

National Aeronautics and
Space Administration

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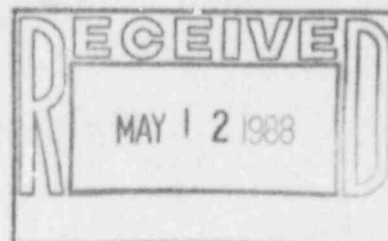
Lyndon B. Johnson Space Center
Houston, Texas
77058

Reply to Attn of

SD12/88-53

MAY 09 1988

United States
Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Gentlemen:

We submit Clarence P. Alfrey, M.D. for your consideration as an authorized user replacing Philip C. Johnson, Jr., M.D. (deceased), on NRC License No. 42-09388-03 issued to NASA/Lyndon B. Johnson Space Center, Houston, Texas. Dr. Alfrey's Nuclear Medicine credentials are enclosed.

Your prompt consideration would be appreciated.

Sincerely,

Carolyn L. Huntoon
Carolyn L. Huntoon, Ph.D.
Director, Space and Life Sciences

Enclosure

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461976
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Methodist

The Methodist Hospital



BAYLOR
COLLEGE OF
MEDICINE

6565 Fannin
Houston, Texas 77030

One Baylor Plaza
Houston, Texas 77030

December 17, 1987

To: A. W. Orsak
JSC - Radiation Safety Officer

From: Clarence P. Alfrey, M.D. *CPA*

Subject: Nuclear Medicine Credentials

*referred
CNC*
My preceptorship was in 1960, with Dub Taux, M.D. at the Mayo Clinic. From October of 1961 to June of 1966, I was Chief of the Radioisotope Service at the Veterans Administration Hospital, Houston, Texas. During that time I was the listed physician user on AEC License #42-84-6. Subsequent to 1966, my use of radionuclides has been under a state of Texas broad institutional license, The Methodist Hospital or Baylor College of Medicine. As Director of the Medical Hematology Laboratory at The Methodist Hospital, I continue to be involved in the use of chromium-51, iron-59, iodine-125 and phosphorus-32.

Also, attached is a copy of my curriculum vitae.

CURRICULUM VITAE

Clarence Powhatan Alfrey, M.D.

Birthdate: May 25, 1930
Birthplace: Brownwood, Texas
Marital Status: Married - 4 children
Social Security No.: 462-40-3401

Education:

1948-1951 Rice University, Houston, Texas
1951-1955 M.D., with honor, Baylor University College of Medicine, Houston, Texas
1958-1961 Mayo Foundation, Graduate School, University of Minnesota; Ph.D. in Medicine - 1966

Postgraduate Training:

1955-1956 Internship, University Hospital, Iowa City, Iowa
1958-1961 Residency, Mayo Foundation, Rochester, Minnesota

Academic Appointments:

1961-1963 Instructor in Medicine, Baylor University College of Medicine, Houston, Texas
July, 1963- Assistant Professor of Medicine, July, 1966 Baylor University School of Medicine, Houston, Texas
July, 1966- Associate Professor of Medicine, June, 1971 Baylor University College of Medicine, Houston, Texas
July, 1971-present Professor of Medicine, Baylor College of Medicine

May, 1969-
July, 1972

Adjunct Associate Professor of
Biomedical Engineering, Rice
University, Houston, Texas

July, 1972-
present

Adjunct Professor of
Biomedical Engineering, Rice
University, Houston, Texas

Hospital Appointments:

September, 1961-
July, 1966

Chief, Radioisotope Service,
Veterans Administration
Hospital, Houston, Texas

September, 1961-
July, 1967

Chief, Hematology Section,
Administration Hospital,
Houston, Texas

July, 1962-
September, 1965

Associate Chief, Research and
Education, Veterans
Administration Hospital,
Houston, Texas

September, 1975-
present

Co-director and Director,
Hematology Research
Laboratory, The Methodist
Hospital, Houston, Texas

July, 1967-
present

Consultant, Hematology Section
Veterans Administration
Hospital, Houston, Texas

June, 1967-
present

Attending Physician, The
Methodist Hospital, Houston,
Texas

September, 1981-
present

Chief, Hematology Section,
Baylor College of Medicine and
The Methodist Hospital,
Houston, Texas

Other Appointments:

September 1, 1984-
present

Director, Gulf Coast Blood
Center, Houston, Texas

Board Certification:

