CURRICULUM VITAE

Natalia Nieto

Professor (RT)
Department of Pathology
College of Medicine
University of Illinois at Chicago
Chicago, IL 60612, USA
nnieto@uic.edu
http://www.linkedin.com

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1. EDUCATION

9/1986-7/1991 **Pharm.D.**
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

9/1992-1/1993 **M.Sc. in Biochemistry and Molecular Biology**
Mentor: Dr. M. Dolores Suárez
Department of Biochemistry and Molecular Biology
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

9/1992-9/1994 **Residency – Pharmacist Specialist in Clinical Chemistry and Laboratory Medicine**
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

Internship - Clinical Biochemistry and Microbiology
University Clinic of Navarre
(Pamplona, Spain)
http://www.cun.es

2/1993-6/1996 **Ph.D. in Biochemistry and Molecular Biology**
Mentors: Drs. Ángel Gil and M. Dolores Suárez
Department of Biochemistry and Molecular Biology
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

7/1996-6/1997 **Postdoctoral Fellow**
Mentor: Dr. Marcos Rojkind
Marion Besin Liver Research Center
Albert Einstein College of Medicine
(New York, USA)
http://www.einstein.yu.edu/centers/liver-research

7/1997-6/2000 **Postdoctoral Fellow**
Mentor: Dr. Arthur I. Cederbaum
Department of Pharmacology and Systems Therapeutics
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/pharmacology-and-systems-therapeutics

2. LEADERSHIP TRAINING

2008 — Leadership Training for High Potentials
Stern School of Business
New York University
(New York, USA)
http://www.stern.nyu.edu

2008 — Building Relationships that Work
Wharton Executive Education
University of Pennsylvania
(Philadelphia, USA)
http://executiveeducation.wharton.upenn.edu

3. LICENSES

2009 — Drug Enforcement Administration, No. 0400901
(New York, USA)

2016 — Drug Enforcement Administration, No. 097.002106
(Illinois, USA)

4. ACADEMIC STEPS AND APPOINTMENTS

9/1991-1/1993 — **M.Sc. Student**
Department of Biochemistry and Molecular Biology
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

9/1991-9/1994 — **Residency - Pharmacist Specialist in Clinical Chemistry and Laboratory Medicine**
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

Internship - Clinical Biochemistry and Microbiology
University Clinic of Navarre
(Pamplona, Spain)
http://www.cun.es

2/1993-6/1996 — **Ph.D. Student**
Department of Biochemistry and Molecular Biology
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

7/1996-6/1997 — **Postdoctoral Fellow**
Marion Besin Liver Research Center

Albert Einstein College of Medicine
(New York, USA)
http://www.einstein.yu.edu/centers/liver-research

7/1997-6/2000 **Postdoctoral Fellow**
Department of Pharmacology and Systems Therapeutics
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/pharmacology-and-systems-therapeutics

7/2000-6/2002 **Instructor, Research Track**
Department of Pharmacology and Systems Therapeutics
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/pharmacology-and-systems-therapeutics

2004 **Faculty Accreditation**
Ministry of Science and Innovation
Government of Spain
http://www.idi.mineco.gob.es

7/2002-12/2005 **Assistant Professor, Research Track**
Department of Pharmacology and Systems Therapeutics
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/pharmacology-and-systems-therapeutics

1/2006-12/2008 **Assistant Professor, Tenure Track**
Department of Medicine, Division of Liver Diseases
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/medicine/divisions/liver-diseases

1/2006-Present **Graduate Faculty in Biomedical Sciences**
Graduate School
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/education/graduate

7/2008-2013 **Director, Cell Culture and Mammalian Models Core**
NIAAA P20 Alcohol Center
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/research/centers/alcoholic-liver-disease-research-center

1/2009-1/2015 **Associate Professor, Tenure Track**

Department of Medicine, Division of Liver Diseases
Icahn School of Medicine at Mount Sinai
(New York, USA)
http://icahn.mssm.edu/departments-and-institutes/medicine/divisions/liver-diseases

9/2015-Present **Faculty Member**
University of Illinois Cancer Center
Carcinogenesis and Chemoprevention Program
College of Medicine
University of Illinois at Chicago
(Chicago, USA)
http://www.chicago.medicine.uic.edu/cancercenter

5/2015-Present **Professor, Principal Investigator**
Jesse Brown VA Medical Center
(Chicago, USA)
http://www.chicago.va.gov/

1/2015-Present **Professor, Tenured**
Department of Pathology
Department of Medicine, Division of Gastroenterology and Hepatology
College of Medicine
University of Illinois at Chicago
(Chicago, USA)
http://pathology.uic.edu/index.asp

5. AWARDS, FELLOWSHIPS AND HONORS

1991 **Valedictorian Pharm. D., Class 1991**
School of Pharmacy
University of Granada
(Granada, Spain)
http://farmacia.ugr.es

1993-1996 **European Union Predoctoral Fellow**
http://europa.eu

1997-1998 **Plan Propio de Formación del Personal Investigador Fellow**
University of Granada
(Granada, Spain)
http://investigacion.ugr.es

1999 **American Association for the Study of Liver Diseases**
Award for Poster Presentation
http://www.aasld.org

2000 **International Society for Biomedical Research on Alcoholism**
Award for Oral Presentation
http://www.isbra.com

2000-2001	**Charles H. Revson Fellow in Biomedical Sciences** http://www.revsonfoundation.org
2001-2002	**ABMRF/The Foundation for Alcohol Research Fellow** http://www.abmrf.org
2002	**American Association for the Study of Liver Diseases** Award for Poster Presentation http://www.aasld.org
2002-2005	**Liver Scholar Fellow** American Liver Foundation http://www.liverfoundation.org
2005	**European Association for the Study of the Liver** Young Investigator Travel Award http://www.easl.eu
2005	**Ramon y Cajal Fellow** Government of Spain (Score: 1) http://www.idi.mineco.gob.es
2008	**American Association for the Study of Liver Diseases** Award for two Poster Presentations http://www.aasld.org
2008	**Invited Candidate** The U. S. Presidential Early Career Award for Scientists (PECASE) http://www.nsf.gov/awards/pecase.jsp
2009	**American Association for the Study of Liver Diseases** Award for Poster Presentation http://www.aasld.org
2009	**Research Excellence Incentive Plan** Department of Medicine Icahn School of Medicine at Mount Sinai http://www.mssm.edu
2010	**American Association for the Study of Liver Diseases** Award for Poster Presentation http://www.aasld.org
2010	**Research Excellence Incentive Plan** Department of Medicine Icahn School of Medicine at Mount Sinai http://www.mssm.edu
2011	**International Society for the Hepatic Sinusoid Research** Three Young Investigator Travel Awards http://www.ishsr.net

2011 **Research Excellence Incentive Plan**
Department of Medicine
Icahn School of Medicine at Mount Sinai
http://www.mssm.edu

2012 **European Association for the Study of the Liver**
Two Young Investigator Travel Awards
President's Choice Poster Award
http://www.easl.eu

2012 **Research Excellence Incentive Plan**
Department of Medicine
Icahn School of Medicine at Mount Sinai
http://www.mssm.edu

2012 **American Association for the Study of Liver Diseases**
Award for Poster Presentation
http://www.aasld.org

2013 **Research Excellence Incentive Plan**
Department of Medicine
Icahn School of Medicine at Mount Sinai
http://www.mssm.edu

2014 **50th Anniversary Fomento Award**
Fomento Alumni Medal
http://www.fomento.edu

2015 **International Society for the Hepatic Sinusoid Research**
Two Young Investigator Travel Awards
http://www.ishsr.net

2015 **Center for Wound Healing and Tissue Regeneration**
Postdoctoral Fellow Research Award
University of Illinois at Chicago
http://www.uic.edu

2015 **College of Medicine Forum**
Award for Poster Presentation
University of Illinois at Chicago
http://www.uic.edu

2016 **European Association for the Study of the Liver**
Young Investigator Travel Award
http://www.easl.eu

2016 **American Association for the Study of Liver Diseases**
Award for Poster Presentation
http://www.aasld.org

6. COMMITTEES, MEMBERSHIPS AND SERVICE

A. Committees and Advisory Councils

2009-2011	**American Association for the Study of Liver Diseases** Journals Publications Committee
2010-2012	**American Association for the Study of Liver Diseases** **American Liver Foundation** Joint Research Awards Review Committee
2011-2013	**American Liver Foundation** Grants Review Committee
2012-2014	**American Association for the Study of Liver Diseases** Basic Research Committee
2013-Present	**ABMRF/The Foundation for Alcohol Research** Medical Advisory Council
2015	**International Society for Hepatic Sinusoid Research** Program Committee
2014-2017	**American Association for the Study of Liver Diseases** Research Awards Committee
2015-2017	**American Association for the Study of Liver Diseases** Chair, Cell Biology of Liver Disease Special Interest Group
2016	**American Association for the Study of Liver Diseases** Nominated, Nominating Committee
2016-2018	**American Association for the Study of Liver Diseases** Steering Committee, Alcoholic Liver Disease Special Interest Group

B. Review Committees for Faculty Promotions

Loyola University (Chicago, IL)
Columbia University (New York, NY)
University of Omaha (Omaha, NE)
The Hebrew University of Jerusalem (Jerusalem, Israel)

C. Professional Societies

Memberships:

2001-Present	American Association for the Study of Liver Diseases
2000	American Society for Biochemistry and Molecular Biology
2008-2013	NIAAA P20 Alcohol Center
2010-Present	International Society of the Hepatic Sinusoid Research

2016 European Association for the Study of the Liver

Service to Professional Societies:

2007 **American Association for the Study of Liver Diseases**
Moderator: Parallel Session on Experimental Hepatotoxicity

2008-2013 **NIAAA P20 Alcohol Center**
Mammalian Models Core Director

2008 **American Association for the Study of Liver Diseases**
Mini-Symposium: Cell-Cell Crosstalk within the Liver

2009 **American Association for the Study of Liver Diseases**
Moderator: Parallel Session on Alcohol-Related Liver Disease

2009-2011 **American Association for the Study of Liver Diseases**
Abstract Reviewer
Category: Hepatotoxicity

2009-2011 **American Gastroenterological Association**
Abstract Reviewer
Category: Hepatotoxicity

