

**CURRICULUM VITAE
GIANFRANCO ALPINI, Ph. D.**

PERSONAL:

NAME Gianfranco D Alpini, Ph.D.

EDUCATION:

1984 University of the Studies of Rome, "La Sapienza", Rome, Italy. Doctor of Philosophy in the field of chemistry and pharmaceutical technologies with a final evaluation of 102/110.

Thesis University of the Studies of Rome, "La Sapienza", Rome, Italy. Department of Pharmacology and Biochemistry. Preparation of the experimental thesis under the supervision of Professor Luciano Angelucci, M.D., Ph.D., Director of the same department. Thesis topic was "Pharmacological Effects of Mechanisms of Discrimination. Observations on Active Conditioned Rat Behavior".

1976 Terenzio Mamiani, School of Classical Studies, Rome, Italy. Diploma in classical studies. Studied all aspects of the classics in Latin, Greek and Ancient Italian.

EMPLOYMENT

09/01/2003-present

Professor with tenure, Internal Medicine and Medical Physiology, The Texas A & M University System Health Science Center, College of Medicine, Research Medical Building, 702 South West H.K. Dodgen Loop, TX, 76504
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9/01/2000-8/31/2003

Associate Professor with tenure, Internal Medicine and Medical Physiology, The Texas A & M University System Health Science Center, College of Medicine, Research Medical Building, 702 South West H.K. Dodgen Loop, TX, 76504
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7/1/94-8/31/2000

Assistant Professor, Internal Medicine and Medical Physiology, The Texas A & M University System Health Science Center, College of Medicine, Research Medical Building, 702 South West H.K. Dodgen Loop, TX, 76504
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6/28/91-6/29/94

Senior postdoctoral Fellow, GI Basic Research for Digestive Diseases. Mayo Clinic, 200 First Street S.W., Rochester, MN, 55905.
Phone: 1-507-284-1001
Advisor: Nicholas F LaRusso, M.D.

5/1/88-5/30/91

Research Associate, Department of Medicine, Liver Research Center. Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY, 10461.
Advisor: David A Shafritz, M.D.

6/10/85-4/10/88

Postdoctoral Fellow, Department of Medicine, Division of Hematology, Liver Unit. Mount Sinai Medical Center, 1 Gustave L. Levy Place, New York, NY 10029.
Advisor: Nicola Tavoloni, Ph.D.

7/12/79-4/20/83

Internship for the preparation of experimental thesis, Department of Pharmacology and Biochemistry. University of the Studies of Rome, "La Sapienza", Rome, Italy.
Advisor: Luciano Angelucci, M.D., Ph.D.

SOCIETIES:

American Gastroenterological Association
American Association for the Study of Liver Diseases
The American Physiological Society
International Member of Italian Liver Foundation
European Association for the Study of the Liver
American Association for the Advancement of Science
American Society of Cell Biology

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Grants

VA Merit Award

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PNAS
American Journal of Pathology
Laboratory Investigation
Digestive Diseases and Sciences
American Journal of Gastroenterology
Regulatory Peptides
Journal of Experimental Biology
Archives of Biochemistry and Biophysics
Alcohol

FUNDED GRANTS:

- **VA Merit Award:** 100,000 per year 10/01/97-09/30/00. 50% of effort time.
- VA Merit Award: direct cost \$ 600,000 for 4 years (**Competitive submission for renewal**). The proposal is entitled "**Mechanisms of Cholangiocyte Proliferative and Secretory Heterogeneity**".
- NIH RO1: \$ 703,222 for 5 years from 8-2000 to 8-2005. 30% of Doctor Alpini's salary is requested to accomplish the proposed studies. The title of the proposal is "**Growth regulation of the intrahepatic biliary tree**". 30% of effort time.
- NIH RO1: requested total direct cost \$ 752,500 for 5 years. The PI on this grant is Dr. Gene LeSage, Internal Medicine, Scott & White Hospital. Dr. Alpini is a Co-Investigator. 10% of Doctor Alpini's salary is requested to accomplish the proposed studies. The title of the proposal is "**Bile acid modulation of bile duct secretion and growth**". 10% effort time.

