

BAYLOR UNIVERSITY MEDICAL CENTER

CURRICULUM VITAE

Date Prepared: July 10, 2006

Name: **Charles Rider Roe, M.D.**

Primary academic appointment: **Institute for Metabolic Disease, Baylor
University Medical Center, Dallas, TX**

Secondary appointment: **Professor, Institute of Biomedical Studies, Baylor
University, Waco TX**

Present academic rank and title:

Medical Director, Institute of Metabolic Disease
Director, Clinical Investigations

Professor, Institute of Biomedical Studies
Baylor University, Waco, TX

Date and rank of first faculty appointment : Assistant Professor, July 1970
Duke University Medical Center

Clinical Privileges :

Baylor University Medical Center, Dallas, TX
"Our Children's House ", Baylor University Medical Center, Dallas, TX

EDUCATION:

1955–59 Duke University, Durham, North Carolina, B.A. Degree
Zoology major

1959–61 University of Maryland School of Medicine, Baltimore,
Maryland

1961–62 Research Training Program, Duke Medical Center, Durham,
North Carolina

1962–64 Duke Medical School, Durham, North Carolina, M.D.

Scholarly Societies (12):

American Association for Advancement of Science, Member
American Chemical Society
American College of Cardiology, Member
Engel Society, Duke Medical Center, Member
Southern Society for Pediatric Research, Member
Society of Pediatric Research, Member
American Association of Clinical Chemistry, Member
American Society for Clinical Pathology, Member
International Society of Clinical Enzymology, Member
North Carolina Pediatric Society, Member
Society for Study of Inborn Errors of Metabolism
(SSIEM, Europe), Member
Society for Inherited Metabolic Disorders (SIMD, U.S.), Member

Professional training and academic career:

- 1/64–6/64 Fellow, Pediatric Endocrinology, Duke Medical Center,
Durham, North Carolina
- 7/64–6/65 Intern, Pediatrics, Duke Medical Center, Durham,
North Carolina
- 7/65–6/67 Research Associate (Post-doctoral trainee), Graduate Department of Biochemistry,
Brandeis University, Waltham, Massachusetts,
Sponsored by N.I.C.H.D.
- 7/67–7/68 Resident, Pediatrics, Duke Medical Center, Durham,
North Carolina
- 7/68–7/70 Associate, Pediatrics, Division of Pediatric Metabolism,
Duke Medical Center, Durham, North Carolina
- 9/70 Department of Pathology, University of Illinois Medical Center,
Chicago, Illinois. Clinical Isoenzymology Training with Dr.
S.T. Nerenberg.
- 7/70–6/75 Assistant Professor, Pediatrics, Division of Pediatric
Metabolism, Duke Medical Center, Durham, North Carolina
- 7/75–7/82 Associate Professor, Pediatrics, Division of Pediatric
Metabolism, Duke Medical Center, Durham, North Carolina
- 7/76–7/94 Chief, Division of Pediatric Genetics and Metabolism, Duke Medical

Center, Durham, North Carolina

- 3/79– Gastroenterology Division, Division of Medicine, Veterans Administration Hospital, Indianapolis, Indiana Training with Dr. Philip J. Snodgrass.
- 4/79–4/80 Division of Inherited Metabolic Diseases, Clinical Research Centre, Harrow, Middlesex, England. Studies related to application of biomedical mass spectrometry with Dr. Ronald Chalmers and Dr. Alex Lawson.
- 10/80–8/82 Director, Mass Spectrometry Unit, Duke Medical Center, Durham, North Carolina
- 8/82–5/95 Professor, Pediatrics, Chief, Division of Genetics and Metabolism, Co-Director, Mass Spectrometry Facility
Duke Medical Center, Durham, North Carolina
- 7/94–6/95 Professor, Pediatrics, Chief, Division of Biochemical Genetics
Co-Director, Mass Spectrometry Facility
Duke Medical Center, Durham, North Carolina
- 6/95- Medical Director of the Institute of Metabolic Disease
Co-Director of Mass Spectrometry Unit
Baylor University Medical Center
3812 Elm Street
Dallas, TX 75226

