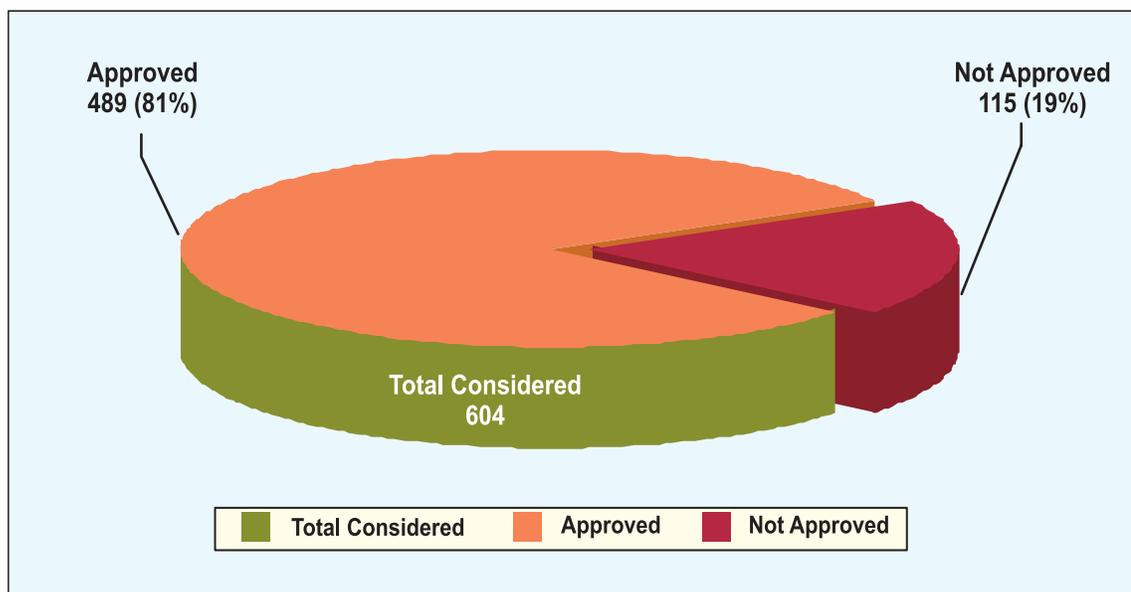
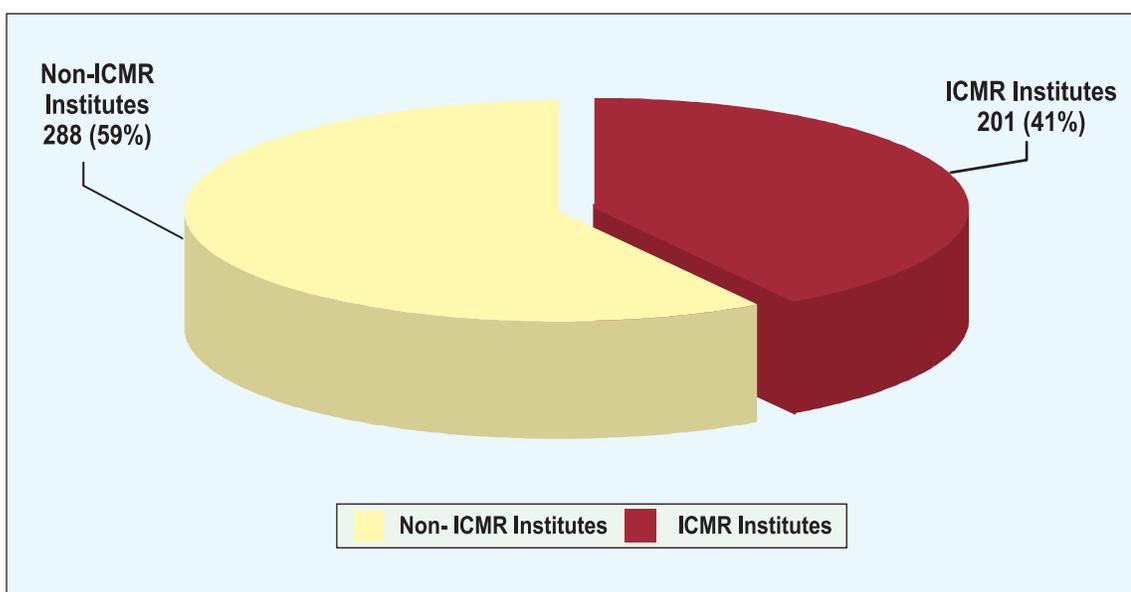


