Listed here, in chronological order, are scientific papers related to the MMR debate. Copies can be obtained, on request, from public and medical/scientific libraries. Some can also be accessed on the web and addresses have been included where appropriate.

1998 February  


**Chadwick N** et al (1998) Measles virus RNA is not detected in inflammatory bowel disease using hybrid capture and reverse transcription followed by the polymerase chain reaction. [see Davis et al, March 2001].  
www.gre.ac.uk/research/SAMs/BRUCE4.doc

1999 June  

2000 March  

2001 January  
www.whale.to/v/mmr16.html

www.immunisation.org.uk/rejection.htm

**Committee on Safety of Medicines** (2001) Summary of the Committee on Safety of Medicines meeting held 10 January 2001.  


February  


March  


April


May


June


September


October


October-December


December


2002 January


February


Useful websites on the MMR vaccine and childhood immunisation

**Vaccine information:**
*News and information about MMR*

**Department of Health**
www.doh.gov.uk/mmr.htm
Department of Health MMR advice.

www.immunisation.org.uk
Comprehensive website on childhood immunisation. Contains a large MMR section.

**Electronic Library for Health**
www.nell.nhs.uk/hh/mmrm_evidence1.asp
Discussion on evidence for and against MMR.

**10 Downing Street**
www.pm.gov.uk
Government site containing a section devoted to MMR.

**Sense**
www.sense.org.uk/sensory_impairment/rubella.html
Provides information on the risks of Rubella to the unborn child.

**Vaccine information:**
*News and information about other vaccines*

**Immunisation Gateway**
www.immunofacts.com

**The Vaccine Page**
www.vaccines.org/
Independent, scientific, up-to-the-minute news and data about vaccines and an annotated database of vaccine resources on the Internet. Supported by the Children's Vaccine Program at PATH - formerly known as The Bill and Melinda Gates Children's Vaccine Program - and UniScience News Net, Inc.

**The World Health Organization (WHO)**
www.who.int/nm/topics/vaccines_immunizations/en/index.html

**Children's health:**
*Professional forums for monitoring issues affecting children and their health*

**The American Academy of Pediatrics (AAP)**
www.aap.org
Organisation dedicated to the health, safety and well being of children, adolescents and young adults.

**The International Network of Paediatric Surveillance Units**
http://bpsu.rcpch.ac.uk
An independent international body which allows individual paediatric surveillance units across the world - such as the British Paediatric Surveillance Unit (BPSU) - to be able to compare and share data about rare childhood diseases.

**Children's Vaccination Programme**
www.childrensvaccine.org
A charity run by Bill and Melinda Gates which promotes worldwide equal access to new vaccines.

**The Global Alliance for Vaccines and Immunization (GAVI)**
www.vaccinealliance.org
A partnership dedicated to ensuring that all children, however poor, have equal access to vaccines.

**The Royal College of Paediatrics and Child Health**
www.rcpch.org.uk
The main objects of the college are to advance the art and science of paediatrics, improve standards of medical care to children, and to educate and examine doctors in paediatrics.

**Medical research and statistics:**
*Co-ordinated research on vaccine safety and development*

**British Medical Journal**
www.bmj.com
Publishes original scientific studies, review and educational articles, and papers commenting on the clinical, scientific, social, political and economic factors affecting health.

**Committee on the Safety of Medicines**
www.mca.gov.uk/aboutagency/regframework/cms/csmhommemain.htm
Advises the UK Licensing Authority to ensure that medicines meet the standards of quality, efficacy and safety the public and health professions would expect.

**Medicines Control Agency**
www.mca.gov.uk
The agency of the Department of Health that safeguards public health by ensuring that all medicines on the UK market meet appropriate standards of safety, quality and efficacy.

**Medical Research Council**
www.mrc.ac.uk
The MRC aims to improve health by promoting research into all areas of medical and related science.

**Public Health Laboratory Service (PHLS)**
www.phls.co.uk
Protects the population from infection by detecting, diagnosing, and monitoring communicable diseases through a network of microbiology laboratories, epidemiology and field investigation services, research, development, education and training programmes.
Professional organisations

Community Practitioners' and Health Visitors' Association
www.msfcphva.org/index.html
UK site containing vaccine specific information.

English National Board (ENB) for Nursing, Midwifery and Health Visiting
www.enb.org.uk

Royal College of General Practitioners
www.rcgp.org.uk
The academic organisation in the UK for general practitioners. Its aim is to encourage and maintain the highest standards of general medical practice and reflect the 'voice' of general practitioners on education, training and standards issues.

