence in HIV research and training. The Department wants to develop the existing facilities of Infectious diseases into a full-fledged department and start a DM Program in Infectious Diseases. The Department is recognized nationally for its work on Geriatrics and we plan to convert the Division of Geriatrics into an independent Department and start the Postgraduate MD Program. The Divisions of Rheumatology and Haematology which are functioning as a service unit will be upgraded in future and over time developed into a full fledged department.

52. Detail any five strengths, weaknesses, opportunities and challenges (SWOC) of the department.

**Strengths:**

1. The Department has world class basic and clinical research capability in Leishmania. It has developed diagnostics for Visceral Leishmania of which rK39 strip test is now used world over including India and WHO has recognized this test as primary field test for this disease.
2. The Department was instrumental in developing the first oral drug miltefosine which has been adopted for the VL Elimination Program in the Indian subcontinent. Further, this drug is now being used worldwide for various forms of Leishmaniasis.
3. The Department is also credited for the development of Single dose Liposomal Amphotericin B therapy for Visceral Leishmaniasis which has revolutionized the approach to the treatment of this disease. This is considered the most preferred regimen by the World Health Organization, Geneva.
4. The Department has done pioneering work in the development of multidrug therapy for VL which has also been recommended as the preferred regimen after the "single dose therapy" by WHO.
5. National research and training centre for HIV.

**Weaknesses:**

1. The number of beds in the Department are not as per MCI guidelines
2. Outpatient facility needs further extension
3. There is a severe space constraint for office space for teachers and a large proportion of teachers do not have an office space.
4. There are four faculty positions vacant (3 – Associate Professors, 1 – Assistant Professor) which needs to be filled.

**Opportunities:**

1. The Department has a six bedded ACU, which could be developed further if space and funds are provided
2. The Division of Geriatrics has immense potential and needs to be developed.
3. The stem cell and bone marrow transplantation unit, being developed in the University should boost the Division of Haematology.