

Advisory Committee on Dangerous Pathogens



Biological Agents Bulletin

*Including the
who's who on
the ACDP*

IN THIS ISSUE

Welcome to the first bulletin

Who's who on the ACDP

*Interim classification of
biological agents*

*Notification of first use
of biological agents*

*Current and new
publications from
the ACDP*

Coming up...

Welcome to the first edition

This is the first issue of the *Biological agents bulletin*. This publication is produced by the Secretariat of the Advisory Committee on Dangerous Pathogens (ACDP). We aim to issue a bulletin two or three times a year to bring you:

- ◆ the latest information on the work of the ACDP - including new and forthcoming publications;
- ◆ news on the classification of biological agents; and
- ◆ other issues and topics of interest to people working with biological agents.

The bulletin is aimed at workers in the laboratory and health care sectors, as well as people with a public health interest in infectious disease.

If you have seen a copy of this issue and wish to receive your own copy and future copies, please let us know (contact details below). We would welcome comments/views from readers too.

The ACDP is an advisory committee of the Health and Safety Commission and the Department of Health and also advises agriculture ministers on all aspects of hazards and risks to workers and others from exposure to pathogens (biological agents).



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The ACDP was set up in 1981 following a second outbreak (resulting in a third death) of laboratory-acquired smallpox and was the successor to the Dangerous Pathogens Advisory Group. The Committee has an independent chairman and eight expert members chosen from names put forward by professional bodies, four representatives of employees and four of employers. Committee membership is widely representative of expertise and long experience in most aspects of microbiology and infectious diseases in both the public sector and industry.

Working groups are set up to deal with specific tasks and they commonly include other experts co-opted for their specialist knowledge of the topic to be addressed.

Agendas (which are annotated after each meeting) can be accessed on the Internet at <http://www.open.gov.uk/hse/acdp>

Who's who on the ACDP

The ACDP was reconstituted with effect from 1 November 1998 and the new Committee are to meet for the first time on 8 December. We have a new Chairman and four new expert members as well as three new employer/employee representatives. The ACDP Secretariat wishes to thank the outgoing Chairman and members for their hard work and valuable contributions to the work of the Committee.

The new Committee

Chairman	Professor Roger Whittenbury	Chairman of the Department of Biological Sciences - University of Warwick
Expert members	Dr Barbara Bannister	Consultant in Infectious and Tropical Disease - Coppetts Wood Hospital
	Professor Roger Freeman	Director of Newcastle Public Health Laboratory
	Dr Ernie Gould	Assistant Director of the Institute of Virology and Environmental Microbiology
	Professor Don Jeffries	Head of Microbiology at St Bartholomew's and London Hospital
	Mr Martin Jones	Risk Management Officer at Parke-Davies Research Centre
	Dr Phil Jones	Head of Division of Environmental Microbiology at the Institute of Animal Health
	Professor Catherine Peckham	Professor of Paediatric Epidemiology, Institute of Child Health
	Professor Brian Spratt	Professor of Biology and Wellcome Trust Principal Research Fellow, Oxford University
Employer representatives	Mr Bob Clare	Independent Health and Safety Consultant
	Ms Anne Harris	Glaxo-Wellcome, Infectious Diseases and Hepatitis Therapeutic Development Group
	Professor Charles Hart	Professor of Medical Microbiology and Genito-Urinary Medicine, University of Liverpool
	Mr John Saxby	Chief Executive of Darlington Memorial Hospital Trust
Employee representatives	Ms Janet McCulloch	Senior Nurse, Infection Control
	Dr Ron Owen	Independent Consultant in Occupational Medicine
	Ms Pam Smith	MLSO, Royal Hampshire County Hospital
	Mr Paul Taylor	Consultant Clinical Scientist, Royal Brompton Hospital

Interim classification of biological agents

Directive 93/88/EEC classifies biological agents into four hazard groups based on their ability to infect healthy workers. This classification was implemented in UK law as an Approved List of Biological Agents in the fourth edition of the *Categorisation of biological agents according to hazard and categories of containment*. A revised Approved list was published in May 1998 (see back page).