PENDING GRANTS:

- NIH RO1: \$ 750,000 for 5 years. 30% of Doctor Alpini's salary is requested to accomplish the proposed studies. The title of the proposal is "**Regulation of bile duct growth in bile duct ligated rats**". 30% of effort time.
- NIH RO1: requested total direct cost \$ 800,000 for 5 years. The PI on this grant is Dr. Gene LeSage, Internal Medicine, Scott & White Hospital. Dr. Alpini is a Co-Investigator. 15% of Doctor Alpini's salary is requested to accomplish the proposed studies. The title of the proposal is "**De novo morphogenesis in the reconstruction of damaged bile ducts**". 15% effort time.

PAST GRANTS:

- Co-Investigator in a Scott & White Grant Award, \$ 20,000. PI is Shannon Glaser. The title of the proposal is "Role of D2 Dopaminergic Receptor in the Growth of Cholangiocytes". 2% of effort time.
- Mentor for Dr. Noriatsu Kanno, M.D. in an AASLD/Schering Advanced Hepatology Fellowship Program entitled "The growth regulation of cholangiocarcinoma by adrenergic innervation". Requested budget is \$ 50,000 for 1 year.
- Co-Investigator in a Scott & White Grant Award, \$ 20,000. PI is Dr. Noriatsu Kanno. The title of the proposal is "Bile Acid Regulation of Cholangiocarcinoma Growth". 5% of effort time.

BIBLIOGRAPHY:

ORIGINAL ARTICLES:

1. S Glaser, A Benedetti, L Marucci, D Alvaro, L Baiocchi, N Kanno, A Caligiuri, J L Phinizy, U Chowdhury, E Papa, G LeSage, and **G Alpini**. Gastrin inhibits cholangiocyte growth in bile duct ligated rats by interaction with Cholecystinin-B/gastrin receptors via D-myo-inositol 1,4,5-triphosphate-, Ca²⁺-, and protein kinase C α -dependent mechanisms. *Hepatology* 32:17-25, 2000.
2. D Alvaro, **G Alpini**, P Onori, L Perego, L Svegliati Baroni, A Franchitto, L Baiocchi, S Glaser, G Le Sage, F Folli, and E Gaudio. Estrogens stimulate proliferation of the intrahepatic biliary epithelium in rats. *Gastroenterology* 119: 1681-1691, 2000.
3. D Alvaro, **G Alpini**, P Onori, A Franchitto, S Glaser, G LeSage, A Gigliozzi, A Vetuschi, S Morini, A Attili, and E Gaudio. Effect of ovariectomy on the proliferative capacity of intrahepatic rat cholangiocytes. *Gastroenterology*, in press. 2002.
4. N Kanno, LeSage, J L Phinizy, S Glaser, H Francis, and **G Alpini**. α_2 -Adrenergic Receptor Stimulation Inhibits Cholangiocarcinoma Growth Through Time Course-Dependent Modulation of Raf-1 and B-Raf Activities. *Hepatology*, in press. 2002.
5. N Kanno, S Glaser, U Chowdhury, J L Phinizy, L Baiocchi, H Francis, G LeSage, and **G Alpini**. Gastrin inhibition of cholangiocarcinoma growth is coupled with increased apoptosis by activation of Ca²⁺-dependent protein kinase C- α . *Journal of Hepatology* 34: 284-291, 2001.
6. **G Alpini**, Y Ueno, S Glaser, J L Phinizy, H Francis, G LeSage. Bile acid feeding increased proliferative activity and apical bile acid transporter expression in both small and large rat cholangiocytes. *Hepatology* 34(5): 868-876, 2001.
7. D Alvaro, A Gigliozzi, L Marucci, **G Alpini**, B Barbaro, R Monterubbianesi, L Minetola, M G Mancino, J F Medina, A F Attili, and A Benedetti. Corticosteroids modulate the secretory processes of the rat intrahepatic biliary epithelium. *Gastroenterology* 2002 (in press).
8. D Alvaro, P Onori, V Drudi Metalli, G Svegliati-Baroni, F Folli3, A Franchitto, **G Alpini**, A F Attili, and E Gaudio. Intracellular pathways mediating estrogen induced cholangiocyte proliferation in the rat. Submitted.
9. **G Alpini**, S Glaser, D Alvaro, Y Ueno, L Baiocchi, M Marzioni, B Barbaro, JL Phinizy, J Maulden, H Francis, G LeSage. Bile acid depletion and repletion regulate cholangiocyte proliferation and secretion in bile duct ligated rats through a phosphatidylinositol 3-kinase-dependent pathway. Submitted.
10. G LeSage, S Glaser, Y Ueno, D Alvaro, L Baiocchi, N Kanno, J L Phinizy, H Francis, and **G**