2010 **American Association for the Study of Liver Diseases**
Moderator: Parallel Session on Mechanisms of Cell Death and Hepatotoxicity

2012-2014 **American Gastroenterological Association**
Abstract Reviewer
Category: Liver fibrogenesis and Non-Parenchymal Cell Biology

2012-Present **American Association for the Study of Liver Diseases**
Special Interest Group: Hepatotoxicity

2012-Present **American Association for the Study of Liver Diseases**
Special Interest Group: Liver Fibrosis

2012-Present **American Association for the Study of Liver Diseases**
Special Interest Group: Cell Biology in Hepatic Disease

2012-Present **American Association for the Study of Liver Diseases**
Special Interest Group: Steatosis and Steatohepatitis

2013 **American Association for the Study of Liver Diseases**
Basic Research Early Morning Workshops
Moderator: Mechanisms of Alcoholic Liver Disease

2014 **American Association for the Study of Liver Diseases**
Moderator: Parallel Session on Mechanisms of Cell Death and Hepatotoxicity

2015	**International Society for Hepatic Sinusoid Research** Program Committee
2014-2017	**American Association for the Study of Liver Diseases** Research Awards Committee
2015-2017	**American Association for the Study of Liver Diseases** Chair, Cell Biology of Liver Disease Special Interest Group
2016	**American Association for the Study of Liver Diseases** Nominated, Nominating Committee
2016-2018	**American Association for the Study of Liver Diseases** Steering Committee, Alcoholic Liver Disease Special Interest Group

D. Service to Public and Non-Profit Agencies

Journal Reviewer:

2003-Present	*Hepatology*
2005-Present	*J. Hepatol.*
2007-Present	*Am. J. Physiol. Gastrointestinal and Liver Physiology*
2008-Present	*Gastroenterology*
2009-Present	*Liver International*
2009-Present	*Am. J. Physiol. Physiology*
2008-Present	*Alcohol & Alcoholism*
2011-Present	*Gut*

Editorial Board:

2009-2013	*Am. J. Physiol. Gastrointestinal and Liver Physiology*
2014- Present	*Cell. Mol. Gastroenterol. Hepatol.*
2015-2018	*Am. J. Physiol. Gastrointestinal and Liver Physiology*

NIH Study Section Reviewer:

2008	Hepatobiliary Pathophysiology Study Section, *Ad hoc* Reviewer
2013	ZAA1 DD Special Emphasis Panel, *Ad hoc* Reviewer
2013	Hepatobiliary Pathophysiology Study Section, *Ad hoc* Reviewer
2014	ZAA1 DD Special Emphasis Panel, *Ad hoc* Reviewer
2016	ZAA1 DD Special Emphasis Panel, *Ad hoc* Reviewer
2016	PAR Panel: NIDDK Translational Research ZRG1 EMNR-R

Grant Reviewer:

2006-Present	US-Israel Binational Science Foundation
2008	Medical Research Council (UK)
2008	Department of Medicine, Icahn School of Medicine at Mount Sinai
2010-Present	American Liver Foundation

2013-2015 ABMRF/The Foundation for Alcohol Research

7. ADMINISTRATIVE LEADERSHIP APPOINTMENTS

A. Internal

Research

1. Nieto Laboratory:

- Size of the group: 4-7 Postdoctoral Fellows
- Goals: To study the pathophysiology of alcoholic liver disease and liver fibrosis
- Budget: Please, see section on Grant Support
- Accomplishments: Please, see sections Trainees' Current Status/Employment, Grant Support and List of Publications.
- Benefits to the Institution: Grant Support (Indirect Costs), presence and presentations at national and international conferences and inclusion of the name of the Institution in publications, posters and oral presentations.

2. NIH P20 Alcohol Mini-Center:

- Size of the group: 3 Professors, 1 Associate Professor and 1 Assistant Professor (Permanent Members) and an average of 5 Ph.D. Students and 10 Postdoctoral Fellows. In addition, every year 3 pilot projects were awarded to Faculty Members at our Institution.
- Goals: The overall objective of the NIH P20 Alcohol Mini-Center was to elucidate the pathogenesis of alcoholic liver injury and fibrosis due to oxidant stress by incorporating novel models of disease and promoting unique synergistic interactions among a diverse range of investigators with complementary interests and strengths.
- Budget: Totals Costs: $1,327,435 for 5 years
- Accomplishments: Please, see List of Publications.
- Benefits to the Institution: Grant support (Indirect Costs), presence and presentations at national and international conferences and inclusion of the name of the Institution in publications, posters and oral presentations.

3. Mammalian Models Core:

- Size of the group: 3 Professors, 1 Associate Professor and 1 Assistant Professor (Permanent Members) and an average of 5 Ph.D. Students and 10 Postdoctoral Fellows. In addition, every year 3 pilot projects are awarded to Faculty Members at our Institution.
- Goals: The Cell Culture and Mammalian Models Core offered both *in vitro* and *in vivo* models for the study of alcohol-induced liver injury. This essential resource provided the necessary expertise and availability of material from cell culture and rodent models to Center and non-Center investigators studying the effects of alcohol on the liver and other organs. Moreover, the Cell Culture and Mammalian Models Core provided technical resources and served as a focal point for unification and active collaboration among Center investigators.
- Budget: $125,000 for 5 years.

- Accomplishments: Please, see List of Publications. The Core provided the following support: 1) Developed an active consultation program to assist investigators with their experimental design and with the setup of the binge drinking and chronic Lieber-DeCarli models of early alcohol-induced liver injury. 2) Provided instruction on isolation of primary cells and more specialized cell culture techniques. 3) Established a sharing plan for primary isolated liver cells, cell lines and rats or genetically modified mice. 4) Provided standardized samples from binge drinking and long-term Lieber-DeCarli ethanol feeding models. 5) Assisted investigators in sample collection. 6) Made available new models that incorporate the Lieber-DeCarli diet with other components to advance research on ethanol-induced liver injury. Thus, this Core offered services, tools and expertise that enabled investigators to accelerate progress in understanding alcoholic liver disease, to provide a forum for technological advancement, standardization of techniques and rigorous quality control along with economy of scale.
- Benefits to the Institution: Grant support (Indirect Costs), presence and presentations at national and international conferences and inclusion of the name of the Institution in publications, posters and oral presentations.

4. U01 Consortium on Translational Research in Alcoholic Hepatitis:

- Size of the group: 6 Principal Investigators from five Institutions and their respective groups and/or laboratories.
- Goals: To test novel therapeutic approaches and reveal new biomarkers in alcoholic hepatitis. Biomarker analyses include serum microRNAs, unique breath and urine markers to establish new predictors of disease outcome and treatment strategies. To enhance the scientific potential and translational impact of this consortium, the lead PIs recruited participation of leading experts for the translational projects including Victor Ambros, who discovered microRNAs and Charis Eng, an internationally recognized expert in integrative genomic analysis for diseases. The Advisory Board brings together Bruce Beutler, 2011 Nobel Laureate for discoveries in innate immunity, Willis Maddrey, the lead clinical expert in alcoholic hepatitis in the USA, Anna Mae Diehl, a highly distinguished leader in the field of steatohepatitis and Christopher Day from the UK, a physician scientist in the UK-European steatohepatitis translational research field. Participating investigators and institutions are as follows: Arthur McCullough and Laura Nagy (Cleveland Clinic), Craig McClain (University of Louisville), Mack C. Mitchell, Jr. (U. T. Southwestern Medical School), Natalia Nieto (Icahn School of Medicine at Mount Sinai now at the University of Illinois at Chicago) and Gyongyi Szabo (University of Massachusetts Medical School).
- Budget: Total Costs $12,036,520 for 5 years.
- Accomplishments: We expect that this consortium, which started two years ago, will build on the collaboration of leading scientists in alcoholic liver disease with clinical, translational and basic research expertize from the University of Massachusetts, Cleveland Clinic, Icahn School of Medicine at Mount Sinai now University of Illinois at Chicago, University of Louisville and UT Southwestern Medical Schools with the goal to test novel therapies, discover unique disease stage- and therapeutic response-specific biomarkers using dynamic bench-to-bedside and bedside-to-bench approaches.
- Benefits to the Institution: Grant support (Indirect Costs), presence and presentations at national and international conferences and inclusion of the name of the Institution in publications, posters and oral presentations.

5. United Kingdom Regenerative Medicine Safety Platform:

- Size of the group: 1 Assistant Professor (Dr. Antoine) and 1 Visiting Professor (Dr. Nieto) and an average of 2 Ph.D. Students and 3 Postdoctoral Fellows.
- Goals: The overall objective is to dissect the role of HMGB1 in acetaminophen-induced liver injury by incorporating novel models of disease and promoting unique synergistic interactions among a diverse range of investigators with complementary interests and strengths.
- Budget: Totals Costs: £100K, 2.5 years starting January 2015.
- Benefits to the Institution: Grant support (Indirect Costs), presence and presentations at national and international conferences and inclusion of the name of the Institution in publications, posters and oral presentations.

6. Extracellular Matrix and Liver/GI Research Interest Group at the University of Illinois at Chicago:

- Size of the group: 30 faculty and 10 Postdoctoral Fellows.
- Goals: The goals of this group are: 1) Apply new technologies discovered by basic research to the medical care of patients with liver disease; 2) Form a cohesive group of investigators from different disciplines involved in liver research; 3) Foster excellence and scientific collaboration among its members; 4) Recruit new investigators to the field of hematology, providing a community platform for the exchange of ideas; 5) Enhance national and international recognition of the faculty in the Liver Program involved in both basic and clinical research in liver biology and pathology; 6) Increase funding for liver research at the University of Illinois at Chicago
- Budget: Not applicable.
- Benefits to the Institution: Grant support (Indirect Costs).