Facts and Figures

Number of international collaborative proposals considered and approved by HMSC during the years 2000 to 2007

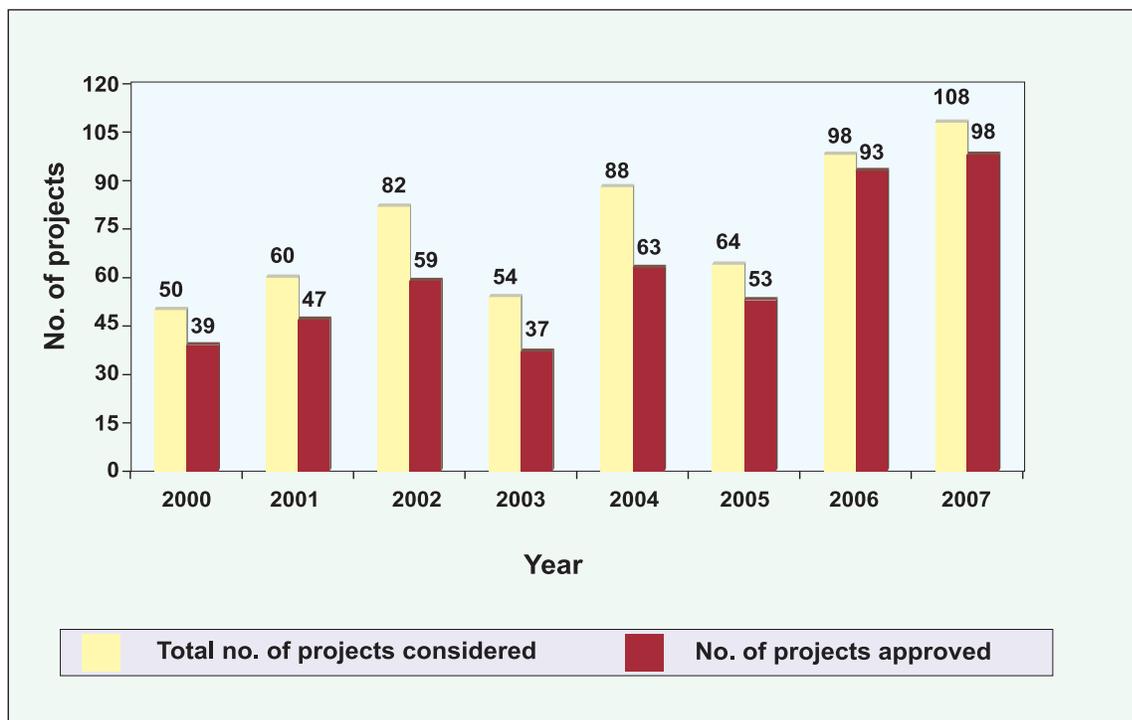


International collaborative projects undertaken at ICMR & Non-ICMR Institutes during the years 2000 to 2007