PROFESSIONAL ACTIVITIES

- 10/17/94– Visiting Professor, Laboratoire de Biochimie, Hopital Debrousse,
10/24/94 Lyon, France, invited by Dr. Christine Vianey–Saban
- 10/25/94– Visiting Professor, Center for Medical Molecular Biology, Aarhus,
11/7/94 Denmark, invited by Dr. N. Gregersen
- 11/8/94– Visiting Professor, Free University of Amsterdam, Holland, invited
11/18/94 by Dr. Cornelis Jakobs
- 11/20/94– Visiting Professor, Academic Medical Center, Amsterdam, Holland
11/25/94 invited by Dr. R.J.A. Wanders
- 11/25/94– Visiting Professor, Institute for Medical Genetics, Erasmus
12/1/94 University, Rotterdam, Holland, invited by Dr. Wim Kleijer and
Dr. Hans Galjaard

2/4/95– Visiting Professor, Laboratoire de Biochimie, Necker Enfants–
2/11/95 Malades, Paris, France, invited by Dr. J.M. Saudubray

2/12/95– Visiting Professor, Service de Biochimie, Hopital Debrousse,
2/19/95 Lyon, France, invited by Dr. P. Divry

2/20/95– Consulting Scientist, Dept. of Chemistry, CUNY, New York, N.Y.
2/26/95 invited by Dr. H. Schulz

3/18/95- SIMD Annual Meeting, Perdido Beach, Alabama
3-21-95

3/23/95- Thirteenth Annual Long Beach Institute Symposium, Long Beach, N.C.
3/26/95

6/13/95- Workshop on Fat Oxidation, Aarhus Denmark
6/16/95

3/96 SIMD Annual Meeting, Cuernavaca, Mexico

4/25-4/28/96 14th Annual Long Beach Institute Symposium, Long Beach, NC

5/31/96 3rd Annual Symposium for Aaron Graham, Children's Los Angeles,
Featured speaker

6/13/96 Invited Speaker Neonatal Nurse Practitioners Symposium, Dallas, TX

10/23/96 Chair of TPN Roundtable Symposium, Dallas, TX

10/30/96 Invited Speaker, American Society for Human Genetics, San Francisco, CA

Nov 28, 1998 : Keynote Speaker for the Canadian Garrod Association, Banff, Canada, The Role
of Tandem Mass Spectrometry in Neonatal Screening.

9/1-4/1998 SSIEM , York UK

9/9-12, 1998 Free University, Amsterdam.: Symposium & Thesis Defense for N. Verhoeven,
Invited Speaker

4/29-5/2, 1999 17th Annual Long Beach Institute Symposium, Long Beach, NC, Invited Speaker

6/ 9-10, 1999 Annual Meeting of Laboratory Directors, Texas Department of Health,
Austin Tx, Invited Speaker

6/8-11/2000 Invited Speaker for University of New Mexico Medical Center re. Expanded Newborn Screening

10/3 -10/5/2000 Cincinnati Children's Hospital, Cincinnati, OH. Invited Speaker for Neurology Grand Rounds (Dr. Ton DeGrauw)

11/10-12-2000 Exceptional Parent World Congress, Invited Speaker. Atlanta, GA

11/16-17/2000 Texas Department of Health Austin, TX. Lecture to TX Metabolic Consultants to TDH on SNBS

12/1/2000 Consult Massachusetts Expanded Newborn Screening Program re.logistics

1/16/2001 Invited consultation (Sen, Montcrief & Sibley) Austin TX re. SNBS for Texas

1/11-12/2001 Invited Speaker for Grand Rounds at University of Nebraska Medical Center, Omaha, NE

1/30-2/1/2001 Invited Speaker for Grand Rounds at University of South Dakota Medical Center, Sioux Falls, SD

4/25-28/2001, 18th Annual Long Beach Institute Symposium, Long Beach, NC, Invited Speaker

7/8-16, 2001 Collaborative clinical research arrangements between US and Paris France. SASOL Corporation, Witten, Germany for Clinical Research diet supplies.