7. Existing Intra- and Extramural Collaborations with other Investigators:

- Dr. Yujin Hoshida (Division of Liver Diseases, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Andrea Branch (Division of Liver Diseases, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Christoph Buettner (Division of Endocrinology, Diabetes and Bone Disease, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Maria Isabel Fiel (Department of Pathology, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Arthur I. Cederbaum (Department of Pharmacology and Systems Therapeutics, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Mark Czaja (Marion Bessin Liver Research Center, Albert Einstein College of Medicine, Bronx, New York, USA)
- Dr. Esben Sørensen (Department of Molecular Biology and Genetics, Aarhus University, Aarhus, Denmark)
- Dr. Thomas Moran (Department of Microbiology, Icahn School of Medicine at Mount Sinai, New York, USA)
- Dr. Daniel J. Antoine (Medical Research Council Centre for Drug Safety Science, Molecular and Clinical Pharmacology, The University of Liverpool, Liverpool, United Kingdom)
- Dr. Marco Bianchi (Department of Molecular Biology, Universitta Vita-Salute San Raffaelle, Milan, Italy)

- Dr. Grace Guzman (Department of Pathology, University of Illinois at Chicago, Chicago, IL, USA)
- Dr. Costica Aloman (Department of Medicine, Rush University, Chicago, IL, USA)
- Dr. Ahlke Heydemann (Department of Physiology, University of Illinois at Chicago, Chicago, IL, USA)
- Dr. Carmen Garcia-Ruiz (Consejo Superior de Investigaciones Cientificas, Barcelona, Spain)
- Dr. Scott L. Friedman (Department of Medicine, Division of Liver Diseases, Icahn School of Medicine at Mount Sinai, New York, NY, USA)
- Dr. Vily Panoutsakopoulou (University Academy of Sciences, Athens, Greece).
- Dr. Rhonda Kinneman (Division of Endocrinology, Diabetes and Metabolism, Department of Medicine, University of Illinois at Chicago, Chicago, IL, USA).
- Michael Walsh (Department of Pathology, University of Illinois at Chicago, Chicago, IL, USA).
- Dieter Klatt (Department of Industrial and Mechanical Engineering, University of Illinois at Chicago, Chicago, IL, USA).

Teaching

1. **Started and continued the Divisional Work in Progress Weekly Seminar in 2006**
   Division of Liver Diseases
   Department of Medicine
   Icahn School of Medicine at Mount Sinai
   (New York, USA)

2. **Liver-GI training Grant**
   Faculty
   Icahn School of Medicine at Mount Sinai
   (New York, USA)

3. **Hepatocellular Carcinoma Program**
   Member
   The Tisch Canter Institute
   Icahn School of Medicine at Mount Sinai
   (New York, USA).

4. **Graduate Faculty in Biomedical Sciences**
   Graduate School
   Icahn School of Medicine at Mount Sinai
   (New York, USA)

5. **Graduate Faculty in Biomedical Sciences**
   Graduate School
   University of Illinois at Chicago
   (Chicago, USA)

B. External

2009-2011 **Journals Publications Committee**
American Association for the Study of Liver Diseases

The purpose of the committee was to define, manage and oversee the publication activities of the American Association for the Study of Liver Diseases and to provide quality publications based on member needs. Our tasks involved to actively monitor the activities of the offices of the editors and the publisher and to formulate strategies for editorial office functions, production, marketing, promotion and advertising and to explore opportunities to optimize editorial activities. In addition, we ensured the successful interaction of the editor's office and the central office editorial staff coordinated all meeting logistics through the association's staff and worked within the budget and policies set forth by the governing board.

2010-2012 **Joint Research Awards Review Committee**
American Association for the Study of Liver Diseases
American Liver Foundation
The American Association for the Study of Liver Diseases and the American Liver Foundation combined their research award review committees to form the Joint Research Awards Review Committee. The committee reviewed and selected, based on scientific merit, the applications which would greatly benefit the field of liver disease research.

2011-Present **Basic Research Committee**
American Association for the Study of Liver Diseases
The purpose of this committee is to foster and promote basic investigation in liver biology and pathobiology. The committee assists in the organization of the Research Workshops, Single Topic Conferences, review the call for abstracts, and review Focused Study Group and Special Interest Group proposals for the American Association for the Study of Liver Diseases.

2011-2013 **Grants Review Committee**
American Liver Foundation
The committee reviewed and selected, based on scientific merit, the applications which could advance the field of research on liver diseases addressing cutting-edge unresolved questions or unmet needs.

2013-Present **Medical Advisory Council**
ABMRF/The Foundation for Alcohol Research
We selected applications for grants to conduct research on the effects of alcohol consumption on health and behavior with particular emphasis on: 1) Studies on how particular patterns of consumption (quantity of alcohol consumed, types of alcoholic beverages consumed, frequency of consumption and context) are related to health and behavioral outcomes; and 2) Interdisciplinary, bio-informatics, and other approaches to elucidate genetic and environmental factors that influence the patterns of consumption of alcoholic beverages and related consequences.

2015 **Program Committee**
International Society for Hepatic Sinusoid Research
The primary aim of the meeting is to: Provide a forum for scientists from

various countries and disciplines to exchange advances as to the roles of liver sinusoidal cells in acute and chronic liver diseases. Introduce emerging areas of innovative cell-type specific research. Facilitate interactions between basic and physician scientists to promote collaborations and innovative translational research. Increase the involvement of young investigators in the study of sinusoidal cell biology through travel awards and interactions during the meeting.

2014-2017 **Research Awards Committee**
American Association for the Study of Liver Diseases
The committee reviews and scores submitted award/fellowship applications, discusses and selects award/fellowship recipients, reviews interim progress reports, is available for committee conference calls when necessary, is available for an in-person committee meeting during the Annual Meeting, coordinates all meeting logistics through AASLD Foundation staff and works within the budget and policies set forth by the governing board.

2015-2017 **Chair, Cell Biology of Liver Disease Special Interest Group**
American Association for the Study of Liver Diseases
I will conduct a business meeting each year during The Liver Meeting, nominate candidates for a 3 to 5 member “Steering Committee”, solicit proposals from members for the Special Interest Group program to take place during The Liver Meeting, consisting of 2 or 3-hour research and/or clinically-oriented programs. Proposals will be selected by the Special Interest Group Steering Committee and a draft program will be submitted to AASLD. I will promote the generation of written proposals from the Special Interest Group for Single Topic Conferences, develop the Special Interest Group website to enhance communication outside of meetings and serve additional responsibilities as requested by the Governing Board.

2016 **Nominated, Nomination Committee**
American Association for the Study of Liver Diseases
If elected as part of the nominating committee, I will: 1) Secure candidates for the ballot and present a slate of qualified, acceptable candidates to the AASLD Governing Board for approval and to the members of AASLD for a vote; 2) Anticipate vacancies on the board; 3) Communicate to all board members the quality of candidates for whom the committee is looking; 4) Regularly ask the full board to submit the names of good candidate prospects; 5) Screen applications for board membership and submit the names of finalists to the full board; 6) Recommend individuals to fill vacancies that occur during the year; 7) Recommend board members to replace outgoing nominating committee members; 8) Conduct new member orientation and training; 9) In doing this, I will consider the specific discussions related to potential nominees to be confidential. I will conduct business via meetings, conference calls, email, mail or fax as deemed necessary by the committee chair.

2016-2018 **Steering Committee, Alcoholic Liver Disease Special Interest Group**
American Association for the Study of Liver Diseases. Our major

goals are to increase awareness among the public, health authorities and health care professionals regarding ALD in order to promote policies to reduce its burden. To promote epidemiological, clinical and translational research in the field of ALD. To provide updated information on the advances in the management of ALD based on AASLD Guidelines.

8. MAJOR RESEARCH INTERESTS

1. Pathogenesis of hepatic fibrosis
2. Pathogenesis of non-alcoholic steatohepatitis
3. Extracellular matrix and regulation of fibrillar collagen deposition and degradation
4. Pathogenesis of alcoholic liver disease
5. Oxidant stress and liver injury
6. Pathogenesis of hepatocellular carcinoma
7. Colon metastasis in the liver
8. Osteopontin and liver disease
9. High-Mobility Group Box-1 and liver injury
10. Mechanisms driving inflammation in the liver
11. Targeting post-translational modifications of osteopontin and high-mobility group box-1
12. Systems biology approaches to better understand liver disease

9. UNIVERSITY SERVICE AND TEACHING

1990 **Teacher Assistant, Pharmacodynamics**
Department of Pharmacology
School of Pharmacy
University of Granada
(Granada, Spain)

1991 **Teacher Assistant, Analytical Chemistry**
School of Pharmacy
Department of Analytical Chemistry
University of Granada
(Granada, Spain)

1991 **Teacher Assistant, Toxicology**
Department of Toxicology
School of Pharmacy
University of Granada
(Granada, Spain)

1994-1996 **Mentor, Biochemistry and Molecular Biology Research Students**
Department of Biochemistry and Molecular Biology
School of Pharmacy
University of Granada
(Granada, Spain)

2000-2005 **Mentor, Summer Ph.D. Students**
Department of Pharmacology
Icahn School of Medicine at Mount Sinai
(New York, USA)

2006-2015 **Faculty, Graduate School of Biological Sciences**
Icahn School of Medicine at Mount Sinai
(New York, USA)

2006-2015 **Mentor, Journal Club**
Division of Liver Diseases
Department of Medicine
Icahn School of Medicine at Mount Sinai
(New York, USA)

2007-2015 **Mentor, Rotating Ph.D. Students**
Division of Liver Diseases
Department of Medicine
Icahn School of Medicine at Mount Sinai
(New York, USA)

2006-2015 **Coordinator of Works in Progress Weekly Seminar**
Division of Liver Diseases
Department of Medicine
Icahn School of Medicine at Mount Sinai
(New York, USA)

2008-2015 **Service in M.Sc. and Ph.D. Thesis Committees**
Icahn School of Medicine at Mount Sinai
(New York, USA)

2008-2014 **Coordinator and Mentor, Journal Club**
NIH P20 Alcohol Mini-Center
Division of Liver Diseases
Department of Medicine
Icahn School of Medicine at Mount Sinai
(New York, USA)

2008-2015 **Mentor, Works in Progress Weekly Seminar**
Division of Liver Diseases
Department of Medicine
Icahn School of Medicine at Mount Sinai
(New York, USA)

2010-2015 **Faculty, Hepatocellular Carcinoma Program**
The Tisch Canter Institute
Icahn School of Medicine at Mount Sinai
(New York, USA)

2015-Present **Extracellular Matrix and Liver-GI Research Interest Group**
Department of Pathology
University of Illinois at Chicago
(Chicago, USA)

2015-Present **Mentor, Rotating Ph.D. Students**

Department of Pathology
University of Illinois at Chicago
(Chicago, USA)

1. Under Dr. Nieto's mentorship, most of the Fellows obtained either pre- or postdoctoral fellowships from their local governments or from private foundations or societies to work in her laboratory either for a short or a long-term period. Moreover, Dr. Lu succeeded in obtaining a pilot project from the NIH Alcohol Mini-Center in addition to funding from the Foundation for Alcohol Research. Recently, he has been awarded an R21 from NIAAA that has allowed him to transition to an independent position.