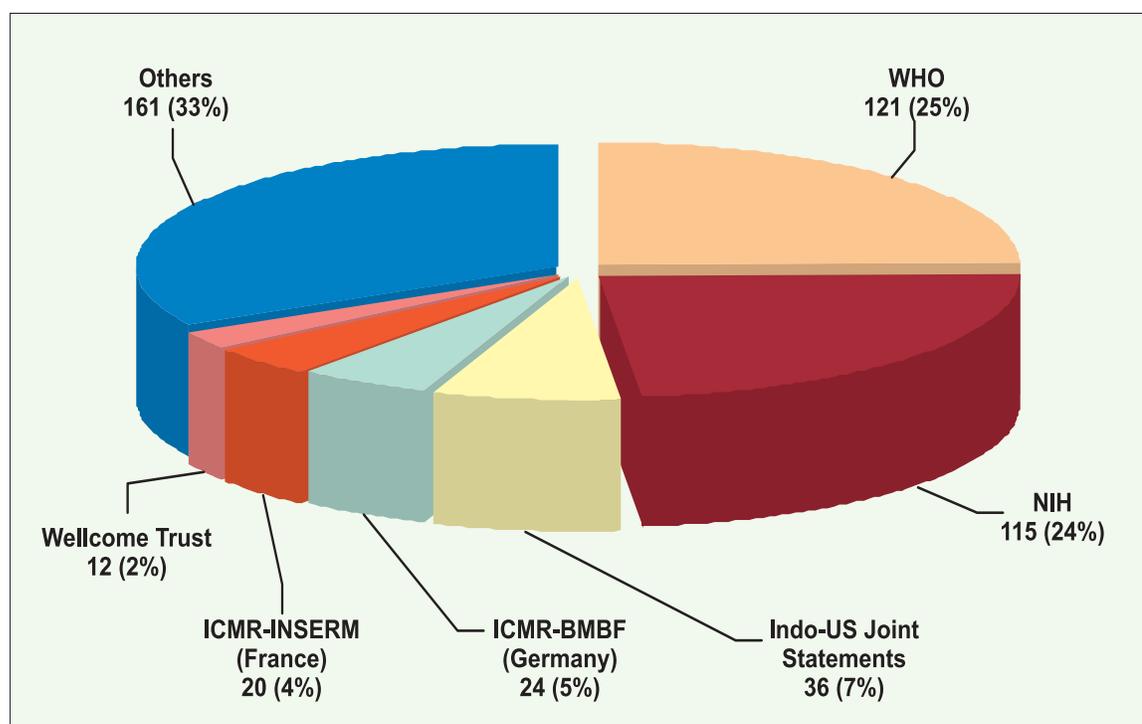
Proposals considered & approved by HMSC during the years 2000 to 2007

Year	Total no. of projects considered	No. of projects approved
2000	50	39
2001	60	47
2002	82	59
2003	54	37
2004	88	63
2005	64	53
2006	98	93
2007	108	98
Total	604	489



Funding agency wise representation of projects approved by HMSC during the years 2000 to 2007