Royal College of Nursing
www.rcn.org.uk/homeroom/home.html
The world's largest professional union of nurses. It is a provider of higher education and promotes research, quality and practice development.

Faculty of Public Health Medicine
www.fpm.org.uk
An organisation which aims to promote the advancement of knowledge in the field of public health medicine and to develop public health medicine with a view to maintaining the highest possible standards of professional competence and practice.

Other Government and NHS sites

National Health Promotion website for Wales
www.hpw.org.uk
Develops and delivers public education campaigns and health promotion under the National Assembly for Wales.

NHSD Direct Online
www.nhsdirect.nhs.uk
The NHS gateway to public health information on the internet.

The National Health Service
www.nhs.uk
The gateway to National Health Service organisations on the internet.

National Electronic Library for health
www.nell.nhs.uk/
Working with NHS Libraries to develop a digital library for NHS staff, patients and the public.

Department of Health
www.doh.gov.uk
Information for people working in the health service and the public.

Centers for Disease Control and Prevention (CDC)
www.cdc.gov
Part of the United States Department of Health and Human Services, the principal agency for protecting the health of Americans.

Using the Internet

When using the Internet, it is important to remember that anyone can set up a website and call themselves an expert. To quote John Lawton of the American Broadcasters’ Association in 1995, “The irony of the information age is that it has given new respectability to uninformed opinion.” So health professionals and parents might find the following pointers helpful when using the Internet to access information about health-related issues.

- General searches generate many “hits” from good, bad and indifferent sites, with a serious risk of incorrect advice.
- Search only using an evaluated subject or specific gateway, such as OMNI or Healthfinder.
- Who owns the website? The owner and sponsors and any advertising deals should be displayed. There is a risk of commercialism, e.g. dubious “cures,” or the online sale of prescription only medicines (POMs) not licensed in the UK.
- Unscrupulous companies may use basic research data as opposed to properly conducted clinical trials to show drugs are safe and effective.
- Is the information current? Is there a date when it was first written and updated? If there isn’t, then the material should be ignored.
- Is there a named author(s)? If “yes,” and claiming to be an expert in a particular field, then the credentials and other published literature can be checked using a Medline search. If there is no identifiable author, the information should be treated with extreme caution.
**acellular**
Without whole cells. An acellular vaccine contains only parts of cells which can produce immunity in the person receiving the vaccine.

**active immunity**
Active immunity is generated by the body when the immune system is triggered to produce antibodies, either by immunisation or a disease.

**adjuvant**
A substance used in a vaccine to increase the body's immune response.

**allergen**
Any substance that produces an allergic reaction when introduced into the body.

**adverse effect**
A side effect of a vaccine.

**anaphylaxis**
A severe allergic response.

**antibodies**
Proteins produced by the body to neutralise or destroy toxins and disease-carrying organisms.

**antigen**
A substance which, under appropriate conditions, triggers an immune response. Vaccines are specially prepared antigens.

**attenuated**
Weakened. Pathogens (organisms that produce disease, for example a virus) are attenuated to make them safe when used in a vaccine.

**autism**
A lifelong disability that affects the way a person communicates and relates to other people. It usually involves poor social interaction, poor social communication and limited imagination.

**autistic spectrum disorders (ASD)**
These include typical autism, atypical autism and Asperger’s syndrome.

**bacterium/bacteria**
Single cell micro-organisms, some of which cause disease. Others are essential for our bodies to work properly.

**booster**
Extra doses of vaccine that build up immunity to the disease the vaccine protects against.

**clinical trials**
Part of the process of testing new vaccines and drugs for safety and effectiveness by giving the product to people under carefully monitored conditions.

**combination vaccine**
A single preparation in which more than one vaccine is present, e.g. MMR (measles, mumps and rubella).

**Committee on the Safety of Medicines (CSM)**
Statutory independent committee responsible for advising on the licensing and safety of human medicines.

**congenital**
Any condition that is present at birth and which may be inherited.

**contraindication**
A reason why a vaccine should not be given.

**Crohn's Disease**
See inflammatory bowel disease (IBD).

**congenital rubella syndrome (CRS)**
A range of disabilities found in a baby whose mother caught German measles (rubella) during the first three months of that pregnancy.

**conjugate vaccine**
These vaccines are made with part of the germ combined with a protein (e.g. tetanus or diphtheria) which makes it work better and gives better protection over a longer period of time.