2. All Fellows were trained in the following areas:

1. Fellowship application
2. NIH Grant writing
3. Abstract writing and submission
4. Oral and poster presentation skills
5. Manuscript review
6. Experimental design/Research approach
7. Data mining and interpretation
8. Manuscript writing and editing
9. Formulating questions and seeking answers
10. Software applications
11. Answering reviews from manuscripts
12. Addressing the critique from NIH or private foundations grants
13. Setting personal goals and meeting expectations
14. Interview skills
15. Job interview training
16. Troubleshooting in experimental work
17. Team work
18. Lab management
19. Inventory maintenance
20. Lab organization
21. How to write a clear lab notebook
22. Collaborative work
23. Performance self-assessment
24. Budgets and finances
25. Networking with peers
26. Protocols sharing

3. Our educational activities included:

1. Weekly attendance to the Liver Division Basic Research seminar
2. Weekly participation in the Liver Division Work in Progress seminar
3. Semiannual presentation at the Liver Division Work in Progress seminar
4. Weekly lab meeting
5. Weekly journal club
6. Monthly NIH P20 Alcohol Mini-Center journal club
7. Weekly individual meeting with the PI
8. Weekly meeting by research projects in the lab
9. Team effort on manuscript writing

10. Training on how to supervise junior Fellows and/or PhD or Undergraduate Students

10. PAST AND CURRENT TRAINEES

Technicians:

1. Daniel Lantvit (University of Illinois at Chicago) (2015-Present)

Undergraduate Students

1. Suzanna Paganos (NYU University, New York, USA)
Premed Research Opportunity Program (Icahn School of Medicine at Mount Sinai)
Current status: Medical Student, St. George University School of Medicine (St. George, West Indies)

Graduate Students

1. Marta Varela (2000)
Awardee: Fondo de Investigaciones Sanitarias Grant (Spain).
Current status: Staff Scientist, Metabolomics Unit, Center for Cooperative Research in Biosciences, CIC-Biogune (Bilbao, Spain).

2. Pilar Perez de Obanos (2007)
Awardee: Fondo de Investigaciones Sanitarias Grant (Spain).
Current status: CINFA Laboratories (Pamplona, Spain).

3. Elena Arriazu (2010)
Awardee: Bancaja-Universidad de Navarra Shot-term Fellowship (Spain).
Current status: Postdoctoral Fellow, Center for Translational Research, University of Navarre (Pamplona, Spain).

4. Marina Ruiz de Galarreta (2013)
Awardee: University of Navarre Fellowship (Spain).
Current status: Postdoctoral Fellow, University of Navarre (Pamplona, Spain).

5. Fernando Magdaleno (2014)
Awardee: Consejo Nacional de Ciencia y Tecnología, CONACyT (Mexico)
Current status: Postdoctoral Fellow, Department of Pathology, College of Medicine, University of Illinois at Chicago (Chicago, IL, USA).

6. Tara McCray (2015)
University of Illinois at Chicago (Chicago, IL, USA).

7. Chuck Blajszczak (2016-Present)
University of Illinois at Chicago (Chicago, IL, USA).

Visiting Scientists

1. Cristina Islas (November 2008)
Awardee: Government of Guadalajara (Mexico).

Current Status: Faculty, Division of Hepatology, University of Guadalajara (Guadalajara, Mexico)

2. Matilde Alique (2009)
Awardee: Ibercaja (Spain).
Current status: Staff Scientist, Fundacion Jimenez-Diaz (Madrid, Spain).

3. Naoto Kitamura (2011-2013)
Awardee: Keio University School of Medicine Fellowship (Japan)
Current status: Assistant Professor, Department of Radiology, Keio University School of Medicine (Tokyo, Japan).

4. Pengfei Gao (2014)
Awardee: Yunnan Provincial Science and Technology Department Fellowship
Current Status: Associate Professor, Dali University (Dali, Republic of China)

Postdoctoral Fellows

1. Michal Carmiel-Haggai (2001-2002)
Awardee: American Association for the Study of Liver Diseases/Schering Advanced Hepatology Fellowship (USA).
Current status: Medical Director Liver Transplantation. Division of Gastroenterology and Liver Disease. Tel-Aviv Sourasky Medical Center (Tel-Aviv, Israel).

2. Pengfei Gong (2001-2003)
Current status: Senior Microsoft Business Intelligence Software Developer, United Nations Federal Credit Union (New York, USA).

3. Maria Vera (2006).
Current status: Research Associate, Albert Einstein College of Medicine (New York, USA).

4. Laura Conde (2007-2008)
Awardee: Ibercaja Foundation Postdoctoral Fellowship (Spain).
Current status: Juan de la Cierva Fellow. Consejo Superior de Investigaciones Científicas (Barcelona, Spain).

5. Francisco Javier Cubero (2006-2009)
Awardee: Ministry of Education and Sciences (Spain) and Center for Systems Biology New York (USA).
Current status: Junior Faculty. University Hospital Aachen, RWTH University (Aachen, Germany).

6. Raquel Urtasun (2007-2009)
Awardee: Postdoctoral Fellowship from the Government of Navarre (Spain).
Current status: Junior Faculty. University of Navarre (Pamplona, Spain).

7. Fariba Kalantari (2008)
Awardee: Canadian Institute of Health Research Postdoctoral Fellowship (Canada).
Current Status: Postdoctoral Fellow. Systems Medicine and Cell Biology, McGill University (Montreal, Canada).

8. Erik Leung (2009-2012)
Current Status: Junior Faculty, SUNY Downstate Medical Center (New York, USA).

9. Elisabetta Mormone (2009-2011)
Current Status: Masters Student. Agenzia Italiana del Farmaco.

10. Xiaodong Wang (2009-2010)
Current Status: President, Chongqing Biomean Technology Ltd.Co. (Chongqing, China).

11. Aritz Lopategi (2009-2012)
Awardee: Government of the Basque Country (Spain).
Current Status: Junior Faculty, IDIBAPS, University of Barcelona (Barcelona, Spain).

12. Xiaodong Ge (2010-2014)
Current Status: Research Assistant Professor, Department of Pathology, College of Medicine, University of Illinois at Chicago (Chicago, USA).

13. Elena Arriazu (2011-2014
Awardee: Asociación Española para el Estudio del Hígado Postdoctoral Fellowship.
Current Status: Postdoctoral Fellow, Center for Translational Research, University of Navarre (Pamplona, Spain).

14. Ioana Abraham (2013-2014)
Current Status: Postdoctoral Fellow, Department of Developmental and Regenerative Biology, Icahn School of Medicine at Mount Sinai (New York, USA).

15. Yu Chen (2015)
Current Status: Postdoctoral Fellow (Belgium).

16. Fernando Magdaleno (2015-Present)
Current Status: Postdoctoral Fellow, Department of Pathology, College of Medicine, University of Illinois at Chicago (Chicago, USA).

Research Assistant Professors

1. Joseph George (2009-2010).
Current Status: Assistant Professor Kanazawa Medical University (Kanazawa, Japan).

2. Yongke Lu (2008-2014)
Awardee: NIH P20 Grant Pilot Project (2010).
The Foundation for Alcohol Research Award (2012-2013).
NIAAA R21 (2013-2015)
NIAAA R01 (awarded 2016)
Current Status: Research Assistant Professor, Structural and Chemical Biology, Icahn School of Medicine at Mount Sinai (New York, USA).

3. Xiaodong Ge (2015-Present)
University of Illinois at Chicago, Chicago, IL, USA

Residents:

1. Christine Salibay (2016)
   Anatomic and Clinical Pathology Resident, Department of Pathology, University of Illinois at Chicago, Chicago, IL, USA

11. SELECTED INVITED LECTURES/PRESENTATIONS

1. CYP2E1-mediated oxidative stress induces *COL1A2* mRNA in hepatic stellate cells and in a co-culture system of HepG2 and stellate cells. 10th International Society of Biomedical Research in Alcoholism (ISBRA) Meeting (2000, Yokohama, Japan).

2. Role of CYP2E1-dependent reactive oxygen species in extracellular matrix production by hepatic stellate cells. Society of Toxicology (SOT) Meeting (2003, Salt Lake City, Utah, USA).

3. Crosstalk between liver cells and fibrogenic response. Invited speaker, University of Southern California (2004, Los Angeles, California, USA).

4. Crosstalk between liver cells and fibrogenic response. National Institutes of Alcohol Abuse and Alcoholism (2005, Bethesda, Maryland, USA).

5. Crosstalk between liver cells and fibrogenic response. Research Society on Alcoholism Meeting (2005, Santa Barbara, California, USA).

6. Crosstalk between liver cells and fibrogenic response. Invited speaker, Department of Medicine Seminar Series, Icahn School of Medicine at Mount Sinai (2006, New York, New York, USA).

7. Communication between Kupffer cells and stellate cells and fibrogenic response. Role of H_2O_2 and IL-6. Invited speaker, Liver Division Seminar Series, Icahn School of Medicine at Mount Sinai (2006, New York, New York, USA).

8. Crosstalk between Kupffer cells and stellate cells and fibrogenic response. Contribution of polyunsaturated fatty acids. Louisiana State University at Shreveport (2007, Shreveport, Louisiana, USA).

9. Kupffer cells mediate the fibrogenic response in stellate cells. Focused Study Groups. American Association for the Studies of the Liver Meeting (2008, San Francisco, California, USA).

10. Reactive nitrogen species switch on early extracellular matrix remodeling via induction of MMP1 and TNFα. Meet the Authors Seminar Series. Icahn School of Medicine at Mount Sinai (2009, New York, New York, USA).

11. Reactive nitrogen species turn on early extracellular matrix remodeling via induction of MMP1 and TNFα. Department of Medicine Seminar Series at the Icahn School of Medicine at Mount Sinai (2010, New York, New York, USA).