If you intend to work with an agent that does not appear in the Approved list then you need to allocate it to a hazard group in accordance with the definitions in the Control of Substances Hazardous to Health (COSHH) Regulations 1994. There are rules to guide this classification, for example, you have to allocate all viruses isolated from humans to Hazard Group 2 as a minimum, unless there is clear evidence to show that they are not pathogenic. The Classification Directive is open to technical adjustment under European Commission procedures which means that new agents can be added or the hazard group of existing agents changed on the basis of new evidence, etc. However, this process can take some time. In the meantime, ACDP will consider the evidence for classifying new and emerging biological agents. At the last meeting of the ACDP, three agents were considered.

'Borna disease virus' (BDV)

The disease was first described over a century ago as a severe neurological disease affecting horses but it has also been found to naturally infect a number of other animals such as sheep, cattle, cats and ostriches. The first human investigations were performed in psychiatric patients where the presence of the BDV specific antibodies lead to the suggestion of a possible etiologic role for BDV in various psychiatric disorders.

There is increasing evidence of human infection with BDV from the first isolates of infectious human BDV from patients with mood disorders reported in 1996. Apart from one study which found a correlation between exposure of workers to infected ostriches and being seropositive for BDV, there appears to be little work which has examined whether the disease is a zoonosis, ie transmissible from animals to humans. A number of studies on animal infection have suggested that it is. The literature also suggests that the disease may be associated with a long incubation period and/or cause latent infection.

Since BDV has now been isolated from humans, the Classification Directive (93/88/EEC) would dictate that the agent should be classified in Hazard Group 2 as a minimum. However, the ACDP advise that because of uncertainties and the potential severity of infection, BDV should now be classified in Hazard Group 3 with the 'D' notation which means that a list of workers exposed must be kept for 40 years.

'Spanish influenza virus'

HSE have recently been notified of a project which aims to recover tissue samples from the bodies of six miners who died in Spitzbergen of influenza during the 1918 pandemic, with a view to isolating the virus or recovering genetic material. The miners' bodies are apparently buried in permafrost, and therefore, the possibility exists that viable material may be recovered. Influenza viruses are currently categorised as Hazard Group 2 biological agents. While there are no laboratory isolates of the 1918/9 pandemic strain available, recent studies based on archived formalin-fixed tissue samples indicate that it appears most closely related to early swine influenza strains and is distinct from all subsequently characterised strains. It is proposed that the strain is called Influenza A/South Carolina/1/18 (H1N1).

These studies, however, gave no insight into the cause of the viruses high pathogenic potential. One of the key features was the high mortality rate among healthy young people which is in marked contrast to more recent pandemic strains. In view of this, the ACDP advised that, dependant on the isolation of infectious virus, those working with the agent should locally classify it into Hazard Group 4. This will mean that all work with, or consignment of, the virus must be notified in advance to HSE (see back page).

'Transfusion transmitted virus (TTV)'

This virus was first discovered over a year ago in Japan, where it was reportedly associated with post-transfusion hepatitis. The virus consists of single-stranded, linear DNA and shares several characteristics with parvoviruses, although there is no sequence homology with known members of the group.

Two recent studies have looked for the presence of the virus in patients with liver disease in the UK. One study found that there was a high prevalence of active TTV infections in the general population but without any associated significant liver damage. A further study found TTV viraemia to be frequent in the blood donor population with evidence that TTV had been transmitted through contamination of blood products. Although the authors could not find a significant link with liver disease, asymptomatic carriage eventually leading to more severe progressive liver disease was not ruled out. Both studies have compared TTV with hepatitis G virus in that association with disease is unclear. The ACDP advised that TTV should be classified in Hazard Group 3. Since the agent is covered by the entry for 'Hepatitis viruses not yet identified' on the exemption certificate which accompanies the *Approved List of Biological Agents*, it can therefore be handled in accordance with the ACDP's guidance on protection against blood-borne infections in the workplace.

Notification of first use of biological agents

COSHH requires that before you start work for the first time with a biological agent in Hazard Groups 2, 3 or 4, you have to notify HSE. Notification is not necessary unless you intend to propagate, concentrate or store biological agents (unless you intend to carry out diagnostic work on Part V agents - see Schedule 9 of COSHH). This means that a haematology department, for example, would not normally need to notify, even though some of the specimens received may contain infectious agents. The requirement to notify came into force in January 1995 but

is not retrospective so if you were already handling biological agents before that date you don't need to notify HSE unless your work was confined to agents in one particular hazard group and you plan to carry out new work. If you intend to import or consign an agent in Part V of Schedule 9, you also need to notify HSE in advance.

