Results of a recent study carried out by Cochrane Review researchers have provided a strong case against previous concerns of a link between the MMR vaccine and autism.

The Cochrane Library publish a conclusive rejection of the suggested link between MMR and autism

A study carried out by Cochrane Review researchers of 31 studies from around the globe, has concluded that there is no credible evidence to back up previous claims of a link between the measles, mumps and rubella (MMR) vaccination and the development of autism and other developmental spectrum disorders.

"...we conclude that all the major unintended events, such as triggering Crohn's disease or autism, were suspected on the basis of unreliable evidence"

Lead author of the study, Vittorio Demicheli, commented on the findings that "In particular we conclude that all the major unintended events, such as triggering Crohn's disease or autism, were suspected on the basis of unreliable evidence." Demicheli noted that "Public health decisions need to be based on sound evidence. If this principle had been applied in the case of the MMR dispute, then we would have avoided all the fuss."

The Cochrane researchers examined international databases and found 139 articles related to the use of the MMR vaccine, of which 31 unbiased papers were chosen for the systematic review of the literature which resulted in the most up-to-date and authoritative assessment of the issue to date.

In addition to disputing a possible link between the vaccine and developmental disorders, the researchers also highlighted the importance of MMR inoculation as a measure that had "prevented diseases that still carry a heavy burden of death and complications where the vaccine is not used consistently."

Negative reports of the vaccine, following initial claims of a link to autism, resulted in a dramatic decrease in use across the UK and currently MMR vaccination remains below the 95% level recommended by the World Health Organization (WHO), with reports from the Health and Social Care Information Center revealing rates of 81% among 2-year old children in the UK for the 2004/5 period.

The MMR triple vaccine was first used in the UK in 1988 following an outbreak of measles which resulted in the deaths of 17 children, and an almost complete eradication of measles and mumps followed. It is now hoped that the study findings will put an end to the ongoing debate surrounding the vaccine that began with the 1998 publication by Andrew Wakefield and colleagues in *The Lancet*. This report was later discredited but controversy surrounding the issue remained.

"Public health decisions need to be based on sound evidence. If this principle had been applied in the case of the MMR dispute, then we would have avoided all the fuss."

Mark Davies of the Cochrane Collaboration Steering Group commented that "This review exemplifies what Cochrane reviews are all about – for the first time all the evidence that is available on the efficacy and safety of MMR vaccine has been gathered together into one report."

Dr Demicheli is currently at the Servizo Sovrazonale di Epidemiologia, Alessandria, Italy. Further details regarding the study and its findings can be found online.
The Cochrane Library website:
www.thecochranelibrary.com.

New evidence for lanthanum carbonate in the treatment of patients with end-stage renal disease

Results of a 2-year study presented at the 3rd World Congress on Nephrology (WCN) suggest that lanthanum carbonate may play a role in reducing serum phosphorous levels in patients with end-stage renal disease, without negatively impacting bone health. Co-author of the study, Rosamund Wilson, commented that "Lanthanum did not have an adverse effect on bone mineralization for patients with end-stage renal disease." He added that as part of the study, the researchers "looked at patients in a lot of detail, examining those who may be going in the wrong direction," and that in both treatment groups (standard therapy and lanthanum carbonate) they "realized that abnormal mineralization was completely unrelated to treatment."

Investigators also commented that there were no signs of osteomalacia and that serum calcium levels were comparable in both treatment groups. The report concludes that lanthanum carbonate has no adverse effect on bone mineralization, turnover or balance in patients with end-stage renal disease.

Priority Paper Alerts

Epileptic seizures during childbirth in a patient with idiopathic generalized epilepsy

Voermans NC, Zwarts MJ, Renier WO, Bloem BR. *Ned. Tijdschr. Geneeskd.* 149(25), 1406–1411 (2005).