12. Reactive nitrogen species turn on early extracellular matrix remodeling via induction of MMP1 and TNFα. Albert Einstein College of Medicine (2010, New York, New York, USA).

13. Reactive nitrogen species turn on early extracellular matrix remodeling via induction of MMP1 and TNFα. University of Massachusetts (2010, Worcester, Massachusetts, USA).

14. Crosstalk Between Kupffer Cells and Stellate Cells and Fibrogenic Response. Mexican Association of Liver Disease (2010, Puerto Vallarta, Mexico).

15. Osteopontin drives the fibrogenic response to liver injury. Osteopontin FASEB Meeting (2010, Denver, USA).

16. Osteopontin drives the fibrogenic response to liver injury. Center for Translational Research, University of Navarre (2010, Pamplona, Spain).

17. Osteopontin and alcohol-induced liver injury. Invited speaker symposium of the Department of Sciences of health at the University Autonoma Metropolitana-Iztapalapa (2012, Iztapalapa, Mexico).

18. The osteopontin – HMGB1 axis and liver fibrosis. Osteopontin FASEB Meeting (2012, Vermont, USA).

19. Osteopontin and liver fibrosis. Albert Einstein College of Medicine (2013, New York, New York, USA).

20. The osteopontin and HMGB1 axis and liver fibrosis. University of California, Davis (2013, Davis, California, USA).

21. Osteopontin and liver fibrosis. University of Arkansas for Medical Sciences (2013, Little Rock, Arkansas, USA).

22. The osteopontin and HMGB1 axis and liver fibrosis. Tulane University (2013, New Orleans, Louisiana, USA).

23. Osteopontin and hepatic stellate cell activation. Annual Symposium of the Conte Digestive Diseases Basic and Translational Research Core Center. Johns Hopkins University School of Medicine (2013, Baltimore, USA).

24. Osteopontin and liver fibrosis. Medical University of South Carolina (2013, Charleston, South Carolina, USA).

25. A systems biology approach for understanding the fibrogenic response to liver injury. Collagen Gordon Research Conference (2013, New Hampshire, USA).

26. Mechanisms of osteopontin-induced liver fibrosis. Invited speaker, Liver Division Seminar, Icahn School of Medicine at Mount Sinai (2013, New York, New York, USA).

27. Osteopontin-induced liver fibrosis. University of Massachusetts (2013, Worcester, Massachusetts, USA).

28. Osteopontin, ductular reaction and liver fibrosis. University of Chicago (2013, Chicago, Illinois, USA).

29. Osteopontin and the fibrogenic response to liver injury. Lerner Institute of Research (2014, Cleveland, Ohio, USA).

30. HMGB1 and alcoholic liver disease. Lerner Institute of Research (2014, Cleveland, Ohio, USA).

31. Osteopontin and fibrogenesis. Northeastern University (2014, Boston, Massachusetts, USA).

32. Osteopontin, Collagen synthesis and ductular reaction. University of Illinois at Chicago (2014, Chicago, Illinois, USA).

33. Nutritional approach with milk OPN to treat alcoholic liver disease. Lerner Research Institute of the Cleveland Clinic Foundation (2014, Cleveland, Ohio, USA).

34. HMGB1 and Alcoholic Liver Disease. 2014 HMGB1 Workshop. (2014, Stockholm, Sweden).

35. HMGB1 participates in the pathogenesis of alcoholic liver disease. American Association for the Studies of the Liver Meeting (2014, Boston, Massachusetts, USA).

36. Post-translational modifications of HMGB1 and alcoholic liver disease. Liver Division Work in Progress Seminar, Icahn School of Medicine at Mount Sinai (2014, New York, New York, USA).

37. HMGB1 and alcoholic liver disease. Department of Pathology Work in Progress Seminar. College of Medicine, University of Illinois at Chicago (2015, Chicago, IL, USA).

38. Osteopontin and alcoholic liver disease. Department of Endocrinology Work in Progress Seminar. College of Medicine, University of Illinois at Chicago (2015, Chicago, IL, USA).

39. Osteopontin and the progression of chronic liver disease. Cancer Center Seminar Series. College of Medicine, University of Illinois at Chicago (2015, Chicago, IL, USA).

40. Osteopontin and alcoholic liver disease. Department of Medicine. University of Nebraska Medical Center (2015, Omaha, NE, USA).

41. Osteopontin in the gut-liver axis and alcoholic liver disease. Department of Physiology. University of Illinois at Chicago (2015, Chicago, IL, USA).

42. Osteopontin and fibrogenesis. Loyola University (2016, Chicago, IL, USA)

43. Osteopontin induces ductular reaction. American Association for the Studies of the Liver Meeting (2016, Boston, Massachusetts, USA).

12. RESEARCH SUPPORT

A. Current

1. 1 U01 AA 021887-03 (PI: Nieto, N) 25/2012 - 6/30/2018
NIAAA
Milk osteopontin, a nutritional therapeutic intervention for alcoholic hepatitis

Overall goal: to investigate whether dietary administration of milk osteopontin could be a nutritional therapeutic strategy for slowing down or preventing alcoholic liver disease. Aims: Aim 1 is to analyze if milk osteopontin blocks the ethanol-mediated increase in gut permeability. Aim 2 is to determine whether milk osteopontin blunts steatosis by targeting fatty acid metabolism and to dissect if the binding of milk osteopontin to lipopolysaccharide lowers Kupffer cell activation. Aim 3 is to identify if milk osteopontin reduces steatosis and liver injury by activating the autophagy pathway.

2. **1 R01 AA022601-01A1 (PI: Czaja, M) (Co-PI: Nieto, N)** 8/10/2014 - 8/9/2019
NIAAA
Regulation of the innate immune response in alcoholic liver disease by autophagy
Overall goal: to delineate the molecular mechanisms by which autophagy regulates the macrophage innate immune response in ALD and the development of hepatic inflammation and injury. Aims: Aim 1 is to establish that alcohol decreases macrophage autophagy by inhibiting AMPK signaling. Aim 2 is to determine that inhibition of macrophage autophagy by alcohol promotes M1 and blocks M2 macrophage polarization. Aim 3 is to establish that impaired macrophage autophagy triggers a proinflammatory immune response that leads to the development of ALD.

3. **(PI: Antoine, D) (Co-PI: Nieto, N)** 1/1/2015 - 6/30/2018
Medical Research Council Centre for Drug Safety Science
Molecular and Clinical Pharmacology
The University of Liverpool
Role of high-mobility group box-1 in acetaminophen-induced acute liver injury
Overall goal: to disccet the mechanism whereby high-mobility group box-1 and its post-translational modifications mediate acetaminophen induced liver injury. We will use *in vitro* and *in vivo* approaches to ablate high-mobility group box-1 in specific cell subsets in the liver to asses their specific role in this setting.

4. **Chicago Biomedical Consortium (PI: Nieto, N)** 7/1/2016 - 12/31/2017
Pathogenic role of hepatocyte-derived high-mobility group box-1 isoforms as potential therapeutic targets to prevent and resolve liver fibrosis.
Overall goal: funds will be used for access to the Surface Plasmon Resonance and the Mass spectrometry, Metabolomics & Proteomics facilities at UIC.

6. **University of Illinois at Chicago (PI: Nieto)** 1/1/2017 - 12/31/2019
Under-represented Faculty Research Grant

B. Pending

1. **1R01DK111677-01A1 (PI: Nieto, N)** 07/01/2017 - 06/30/2022
NIDDK
Pathogenic role of hepatocyte-derived high-mobility group box-1 isoforms as potential therapeutic targets to prevent and/or resolve liver fibrosis
Overall goal: to dissect the role of hepatocyte-derived high-mobility group box-1 isoforms as potential therapeutic targets to prevent and resolve liver fibrosis.

2. **1U01AA025907-01 (PI: Nieto, N)** 07/01/2017 - 06/30/2022
NIAAA
High-mobility group box-1 and alcoholic liver disease

Overall goal: To dissect the functional role of high-mobility group box-1 in alcoholic liver disease. Aims: Aim 1 is to elucidate the mechanism for the alcohol-mediated upregulation of high-mobility group box-1 expression and mobilization in hepatocytes and to identify how it promotes hepatocellular injury. Aim 2 is to identify how alcohol-induced hepatocyte high-mobility group box-1 creates a pro-inflammatory environment in a paracrine manner.

C. Upcoming submissions

1. **AASLD Pinnacle Award (PI: Ge, X)** 7/1/2017 - 6/30/2020
2. **ALF Liver Scholar Award (PI: Ge, X)** 7/1/2017 - 6/30/2020
3. **NIH F31 Predoctoral Fellowship (Mentee: Blajszczak, C)** 7/1/2017 - 6/30/2021

D. Past

1. **5 R01 AA 017733-05 (PI: Nieto, N)** 9/1/2008 - 1/9/2015
   NIAAA
   Argininosuccinate synthase, NOS2 and alcoholic liver disease
   Responsibilities: Generated the preliminary results using isotope-coded affinity tags technology, analyzed the results from the proteomics data using the trans-proteomic pipeline from the Seattle Proteomics Center and trained new Postdoctoral Fellows.
   Overall goal: To define the role of argininosuccinate synthase in alcoholic liver disease. Aim 1 was to dissect if the alcohol-mediated up-regulation of argininosuccinate synthase played a role in increased NO· synthesis by NOS2 in hepatocytes. Aim 2 was to identify the mechanism by which alcohol induced argininosuccinate synthase. Aim 3 was to assess the biological relevance of the alcohol-mediated induction of argininosuccinate synthase for NO· synthesis *in vivo* using WT mice, *Ass*$^{+/-}$ and mice injected with either AAV8.GFP or AAV8.ASS.GFP.

2. **3 R01 AA 017733-04S1 (PI: Nieto, N)** 9/1/2013 - 1/9/2015
   NIAAA
   Supplement: **Argininosuccinate synthase, NOS2 and Alcoholic Liver Disease**
   The purpose of this administrative supplement was to purchase additional capital equipment to complement the experiments proposed in the parent grant 5 R01 AA 017733.