**efficacy**
The measure of a vaccine's effectiveness. It is measured by the proportion of those immunised who don't get a disease when exposed to it, or by the number of antibodies produced by the immune system.

**encephalitis**
Inflammation of the tissues of the brain which can cause lasting brain damage.

**encephalopathy**
Any disease of the brain.

**enterocolitis**
Inflammation of the colon and small intestine.

**epidemic**
An outbreak of a disease that spreads within a population. A pandemic is an epidemic over a vast area, usually affecting several countries.

**epidemiology**
The study of patterns of disease in a population.

**Guillain-Barré Syndrome**
An inflammatory disorder of the peripheral nerves (the nerves outside the brain and spinal cord).

**herd immunity**
The phenomenon by which members of a community who are not immune to a disease are still protected from it provided sufficient numbers of people in that community are immune. When enough people are immune to a certain disease, it has little opportunity to spread and so find a non-immune person. Eventually the disease may be wiped out (e.g. smallpox). Herd immunity
only applies to diseases that are caught from other people.

**immunity**
The ability to resist infection due either to an immunisation or previous infection.

**immune system**
The body's system for fighting infectious disease.

**immunoglobulin**
Types of antibodies that can provide short-term immunity against certain diseases.

**immunisation**
The priming of the body's immune system with a specially prepared medicine.

**inactivated vaccine**
These vaccines are manufactured either from the killed germ, or from the toxin, or using parts of the germ either as component vaccines or as conjugate vaccines.

**incidence**
The frequency or range of occurrences.

**incubation period**
The time a germ requires to invade and infect your body.

**inflammatory bowel disease (IBD) – Crohn's disease (CD) and ulcerative colitis (UC)**
This term covers Crohn's disease and ulcerative colitis. Crohn's disease is inflammation of the walls of the intestine involving the small and large intestines. Ulcerative colitis is inflammation of the small intestine and rectum, causing diarrhoea and bleeding.

**Joint Committee on Vaccination and Immunisation (JCVI)**
Statutory independent committee which advises UK health ministers on immunisation policy.

**laryngeal oedema**
Swelling of the larynx (voicebox) which can cause difficulties in speaking, swallowing and breathing.

**live attenuated vaccine**
This is a vaccine made from the live pathogen which has been altered to make it less harmful. The live vaccines in the childhood immunisation schedule are oral polio, MMR and BCG. Other live vaccines include yellow fever and one form of typhoid vaccine.

**Medicines Control Agency (MCA)**
The statutory body that monitors the safety of vaccines and medicines in the UK.

**micro-organisms**
Living organisms that are so small you need a microscope to see them.

**neonatal**
The period immediately after birth (usually) defined as being the first month of life.

**oral vaccine**
A vaccine taken by mouth.

**passive immunity**
Passive immunity is generated when the body is given proteins that act as antibodies instead of making them itself. Immunoglobulins produce this type of immunity. All babies have antibodies from their mothers, which give them short-term protection.

**pathogen**
The organism that produces disease, for example a virus or bacterium.

**plasma**
The part of the blood that contains protein and fluid.

**platelets**
Tiny spherical bodies in the blood that are involved in stopping bleeding.

**preservatives**
Substances that stop a vaccine becoming contaminated, e.g. thiomersal.

**stabilisers**
Substances that stop a vaccine breaking down into its component parts.

**subacute sclerosing panencephalitis (SSPE)**
A rare degenerative neurological condition which progressively destroys nerve cells in the brain leading to mental deterioration and death. It occurs some years after measles disease (average interval around eight years). Those children affected by the disease at a young age are at particular risk. It is not caused by the vaccine.

**suspension fluid**
The neutral substance that carries the vaccine into the body.

**syndrome**
A group of symptoms occurring together and constituting a disease to which a particular name is given, e.g. congenital rubella syndrome.

**thiomersal**
Thiomersal is a mercury based preservative used in some vaccines to prevent microbial contamination, or in the process of producing inactivated vaccines. The levels of mercury in vaccines in the UK are below the permitted levels.

**toxin**
A poison produced by bacteria which can cause illness, e.g. diphtheria and tetanus.

**vaccine**
Vaccines are manufactured in different ways using part of the germ or virus which causes the disease. They cannot cause the disease for which they give protection, except very rarely following oral polio vaccine.

**virus**
An organism that needs to live inside a cell to grow and reproduce. Viruses cause many types of disease, including the common cold.