1962

American Board of Internal
Medicine

1972

American Board of Internal
Medicine, Hematology

1974

American Board of Internal
Medicine, Recertification

Medical Licensure:

1955

Texas

Professional Memberships:

Texas Club of Internists
American Medical Association
Houston Society of Internal
Medicine
Society of Nuclear Medicine
American Society of Hematology
American Federation for
Clinical Research
Harris County Medical Society
Fellow, American College of
Physicians
Texas Medical Association
Southern Society of Clinical
Investigation
Alpha Omega Alpha Honorary
Medical Fraternity
Central Society for Clinical
Research
Southwest Oncology Group

Honors:

Alpha Omega Alpha Honorary
Medical Fraternity

Editorships:

1968-1972

Hematology Editor, Internal
Medicine Digest

1975

Editor, Harris County Medical
Society Journal

1977-present

Hematology Editor, Journal of
Laboratory and Clinical
Medicine

Military Service:

1955-1958

Captain, Army Medical Corps,
Ansbach, Germany

Published Articles

1. Alfrey CP Jr., Bartholomew LG, Cain JC, and Baggenstoss AH: "Chronic disease in the liver in young women: An evaluation of patients with negative clot test for lupus erythematosus." Gastroenterology, Vol. 43, No. 5, 1962, pp. 532-538.
2. Brown H, Davis V, Huff J and Alfrey CP Jr.: "Determination of serotonin in blood using an ion-exchange resin." Clinica Chimica Acta., 9, 1964, pp. 419-426.
3. Lane M, Alfrey CP Jr., Mengel CE, Brindley CO, Doherty MA and Doherty J: "The rapid induction of human riboflavin deficiency with Galactoflavin." Journal of Clinical Investigation, Vol. 43, No. 3, 1964, pp. 357-373.
4. Lane M, Liebelt RA, and Alfrey CP Jr.: "Effects of chemotherapeutic agents on iron metabolism." Proceedings of the American Association for Cancer Research, Vol. 5, 1964, p. 38.
5. Alfrey CP Jr., Karjala RJ, Dale SC, Frenkel EP, and Lane M: "Erythrokinetic abnormalities with administration of hydroxyurea (NSC-32065)." Cancer Chemotherapy Report, No. 40, 1964, pp. 27-30.
6. Bersagel DE, Frenkel EP, Alfrey CP Jr., and Thurman, WG: "Megaloblastic erythropoiesis induced by hydroxyurea (NSC-32065)." Cancer Chemotherapy Report, No. 40, 1964, pp. 15-17.
7. Lane M, and Alfrey CP Jr.: "The anemia of human riboflavin deficiency." Blood, Vol. 25, No. 4, 1965, pp. 432-441.
8. Motzkin D, Johnson PC, Scott R Jr. and Alfrey CP Jr.: "Radioactive scintiscanning in evaluation of renal disease." Texas State Journal of Medicine, Vol. 61, 1965, pp. 401-406.
9. Lynch EC and Alfrey CP Jr.: "Histiocytic medullary reticulosis: Hemolytic anemia due to erythrophagocytosis by histiocytes." Annals of Internal Medicine, Vol. 63, No. 4, 1965, pp. 444-471.
10. Alfrey CP Jr., Lane M, and Karjala RJ: "The modification of ferrokinetics in man by cancer chemotherapeutic agents." Cancer, Vol. 19, No. 3, 1966, pp. 428-432.