- Alpini.** Regression of cholangiocyte proliferation after cessation of ANIT feeding is associated with increased apoptosis. *Am J Physiol* 281:G182-G190, 2001.
11. G LeSage, L Marucci, D Alvaro, S Glaser, A Benedetti, M Marzioni, and **G Alpini**. Insulin inhibits secretin-induced ductal secretion in bile duct ligated rats through activation of protein kinase C alpha and inhibition of cAMP-dependent protein kinase A. Resubmitted.
 12. **G Alpini**, L Baiocchi, S Glaser, M Angelico, N Kanno, H Francis, JL Phinizy, G LeSage. Taurohyodeoxycholic acid and tauroursodeoxycholic acid have different mechanisms for bile acid-dependent hypercholeresis. Submitted.
 13. **G Alpini**, L Baiocchi, S Glaser, Y Ueno, M Marzioni, H Francis, J L Phinizy, M Angelico, G LeSage. Ursodeoxycholate and tauroursodeoxycholate inhibit cholangiocyte proliferation and secretion of bile duct ligated rats through activation of PKC alpha. *Hepatology* 2002 (in press).
 14. D Alvaro, A Benedetti, L Marucci, M Delle Monache, E Papa, E DiCosimo, L Perego, G Macarri, S Glaser, G LeSage, and **G Alpini**. The Function of alkaline phosphatase in the liver: regulation of intrahepatic biliary epithelium secretory activities in the rat. *Hepatology* 32:174-184, 2000.
 15. J M McGill, M S Yen, O W Cummings, **G Alpini**, G LeSage, K E Pollock, B Miller, S K Engle, and A P Kwiatkowski-Stansfield. Interleukin-5 inhibition of biliary cell chloride currents and bile flow. *Am J Physiol* 280: G738-G745, 2001.
 16. LeSage G, Glaser S and Alpini G. Regulatory mechanisms of ductal bile secretion. *Dig Liver Dis* 32(7): 563-566, 2000.
 17. G LeSage, D Alvaro, A Benedetti, S Glaser, L Marucci, W Eisel, A Caligiuri, L Baiocchi, R Rodgers, J L Phinizy, H Francis, and **G Alpini**. Cholinergic system modulates growth, apoptosis and secretion of cholangiocytes from bile duct ligated rats. *Gastroenterology* 117: 191-199, 1999.
 18. **G Alpini**, S Glaser, U Ueno, J Phinizy, R Rodgers, H Francis, L Baiocchi, L Holcomb, A Caligiuri, and G LeSage. Bile acid feeding induces cholangiocyte proliferation and secretion: evidence for bile acid-regulated ductal secretion. *Gastroenterology* 116:179-86, 1999.
 19. G LeSage, A Benedetti, S Glaser, L Marucci, Z Tretjak, A Caligiuri, R Rodgers, J L Phinizy, L Baiocchi, H Francis, J Lasater, L Ugili, and **G Alpini**. Acute carbon tetrachloride feeding selectively damages large, but not small, cholangiocytes from normal rat liver. *Hepatology* 29: 307-319, 1999.
 20. G LeSage, S Glaser, L Marucci, A Benedetti, R Rodgers, J L Phinizy, L Holcomb, A Caligiuri, E Papa, Z Tretjak, and **G Alpini**. Acute carbon tetrachloride feeding induces damage of large but not small cholangiocytes from bile duct ligated rat liver. *Am J Physiol* 276:G1289-G1301, 1999.
 21. C Grappone, M Pinzani, M Parola, G Pellegrini, A Caligiuri, R DeFranco, F Marra, H Herbst, **G Alpini**, and S Milani. Expression of platelet-derived growth factor in newly formed cholangiocytes during experimental biliary fibrosis in rat. *J. Hepatology* 31:100-109, 1999.
 22. M Ott, P Rajvanshi, R P Sokhi, **G Alpini**, E Aragona, M Dabeva, D Shafritz, and S Gupta. Differentiation-specific regulation of transgene expression in a diploid cell line derived from the normal F344 rat liver. *J Pathol* 187:365-373, 1999.
 23. **G Alpini**, S Glaser, Y Ueno, L Pham, P Podila, A Caligiuri, G LeSage, and N LaRusso. Heterogeneity of the proliferative capacity of rat cholangiocytes following bile duct ligation. *Am*

J Physiol 274:G767-G775, 1998.