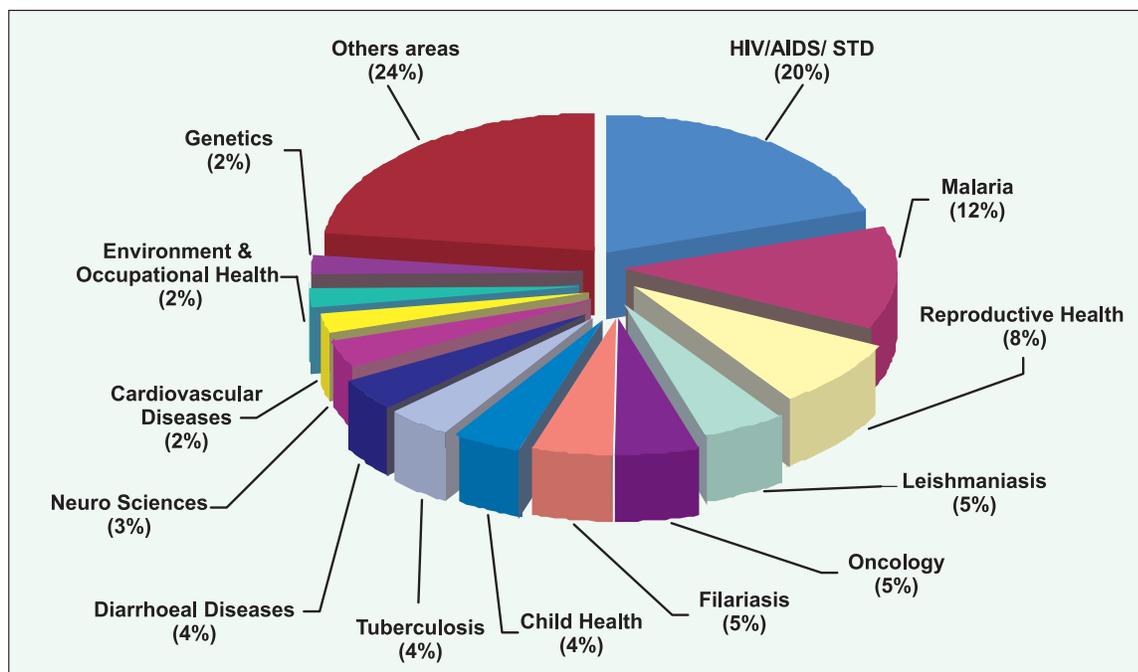
Funding agency	Projects approved (489)
WHO	121
NIH	115
Indo-US Joint Statements	36
ICMR-BMBF (Germany)	24
ICMR-INSERM (France)	20
Wellcome Trust	12
Other agencies*	161



* Other agencies with less than 10 projects include IVI, EU, Bill & Melinda Gates Foundation, IFCPAR, USAID, MRC-UK, CONRAD, Institute of One World Health, CDC, CIHR, DNDi, FHI, Health Effects Institute, IAVI, IBCSG, IRCCS, AREAS, JICA, MMV, PATH, WAF, ILTP, IAEA, IDRI, various Foreign Universities etc.

Subject area wise representation of projects approved by HMSC during the years 2000 to 2007

Subject area	Projects approved (489)
HIV/AIDS/ STD	98
Malaria	60
Reproductive Health	39
Leishmaniasis	25
Oncology	24
Filariasis	23
Child Health	20
Tuberculosis	20
Diarrhoeal Diseases	19
Neuro Sciences	15
Cardiovascular Diseases	12
Environment & Occupational Health	11
Genetics	10
Others areas [†]	113



[†] An exhaustive list of all subject areas is compiled in "Sub areas under which international collaborative projects were undertaken during the years 2000 to 2007"

Sub areas under which international collaborative projects were undertaken during the years 2000 to 2007

Major Areas#	Sub-areas
HIV/AIDS(98) <ul style="list-style-type: none"> ▪ HIV/AIDS-Tuberculosis(5) ▪ HIV/AIDS-STD(93) 	<ul style="list-style-type: none"> ▪ Prevention/ Intervention trials ▪ Behavioral research ▪ Health Systems Research ▪ Clinical trials ▪ Genetics & molecular biology ▪ Immunology ▪ Vaccine trials ▪ Surveillance ▪ Diagnostic tool development ▪ Neurovirology
Malaria (60)	<ul style="list-style-type: none"> ▪ Genetics & molecular biology ▪ Vector control ▪ Epidemiology ▪ Drug development ▪ Health Systems Research ▪ Vaccine trials ▪ Pharmacotherapy ▪ Immunology ▪ Drug and Insecticide resistance ▪ Others (Including projects on geospatial studies, mathematical modeling & public policy linkages and disease susceptibility models.
Reproductive Health(39)	<ul style="list-style-type: none"> ▪ Clinical trials ▪ Microbicides ▪ Epidemiology & surveillance ▪ Behavioral factors
Leishmaniasis (25)	<ul style="list-style-type: none"> ▪ Clinical trials ▪ Genetics & molecular biology ▪ Health Systems Research ▪ Surveillance & vector control
Oncology (24)	<ul style="list-style-type: none"> ▪ Clinical trials ▪ Epidemiology & surveillance ▪ Molecular biology & genetics ▪ Novel techniques ▪ Others (including study on radiation oncology)
Filariasis (23)	<ul style="list-style-type: none"> ▪ Drug development ▪ Epidemiology ▪ Health Systems Research ▪ Pharmaco-therapy ▪ Immunology ▪ Diagnostic tool development
Child Health (20)	<ul style="list-style-type: none"> ▪ Epidemiology & surveillance ▪ Clinical trials ▪ Capacity building ▪ Influenza vaccine

Table Continued ...