4/28-5/1/2001 American Pediatric Society/Society for Pediatric Research, Baltimore, MD. Invited Speaker

5/3-6/2001 Annual Meeting of Fat Oxidation and Organic Acidemia Family Support Associations, Columbus, OH, Invited Speaker

3/4-6/2002 Society for Inherited Metabolic Disease, Asilomar, CA. Plenary Speaker

4/28-5/2/2002, 20th Annual Long Beach Institute Symposium, Long Beach, NC, Coordinator & Invited Speaker

9/3-6/2002 Society for the Study of Inborn Errors of Metabolism, Dublin, Ireland. Invited Speaker

9/17-19/2002 Cardiology Research Workshop, NHLBI, National Institutes of Health, Bethesda MD. Invited Speaker

10/2-4/2002 Annual Meeting of Fat Oxidation and Organic Acidemia Family Support Associations, Orlando FL, Invited Speaker

1/13-15/2003 3rd Annual Tandem Mass Spectroscopy Meeting for Implementation of Expanded Newborn Screening. Berkeley, CA. Invited Speaker.

3/9-10/2003 Department of Human Genetics, Emory School of Medicine, Atlanta, GA. Invited Speaker.

3/11/03 Distinguished Speaker Series, Baylor University Medical Center, Dallas Texas. Invited Speaker

3/20-22/2003 South Dakota Medical Center, Sioux Falls, SD: Invited Speaker for Annual Symposium on Maternal and Child Health.

4/4-5/2003 Annual Ross Laboratories Metabolic and Diet Conference. Houston Texas. Invited Speaker

4/24-27/2003 21st Annual Long Beach Institute Symposium, Long Beach, NC, Coordinator & Invited Speaker

5/23-25/2003 35th Annual Meeting of the European Metabolic Group, Paris, France. Workshop Presentation on New Treatment Strategies. Invited Speaker.

5/26/03 Department of Pediatrics, Medical Genetics, Necker-Enfants Malades Hospital, Paris France. Invited lecture on Treatment of Fat Oxidation Disorders.

9/2-9/5/2003 International Congress of Inborn Errors of Metabolism, Brisbane Australia. Invited Plenary Speaker

3/10-13, 2004: SHS Meeting, London, UK. Plenary Speaker

4/24-27/2004 22nd Annual Long Beach Institute Symposium, Long Beach, NC, Coordinator & Invited Speaker

Sept 2004: Visiting Professor, Necker Enfants-Malades, Paris, France

4/28-5/1/2005 23rd Annual Long Beach Institute Symposium, Long Beach, NC, Coordinator & Invited Speaker

May 18-21, 2005: Visiting Professor, University of Minnesota Medical School and Veterinary Medicine School

June 8-10, 2005: VIth International Congress on Fat Oxidation Disorders, Egmond an Zee, The Netherlands

Sept 6-8, 2005: Plenary Speaker, SSIEM, Paris France

Jan 24, 2006: Grand Rounds presentation. Cook Childrens Hospital, Ft Worth, TX

Jan 31, 2006: Grand Rounds presentation. Cook Childrens Hospital, Ft Worth, TX

4/27-4/30/2006 24th Annual Long Beach Institute Symposium, Long Beach, NC, Coordinator & Invited Speaker

5/12-13, 2006 Canadian Garrod Conference, Halifax, Nova Scotia. Invited Speaker

Fields of Special Interest:

Inherited Metabolic Disorders
Biomedical Mass Spectrometry
Sudden Unexplained Death
Nutritional Strategies for Inherited Defects
Anaplerotic Diet therapy for Acquired Disease
Gardening & Raising Poultry

Editorial Appointment: Biochemical and Molecular Medicine, (*Molecular Genetics & Metabolism*)

Editorial Board of *Biochemical Medicine and Metabolic Biology*, (*Molecular Genetics & Metabolism*)
(January 1994–January 1996)