24. A Caligiuri, S Glaser, R Rodgers, J L Phinizy, W Robertson, E Papa, M Pinzani, and **G Alpini**. Endothelin 1 inhibits secretin-stimulated ductal secretion by interacting with ET_A receptors on large cholangiocytes. Am J Physiol 275:G835-G846, 1998.
25. S Glaser, R Rodgers, J L Phinizy, W Robertson, J Lasater, A Caligiuri, Z Tretjak, G LeSage, and **G Alpini**. Gastrin inhibits secretin-induced ductal secretion by interaction with specific receptors on rat cholangiocytes. Am J Physiol 273:G1061-1070, 1997.
26. **G Alpini**, S Glaser, WE Robertson, J Phinizy, R Rodgers and G LeSage. Functional expression of the apical Na-dependent bile acid in large but not small cholangiocytes. Gastroenterology 113:1734-1740, 1997.
27. **G Alpini**, C Ulrich, S K Roberts, J O Phillips, Y Ueno, P Podila, O Colegio, G LeSage, L J Miller, and N F LaRusso. Molecular and functional heterogeneity of cholangiocytes from rat liver after bile duct ligation. Am J Physiol 272:G289-G297, 1997.
28. **G Alpini**, S Glaser, R Rodgers, W Robertson, J L Phinizy, O Colegio, S Roberts, L Pham, G LeSage, and N F LaRusso. Morphological and functional heterogeneity of the rat intrahepatic biliary tree. Vanishing Bile Duct Syndrome, Pathophysiology and Treatment, edited by D Alvaro, A Benedetti and M Strazzabosco. Pages: 32-51, 1997.
29. **G Alpini**, S Glaser, W Robertson, R Rodgers, J L Phinizy, J Lasater, and G LeSage. Large but not small intrahepatic bile duct units are involved in secretin-regulated ductal bile secretion in normal rat liver. Am J Physiol 272:G1064-G1074, 1997.
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33. G LeSage, S Glaser, S Gubba, W E Robertson, J L Phinizy, J Lasater, R Rodgers, and **G Alpini**. Regrowth of the rat biliary tree after 70% partial hepatectomy is coupled to increased secretin-induced ductal bile secretion. Gastroenterology 111:1633-1644, 1996.
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37. S Gupta, **G Alpini**, RP Vemuru, E Hurston, and DA Shafritz. Butyrate synchronization of hepatocytes: modulation of cycling and cell cycle regulated gene expression. *Growth Factors* 10:174-180, 1994.
38. **G Alpini**, CD Ulrich, JO Phillips, LD Pham, LJ Miller, and NF LaRusso. Upregulation of secretin receptor gene expression in rat cholangiocytes after bile duct ligation. *Am J Physiol* 266:G922-G928, 1994.
39. M Dabeva, **G Alpini**, E Hurston, and DA Shafritz. Models for hepatic progenitor cell activation. *Proc Soc Exp Biol Med* 204:242-253, 1993.
40. **G Alpini**, E Aragona, M Dabeva, R Salvi, DA Shafritz, and N Tavoloni. Distribution of albumin and alpha-fetoprotein mRNA's in normal, hyperplastic and preneoplastic rat liver. *Am J Pathol* 141:623-632, 1992.
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43. R Lenzi, MH Liu, F Tasseti, PA Slott, **G Alpini**, WR Zhai, F Paronetto, R Lenzen, and N Tavoloni. Histogenesis of bile duct-like cells proliferating during ethionine hepatocarcinogenesis. *Lab Invest* 66:390-402, 1992.
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45. R Lenzi, **G Alpini**, MH Liu, JH Rand, and N Tavoloni. Von Willebrand factor antigen is not an accurate marker of rat and guinea pig liver endothelial cells. *Liver* 10:372-379, 1990.
46. **G Alpini**, R Lenzi, W R Zhai, M H Liu, P A Slott, F Paronetto, and N Tavoloni. Isolation and purification of a non-parenchymal rat liver cell fraction enriched in cells with biliary epithelial phenotypes. *Gastroenterology* 97:1248-1260, 1989.
47. **G Alpini**, R Lenzi, WR Zhai, PA Slott, MH Liu, L Sarkozi, and N Tavoloni. Bile secretory function of intrahepatic biliary epithelium in the rat. *Am J Physiol* 257:G124-G133, 1989.
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52. S Glaser, **G Alpini**, and G LeSage. Functional and genetic expression of gastrin receptors in the bile duct. *Scott & White Laboratory Quarterly*, 107(4), 1996.