11. Lynch EC, and Alfrey CP Jr.: "Studies in vitro on the autohemolysis of normoblastic and megaloblastic marrow cells." Texas Reports on Biology and Medicine, Vol. 24, No. 2, 1966, pp. 180-188.
12. Perry LV, and Alfrey CP Jr.: "Red cell pyruvate kinase deficiency in adults: A report of two cases." Medical Records and Annals, Vol. 59, No. 4, 1966, pp. 137-140.
13. Levin H and Alfrey CP Jr.: "Thrombotic thrombocytopenic purpura: Temporary remission induced by prednisone." Texas Medicine, Vol. 62, No. 10, 1966 pp. 72-75.
14. Lynch EC, Bakken CL, Casey TH and Alfrey CP Jr.: "Microangiopathic hemolytic anemia in carcinoma of the stomach." Gastroenterology, Vol. 52, No. 1, 1967, pp. 88-93.
15. Alfrey CP Jr., Lynch EC, and Whitley CE: "Characteristics of ferritin isolated from human marrow, spleen, liver and reticulocytes." Journal of Laboratory and Clinical Medicine, Vol. 70, No. 3, 1967, pp. 419-428.
16. Alfrey CP Jr., Cook V, and Pittman JP: "The design and use of a linear scanner." Journal of Nuclear Medicine, 8, 1967, pp. 859-870.
17. Twomey J, O'Neal FG, Alfrey CP Jr., and Moser R: "ATP metabolism of pyruvate kinase deficient red cells." Blood, Vol. 30, No. 5, 1967, pp. 576-586.
18. Alfrey CP Jr., Kohen RR, Gyorkey F, Lidsky MD, Sharp JT, Carpenter RR, and Borreson, RE: "Clinicopathologic conference." Texas Medicine, Vol. 64, No. 6, 1968, pp. 69-76.
19. Nevaril CP, Lynch EC, Alfrey CP Jr. and Hellums JD: "Erythrocyte damage and destruction induced by shearing stress." Journal of Laboratory and Clinical Medicine, Vol. 71, No. 5, 1968, pp. 784-790.
20. Natelson EA, Lynch EC, Hettig RA, and Alfrey CP Jr.: "Histiocytic medullary reticulosis: The role of phagocytosis in pancytopenia." Archives of Internal Medicine, Vol. 122, 1968, pp. 223-229.
21. Lynch EC, McKechnie JC, and Alfrey CP Jr.: "Brucellosis with pancytopenia." Annals of Internal Medicine, Vol. 69, No. 2, 1968, pp. 319-322.
22. Alfrey, CP Jr., Lynch EC, and Hettig RA: "Studies of iron kinetics using a linear scanner: I. Distribution

of sites of uptake of plasma iron in hematological disorders." Journal of Laboratory and Clinical Medicine, Vol. 73, No. 3, 1969, pp. 405-417.

23. Nevaril CP, Hellums JD, **Alfrey CP Jr.**, and Lynch, EC: "Physical effects in red blood cell trauma." AICHe Journal, Vol. 15, No. 5, 1969, pp. 707-711.
24. Lynch EC, and **Alfrey CP Jr.**: "Erythrocyte fragmentation: A diagnostic clue in hemolytic anemia." Medical Times, Vol. 97, No. 9, 1969, pp. 125-134.
25. Natelson EA, Lynch EC, **Alfrey CP Jr.**, and Gross JB: "Heparin-induced thrombocytopenia: An unexpected response to treatment of consumption coagulopathy." Annals of Internal Medicine, Vol. 71, No. 6, 1969, pp. 1121-1125.
26. Diethrich EB, Liddicoat JE, Brewer M, Kinard S, Lynch EC, **Alfrey CP Jr.**, and DeBakey MD: "Chapter 37: Aortic valve replacement in 150 patients using the Magovern sutureless ball-valve prosthesis." Prosthetic Heart Valves, 1969, pp. 551-563.
27. **Alfrey CP Jr.**, and Lane M: "The effect of riboflavin deficiency on erythropoiesis." Seminars in Hematology, Vol. 7, No. 1, 1970, pp. 49-53.
28. Arora RS, Lynch EC, Whitley CE and **Alfrey CP Jr.**: "The ubiquity and significance of human ferritin." Texas Rep. Biol. Med. 28:3, 1970, pp. 189-196.
29. Natelson EA, Lynch EC, Hettig RA, and **Alfrey CP Jr.**: "Acquired factor IX deficiency in the nephrotic syndrome." Annals of Internal Medicine, Vol. 73, No. 3, 1970, pp. 373-378.
30. Alexanian R, and **Alfrey CP, Jr.**: "Erythropoiesis in the anemia of bone marrow failure." Journal of Clinical Investigation, Vol. 49, No. 11, 1970, pp. 1986-1992.
31. Wisselink P, Feola M, **Alfrey CP Jr.**, Suzuki M, Ross JN Jr., Kennedy JH: "Prolonged partial cardiopulmonary bypass and the integrity of small blood vessels." Journal of Thoracic and Cardiovascular Surgery, Vol. 60, No. 6, 1970, pp. 789-794.
32. Natelson EA, Lynch EC, Britton HA, and **Alfrey CP Jr.**: "Polycythemia vera in childhood: A case with chromosome abnormality, immunoglobulin deficiency and chronic consumption coagulopathy." American Journal of Disease of Children, Vol. 122, 1971, pp. 241-244.