Editorial Board of *Molecular Genetics and Metabolism*
February 1996 to present

Editorial Advisory Board for the Program, Contemporary Issues in Newborn Screening for Exceptional Parent magazine. June 2000 -

International Appointments:

International Consulting Faculty, Institute of Human Genetics,
Kanazawa Medical University, Ishikawa, Japan

International Consulting Faculty, Harbin Medical University,
People's Republic of China

International Consulting Faculty, Henan Medical University,
People's Republic of China

Industrial Consultancy:

F. Hoffman–LaRoche, Basel Switz.
Roche Canada, Montreal Canada

Sigma-Tau Pharmaceuticals, Rome Italy
SASOL, GmbH, Witten Germany (non-paid consultant)

PUBLICATIONS :

1. **Roe, C.R.** and Kaplan, N.O. Purification and Substrate Specificities of Bacterial Hydroxysteroid Dehydrogenases. Biochemistry 8:5093–5103, 1969.
2. **Roe, C.R.**, You, K.S. and Kaplan, N.O. Agar Gel Electrophoretic Demonstration of Charge Alteration in Mutant Bacterial Proteins. B.B.R.C. 36:64–74, 1969.
3. **Roe, C.R.** and You, K.S. Biochemical Analysis of DNA Macromutations. Z fur Allgemeine Mikrobiologie 11:525–539, 1971.
4. **Roe, C.R.**, Obermoser, H., You, K.S. and Admiraal, J. DNA Macromutant Identified as Flavobacterium: Total Lack of Immunologic Relationship to Flavobacterium. Mutation Research 13:123–129, 1971.
- *5. **Roe, C.R.**, Limbird, L.E., Wagner, G.S. and Nerenberg, S.T. Combined Isoenzyme Analysis in the Diagnosis of Myocardial Injury: Application of Electrophoretic Methods for the Detection and Quantitation of the Creatine Phosphokinase MB Isoenzyme. J. Lab. Clin. Med. 80:577–590, 1972.
6. Wagner, G.S., **Roe, C.R.**, Limbird, L.E., Rosati, R.A. and Wallace, A.G. The Importance of Identification of the Myocardial-Specific Isoenzyme of Creatine Phosphokinase (MB Form) in the Diagnosis of Acute Myocardial Infarction. Circulation 47:263–269, 1972.
7. Dixon, S.H., Jr., Limbird, L.E., **Roe, C.R.**, Wagner, G.S., Oldham, H.N., Jr. and Sabiston, D.C., Jr. Recognition of Post-operative Acute Myocardial Infarction. Supp III to Circulation 47 & 48:137–140, 1973.
- *8. Oldham, H.N., Jr., **Roe, C.R.**, Young, W.G., Jr. and Dixon, S.H., Jr. Intraoperative Detection of Myocardial Damage During Coronary Artery Surgery by Plasma Creatine Phosphokinase Isoenzyme Analysis. Surgery 74:917–925, 1973.
9. Sapsford, R.N., Blackstone, E.H., Kirklin, J.W., Karp, R.B., Kouchoukos, N.T., Pacifico, A.D., **Roe, C.R.** and Bradley, E.R. Coronary Perfusion versus Cold Ischemic Arrest During Aortic Valve Surgery: A Randomized Study. Circulation XLIX:1190–1199, 1974.
10. Gervin, C.A., Hackel, D.B. and **Roe, C.R.** Enzyme Content of Canine Cardiac Lymph during Acute Myocardial Infarction. Surg. Forum XXV:175–176, 1974.
11. Tonkin, A.M., Lester, R.M., Guthrow, C.E., **Roe, C.R.**, Hackel, D.B. and Wagner, G.S. Persistence of MB Isoenzyme of Creatine Phosphokinase in the Serum after Minor Iatrogenic

Cardiac Trauma. Circulation 51:627–631, 1975.

12. **Roe, C.R.**, Schonberger, L.B., Gehlbach, S.H., Wies, L.A. and Sidbury, J.B., Jr. Enzymatic Alterations in Reye's Syndrome: Prognostic Implications. Pediatrics 55:119–125, 1975.