3. 2 R56 DK 069286-06 (PI: Nieto, N) 8/1/2010 - 6/30/2013
   NIDDK
   Osteopontin and the fibrogenic response to liver injury
   Responsibilities: Write manuscripts, plan experiments, analyze data and train Postdoctoral Fellows.
   Overall goal: to continue doing experiments throughout the year to address the critique from the reviewers and resubmit the Competitive Renewal 2 R01 DK 069286-07.

4. **3 R56 DK 069286-06S (PI: Nieto, N)** 18/1/2010 - 6/30/2013
   NIDDK
   Supplement: **Osteopontin and the fibrogenic response to liver injury**
   Responsibilities and Overall goal: the same as in the parent grant 2 R56 DK 069286-06

5. **5 P20 AA 017067-04 (PI: Friedman, SL; Co-PI: Nieto, N)** 8/1/2008 - 7/31/2013
   NIAAA
   Oxidant stress and fibrosis in alcoholic liver injury
   Responsibilities: Exploratory Project #1 and Mammalian Models Core Director.

Overall goal: To assess the role of reactive oxygen species on $KLF6_{Full}$ expression, alternative splicing and its relevance to alcoholic liver disease. Aims: Aim 1 explored the significance of CYP2E1-derived reactive oxygen species modulation of $KLF6_{Full}$ expression and alternative splicing. Aim 2 assessed how KLF6_V1 and V2 may be biologically relevant to alcoholic liver disease *in vivo*. Aim 3 evaluated whether stress-activated kinases modulate $KLF6_{Full}$ up-regulation and splicing of under oxidative stress.

6. **5R01DK069286-05 (PI: Nieto, N)** 9/15/05 - 6/30/10
   NIDDK
   Communication between Kupffer cells and stellate cells
   Overall goal: To assess the role of Kupffer cell-derived factors/reactive species on the hepatic stellate cell fibrogenic response. Aims: Aim 1 explored the impact of Kupffer cells on hepatic stellate cell collagen I production. Aim 2 determined if Kupffer cell-derived reactive species were the mediators for collagen I up-regulation in hepatic stellate cell and identified their source. Aim 3 focused on the role of fatty acids on collagen I expression in hepatic stellate cell in co-culture with Kupffer cells. Aim 4 assessed the contribution of chronic ethanol feeding to collagen I expression by hepatic stellate cell in co-culture with Kupffer cells.

7. **R01AA017733-02S1 (PI: Nieto, N)** 07/15/09 - 07/15/11
   NIAAA
   Supplement: **Argininosuccinate synthase, NOS2, and Alcoholic Liver Disease**
   Overall goal: same as in the parent grant NIAAA 5R01AA017733

8. **P20-AA017067-02S1 (PI: Friedman, SL; Co-PI: Nieto, N)** 07/15/09 - 07/15/11
   NIAAA
   Supplement: **Oxidant Stress and Fibrosis in Alcoholic Liver Injury**
   Overall goal: same as in the parent grant NIAAA 5P20-AA017067

9. **American Liver Foundation (PI: Nieto, N)** 7/01/02 - 6/30/05
   Liver specific nitric oxide generation and protection against alcohol and drug-induced liver injury
   Overall goal: The specific hypothesis that was tested is that nitric oxide (NO·) is an important protecting agent against alcohol-induced and drug-induced liver damage via its ability to down-regulate and inhibit cytochrome P450 activity and generation of reactive oxygen species, and its antioxidant effects in breaking the propagation reactions of the lipid peroxidation cascade. We evaluated the effectiveness of a NO· pro-drug, V-PYRRO/NO·, which requires metabolism by P450s such as CYP2E1 in order to generate NO·. This pro-drug thus, has the novel potential for liver-specific generation of NO·, allowing a more selective, targeted NO· delivery than that achieved by other typical NO·-donors.

10. **ABMRF/The Foundation for Alcohol Research (PI: Nieto, N)** 1/01/00 - 12/31/02
    The role of CYP2E1-diffusable mediators on hepatic stellate cell activation
    Overall goal: The overall goal of this study was to evaluate whether hepatocytes overexpressing cytochrome P450 2E1, which generate reactive oxygen species, could activate hepatic stellate cells. Experiments were designed to determine the molecular mechanisms behind HSC activation, proliferation, and the increase in collagen type I levels. The protective role of antioxidants and the response to ethanol, arachidonic acid, or iron were also studied.

13. PUBLICATIONS

A. Peer Reviewed Original Contributions

Dr. Nieto contributed to the conception and design of the study, data acquisition, data analysis and interpretation and to drafting or revising critically important intellectual content in all publications where she is the senior author. In addition to the above, Dr. Nieto also performed most of the experiments in the publications where she is the first author. In the rest of the publications, her role is indicated in parenthesis.

1. Hicks DF, Goossens N, Blas-García A, Tsuchida T, Wooden B, Wallace MC, Nieto N, Lade A, Bedhead B, Dudley J, Lee YA, Hoshida Y, Friedman SL. Discovery of apigenin as an antifibrotic molecule mediated by the adipokine C1QTNF2 in hepatic stellate cells through a bioinformatics approach; a new paradigm for drug discovery in hepatic fibrosis. ***J. Hepatol*** (Submitted).

2. Magdaleno F, Nieto N, Rincon A. Aminoguanidine reduces cardiac fibrosis and improves antioxidant gene expression in type 2 diabetic rats. ***Mol. Pharmacol.*** (Under Revision).

3. Arriazu E, Ruiz de Galarreta M, Magdaleno F, Ge X, Conde de la Rosa L, Oldberg A, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. ***J. Hepatol.*** 2016;65(5):963-971.

4. Arriazu E, Ge X, Leung TM, Lopategi A, Lu Y, Kitamura N, Urtasun R, Theise N, Nieto N. The Osteopontin and high-mobility group-1 axis is involved in the pathogenesis of liver fibrosis. ***Gut*** 2016 (In Press).
*Featured in *Nature Reviews Gastroenterology & Hepatology* 2016.

5. Ge X, Antoine D, Lu Y, Arriazu E, Klepper A, Branch AD, Fiel MI, Nieto N. Identification of post-translational modifications from HMGB1 in alcoholic liver disease. ***J. Biol. Chem.*** 2014 Aug 15;289(33):22671 (PMID:24928512).
*****Featured in *Nature Science Business Exchange* 2014.

6. Wang X, Lopategi A, Lu Y, Kitamura N, Ge X, Urtasun R, Leung TM, Fiel MI, Nieto N. Osteopontin induces ductular reaction contributing to liver fibrosis. ***Gut*** 2014;63(11):1805-18 (PMID:24496779).

7. Ge X, Leung TM, Arriazu E, Lu Y, Urtasun R, Christensen B, Fiel MI, Mochida S, Sørensen ES, Nieto N. Binding of osteopontin to lipopolysaccharide lowers tumor necrosis factor-α and prevents early alcohol-induced liver injury in mice. ***Hepatology*** 2014;59(4):1600-1616. (PMID:24214181)
*****Featured in *Nature Reviews* 2014.

8. Leung TM, Kitamura N, Fiel MI, Nieto N. Osteopontin delays resolution of liver fibrosis. ***Lab. Invest.*** 2013;93(10):1082-1089 (PMID:23999249).

9. Lu Y, Ward S, Nieto N. Ethanol/Jo2-induced liver injury is attenuated in mice with lower expression of argininosuccinate synthase. ***Alcohol Clin Exp Res.*** 2014;38(3):649-656. (PMID:24224890).

10. Smalling R, Delker D, Zhang Y, Nieto N, McGuiness MS, Liu S, Friedman SL, Hagedorn C, Wang L. Genome-wide Transcriptome Analysis Identifies Novel Gene Signatures Implicated

in Human Chronic Liver Disease. ***Am J Physiol Gastrointest Liver Physiol***. 2013;305(5):G364-74 (PMID: 23812039).

11. Ge X, Lu Y, Leung TM, Sørensen ES, Nieto N. Milk osteopontin, a nutritional approach to prevent alcohol-induced liver injury by preserving gut integrity. ***Am. J. Physiol. Gastrointest. Liver Physiol.*** 2013;304(10):G929-39 (PMID: 23518682).

12. Hernandez-Gea V, Hirschl M, Rozenfeld R, Lim MP, Weiner S, Nieto N, Devy L, Friedman SL. Endoplasmic reticulum stress induces fibrogenic behavior in hepatic stellate cells through autophagy. ***J. Hepatol.*** 2013;59(1):98-104 (PMID: 23485523).
(Dr. Nieto provided primary cells, edited the manuscript and contributed to design of some of the experiments and to the interpretation of the results).

13. Arriazu E, Ruiz de Galarreta M, Lopez-Zabalza M, Leung TM, Nieto N, Iraburu M. GCN2 kinase is a key regulator of fibrogenesis and acute and chronic liver injury induced by carbon tetrachloride in mice. ***Lab. Invest.*** 2013;93(3):303-10 (PMID: 23318883).
(Dr. Nieto edited the manuscript and contributed to design of the *in vivo* experiments and to the interpretation of the results).

14. Cubero FJ and Nieto N. Arachidonic acid stimulates TNFα production in Kupffer cells via a reactive oxygen species-pERK1/2-Egr-1-dependent mechanism. ***Am. J. Physiol. Gastrointest. Liver Physiol.*** 2012;303(2):G228-239 (PMID: 22538404).

15. Rivas-Estilla AM, Bryan-Marrugo OL, Trujillo-Murillo K, Pérez-Ibave D, Charles-Niño C, Pedroza-Roldan C, Ríos-Ibarra C, Ramírez-Valles E, Ortiz-López R, Islas-Carbajal MC, Nieto N, Rincón-Sánchez AR. Cu/Zn superoxide dismutase (SOD1) induction is implicated in the antioxidative and antiviral activity of acetylsalicylic acid in HCV-expressing cells. ***Am. J. Physiol. Gastrointest. Liver Physiol.*** 2012;302(11):G1264-1273 (PMID: 22442156).
(Dr. Nieto edited the manuscript and contributed to the interpretation of the results).

16. Urtasun R, Cubero FJ, Nieto N. Oxidative stress modulates $KLF6_{Full}$ and its splice variants. ***Alcohol Clin. Exp. Res.*** 2012;36(11):1851-62 (PMID: 22486562).