Forms for notification are available from HSE, Directorate of Science and Technology, Room 443, Magdalen House, Stanley Precinct, Bootle, Merseyside, L20 3QZ.

Current ACDP publications

The ACDP has produced a number of publications which can be obtained either from HSE Books or The Stationery Office (TSO) see below for individual publication details.

Available from HSE Books

The large-scale contained use of biological agents HSE Books 1998 ISBN 0 7176 1544 8 £8.50

Infection risks to new and expectant mothers in the workplace: A guide for employers HSE Books 1997 ISBN 0 7176 1360 1 £10.50

Working safely with research animals: Management of infection risks HSE Books 1997 ISBN 0 7176 1377 1 £7.95

BSE (Bovine spongiform encephalopathy): Background and general occupational guidance HSE Books 1996 ISBN 0 7176 1212 0 £5.50

Guidance for handling meat and bone meal material (Supplement to BSE: Background and general occupational guidance) HSE Books 1998 ISBN 0 7176 1212 0 Available free of charge

Categorisation of biological agents according to hazard and categories of containment (Fourth edition, 1995) HSE Books 1995 ISBN 0 7176 1038 1 £8.50

Available, free, from the ACDP Secretariat

Working safely with simians: Management of infection risks (Specialist supplement to *Working safely with research animals: Management of infection risks*) MISC134 HSE Books 1998

Guidance on the use, testing and maintenance of laboratory and animal flexible film isolators ACDP 1985

Supplement to the *Categorisation of biological agents according to hazard and categories of containment* (Fourth edition, 1995) HSE Books 1998 ISBN 0 7176 1038 1

Available from the Stationery Office

Transmissible spongiform encephalopathy agents: safe working and the prevention of infection TSO 1998 ISBN 0 11 322166 5 £10.00

Microbiological risk assessment: An interim report TSO 1996 ISBN 0 11 321990 3 £9.95

Management and control of viral haemorrhagic fevers TSO 1996 ISBN 0 11 321860 5 £11.00

Protection against blood-borne infections in the workplace: HIV and hepatitis TSO 1996 ISBN 0 11 321953 9 £12.00

Advisory Committee on Dangerous Pathogens and Advisory Committee on Genetic Modification. Vaccination of laboratory workers handling vaccina and related poxviruses infectious for humans TSO 1990 ISBN 0 11 885450 X £5.50

HSE Books, PO Box 1999, Sudbury, Suffolk CO10 6FS Tel: 01787 881165; Fax: 01787 313995
The Stationery Office, PO Box 276, London SW8 5DT Tel: 0171 873 9090; Fax: 0171 873 8200

NEW publications from the ACDP

Guidance on good practice for large-scale users of biological agents in industry and research has just been published. The guidance provides advice on appropriate containment systems and safe working practices where biological agents (including genetically modified micro-organisms) are used in large quantities, for example pharmaceuticals, food and fine chemicals, production, academic and research establishments. It is also aimed at those involved in the construction and design of buildings specifically for the large-scale containment of biological agents. *The large-scale contained use of biological agents* is available from HSE Books, priced £8.50

A new UK Approved List of biological agents which incorporates all the recent changes came into force on 1 May 1998. The Approved List, known as the

Categorisation 98, also contains an exemption certificate for those Hazard Group 3 agents subject to derogation as well as guidance for those working with Hazard Group 3 enteric pathogens such as *E. coli* O157. This list and the guidance is available free of charge from HSE Books. It is also available on HSE's Internet site at <http://www.open.gov.uk/hse/hthdir/agents.htm>

Updated guidance for laboratory and health care workers on safe working with transmissible spongiform encephalopathies such as CJD and BSE was published in April. The guidance was prepared by a joint working group of experts from ACDP and the Spongiform Encephalopathy Advisory Committee (SEAC). The guidance is available from the Stationery Office (priced £10) and can also be down-loaded from the TSO Internet site at www.official-documents.co.uk

Coming up... Over the next few months:

HSE will be consulting on changes to the Approved Code of Practice and guidance on the control of legionellosis

ACDP will be preparing guidance of the design, construction and operation of Containment Level 3 laboratories

HSE will be concluding an evaluation of the impact of Schedule 9 of COSHH