Report of a case of adult idiopathic generalized epilepsy in a 37-year old woman during her first and second pregnancy. The patient's epilepsy had previously been successfully controlled with lamotrigine but experienced a series of epileptic seizures following an elective cesarian section (CS), which were then terminated using diazepam. The patient continued on lamotrigine therapy and at the end of her second pregnancy she again experienced tonic–clonic seizures which necessitated delivery by CS. The study highlights various problems that can occur late in pregnancy and during childbirth in patients with adult idiopathic generalized epilepsy.

Effects of hyperbaric spinal ropivacaine for caesarean section: with or without fentanyl.

Sanli S, Yegin A, Kayacan N, Yilmaz M, Coskunfirat N, Karsli B. *Eur. J. Anaesthesiol.* 22(6), 457–461 (2005).

This study examines the efficacy and safety of intrathecal fentanyl 10 µg when added to 15 mg hyperbaric ropivacaine for spinal anesthesia in patients undergoing CS. A total of 37 healthy and full-term participants were assigned at random to two groups receiving 15 mg hyperbaric ropivacaine in 2.5 + 0.5 ml saline and 15 mg hyperbaric ropivacaine in 2.5 ml + 10 µg fentanyl in 0.5 ml, intrathecally. Results indicated that the addition of fentanyl increased the duration of analgesia in the early period post operation for patients undergoing delivery by CS.

Perioperative *N*-acetylcysteine to prevent renal dysfunction in high-risk patients undergoing CABG surgery: a randomized controlled trial.

Burns KE, Chu MW, Novick RJ *et al*. *JAMA* 294(3), 342–350 (2005).

This study was carried out to determine whether perioperative intravenous *N*-acetylcysteine preserves renal function in high-risk patients undergoing coronary artery bypass graft (CABG) surgery with cardiopulmonary bypass (CPB) when compared with placebo. The authors conclude that *N*-acetylcysteine does not prevent postoperative renal dysfunction, interventions, complications, or mortality in high-risk patients undergoing CABG surgery with CPB but that further research is required.

SAPPHIRE and US Carotid Feasibility Study trial results demonstrate the durability of carotid artery stenting

The 2005 Transcatheter Cardiovascular Therapeutics meeting was the setting for the presentation of preliminary 3-year data from the Stenting and Angioplasty with Protection in Patients at High Risk for Endarterectomy (SAPPHIRE) trial and final 3-year data from the US Carotid Feasibility Study (USFS). Trial results demonstrated the long-term durability of carotid artery stenting (CAS) for the prevention of stroke versus carotid endarterectomy (CEA) in high-risk surgical patients.

The SAPPHIRE trial examined 334 patients randomized to either CAS with the PRECISE® Nitinol Self-Expanding Stent and ANGIOGUARD™ XP Emboli Capture Guidewire System or CEA.

Results demonstrated a low incidence of stroke after the first 30 days for the full duration of the 3-year follow-up in patients receiving CAS in the USFS and SAPPHIRE trials. The incidence of stroke was almost identical for CAS (7.1%) and CEA (6.7%) in the SAPPHIRE trial ($p = 0.945$). An average increase of 4% was observed for the 3-year incidence of stroke over the 30-day stroke rate across both CAS randomized and nonrandomized groups for both trials.

Commenting on the study findings, Jay Yadav principal investigator of the study, noted that "The SAPPHIRE trial demonstrated CAS was non-inferior to CEA. This is important new data which suggests the long-term durability of CAS in this patient population."

The conference also provided an opportunity to present data from the Clopidogrel After Surgery for Coronary Artery DiseasE (CASCADE) trial which demonstrated the efficacy of CAS involving ANGIOGUARD.

T-lymphocyte-based therapy developed for the eradication of malignant melanoma tumors

A Canadian research team based at the Institute of Research in Immunology and Cancer (IRIC) of the Université de Montréal have successfully developed a T-lymphocyte-based therapy for eradicating malignant melanoma tumors in mice. The therapy consists of administering T-lymphocytes preimmunized against the H7A antigen from a health mouse donor to mice with cancer, which results in the production of interferon (IFN)-γ and perforine/granzyme which eradicate cancerous cells.