33. **Alfrey CP Jr., and Lynch EC:** "Iron-loading anemias." Current Diagnosis, 3rd edition, 1971, pp. 463-466.
34. **Ross JN Jr., Alfrey CP Jr., Lynch EC, and Kennedy JH:** "Hematologic observations during prolonged partial left ventricular bypass." Trans American Society of Artificial Internal Organs, Vol. 17, 1971, pp. 195-199.
35. **Lynch EC, Alfrey CP Jr., and Hettig, RA:** "Rational treatment of anemias in malignant diseases." Texas Medicine, Vol. 67, No. 12, 1971, pp. 64-74.
36. **Alfrey CP Jr. and Ganchan RP Jr.:** "Leukemic pericarditis: Successful radiation therapy." Bibliotheca Haematologica, No. 38, Part I, 1971, pp. 642-645.
37. **Leverett LB, Hellums JD, Alfrey CP Jr. and Lynch EC:** "Red blood cell damage by shear stress." Biophysical Journal, Vol. 12, No. 3, 1972, pp. 257-273.
38. **MacCallum RN, O'Bannon W, Hellums JD, Alfrey CP Jr., and Lynch EC:** "Viscometric instruments for studies on red blood cell damage." Rheology of Biological Systems, Chapter 4, 1972, pp. 70-83.
39. **McIntire LV, Hellums JD, Alfrey CP Jr., and Lynch EC:** "The use of rheology in screening proposed therapeutic treatments of sickle cell anemia." Proceedings of the 25th Annual Conference on Engineering in Medicine and Biology, Vol. 14, 1972, p. 47.
40. **Alexanian R, Nadell J, and Alfrey CP Jr.:** "Oxymetholone treatment for the anemia of bone marrow failure." Blood, Vol. 40, No. 3, 1972, pp. 353-364.
41. **Brown CH, Natelson EA, Bradshaw MD, Williams TW Jr., Alfrey CP Jr.:** "The hemostatic defect produced by carbenicillin." New England Journal of Medicine, Vol. 291, 1974, pp. 265-270.
42. **Zanger B, Alfrey CP Jr., McIntire LV, and Leverett, LB:** "The effects of dromostanolone in sickle cell anemia." Journal of Laboratory and Clinical Medicine, Vol. 84, No. 6, 1974, pp. 889-901.
43. **Lane M, Smith FE, and Alfrey CP Jr.:** Experimental dietary and antagonist-induced human riboflavin deficiency." RIBOFLAVIN, Chapter 8, 1974, pp. 245-273.
44. **MacCallum RN, Lynch EC, Hellums JD, and Alfrey CP Jr.:** "Fragility of abnormal erythrocytes evaluated by response to shear stress." Journal of Laboratory and Clinical Medicine, Vol. 85, No. 1, 1975, pp. 67-74.