BOOK CHAPTERS, REVIEW ARTICLES:

1. G LeSage, S Glaser, and **G Alpini**. Regulation of Cholangiocyte Proliferation. *Liver* 21:73-80, 2001.
2. **G Alpini**, RT Prall, and LaRusso. 2001. The pathobiology of biliary epithelia. In: *The Liver; Biology & Pathobiology*, 4E. I. M. Arias, J. L. Boyer, F. V. Chisari, N. Fausto, W. Jakoby, D. Schachter, and D. A. Shafritz D editors. Philadelphia, PA: Lippincott Williams & Wilkins. 421-435, 2001.
3. **G Alpini**, J McGill, N F LaRusso. The pathobiology of biliary epithelia. *Hepatology* (2002). In press
4. G LeSage, S Glaser, and **G Alpini**. The pathobiology of cholangiocytes. In: *Molecular Pathogenesis of Cholestasis*. Michael Trauner & Peter Jansen, Eds. Landes Biosciences, Austin, Texas, USA. In press (2001).
5. G LeSage, S Glaser, H Francis, and **G Alpini**. Heterogeneity of the intrahepatic biliary epithelium. In: *Pathophysiology of the Bile Duct System*. Gianfranco Alpini, Domenico Alvaro, Gene LeSage and Nicholas LaRusso Eds. Landes Biosciences, Austin, Texas, USA. In press (2002).
6. G LeSage, B Barbaro, S Glaser, and **G Alpini**. Nerve regulation of cholangiocyte function. In: *Pathophysiology of the Bile Duct System*. Gianfranco Alpini, Domenico Alvaro, Gene LeSage and Nicholas LaRusso Eds. Landes Biosciences, Austin, Texas, USA. In press (2002).
7. **G Alpini**, S Glaser, H Francis, and G LeSage. Bile acid regulation of cholangiocyte function. In: *Pathophysiology of the Bile Duct System*. Gianfranco Alpini, Domenico Alvaro, Gene LeSage and Nicholas LaRusso Eds. Landes Biosciences, Austin, Texas, USA. In press (2002).
8. G LeSage, M Marzioni, S Glaser, and **G Alpini**. Functional heterogeneity of the intrahepatic biliary tree. In: *Seminars in Liver Diseases*. Greg Fitz. In press (2002).
9. **G Alpini**, S Glaser, G LeSage. 2001. Bile acids stimulate proliferative and secretory events in rat cholangiocytes. In: *Biology of bile acids in health and disease*. G. P. van Berge Henegouwen, D. Keppler, U. Leuschner, G. Paumgartner, A. Stiehl. XVI international bile acid meeting. Falk Symposium 120. Kluwer Academic Publishers, Dordrecht/Boston/London. 137-151.
10. M Marzioni, S Glaser, G Alpini, G LeSage. Role of apoptosis in the development of primary biliary cirrhosis. *Dig Liver Dis* 33:531-533, 2001.
11. S Glaser, G LeSage, and **G Alpini**. The Pathobiology of the Intrahepatic Biliary Epithelium. II Nostro Fegato. In press (2001).
12. D Alvaro, G Alpini, P Onori, A Franchitto, S Glaser, G LeSage, F Folli, A Attili, and E Gaudio. Alpha and beta estrogen receptors and the biliary tree. (*Mol Cell Endocrinol*, in press).
13. G LeSage, S Glaser, and **G Alpini**. Regulatory mechanisms of ductal bile secretion. *Dig Liver Dis* 32: 563-566, 2000.
14. N Kanno, G LeSage, S Glaser, and **G Alpini**. Functional heterogeneity of the rat intrahepatic biliary epithelium. (Review). *Hepatology* 31:555-561, 2000.
15. N Kanno, G LeSage, S Glaser, and **G Alpini**. Regulation of cholangiocyte bicarbonate secretion. *Am J Physiol* 281:G612-G625, 2001.

