

IMMUNE FACTORS: RESEARCH RELATED TO

Sabin, Albert B. et.al. 1962, *Pediatrics*, 29, pp. 105-115. "Antipoliomyelitic activity of human and bovine Colostrum and milk": **Dr. Sabin isolated antipolio antibodies in bovine colostrum. (Bovine colostrum was used in oral administration successfully. Antibodies were isolated and a successful vaccine prepared.)**

Ebina, et.al. 1983 *The Lancet*, Vol. 29 No 2 pp. 1029-1030: "Prevention of Rotavirus Infection By Cow Colostrum Containing Antibody Against Human Rotavirus": **Japanese researchers exposed cattle to oral doses of rotavirus which causes severe diarrhea and bowel inflammation in humans. Colostrum from these cows contained antibodies which, when fed to humans, prevented them from getting rotavirus.**

Tacket, Binion, Bostwick, et.al., *American Jou of Trop Med Hyg*, Sep 1992 V47(3) p276-83: Efficacy of bovine immunoglobulin concentrate in preventing illness: "Human trial with hyper immune immunoglobulin administered orally with sodium bicarbonate. **Conclusion: Orally administered bovine immunoglobulin protects against shigellosis and may be useful in preventing shigellosis among travelers**".

Hernell, Olle At the University of Ulmea, Sweden 1995, *Science*, Apr. pp231 **reported findings that glycoproteins in bovine colostrum inhibited attachment of the Helicobacter Pylori bacteria believed to cause stomach ulcers, and that colostrum contains significant amounts of interlukin-10, a strong inflammation inhibitory agent significant in reducing inflammation in arthritic joints and injury areas.**

IMMUNOGLOBULINS: ANTI-VIRAL, ANTI-BACTERIAL, ANTI-YEAST, ANTI-TOXIN

McClead, R. et. al, 1979, *Pediatrics Research*, Vol, 13 No 4 2 of 2, 464. **Human clinical study completed using immunoglobulins and antibodies from cow colostrum proving its effectiveness against disease-causing bacteria. Presented in 1979 by Dr. R. McClead and associates at the 88th annual meeting of the American Pediatric Society. It was demonstrated that immune factors were effective in providing protection. They concluded: "The preservation of the biological activity of IgG (immunoglobulin) in the digestive secretions of adults receiving bovine immune colostrum orally indicates – passive enteral (intestinal) immunization for the prevention and treatment of acute intestinal diseases."**

Khazenson, L.B., 1980, *Microbial & Epidemial Immunobiology* No 9 101-106. In 1980 Dr. L.B. Activity of bovine colostrum IgG in the human digestive tract. **Khazenson and assoc.'s completed a study on human volunteers in which cow colostrum was taken orally. Samples of their digestive tract demonstrated that the immune factors were effective in providing protection. They concluded: "The preservation of the biological activity of IgG (immunoglobulin) in the digestive secretions of adults receiving bovine immune colostrum orally indicates – passive enteral (intestinal) immunization for the prevention and treatment of acute intestinal diseases."**

Davidson, GP; et.al. *The Lancet*, Sept. 23, 1989. 709-712. Passive Immunization of Children with Bovine Colostrum Containing Antibodies to Human Rotavirus. **In a 10-day controlled study: Children fed bovine colostrum did not get rotavirus while 13.8% of those who were fed an artificial infant formula acquired the virus.**

Ushijima et. al., Dept. of Enteroviruses, *Japanese National Health Institute*, Mar, 1990 V64(3)p 274-9: Immunoglobulin components and anti-viral activities in bovine colostrum: "IgG, IgM, IgA, were found in bovine colostrum, anti-human adenovirus antibody was not found. **Oral treatment rotavirus gastroenteritis found to be effective.**" (Rotavirus is the leading cause of diarrhea in world)

Heaton, *Arch of Disease in Childhood*, 1990; 65:813, Cryptosporidiosis and acute leukemia: "Paper at 6th annual Asian Pediatric Conference: "Treatment of 3 year old with acute cryptosporidia caused diarrhea. Bovine colostrum 100 ml 3x daily in form of milkshake. Within two weeks symptoms alleviated. Cryptosporidia tests negative. Bovine colostrum very rich source of immunoglobulins. Pooled colostrum from nonimmunized cows provides an effective method of controlling symptoms in immunodeficient patients. **Immunoglobulin concentrated may provide an effective, convenient method by which immunology can be administered**".