17. Leung TM, Lu Y, Yan W, Morón-Concepción JA, Ward SC, Ge X, de la Rosa LC, Nieto N. Argininosuccinate synthase conditions the response to acute and chronic ethanol-induced liver injury in mice. ***Hepatology*** 2012;55(5):1596-609 (PMID: 22213272).

18. Mormone E, Lu Y, Ge X, Fiel MI, Nieto N. Fibromodulin, an oxidative stress-sensitive proteoglycan, regulates the fibrogenic response to liver injury in mice. ***Gastroenterology*** 2012;142(3):612-621 (PMID: 22138190).

19. Lu Y, Leung TM, Ward SC, Nieto N. Partial deletion of argininosuccinate synthase protects from pyrazole plus lipopolysaccharide-induced liver injury by decreasing nitrosative stress. ***Am. J. Physiol. Gastrointest. Liver Physiol.*** 2012;302(3):G287-295 (PMID: 22052013).

20. Urtasun R, Lopategi A, George J, Leung TM, Lu Y, Wang X, Ge X, Fiel MI, Nieto N. Osteopontin, an oxidant stress sensitive cytokine, up-regulates collagen-I via integrin $\alpha_V\beta_3$ engagement and PI3K/pAkt/NFκB signaling. ***Hepatology*** 2012;55(2):594-608 (PMID: 21953216).

21. Howarth DL, Vacaru AM, Tsedensodnom O, Mormone E, Nieto N, Costantini LM, Snapp EL, Sadler KC. Alcohol disrupts endoplasmic reticulum function and protein secretion in hepatocytes. ***Alcohol Clin. Exp. Res.*** 2012;36(1):14-23 (PMID: 21790674).
(Dr. Nieto edited the manuscript and contributed to the design of some experiments and to the interpretation of some of the results).

22. Kastanis GJ, Hernandez-Nazara Z, Nieto N, Rincón-Sanchez AR, Popratiloff A, Dominguez-Rosales JA, Lechuga CG, Rojkind M. The role of dystroglycan in PDGF-BB-dependent migration of activated hepatic stellate cells/myofibroblasts. ***Am. J. Physiol. Gastrointest. Liver Physiol.*** 2011;301(3):G464-474 (PMID: 21659621).
(Dr. Nieto edited the manuscript and contributed to the design of some of the experiments and to the interpretation of the results).

23. Rozenfeld R, Gupta A, Gagnidze K, Lim MP, Gomes I, Lee-Ramos D, Nieto N, Devi LA. AT1R-CB_1R heteromerization reveals a new mechanism for the pathogenic properties of angiotensin II. ***EMBO J***. 2011;30(12):2350-2363 (PMID: 21540834).
(Dr. Nieto provided primary cells, edited the manuscript and contributed to the design of some of the experiments and to the interpretation of the results).

24. Urtasun R, Cubero FJ, Vera M, Nieto N. Reactive nitrogen species switch on early extracellular matrix remodeling via induction of MMP1 and TNFα. ***Gastroenterology*** 2009;136(4):1410-1422 (PMID: 19250650).

25. Cubero FJ, Nieto N. Ethanol and arachidonic acid synergize to activate Kupffer cells and modulate the fibrogenic response via tumor necrosis factor alpha, reduced glutathione, and transforming growth factor beta-dependent mechanisms. ***Hepatology*** 2008;48(6):2027-2039 (PMID: 19003881).

26. Friedman SL, Nieto N. Cannabinoids provoke alcoholic steatosis through a conspiracy of neighbors. ***Cell Metab.*** 2008;7(3):187-188 (PMID: 18316020).

27. Nieto N, Mesa MD, López-Pedrosa JM, Torres MI, Ríos A, Suárez MD, Gil A. Contribution of polyunsaturated fatty acids to intestinal repair in protein-energy malnutrition. ***Dig. Dis. Sci.*** 2007;52(6):1485-1496 (PMID: 17393329).

28. Nieto N. Ethanol and fish oil induce NFκB transactivation of the collagen α2(I) promoter through lipid peroxidation-driven activation of the PKC-PI3K-Akt pathway. ***Hepatology*** 2007;45(6):1433-1445 (PMID: 17538965).

29. Nieto N, Rojkind M. Repeated whiskey binges promote liver injury in rats fed a choline-deficient diet. ***J. Hepatol.*** 2007;46(2):330-339 (PMID: 17156887).

30. Nieto N. Oxidative-stress and IL-6 mediate the fibrogenic effects of Kupffer cells on stellate cells. ***Hepatology*** 2006;44(6):1487-1501 (PMID: 17133487).

31. Nieto N, Cederbaum AI. S-adenosylmethionine blocks collagen I production by preventing transforming growth factor-beta induction of the COL1A2 promoter. ***J. Biol. Chem.*** 2005;280(35):30963-30974 (PMID: 15983038).

32. Carmiel-Haggai M, Cederbaum AI, Nieto N. A high-fat diet leads to the progression of non-alcoholic fatty liver disease in obese rats. ***FASEB J.*** 2005;19(1):136-138 (PMID: 15522905).

33. Gong P, Cederbaum AI, Nieto N. Heme oxygenase-1 protects HepG2 cells against cytochrome P450 2E1-dependent toxicity. ***Free Radic. Biol. Med.*** 2004;36(3):307-318 (PMID: 15036350).

34. Gong P, Cederbaum AI, Nieto N. The liver-selective nitric oxide donor O2-vinyl 1-(pyrrolidin-1-yl)diazen-1-ium-1,2-diolate (V-PYRRO/NO) protects HepG2 cells against cytochrome P450 2E1-dependent toxicity. ***Mol. Pharmacol.*** 2004;65(1):130-138 (PMID: 14722244).

35. Carmiel-Haggai M, Cederbaum AI, Nieto N. Binge ethanol exposure increases liver injury in obese rats. ***Gastroenterology*** 2003;125(6):1818-1833 (PMID: 14724834).

36. Gong P, Cederbaum AI, Nieto N. Increased expression of cytochrome P450 2E1 induces heme oxygenase-1 through ERK MAPK pathway. ***J. Biol. Chem.*** 2003;278(32):29693-19700 (PMID: 12777398).

37. Nieto N, Cederbaum AI. Increased Sp1-dependent transactivation of the LAMγ 1 promoter in hepatic stellate cells co-cultured with HepG2 cells overexpressing cytochrome P450 2E1. ***J. Biol. Chem.*** 2003;278(17):15360-15372 (PMID: 12529372).

38. Nieto N, Marí M, Cederbaum AI. Cytochrome P450 2E1 responsiveness in the promoter of glutamate-cysteine ligase catalytic subunit. ***Hepatology*** 2003;37(1):96-106 (PMID: 12500194).

39. Nieto N, Friedman SL, Cederbaum AI. Cytochrome P450 2E1-derived reactive oxygen species mediate paracrine stimulation of collagen I protein synthesis by hepatic stellate cells. ***J. Biol. Chem.*** 2002;277(12):9853-9864 (PMID: 11782477).

40. Nieto N, Friedman SL, Cederbaum AI. Stimulation and proliferation of primary rat hepatic stellate cells by cytochrome P450 2E1-derived reactive oxygen species. ***Hepatology*** 2002;35(1):62-73 (PMID: 11786960).

41. Nieto N, Torres MI, Ríos A, Gil A. Dietary polyunsaturated fatty acids improve histological and biochemical alterations in rats with experimental ulcerative colitis. ***J. Nutr.*** 2002;132(1):11-19 (PMID: 11773501).

42. Nieto N, Dominguez-Rosales JA, Fontana L, Salazar A, Armendariz-Borunda J, Greenwel P, Rojkind M. Rat hepatic stellate cells contribute to the acute-phase response with increased expression of alpha1(I) and alpha1(IV) collagens, tissue inhibitor of metalloproteinase-1, and matrix-metalloproteinase-2 messenger RNAs. ***Hepatology*** 2001;33(3):597-607 (PMID: 11230740).

43. Nieto N, López-Pedrosa JM, Mesa MD, Torres MI, Fernández MI, Ríos A, Suárez MD, Gil A. Chronic diarrhea impairs intestinal antioxidant defense system in rats at weaning. ***Dig. Dis. Sci.*** 2000;45(10):2044-2050 (PMID: 11117581).

44. Nieto N, Torres MI, Fernández MI, Girón MD, Ríos A, Suárez MD, Gil A. Experimental ulcerative colitis impairs antioxidant defense system in rat intestine. ***Dig. Dis. Sci.*** 2000;45(9):1820-1827 (PMID: 11052326).

45. Nieto N, Greenwel P, Friedman SL, Zhang F, Dannenberg AJ, Cederbaum AI. Ethanol and arachidonic acid increase α2(I) collagen expression in rat hepatic stellate cells overexpressing cytochrome P450 2E1. Role of H_2O_2 and cyclooxygenase-2. ***J. Biol. Chem.*** 2000;275(26):20136-20145 (PMID: 10770928).

46. Torres MI, García-Martin M, Fernández MI, Nieto N, Gil A, Ríos A. Experimental colitis induced by trinitrobenzenesulfonic acid: an ultrastructural and histochemical study. ***Dig. Dis. Sci.*** 1999;44(12):2523-2529 (PMID: 10630507).
(Dr. Nieto edited the manuscript and performed several experiments).

47. Nieto N, Friedman SL, Greenwel P, Cederbaum AI. CYP2E1-mediated oxidative stress induces collagen type I expression in rat hepatic stellate cells. ***Hepatology*** 1999;30(4):987-996 (PMID: 10498651).

48. Girón MD, Salto R, González Y, Girón JA, Nieto N, Periago JL, Suárez MD, Hortelano P. Modulation of hepatic and intestinal glutathione S-transferases and other antioxidant enzymes by dietary lipids in streptozotocin diabetic rats. ***Chemosphere*** 1999;38(13):3003-3013 (PMID: 10230044).
(Dr. Nieto edited the manuscript and performed several experiments).

49. Nieto N, Giron MD, Suarez MD, Gil A. Changes in plasma and colonic mucosa fatty acid profiles in rats with ulcerative colitis induced by trinitrobenzene sulfonic acid. ***Dig. Dis. Sci.*** 1998;43(12):2688-2695 (PMID: 9881501).