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13. **Roe, C.R.** and Starmer, C.F. A Sensitivity Analysis of Enzymatic Estimation of Infarct Size. Circulation 52:1–5, 1975.

14. Sexton, D.J., Banks, P.M., Weig, S. and **Roe, C.R.** Late Appearance of Skin Rash and Abnormal Serum Enzymes in Rocky Mountain Spotted Fever – A Case Report. J. Pediatrics 87:580–582, 1975.

15. Roark, S.F., Wagner, G.S., Izlar, H.L., Jr. and **Roe, C.R.** Diagnosis of Acute Myocardial Infarction in a Community Hospital: Significance of CPK–MB Determination. Circulation 53:965–969, 1976.

* 16. **Roe, C.R.**, Cobb, F.R. and Starmer, C.F. The Relationship Between Enzymatic and Histologic Estimates of the Extent of Myocardial Infarction in Conscious Dogs with Permanent Coronary Occlusion. Circulation 55:438–449, 1977.

17. Roses, A.D., Roses, M.J., Nicholson, G.A. and **Roe, C.R.** Lactic Dehydrogenase Isoenzyme 5 in Detecting Carriers of Duchenne Muscular Dystrophy. Neurology 5:414–421, 1977.

* 18. Lell, W.A., Walker, D.R., Blackstone, E.H., Kouchoukos, N.T., Allarde, R. and **Roe, C.R.** Evaluation of Myocardial Damage in Patients Undergoing Coronary Artery Bypass Procedures with Halothane–N₂O Anesthesia and Adjuvants. Anesthesia and Analgesia 56:556–563, 1977.

19. Cox, J.L., Anderson, R.W., Pass, H.I., Currie, W.C., **Roe, C.R.**, Mikat, E., Wechsler, A.S. and Sabiston, D.C. The Safety of Induced Ventricular Fibrillation During Cardiopulmonary Bypass in Non–Hypertrophied Hearts. J. Thoracic and Cardiovascular Surgery 74:423, 1977.

* 20. **Roe, C.R.**, Starmer, S.F. and Cobb, F.R. Mathematical Modifications Fail to Improve CPK Estimates of Extent of Infarct. Circulation 55:678–679, 1977.

21. Warren, S.G., Wagner, G.S., Bethea, C.F., **Roe, C.R.**, Oldham, H.N. and Kong, Y. Diagnostic and Prognostic Significance of Electrocardiographic and CPK Isoenzyme Changes Following Coronary Bypass Surgery: Correlation with Findings at One Year. Am. Heart Journal 93:189–196, 1977.

22. Roses, A.D., Roses, M.J., Metcalf, B.S., Hull, K.L., Nicholson, G.A., Hartwig, G.B. and **Roe, C.R.** Pedigree Testing in Duchenne Muscular Dystrophy. Annals of Neurology 2:271–278, 1977.

23. **Roe, C.R.** The Validity of Estimating Myocardial Infarct Size from Serial Measurements of Enzyme Activity in the Serum. Clinical Chemistry 23(10): 1807– 1812, 1977.