Michael Wosnick of the National Cancer Institute of Canada commented on the findings that "these results are promising and if proven successful in human clinical trials, this therapy could have a tremendous impact on the treatment of this disease."

Trials examining the effectiveness of the antibiotic moxifloxacin in the treatment of tuberculosis to begin

Infectious disease expert Richard Chaisson is to lead two international studies on the effectiveness of the Bayer healthcare antibiotic, moxifloxacin, as a potential new treatment for TB.

It has been announced that Richard Chaisson of the John Hopkins Medical Center is to lead two international studies, organized as part of a series of studies on the drug by the Global Alliance for TB Drug Development (GATB) and Bayer Healthcare AG, to examine the ability of moxifloxacin to shorten the treatment period required to cure tuberculosis (TB).

Moxifloxacin, a fluoroquinolone antibiotic developed and manufactured by Bayer Healthcare as Avelox®, is currently approved in over 100 countries for the treatment of bacterial respiratory infections and it is hoped that the drug can be used to shorten the length of time it takes to treat the disease. "Defeating the spread of tuberculosis in the United States and the developing world will require scientists to take bold and creative new approaches because there has not been a new therapy for tuberculosis in more than 40 years," commented Chaisson. He continued that multidrug resistance forms of the disease are occuring at a rate of 300,000 new cases a year and that "New options are needed, and they need to be both effective and easier for patients to tolerate."

The GATB has estimated that up to 1 billion people worldwide will be infected with TB by the year 2020 and that of these, 35 million will die. It is hoped that shortening the time-to-treat period will prevent this scenario, a sentiment that has been enforced by Chaisson who commented that "Shortening the time required to cure the disease could save millions of lives in the coming years."

Bayer has agreed to donate supplies of the drug for all of the trial sites involved in the research program, which is being supported and co-ordinated by a number of organizations across the participating countries, including the TB Alliance and the US Centers for Disease Control and Prevention's (CDC) TB Trials Consortium.

Psychiatrists warn of a potential link between increased risk of death and use of antipsychotic drugs in elderly Alzheimer's disease patients

An editorial published in a recent issue of the *JAMA* by psychiatrists at the Johns Hopkins University School of Medicine (Baltimore, MD), has suggested a possible link between the use of some newer antipsychotic medications in elderly dementia patients and an increased risk of death. The authors warn of the potential associated risk and are urging caution with the use of second-generation antipsychotic medications in elderly patients.

In a separate study (published in the same issue of *JAMA*), Schneider and colleagues concluded that patients taking second-generation antipsychotic medications were 1.5-times more likely to die than patients taking placebo. However, Peter Rabins (lead author of the editorial), commented that his results "do not suggest that first-generation antipsychotic drugs haloperidol and chlorpromazine, introduced in the 1950s, are safer alternatives to second-generation drugs", as these drugs also possess their own range of adverse side effects.

He continued that he believes "the findings contraindicate the use of antipsychotics for patients with dementia who have psychotic symptoms and agitation, but rather that they change the risk–benefit analysis such that antipsychotics should be used only when the patient's symptoms present an identifiable risk to the patient or to others, when the distress caused by the symptoms is significant, or when alternative therapies have failed and symptom relief would be beneficial."

Rabins and colleagues suggest in their editorial that there are alternatives to antipsychotic medications in patients when the risk of harm or significant distress is low and that these should be considered. Alternative treatments (i.e., behavioral interventions and antidepressants), have shown success in some cases in the past and should not be ruled out.

Rabins also noted caution regarding the short-term data used for Schneider's study as a predictor of what occurs over longer time periods, as adverse drug reactions are often prominent in the early stages of a course of treatment.

He concluded that he is looking "forward to international efforts to improve long-term monitoring for adverse events," and for "research into the important questions raised by this study."