45. Brown, CH III, Natelson EA, Bradshaw MW, Alfrey CP Jr., and Williams TW Jr.: "A study of the effects of Ticarcillin on blood coagulation and platelet function." Antibiotic and Antimicrobial Therapy, Vol. 7, No. 5, 1975, pp. 652-657.
46. Brown CH, Weisberg RM, Natelson and Alfrey CP Jr.: "Glanzmann's thrombasthenia: Assessment of the response to platelet transfusions." Transfusion, Vol. 15, No. 2, 1975, pp. 124-131.
47. Brown CH III, Leverett LB, Lewis C, Alfrey CP Jr. and Hellums JD: "Morphological, biochemical and functional changes in human platelets subjected to shear stress." Journal of Laboratory and Clinical Medicine, Vol. 86, No. 3, 1975, pp. 462-471.
48. Brown CH, Lemuth RF, Hellums JD, Leverett LB, and Alfrey CP Jr.: "Response of human platelets to shear stress." Trans American Society of Artificial Internal Organs, Vol. 21, 1975, pp. 35-38.
49. Brown CH III, Bradshaw MW, Natelson EA, Alfrey CP Jr., and Williams TW Jr.: "Defective platelet function following the administration of penicillin compounds." Blood, Vol. 47, No. 6, 1976, pp. 949-956.
50. Natelson EA, Brown CH III, Bradshaw MW, Alfrey CP Jr., and Williams TW Jr.: "Influence of cephalosporin antibiotics on blood coagulation and platelet function." Antimicrobial Agents and Chemotherapy, Vol. 19, No. 1, 1976, pp. 91-93.
51. Alexanian R, and Alfrey CP Jr.: "Erythrokinetics and androgens in bone marrow cancer." Cancer, Vol. 38, No. 2, 1976, pp. 833-840.
52. Tadano K, Hellums JD, Lynch EC, Peck EJ, and Alfrey CP Jr.: "The effects of ATP depletion on the response of erythrocytes to shear stress." Blood Cells, Vol. 3, 1977, pp. 163-174.
53. Lynch EC and Alfrey CP: "Acquired hemolytic anemia." Current Diagnosis, Vol. 5, 1977, pp. 466-471.
54. Colantuoni GC, Hellums JD, Moake JL, and Alfrey CP Jr.: "The response of human platelets to shear stress at short exposure times." Trans American Society of Artificial Internal Organs, Vol. 23, 1977, pp. 626-630.
55. McIntire LV, Alfrey CP, and Lynch EC: "Effect of transfusion on hemoglobin flow and oxygen delivery in patients with sickle cell anemia--In vitro evaluation." Medical Research Engineering, 1978.

56. **Alfrey CP Jr.:** "Serum ferritin assay." Critical Reviews in Clinical Laboratory Sciences, Vol. 9, 1978, pp. 179-208.
57. Anderson GH, Hellums JD, Moake JL and Alfrey CP, Jr.: Platelet response to shear stress: Changes in serotonin uptake, serotonin release, and ADP-induced aggregation. Proc Int Cong on Biorheology, 1978.
- 58.. Anderson GH, Hellums JD, Moake JL, and **Alfrey CP Jr.:** "Platelet response to shear stress: Changes in serotonin uptake, serotonin release, and ADP induced aggregation." Thrombosis Research, Vol. 13, 1978, pp. 1039-1047.
59. Anderson GH, Hellums JD, Moake JL, and **Alfrey CP Jr.:** "Platelet lysis and aggregation in shear fields." Blood Cells, Vol. 4, 1978, pp. 499-507.
60. **Alfrey CP Jr.,** Seiler MV, and Whitley CE: "Differentiation of iron deficiency from anemia of chronic disorders: Use of serum ferritin assay." NUC Compact, 9:160, 1978, pp. 160-164.
61. Anderson GH, Colantuoni G, Hellums JD, Moake JL, and **Alfrey CP Jr.:** "Shear stress effects on human blood platelets." Proceeding of the XII International Conference on Medical and Biologic Engineering, 39:1 (1979).
62. Zeluff GW, **Alfrey CP Jr.,** Jackson D: "Hemochromatosis-Cardiomyopathy and other complications." Heart & Lung, July-August, 1979, pp. 761-765.
63. **Alfrey CP Jr.:** "Quality control of the serum ferritin assay." Proceedings of Fourth Meeting of the Asian-Pacific Division of the International Society of Hematology, Vol. 1, 1979, pp. 373-378.
64. Lynch EC, and **Alfrey CP:** "Acquired Hemolytic Anemia." Current Diagnosis, Vol. 6, 1980, pp. 449-455.
65. **Alfrey CP Jr.:** "Teil II: Einschränkungen bei der verwendung des serumferritin assays in der diagnostik: Differenzierung in Eisenmangel-und andere Anamieformen." Serum-ferritin, 1980, pp. 268-275.
66. Harwick RA, Hellums JD, Moake JL, Peterson DM, and **Alfrey CP:** "Effects of antiplatelet agents on platelets exposed to shear stress." Trans American Society of Artificial Internal Organs, Vol. 26, 1980, pp. 179-18

67. Alfrey CP and Riggs SA: "Erythropoietin, an elusive hormone." Journal of Laboratory and Clinical Medicine, 97:141-143, 1981.
68. Alfrey CP Jr., White MR and Zelnick PW: "Abnormalities of white blood cells, platelets and hemostasis." Medical Complications of Malignancy, Chapter 9, 1984, pp. 207-217.
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