24. Roses, A.D., Nicholson, G.A. and **Roe, C.R.** Screening of Muscular Dystrophy. Pediatrics Vol. 60, No. 2, August, 1977.
25. **Roe, C.R.**, Wagner, G.S., Young, W.G., Jr., Curtis, S.E., Cobb, F.R. and Irvin, R.G. The Relationship of CK-MB to the Post-Operative Electrocardiographic Diagnosis in Patients Undergoing Coronary Artery Bypass Surgery. Clinical Chemistry 25, 1979.
- *26. Cobb, F.R., Irvin, R.G., Haggerty, R.C. and **Roe, C.R.** Effect of Extension of Infarction on Serial CK Activity. Circulation 60:145-154, 1979.
27. Stargel, W.W., **Roe, C.R.**, Routledge, P.A. and Shand, D.G. Importance of Blood Collection Tubes in Plasma Lidocaine Determinations. Clinical Chemistry 25:617-619, 1979.
28. Goldsmith, L.A., Thorpe, J. and **Roe, C.R.** Hepatic Enzymes of Tyrosine Metabolism in Tyrosinemia II. J. Invest. Dermatology 73:530-532, 1979.
29. Saul, R.A., Vernon, M., **Roe, C.R.** and Osofsky, S.G. Rhabdomyolysis in a Patient with Non-oliguric Renal Failure and Similarities to the Toxic-Shock Syndrome. Southern Med. J. 73:261-263, 1980.
30. Irvin, R.G., Cobb, F.R. and **Roe, C.R.** Acute Myocardial Infarction and MB Creatine Phosphokinase. Relationship between most onset of symptoms of infarction and appearance and disappearance of enzyme. Arch. Int. Med. 140:329, March, 1980.
31. Swain, J., Cobb, F.R., McHale, P.A. and **Roe, C.R.** Nonlinear Relationship between CK Estimates and Histologic Extent of Infarction in Conscious Dogs: Effects of Regional Myocardial Blood Flow. Circulation 62:1239-1247, 1980.
32. Murdock, C.B., Baker, P.J., DeLong, E., **Roe, C.R.** and Osofsky, S.G. Urine and Serum Lactic Dehydrogenase, LDH Isoenzyme and Alkaline Phosphatase in the Nephrotic Syndrome. Kidney International 19:710-715, 1981.
33. You, K. and **Roe, C.R.** Affinity Chromatography of Pseudomonas Salicylate Hydroxylase. Analytical Biochemistry 113:117-185, 1981.
34. Bramlet, D.A., Lester, R.M., Harrison, D.G., **Roe, C.R.** and Cobb, F.R. Myocardial Infarct Extension: Incidence and Relationship to Survival. Circulation 65:918-923, 1982.
35. **Roe, C.R.** and Bohan, T.P. L-Carnitine Therapy in Propionic Acidemia. The Lancet 1411-1412, 1982.
36. Bohan, T.P. and **Roe, C.R.** Letter to the Editor, New England Journal of Medicine 307:1212, 1982.
37. Kim, C.S., O'Tuama, L.A., Mann, J.D., and **Roe, C.R.** Saturable accumulation of the

anionic herbicide, 2,4-dichlorophenoxyacetic acid (2,3-D), by rabbit choroid plexus: early developmental origin and interaction with salicylates. J. Pharm. Exp. Ther. 225:669–704, 1983.

38. Kim, C.S., O'Tuama, L.A., Mann, J.D. and **Roe, C.R.** Effect of Increasing Carbon Chain Length on Organic Acid Transport by the Choroid Plexus: A Potential Factor in Reye's Syndrome. Brain Res. 259:340–343, 1983.

39. **Roe, C.R.**, Millington, D.S., Maltby, D.A. and Bohan, T.P. Status and Function of L-Carnitine in Reye's Syndrome (RS) and Related Metabolic Disorders. J. Natl. Reye's Syndrome Foundation, 4(1):58–59, 1983.

* 40. **Roe, C.R.**, Hoppel, C.L., Stacey, T.E., Chalmers, R.A., Tracey, B.M. and Millington, D.S. Metabolic Response to Carnitine in Methylmalonic Aciduria: An Effective Strategy for Elimination of Propionyl Groups. Archives of Disease in Childhood 58:916–920, 1983.

41. Chalmers, R.A., **Roe, C.R.**, Tracey, B.M., Stacey, B.M., Hoppel, C.L., and Millington, D.S. Secondary Carnitine Insufficiency in Disorders of Organic Acid Metabolism: Modulation of Acyl CoA/CoA Ratios by L-Carnitine In Vivo. Biochemical Society Transactions 11:724–725, 1983.

42. **Roe, C.R.**, Millington, D.S., Hoppel, C.L., Maltby, D.A., and Bohan, T.P. L-Carnitine Enhances Excretion of Propionyl CoA as Propionylcarnitine in Propionic Acidemia. J. Clin. Invest. 73:1785–1788, 1984.