Major Areas#	Sub-areas
Tuberculosis(20)	<ul style="list-style-type: none"> ▪ Epidemiology ▪ Diagnostic tool development ▪ Immunology ▪ Drug resistance and disease susceptibility
Diarrhoeal Diseases(19)	<ul style="list-style-type: none"> ▪ Vaccine trials ▪ Genomics ▪ Prevention/Intervention trials
Neuroscience (15)	<ul style="list-style-type: none"> ▪ Geriatrics ▪ Molecular biology & genetics ▪ Others (Including study on cognitive retraining and home based interventions)
Cardiovascular Diseases (12)	<ul style="list-style-type: none"> ▪ Clinical trials ▪ Risk factor identification (including cohort study)
Environment & Occupational Health(11)	<ul style="list-style-type: none"> ▪ Air pollution ▪ Surveillance ▪ Arsenic toxicity
Genetics(10)	<ul style="list-style-type: none"> ▪ Molecular genetics
Other areas(113) Leprosy(9)	<ul style="list-style-type: none"> ▪ Genetics & molecular biology ▪ Prevention trials
Mental Health(9)	<ul style="list-style-type: none"> ▪ Schizophrenia ▪ Genetics ▪ Integration of treatment of CMD's in primary care
Nutrition (9)	<ul style="list-style-type: none"> ▪ Health Systems Research ▪ Basic science
Virology (8)	<ul style="list-style-type: none"> ▪ Vaccine trials ▪ Epidemiology & surveillance
Ophthalmology(8)	<ul style="list-style-type: none"> ▪ Epidemiology ▪ Others (Including study on rehabilitation in congenital blindness)
Diabetes (7) [‡]	<ul style="list-style-type: none"> ▪ Genomics & molecular biology
Haematology(6)	<ul style="list-style-type: none"> ▪ Immunology ▪ Genetics & molecular biology
Dengue (6)	<ul style="list-style-type: none"> ▪ Surveillance ▪ Vector control & genetics
Alternative Medicinal Systems(5) <ul style="list-style-type: none"> ▪ Ayurveda ▪ Homeopathy ▪ Yoga 	<ul style="list-style-type: none"> ▪ Capacity building ▪ Biochemistry ▪ Yoga
Bioethics(5)	<ul style="list-style-type: none"> ▪ Capacity building ▪ Public policy
Basic Sciences [§] (5)	
Social & Behavioral Research(5)	<ul style="list-style-type: none"> ▪ Cohort study on healthy adolescence ▪ Exploring the relationship of domestic violence with poor maternal and infant health

Table Continued ...

[‡] Projects exploring CVD and Diabetes—have been clubbed with Cardiovascular Diseases in the list whereas studies on Diabetes have been put under a different head.

[§] not classified elsewhere.

Major Areas [#]	Sub-areas
Bioinformatics(4)	<ul style="list-style-type: none"> ▪ Genomics ▪ Telemedicine
Health Systems Research(4)	<ul style="list-style-type: none"> ▪ Health financing ▪ Surveillance
Infectious Diseases [§] (4)	
Japanese Encephalitis(3)	<ul style="list-style-type: none"> ▪ Molecular biology
Parasitic Infections (3)	
Immunology (2)	<ul style="list-style-type: none"> ▪ Transplant immunology
Gastroenterology (2)	<ul style="list-style-type: none"> ▪ Liver diseases
Non-Communicable Dis. Surveillance (2)	Details are available in the list of international collaborative projects
Psychology (2)	
Stem Cell Research (2)	
Influenza (2)	
Endocrinology (1)	
Field Epidemiology Training Programme (1)	

[#] Total number of approved projects are shown in bracket.