Jage, Kampmann, Kolb, et. al., 1992, *Clin. Investigation* Jul.; 70(7): 588-94 Reported: **A. Immunoglobulins from bovine colostrum (lactobin, biotest, Dreieich, FRG) contain high titres of antibodies against a wide range of bacterial, viral and protozoa pathogens, as well as against various bacterial toxins. B. Colostrum quite resistant to gastric acids. C. Effective in the treatment of intestinal opportunistic infections associated with HIV and other immunosuppressed disease.**

Jochims, Kaup and Drommer, 1994, *Res. Vet. Science* Sept. Vol. 57(2) pp. 146-151 **Reports the absorption of colostral IgG (immunoglobulin) by small intestine enterocytes in adult human subjects.**

Bitzan MM; et al, *J Infect Dis.* April 1998. Inhibition of *Helicobacter Pylori* and *Helicobacter Mustelae* binding to lipid receptors by bovine colostrum. **Results indicate confirmation that colostrum can prevent infection of *Helicobacter* species bacteria.**

HERPES and HIV (AIDS) RELATED RESEARCH

Ebina, et. al., 1983, *The Lancet*, Vol. 29 No 2 pp. 1029-1030: "Prevention of Rotavirus Infection By Cow Colostrum Containing Antibody Against Human Rotavirus": **Japanese researchers exposed cattle to oral doses of rotavirus which causes severe diarrhea and bowel inflammation in humans. Colostrum from these cows contained antibodies which, when fed to humans, prevented them from getting rotavirus.**

Stephan, Dichtelmuller and Lissner, 1989, *Journal of Clinical Chem. And Clinical Biochem.*, Vol. 28, 1990, no 1: "Antibodies from Colostrum in Oral Immunotherapy": **Spray dried concentration of immunoglobulin preparation for oral use from pooled source of 100 cows was found to be highly effective in treatment of severe diarrhea e.g. in AIDS patients. After treatment no cryptosporidia were found in stools where it had been previously detected.**

Foothill, Oak and Mott, 1990, *Archives of Disease in Childhood*, Vol. 65 pp 813-14: "Case Report": **Favorable treatment of Cryptosporidiosis with pooled bovine colostrum via oral administration was reported.**

Nord, DiJohn, Tripodi, Tacket, 1990, *AIDS*, Vol. 4(6) pp. 581-4: "Treatment with bovine hyperimmune colostrum of cryptosporidial diarrhea in AIDS patients": **Double Blind, controlled pilot study of hyperimmune colostrum in five AIDS patients by nasric infusion. Conclusion that treatment was effective. More studies suggested.**

Ungar, Ward, Fayer and Quinn, 1990, *Gastroenterology*, Vol. 98 pp. 486-89: "Cessation of *Cryptosporidium*-Associated Diarrhea in an AIDS Patient after oral treatment with Hyperimmune Bovine Colostrum": **Cryptosporidium absent after treatment.**

Desert News, Salt Lake City, Utah June 19, 1991 Mentioned Study by protozoologist Ron Fayer US Dept. of Agric.: **Two AIDS patients with cryptosporidium caused diarrhea were relieved of symptoms in treatment with hyperimmune colostrum. A larger study to continue at Johns Hopkins Hospital. Dr. Bruce Anderson a veterinary pathologist at the University of Idaho stated: "There have been over 50 drugs tried to relieve AIDS patients diarrhea, they didn't work. But this hyper immune colostrum does." Anderson is credited with suggesting this form of therapy because he noticed that a number**

of veterinary students would come down with cryptosporidiosis after contact with cattle who had disease. He theorized that immune capability could be transferred to humans.

