

PATENT PURPORTED BY MATOL

United States Patent [19]
Collins et al.

[11] 4,402,938
[45] Sep. 6, 1983

[54] **FOOD AND THE METHOD OF
EXTRACTING THE SAME FROM
COLOSTRUM AND MILK**

4,138,501 2/1979 Chareron et al.426/239
4,284,623 5/1981 Beck 424/85

[75] Inventors: Mary E. Collins; Robert A. Collins,
both of Waukon, Iowa
[73] Assignee: Impro Products, Inc., Waukon, Iowa
[21] Appl. No.: 276,230
[22] Filed:Jun. 22, 1981

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 154,502, May 29,
1980, abandoned.
[51] Int. Cl.⁴..... 4A61K 39/00
[52] U.S. Cl. 424/85; 426/583;
426/491
[53] Field of Search426/580, 583, 41, 431,
426/491, 495, 657; 424/85, 86, 87

[56] **References Cited:**

U.S. PATENT DOCUMENTS

3,128,230 4/1964 Helabach.....424/85
3,646,193 2/1972 Michaelson et al.424/85
3,911,108 10/1975 Siagla.....424/86
3,984,539 10/1976 Khouw et al.....424/85 X
4,051,235 9/1977 Plymater424/85

OTHER PUBLICATIONS

Webb, B.H., "Fundamentals of Dairy Chemistry", The
Avi Publ. Co., Inc., Westport, Conn., 1965, pp. 10 and
416.
Butler, J.H., :37 The Occurrence of Immunoglobulin
Fragments, Two Types of Lactoferrin and a Lac- to-
Ferrin-IgG2 Complex in Bovine Colostral and Milk
Whey", Biochemists et Biophysicis Acta, 295, (1973),
pp. 341-351.
McDonough, F.E., et al., "Protein Concentrate from
Cheese Whey by Ultrafiltration", J. Dairy Sci., vol. 54,
No. 10, Oct. 1971, pp. 1406-1409.

Primary Examiner -- Robert A Yoncoakie
Attorney, Agent, or Firm -- Ira Milton Jones

[57] **ABSTRACT**

This invention provides a new and useful food factor for
use as a nutritional supplement for animals, which
product comprises whey obtained from colostrum and
milk as it comes from selected cows or other ungulates,
and containing an active fraction having a molecular
weight on the order of 1200 or less.

6 Claims, No Drawings

4LIFE TRANSFER FACTOR PATENT

United States Patent [19]
Wilson et al.

[11] **Patent Number:** 4,816,563
[45] **Date of Patent:** Mar. 28, 1989

[54] **PROCESS FOR OBTAINING TRANSFER FACTOR FROM COLOSTRUM, TRANSFER FACTOR SO OBTAINED AND USE THEREOF**

[75] **Inventors:** Gregory B. Wilson; Gary V. Paddock, both of Mount Pleasant, S.C.

[73] **Assignee:** Amtron, Inc., Charleston, S.C.

[21] **Appl. No.:** 670,596

[22] **Filed:** Nov. 15, 1984

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 554,921, Nov. 25, 1983, abandoned.

[51] Int. Cl.⁴ A61K 39/00; A61K 39/02; A61K 39/12; C07H 15/12

[52] U.S. Cl. 530/344; 530/300; 536/22; 536/23; 536/24; 536/27; 514/2; 514/7; 514/8; 424/88; 424/89; 424/92; 424/105; 435/68

[58] Field of Search 424/95, 105, 88, 89, 424/92, 93; 514/2, 7, 8; 530/350, 300, 832, 833, 344, 300; 536/22, 23, 24, 27

[56] **References Cited**

PUBLICATIONS

France et al *Clin Res*, vol. 28 863 A 1981 "Transfer Factor from Human Colostrum and Breast Milk Lymphocytes".
Ruben et al *Clin Res* vol. 27(4) 1979 698 A "Cell Medicated immunity to influenza A virus and influenza B virus in human colostrum and milk."
Meggs et al *Am J. Obstet Gynecol* vol. 133(6) 1979, pp. 703-707 "In-vitro Stimulation of human colostrum lymphocytes by cytomegalovirus".
Parmely et al *J. Dairy Science* vol. 60(4) 1977 pp.

655-665 "Colostrum cell mediated immunity and the concept of a common secretory immune system".
Schlesinger et al *Lancet* vol. 2 1977 pp. 529-532 "Evidence for transmission of lymphocytes response to tuberculin by breast feeding".
Wilson et al *Immunobiology of Transfer Factor* 1983 Kirkpatrick, Colt et al editors p. 331.
Wilson et al. *Immunology Today* vol. 4, p. 157.

Primary Examiner -- Thomas G. Wiseman
Assistant Examiner -- Robin L. Teskin
Attorney, Agent, or Firm -- John P. White; John J. Santalone

[57] **ABSTRACT**

Antigen specific excreted transfer factor may be obtained by collecting material, e.g. colostrum or milk, secreted by the mammary gland of a suitable lactating mammal, e.g. a cow having immunity to the antigen under suitable conditions such that materials which interfere with transfer factor efficacy are removed so as to obtain transfer factor. Colostrum or milk so collected may be used directly, typically after sterilization, or may be treated to further concentrate and/or purify transfer factor. Treatment to yield colostrum whey containing transfer factor is presently the preferred method for obtaining transfer factor for use in conferring immunity against diseases associated with antigens for which the transfer factor is specific. Cell-associated transfer factor specific for an antigen may also be obtained by incubation release from, or lysis of, cells obtained from the collected material. An alternative method for obtaining transfer factor is to recover it from the mammary tissue of a suitable lactating mammal. The transfer factor may be used in edible compositions and in pharmaceutical or veterinary compositions and in methods for conferring immunity in a human or lower animal to a disease associated with the antigen. The transfer factor may then be used to prevent or treat the disease.

28 Claims, No Drawings