Trends in Biomedical Research

The HMSC granted approval to a total of 489 international collaborative projects during the years 2000 to 2007. The approved collaborative projects were in varied subject areas. This information can be used as an evidence base to analyze whether international collaborative projects were undertaken only in certain major areas of research. We hope that the current analysis will help in identifying those areas which need further attention and would help policy makers to formulate a better informed strategic decision making.

The maximum number of projects approved were 98 projects in the area of HIV/AIDS with a representation of 20% of total approved projects. Out of these, five projects focused exclusively on HIV/AIDS and tuberculosis while remaining 93 were on various areas related to HIV/AIDS and STD. The projects broadly focused on prevention/intervention, behavioral aspects of disease and such research issues which could be incorporated in the national health systems. The clinical/vaccine trials and genomics research was also undertaken through certain projects for effective prevention and treatment of HIV/AIDS.

Subsequent focus, as manifested by 60 projects, was on Malaria. Predominantly, the genomics and molecular biology approach was undertaken for research in this area. Other areas in which projects were undertaken included vector control, epidemiology, drug and vaccine development. Use of newer geo epidemiological techniques such as geo informatics systems (GIS) and mathematical modeling as well as public policy impact evaluation has begun showing forays in the domain of international collaborative research on Malaria.

Within the area of Reproductive health, 39 projects were approved during the above said period. The projects were undertaken as clinical trials and epidemiology/surveillance studies. The emerging areas of research such as studies on microbicide were also undertaken which embarks the public policy focus on novel preventive strategies.

An important thrust area appears to be Leishmaniasis with 25 projects, where clinical trials, genomics and vector control measures predominated. The relatively lower efficacy profile and high index of adverse reactions of older agents has prompted newer anti-infective product development strategies and hence increasing number of clinical trials in the field of leishmaniasis.

The international collaboration on Oncology resulted into 24 projects, with more than one third as clinical trials. Other areas of concentration included genomics and evaluation of novel techniques for diagnostic and therapeutic accuracy in cancer. However, radiation oncology had just one international collaborative project, which is an area where technology transfer and future integration with nuclear medicine has immense value, both in basic science and translational research.

The approved research projects on Filariasis amounted to 23 projects, where the maximum

focus was on preventive strategic research and drug development.

The area of Child Health was explored through 20 international collaborative projects where emphasis was on epidemiology and surveillance, clinical trials and influenza vaccine development to improve the current treatment options and hence maximize the benefits.

The collaborative projects undertaken in Tuberculosis numbered 20 projects with major focus on epidemiology, immunology and drug resistance studies.

The collaborative programme on Diarrhoeal diseases constituted of 19 projects undertaken during the years 2000 to 2007. The studies undertook scientific exploration in areas such as vaccine and prevention/intervention trials and genomics.

Neuroscience studies consisted of 15 projects, where a diverse set of areas like geriatrics, molecular biology, cognitive retraining etc. were considered. However, work has also begun on home based therapeutic interventions, which if improved, could change the outcome of currently practiced service delivery modalities.

The projects undertaken on cardiovascular diseases amounted to 12 projects, where the trend of focus was on the risk factor identification and clinical trials. The Environment & Occupational Health consisted of 11 projects primarily focusing on pollution and establishing patterns of surveillance.

Projects in the area of genetics were 10 in number mainly focusing on molecular genetics.

However, few notable areas such as alternative systems of medicine, bioethics, bioinformatics and stem cell research etc (outlined under other areas in the table on page no- 199-201) had minimal number of projects for international collaboration. Some of these are the upcoming fields of research and need to be taken up with certain international institutes working in these areas.