43. Kim, C.S., Dorgan, D.R., and **Roe, C.R.** L-Carnitine: Therapeutic Strategy for Metabolic Encephalopathy. Brain Research 310:149–153, 1984.

44. Chalmers, R.A., Stacey, T.E., Tracey, B.M., DeSousa C., **Roe, C.R.**, Millington D.S. and Hoppel, C.L. L-Carnitine Insufficiency in Disorders of Organic Acid Metabolism: Response to L-Carnitine by Patients with Methylmalonic Aciduria and 3-Hydroxy-3-methyl-glutaric Aciduria. J. Inher. Metab. Dis. 7(Suppl. 2):109–110, 1984.

* 45. Chalmers, R.A., **Roe, C.R.**, Stacey, T.E. and Hoppel, C.L. Urinary Excretion of L-Carnitine and Acylcarnitines by Patients with Disorders of Organic Acid Metabolism: Evidence for Secondary Insufficiency of L-Carnitine. Pediat. Res. 18:1325–1328, 1984.

* 46. **Roe, C.R.**, Millington, D.S., Maltby, D.A., Bohan, T.P., Kahler, S.G. and Chalmers, R.A. Diagnostic and Therapeutic Implications of Medium Chain Acylcarnitines in the Medium Chain Acyl-CoA Dehydrogenase Deficiency. Pediat. Res. 19:459–466, 1985.

* 47. **Roe, C.R.**, Millington, D.S., Maltby, D.A., Kahler, S.G. and Bohan, T.P. L-Carnitine Therapy in Isovaleric Acidemia. J. Clin. Invest. 74:2290–2295, 1984.

* 48. Millington, D.S., **Roe, C.R.** and Maltby, D.A., "Application of High Resolution Fast Atom Bombardment and Constant B/E Ratio Linked Scanning to the Identification and Analysis of Acylcarnitines in Metabolic Disease", Biomed. Mass Spectrom. 11:236–241, 1984.

49. Worley, G., Lipman, B., Gewolb, I.H., Green, J.A., Schmechel, D.E., **Roe, C.R.**, and Gross, S.J. Creatine Kinase Brain Isoenzyme: Relationship of Cerebrospinal Fluid Concentration to the Neurologic Condition of Newborns and Cellular Localization in the Human Brain. Pediatrics 76:15–21, 1985.

*50. **Roe, C.R.**, Millington, D.S., Maltby, D.A. and Kinnebrew, P. Recognition of Medium–Chain Acyl–coA Dehydrogenase Deficiency in Asymptomatic Siblings of Children Dying from Sudden Infant Death or Reye–Like Syndromes. J. Pediatr. 108:1–13, 1986.

51. Millington, D.S., Maltby, D.A. and **Roe, C.R.** Diagnostic and Therapeutic Implications of Acylcarnitine Profiling in Organic Acidurias, Proceedings of the Japanese Society for Medical Spectrometry. 10:125–130, 1985.

52. Millington, D.S., Bohan, T.P., **Roe, C.R.**, Yergey, A.L. and Liberato, D.J. Valproylcarnitine: A Novel Drug Metabolite Identified by Fast Atom Bombardment and Thermospray Liquid Chromatography–Mass Spectrometry. Clin. Chim. Acta. 145:69–76, 1985.

53. **Roe, C.R.**, Millington, D.S. and Maltby, D.A. Sequential MS Analysis for Evaluation of New Treatment Strategy in Metabolic Disorders. Advances in Mass Spectrom. 10:1243–1244, 1985.

54. Millington, D.S., Maltby, D.A. and **Roe, C.R.** Improved Acylcarnitine Profiles in Human Metabolic Disease using FAB/MS. Adv. Mass Spectrom. 10:1539–1540, 1985.

55. Maltby, D.A., Millington, D.S. and **Roe, C.R.** Improved Acylcarnitine Profiling in Human Urine by FAB/MS, *ibid.*, p. 484–485.