16. L Baiocchi, G LeSage, S Glaser, and **G Alpini**. Regulation of cholangiocyte bile secretion. (Review). *J Hepatology* 31: 179-191, 1999.
17. **G Alpini**, BS Vroman, JO Phillips, and NF LaRusso. Recent advances in the isolation of liver cells. *Hepatology* 20:494-514, 1994.
18. **G Alpini**, JO Phillips, and NF LaRusso. The biology of the biliary epithelia. In: *The Liver; Biology & Pathobiology*, 3E, 1994:623-653. Arias I, Boyer J, Fausto N, Jakoby W, Schachter D & DA Shafritz, Eds. Raven Press, New York, NY.

ABSTRACTS:

1. G LeSage, S Glaser, H Francis, M Ludvik, J L Phinizy, N Kanno, and **G Alpini**. Alpha-naphthylisothiocyanate-induced cholangiocyte apoptosis is dependent on increased reactive oxygen species (ROS). *Gastroenterology* 120: A1828, 2001.
2. M Marzioni, **G Alpini**, S Glaser, Y Ueno, L Marucci, A Benedetti, B Barbaro, H Francis, J Phinizy, J Maulden, J Venter, B Baumann, and G LeSage. Taurocholic acid (TC) feeding prevents vagotomy-induced cholangiocyte apoptosis through PI3-kinase blockage of caspase activity. Submitted for presentation at the American Gastroenterological Association meeting, San Francisco, May 2002.
3. G LeSage, S Glaser, H Francis, M Marzioni, B Barbaro, D Alvaro, J Phinizy, J Maulden, J Venter, B Baumann, and **G Alpini**. Administration of adrenergic agonists reverses 6-hydroxydopamine (6-OHDA) degeneration of adrenergic innervation. Submitted for presentation at the American Gastroenterological Association meeting, San Francisco, May 2002.
4. **G Alpini**, S Glaser, J L Phinizy, J Maulden, H Francis, and G LeSage. Activation of phosphatidylinositol-kinase (PI3K) but not extracellular signal-regulated kinase (ERK) is necessary for *de novo* bile duct morphogenesis. Submitted for presentation at the American Gastroenterological Association meeting, San Francisco, May 2002.
5. Y Ueno, **G Alpini**, Y Mano, K Yahagi, G LeSage, and T Shimosegawa. Differential gene expression between small and large cholangiocytes from normal mice by micro array analysis. Submitted for presentation at the American Gastroenterological Association meeting, San Francisco, May 2002.
6. B Barbaro, S Glaser, E Gaudio, D Alvaro, C Meininger, H Francis, G Stoica, M Marzioni, Y Ueno, J Phinizy, J Maulden, G LeSage, and **G Alpini**. Novel evidence for an autocrine role of VEGF in the regulation of cholangiocyte proliferation. Submitted for presentation at the American Gastroenterological Association meeting, San Francisco, May 2002.
7. G LeSage, S Glaser, D Alvaro, M Marzioni, Y Ueno, H Francis, and **G Alpini**. Alpha-1 (but not beta-1) adrenergic agonists potentiate secretin-stimulated ductal secretion in bile duct ligated (BDL) rats through cross-talk between Ca²⁺-dependent PKC and adenylyl cyclase pathways. *Hepatology* 34: A1219, 2001.
8. G LeSage, S Glaser, M Marzioni, L Marucci, A Benedetti, D Alvaro, and **G Alpini**. Insulin inhibits secretin-stimulated ductal secretion in bile duct ligated (BDL) rats through activation of Ca²⁺-dependent protein kinase C (PKC) which leads to downregulation of protein kinase A (PKA). *Hepatology* 34: A1228, 2001.
9. M Marzioni, **G Alpini**, S Glaser, Y Ueno, L Marucci, A Benedetti, H Francis, J Phinizy, and G