Flanigan, Marshall, Redman, Kaetzel, Ungar, 1991 *Journal. Prtozool Nov-Dec*, Vol. 38(6): 225s-227s **A. Diarrhea producing Cryptosporidium parvum infection treated effectively with oral ingestion of bovine colostrum. B. Also effective in treatment of prophylaxis and rotavirus gastroenteritis C. Hyper immune cows colostrum and regular cows colostrum compared: Parasite infections reduces 82% in presence of hyperimmune and 67% in regular colostrum.**

Immunoglobulin to Prevent Nosocomial Infections, *New England Journal of Medicine*, July 23, 1992, Vol. 327 No 4 p 269. **Immunoglobulin from bovine colostrum effective in reducing and preventing infections in immune deficient subject: bone marrow recipients, premature babies, AIDS, etc.** Problem: obtaining high and consistent levels of functional antibodies though donor selection. Could improve through pooled selection, selective donor immunization.

Jage, Kampmann, Kolb, et. al., 1992, *Clin. Investigation* Jul.; 70(7): 588-94 Reported: A. Immunoglobulins from bovine colostrum (lactobin, biotest, Dreieich, FRG) contain high titres of antibodies against a wide range of bacterial, viral and protozoa pathogens, as well as against various bacterial toxins. B. Lactobin quite resistant to gastric acids. C. Effective in the treatment of opportunistic infections that cause diarrhea. **Treatment and effectiveness in AIDS patients verified, where no other treatment was effective.**

Rump, et. al., 1992, *Clinical Investigator*, Vol. 70 pp. 588-94: Treatment of Diarrhea in AIDS and bone marrow transplant patients with bovine colostrum: **Reported colostrum quite resistant to gastric juice. Oral treatments very effective. No side effects.**

Plettenberg, et. al., 1993, *Clinical Investigator*, Vol. 71 pp 42-45: **Open study of 25 AIDS patients with cryptosporidiosis were treated with a daily oral dose of 10g of bovine colostrum for 10 day period. Complete remission reported in 40% and partial remission in 24% of patients described. Treatment is judged overall: effective.**

New Scientist, Jan. 8, 1994: **Reported an Australian Co. has been involved in successful human trials with an oral administration of over 500 patients in hospitals in India, Hong Kong and Australia with hyperimmune colostrum specific for rotavirus a diarrhea causing virus rampant in third world countries but common in developed countries also.**

GROWTH FACTORS: IMPLICATIONS IN HEALING AND PHYSIOLOGY

Dohm, G. Lynis, et al, Sept. 1990, *Diabetes* Vol, 39. "IGF-1 Stimulated Glucose Transport in Human Skeletal Obesity and NIDDM." "Based on the observation that insulin-like growth factor 1 (IGF-1) can stimulate glucose utilization in non-diabetic subjects...IGF-1 might provide an effective acute treatment for the hyperglycemia of NIDDM." "Presence of IGF-1 receptors in human muscle, with IGF-1 binding being 24% that of insulin. There was no change in IGF-1 bind in muscle from obese or diabetic subjects..." **"IGF-1 stimulated glucose transport approximately twofold..."**

Mero, Antti; et al. The Dept. of Biology of Physical Activity, Univ. Of Jyvaskyla, **Finland**. *The American Physiological Society*. 1997. Effects of bovine colostrum supplementation on serum IGF-1, IgG, hormone, and saliva IgA during training. **Bovine colostrum supplement increased serum IgF-1 concentration in athletes during strength and speed training.**

Antonio, PhD. CSCS, Jose. *Muscle and Fitness*. May 1998. BODY BUILDING SCIENCE- From the Weider Research Group. Can Bovine Colostrum Enhance Levels of IGF-1? **Studies indicate that bovine colostrum supplementation can increase levels of IGF-1.**