56. **Roe, C.R.**, Millington, D.S. and Maltby, D.A. 3–Methylglutaryl–carnitine: A New Diagnostic Metabolite of 3–Hydroxy–3–Methylglutaryl–CoA Lyase Deficiency. J. Clin. Invest. 77:1391–1394, 1986.

57. Millington, D.S., Maltby, D.A. and **Roe, C.R.** Rapid Detection of Argininosuccinic Aciduria and Citrullinuria by Fast Atom Bombardment and Tandem Mass Spectrometry. Clin. Chim. Acta 155:173–178, 1986.

58. Gaskell, S.J., Guenat, C., Millington, D.S., Maltby, D.A. and **Roe, C.R.** Differentiation of Isomeric Acylcarnitines using Tandem Mass Spectrometry. Analytical Chemistry 58:2801–2805, 1986.

*59. Sidbury, J.B., Chen, Y.–T. and **Roe, C.R.** The Role of Raw Starches in the Therapy of Type I Glycogenosis. Arch. Intern. Med. 146:370–373, 1986.

60. **Roe, C.R.**, Millington, D.S. and Conmy, H.T. Reye's Syndrome: Need for Mass spectrometry. J. Natl. Reye's Syndrome Found. 6:94–101, 1986.

*61. Millington, D.S., **Roe, C.R.**, Maltby, D.A. and Inoue, F. Endogenous Catabolism is the

Major Source of Toxic Metabolites in Isovaleric Acidemia. J. Ped. 10:56–60, 1987.

62. **Roe, C.R.**, Millington, D.S. and Maltby, D.A. Characterization of New Diagnostic Acylcarnitines in Patients with Glutaric Aciduria Type I and Beta– Ketothiolase Deficiency Using Mass Spectrometry. Biomed. Mass Spectrom. 14:711–716, 1987.

63. Millington, D.S., Inoue, F. and **Roe, C.R.** New Applications of Stable Isotopes in the Organic Acidurias. Proceedings of the Japanese Society for Medical Mass Spectrometry 12:33–40, 1987.

*64. **Roe, C.R.**, Millington, D.S., Maltby, D.A., Wellman, R.B. Post–mortem Recognition of Inherited Metabolic Disorders from Specific Acylcarnitines in Tissue in Cases of Sudden Infant Death. Lancet 1:512, 1987.

*65. **Roe, C.R.** and Coates, P.M. Acyl–CoA Dehydrogenase Deficiencies. In: Scriver CR, Beaudet AL, Sly WS, Valle D. eds. Metabolic Basis of Inherited Disease 6th ed. New York: McGraw–Hill, 1989:899–914.

66. Lipkin, P.H., **Roe, C.R.**, Goodman, S.I. and Batshaw, M.L. A Case of Glutaric Acidemia Type I: Effect of Riboflavin and Carnitine. J. Ped. 112:62–65, 1988.

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Consultant appointments :

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Sigma-Tau Pharmaceuticals, Gaithersburg, MD.

TAP Holdings , Chicago, IL

Professional awards and Special Recognitions:

Awards: Frank L. Engel Award for Endocrinology, 1964.

Research Career Development Award, National Institute of Child Health and Human Development, #5K04-HD-47429, 1971-1976.

Fellowship in American College of Cardiology (FACC), 1976 for discovery and application of the CPK-MB isozyme as a marker of myocardial infarction and/or intraoperative myocardial injury. (See References # 5-11, 13, 15, 16, 18-21, 23, 25, 26, 30, 31, & 34 above)

Organizations and participation: (Offices held, committee assignments, etc.)

International Scientific Committee for 7th Int. Congress of Metabolism, Vienna 5/21-5/25, 1997

Societies:

American Association for Advancement of Science, Member
American College of Cardiology, Member
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Southern Society for Pediatric Research, Member
Society of Pediatric Research, Member
American Association of Clinical Chemistry, Member
American Society for Clinical Pathology, Member
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Editorial Reviewer of Scientific Manuscripts for 30 Journals :

American Journal of Clinical Pathology
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