- LeSage. Maintenance of ABAT levels and bile acid (BA) transport activity, by taurocholic acid (TC) feeding, prevents the cholangiocyte apoptosis and loss of cholangiocyte proliferation and secretion due to vagotomy. *Hepatology* 34: A1223, 2001.
10. **G Alpini**, S Glaser, J Phinizy, H Francis, M Marzioni, G LeSage. Activation of phosphatidylinositol-3 kinase (PI3K) and extracellular signal-regulated kinase (ERK) are necessary for cholangiocyte migration during experimental bile duct wound repair. *Hepatology* 34: A721, 2001.
 11. D Alvaro, **G Alpini**, P Onori, S Glaser, G LeSage, A Franchitto, A Attili, E Gaudio. Ovariectomy impairs cholangiocyte proliferative and secretory capacity of cholangiocytes from bile duct ligated rats. New evidence for the role of estrogens in modulating the functional proliferative capacity of the intrahepatic biliary epithelium. *Hepatology* 34: A1218, 2001.
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hepatocarcinogenesis. *Hepatology* 8:1233, 1988.

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PRESENTATIONS / LECTURES:

- 1994 AASLD SINGLE TOPIC CONFERENCE: PATHOBIOLOGY OF THE BILIARY EPITHELIA. Arlie, VA, May 1994. Morphologic and functional heterogeneity of intrahepatic biliary epithelia.
- THE BARGEN SYMPOSIA. Scott & White Memorial Hospital, Temple, TX, February 1993. The intrahepatic biliary epithelium.
- THE BARGEN SYMPOSIA. Scott & White Memorial Hospital, Temple, TX, November 1995. Compensatory cholangiocyte proliferation in rats with 70% partial hepatectomy is associated with increased ductal secretion.
- Invited to give a lecture at the next International Falk-Workshop on Vanishing Bile Duct Syndrome-Pathophysiology and Treatment on "The Functional Heterogeneity of the Intrahepatic Biliary Ductal System" in Spoleto, Italy (May 30-June 1, 1996).

- Invited to moderate the AASLD Research Forum Molecular mechanisms of transport in hepatic epithelia at the American Association for the Studies of Liver Diseases. Chicago, November 7-11, 1997.
- Invited to give a lecture on the “Gastrin Regulation of Cholangiocyte Growth” at the Biliary Disorders Meeting, Sabaudia, September 10-11, 1999.
- Invited to give a lecture on the “Morphologic and Functional Heterogeneity of Rat Intrahepatic Biliary Epithelium” at the University of “La Sapienza”, Department of Anatomy, Rome, Italy, September 1999.
- Invited to moderate the AASLD Research Forum on Transport and Bile Secretion at the American Gastroenterological Association Digestive Disease Week in Washington, D.C., May 11, 1997.
- Invited to moderate meet the Professor Luncheon on the postgraduate course on "Pathobiology of the Intrahepatic Biliary Epithelium" on November 1996.
- Lecture entitled “Insulin Regulation of Ductal Secretion in Rats with Bile Duct Obstruction” to Post-doctoral fellows/Faculties of GI, Scott & White Hospital, April 2001.
- Invited to give a lecture at the “Cardiovascular Research Seminar” on the “Role of Gastrin on the Proliferation of Intrahepatic Bile Duct Epithelial Cells”, Dept. of Medical Physiology, The Texas A&M University System Health Science Center College of Medicine, College Station, TX.
- Invited to moderate an oral session on “Biliary Pathobiology” at the next American Association for the Studies of Liver Diseases, Dallas, TX, November 1999.
- Invited to give a lecture on “Gastrin Regulation of Cholangiocyte Growth” at Yale University School of Medicine, Liver Study Unit, March 7, 2000. (Host: Michael Nathanson, M.D., Ph.D.)
- Invited to give a lecture on “Test systems for biliary injury” on a NIH-sponsored conference on hepatotoxicity, October 17-18, 2000, Bethesda, MD.
- Invited to give a lecture on "Basic Science in Gastroenterology" at the next S.I.G.E., Perugia, November 18-22, 2000.
- Invited to give a lecture on the "Structural and functional heterogeneity of the intrahepatic biliary epithelium" at the University of the Studies of Rome "La Sapienza", Division of Gastroenterology, November 14, 2000.
- Invited to give a lecture on the "Pathophysiology of the intrahepatic biliary epithelium" at the University of Ancona, Division of Gastroenterology, November 18, 2000.
- Invited to give a lecture on the "Mechanisms of cholangiocyte proliferation" at the University of Firenze, Division of Gastroenterology, November 16, 2000.
- Co-director (together with Dr. LaRusso and Dr. McGill) of the American Association for the Studies of Liver Diseases (AASLD) single topic on "biliary epithelia", Arlie, Virginia, June 7-10, 2001.
- Invited to give a lecture on the “Functional heterogeneity of the intrahepatic biliary epithelium” at Albert Einstein Hospital School Medicine, Bronx, New York, Liver Center.

PRECEPTOR FOR POSTDOCTORAL FELLOWS AND STUDENTS:

Alessandra Caligiuri, Ph. D.	1996-1997	University of the Studies of Firenze, Division of Gastroenterology. Endothelin-1 regulation ductal bile secretion.
Emanuela Papa, Medical Student	July 96 to September 96	University of the Studies of Rome "La Sapienza". CCl ₄ -induced cholangiocyte injury.
Leonardo Baiocchi, M. D.	January 98 to June 98	University of the Studies of Rome "La Sapienza". Bile acid regulation of cholangiocyte growth.
Noriatsu Kanno, M. D.	October 98 to September 01	Third Department of Internal Medicine, Tohoku University School of Medicine, Aobaku, Sendai, Japan. Adrenergic regulation of cholangiocarcinoma growth.
Marco Marzioni, M. D.	February 01 to January 03	Role of the adrenergic system in the heterogeneous cholangiocyte proliferative response to liver injury/toxins.
Barbara Barbaro, Ph. D.	July 01 to July 02	Role of angiogenesis in the regulation of cholangiocyte proliferation.
Jeremy Caulden	June 00 to August 00	Summer student. He helped in a number of projects related to understand the role of gastrin in the regulation of cholangiocyte growth in rats with bile duct ligation.
Sobia Rashid	June 01 to August 01	Summer student. She is helping in a project aiming to evaluate the role of serotonin in the regulation of cholangiocyte secretion.
Lauren Jones	June 01 to August 01	Summer student. She is helping in a project aiming to evaluate the role of adrenergic agonists in the regulation of cholangiocyte secretion.

Teaching

- **February-March 2001.** Taught the “Gastrointestinal and Liver Physiology” section (10-hour lecture) part of the Medical Physiology Course, MPHY 901.
- **February-March 2000.** Taught the “Gastrointestinal and Liver Physiology” section

(**16-hour lecture**) part of the Medical Physiology Course, MPHY 901.

- **February-March 2000.** Directed the small group conferences (**18 hours**) held during the Medical Physiology Course, MPHY 901.
- **February-March 1999.** Taught the “Gastrointestinal and Liver Physiology” section (**16-hour lecture**) part of the Medical Physiology Course, MPHY 901.
- **April 1999.** Directed a 2-hour mini conference class on respiratory physiology.
- **February 1998.** Taught in the “Liver Physiology” section (**2-hour lecture**) part of the Medical Physiology Course, MPHY 901.
- **January-May 1998.** Directed the mini conference classes (**18 hours**) held during the Medical Physiology Course, MPHY 901.
- **April 1999.** Two hour lecture in Gastrointestinal Physiology to GI fellows, Division of Gastroenterology, Scott & White Hospital.
- **April 1998.** Two hour lecture in Gastrointestinal Physiology to GI fellows, Division of Gastroenterology, Scott & White Hospital.

Other indices of teaching performance

- GRC for the graduate student, Antoine Roister.
- Judge of the research projects for the 9th Anesthesiology Research Day, April 29, 2000.

COMMITTEES:

Intramural

- Member of the combined Scott & White and Texas A&M University Institutional Animal Care and Use Committee (Temple, TX) which reviews scientific protocols (involving animal use) for investigators residing at the Temple Campus and working for either Scott & White or Texas A&M University.
- Member of the Scott & White Institutional Animal Care and Use Committee (Temple, TX) which reviews scientific protocols (involving animal use) for investigators residing at the Temple Campus and working for either Scott & White or Texas A&M University.
- Member of the Veterans Administration Research and Development Committee (Temple, TX) who reviews human and animal protocols submitted through the VA system.

RESEARCH INTERESTS:

- Gastrin regulation of hyperplastic and neoplastic cholangiocyte growth
- Heterogeneity of the Intrahepatic Biliary Tree
- Cholinergic, adrenergic and dopaminergic regulation of cholangiocyte growth
- Role of angiogenesis in the regulation of cholangiocyte growth and secretion
- Bile acid regulation of cholangiocyte proliferation and secretion