50. Nieto N, Fernandez MI, Torres MI, Ríos A, Suarez MD, Gil A. Dietary monounsaturated n-3 and n-6 long-chain polyunsaturated fatty acids affect cellular antioxidant defense system in rats with experimental ulcerative colitis induced by trinitrobenzene sulfonic acid. ***Dig. Dis. Sci.*** 1998;43(12):2676-2687 (PMID: 9881500).

B. Other Peer Reviewed Publications

1. Nieto N. A systems biology approach for understanding the collagen regulatory network in alcoholic liver disease. ***Liver Int***. 2012;32(2):189-198 (PMID: 21745314).

2. Mormone E, George J, Nieto N. Molecular pathogenesis of hepatic fibrosis and current therapeutic approaches. ***Chem. Biol. Interact.*** 2011;193(3):225-231 (PMID: 21803030).

3. Cubero FJ, Urtasun R, Nieto N. Alcohol and liver fibrosis. ***Semin. Liver Dis.*** 2009;29(2):211-221 (PMID: 19387920).

4. Urtasun R, Conde de la Rosa L, Nieto N. Oxidative and nitrosative stress and fibrogenic response. ***Clin. Liver Dis.*** 2008;12(4):769-790 (PMID: 18984466).

5. Conde de la Rosa L, Moshage H, Nieto N. Hepatocyte oxidant stress and alcoholic liver disease. ***Rev. Esp. Enferm. Dig.*** 2008;100(3):156-163 (PMID: 18416641).

6. Cubero J, Nieto N. Kupffer cells and alcohol-induced liver injury. ***Current Res. Dev. Hepatol*****.** 2008 (In press).

7. Urtasun R, Nieto N. Hepatic stellate cells and oxidative stress. ***Rev. Esp. Enferm. Dig.*** 2007;99(4):223-230 (PMID: 17590105).

8. Vera M, Nieto N. Hepatic stellate cells and alcoholic liver disease. ***Rev. Esp. Enferm. Dig***. 2006;98(9):674-684 (PMID: 17092199).

9. Cubero FJ, Nieto N. Kupffer cells and alcoholic liver disease. ***Rev. Esp. Enferm. Dig.*** 2006;98(6):460-472 (PMID: 16948545).

10. Rojkind M, Domínguez-Rosales JA, Nieto N, Greenwel P. Role of hydrogen peroxide and oxidative stress in healing responses. ***Cell Mol. Life Sci.*** 2002;59(11):1872-1891 (PMID: 12530519).
(Dr. Nieto wrote a section and edited the review).

11. Nieto N, Friedman SL, Cederbaum AI. CYP2E1-mediated oxidative stress and hepatic stellate cells. ***Recent Res. Dev. Mol. Pharmacol****,* 2002;1:21-35.

12. Donohue TM Jr, Clemens DL, Galli A, Crabb D, Nieto N, Kato J, Barve SS. Use of cultured cells in assessing ethanol toxicity and ethanol-related metabolism. ***Alcohol Clin. Exp. Res.*** 2001;25(5 Suppl ISBRA):87S-93S (PMID: 11411462).
(Dr. Nieto edited the manuscript and wrote part of the manuscript).

13. Marí M, Wu D, Nieto N, Cederbaum AI. CYP2E1-dependent toxicity and up-regulation of antioxidant genes. ***J. Biomed. Sci.*** 2001;8(1):52-58 (PMID: 11173976).
(Dr. Nieto edited the manuscript and performed some experiments).

C. Invited Contributions

1. Arriazu E, Ruiz de Galarreta M, Cubero FJ, Varela-Reay M, Perez de Obanos MP, Leung TM, Lopategi A, Benedicto A, Abraham I, Nieto N. Extracellular matrix and liver disease. Antiox. Redox. Signal. 2014 Sep 1;21(7):1078-97 (PMID: 24219114).

2. Leung TM and Nieto N. CYP2E1 and oxidant stress in alcoholic and non-alcoholic fatty liver disease. ***J. Hepatol.*** 2013;58(2):395-398 (PMID: 22940046).

3. Nieto N, Lutolf MP. Extracellular matrix bioengineering and systems biology approaches in liver disease. ***Syst. Synth. Biol.*** 2011;5(1-2):11-20 (PMID: 22654992).

D. Books and Book Chapters

Nieto N, and Rojkind M. Pathophysiology of Alcoholic Liver Disease. The Liver: Biology and Pathobiology (5th Edition) Arias, Alter, Boyer, Cohen, Fausto, Shafritz and Wolkoff, Eds. 2009. p. 739-768.

E. Non-Peer Reviewed Publications

None

14. PRESENTATIONS AT MEETINGS

1. Escudero A, Montilla JC, Sanchez-Quevedo C, Garcia JM, Nieto N, Periago JL, Hortelano P, Suarez MD. Effecto de los aceites de oliva, girasol y pescado sobre el perfil de acidos

grasos de las membranas y la morfologia de los eritrocitos de rata. XX Congreso Internacional de la Sociedad Farmaceutica del Mediterraneo Latino (Granada, Spain, 1992).

2. Nieto N, Giron MD, Hortelano P, Gila A, Suarez MD. Influence of dietary polyunsaturated fatty acids in the antioxidant defense and fatty acid profile in inflammatory bowel disease. 36th International Conference on the Biochemistry of Lipids (Georgetown University, Washington DC, USA, 1995).

3. Hortelano P, Montilla JC, Escudero A, Nieto N, Oliver C, Periago JL, Suarez MD. Influence of dietary fat on the antioxidant defense in different organs in the rat. 36th International Conference on the Biochemistry of Lipids (Georgetown University, Washington DC, USA, 1995).

4. Lopez-Pedrosa JM, Nieto N, Suarez MD, Gil A. Chronic diarrhea affects gut mucosa fatty acid profile and the antioxidant defense in weanling rats. (Federation of European Biochemical Societies, Barcelona, Spain, 1996)

5. Delgado SA, Ferron JA, Delgado ML, Ramirez MC, Nieto N, Garrote D. Two-hit phenomenon in multiple organ failure. European Congress of Surgery (Rome, Italy, 1996).

6. Delgado SA, Ferron JA, Deldago ML, Nieto N, Mansilla A, Hernandez J. Effects of allopurinol on leukocyte infiltration in sepsis. European Congress of Surgery (Rome, Italy, 1996).

7. Delgado ML, Ferron JA, Deldago SA, Hernandez J, Collado A, Nieto N. Evidence that uric acid reduces liver and lung leukocyte sequestration during sepsis in rats. European Congress of Surgery (Rome, Italy, 1996).

8. Nieto N, Lopez-Pedrosa JM, Gil A, Suarez MD. Lipid profiles and antioxidant defense system in an animal model of chronic diarrhea and recovery after feeding different fatty diets. International Society for Free Radical Research (Barcelona, Spain, 1996).

9. 49th Meeting of the American Association for the Study of Liver Diseases (Chicago, USA, 1998)

10. Nieto N, Friedman SL, Greenwel P, Cederbaum AI. Overexpression of CYP2E1 induces COL1A2 gene in rat hepatic stellate cells. FASEB Meeting (San Francisco, USA 1999).

11. Nieto N and Cederbaum AI. 10th Congress of the International Society for Biomedical Research on Alcoholism (Yokohama, Japan, 2000).

12. Gong P, Cederbaum AI, Nieto N. The liver specific nitric oxide donor V-PYRRO/NO protects HepG2 cells against cytochrome P450 2E1-dependent toxicity. American Association for the Study of Liver Diseases (Boston, USA, 2002).

13. Nieto N, Cederbaum AI. S-adenosyl-L-methionine represses the responsiveness of the alpha 2(I) collagen promoter to CCl_4 in transgenic mice. American Association for the Study of Liver Diseases (Boston, USA, 2003).

14. Nieto N, Cederbaum AI. *S*-adenosylmethionine and its metabolites down regulate collagen I expression in hepatic stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2004).

15. Vera M, Nieto N. Peroxynitrite modulates hepatic stellate cell activation and extracellular matrix remodeling. American Association for the Study of Liver Diseases (Boston, USA, 2006).

16. Cubero FJ, Allina J, Nieto N. Arachidonic acid activates Kupffer cells and induces a pro-fibrogenic response in stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2006).

17. Nieto N. Kupffer cells induce a fibrogenic response by transactivating the COL1A1 and COL1A2 promoters and by decreasing collagen-I degradation. European Association for the Study of the Liver (Vienna, Austria, 2006).

18. Nieto N. Ethanol and fish oil induce NFκB transactivation of the COL1A2 promoter via a lipid peroxidation driven activation of the PKC-PI3K-Akt pathway. European Association for the Study of the Liver (Paris, France, 2007).

19. Urtasun R, Nieto N. Osteopontin, an oxidant stress-sensor in hepatocytes and Kupffer cells, triggers a fibrogenic response in stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2007).

20. Nieto N, Cubero FJ, Vera M, Urtasun R. Reactive nitrogen species modulate early extracellular matrix remodeling via induction of matrix metalloproteinase-1 and tumor necrosis factor-α. American Association for the Study of Liver Diseases (Boston, USA, 2007).

21. Urtasun R, Cubero FJ, Yea S, Friedman SL, Nieto N. Oxidative stress modulates the expression of Krüppel-like factor-6 and its splice variants. American Association for the Study of Liver Diseases (Boston, USA, 2007).

22. Yan W, Shannon P, Moron J, Conde del a Rosa L, Nieto N. Quantitative proteomic analysis of the ethanol response in hepatocytes using the isotope coded affinity tag method and a systems biology approach. American Association for the Study of Liver Diseases (Boston, USA, 2007).

23. Urtasun R, Nieto N. Osteopontin, an oxidant stress-sensor in hepatocytes and Kupffer cells, triggers a fibrogenic response in stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2007).

24. Nieto N. Crosstalk Between Kupffer Cells and Hepatic Stellate Cells and Fibrogenic Response. American Association for the Study of Liver Diseases (San Francisco, USA, 2008).

25. Urtasun R, Nieto N. Hepatic SPP1 switches on collagen-I deposition. American Association for the Study of Liver Diseases (San Francisco, USA, 2008).

26. Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein, a novel factor involved in collagen I deposition. American Association for the Study of Liver Diseases (San Francisco, USA, 2008).

27. Cubero FJ, Nieto N. Ethanol and arachidonic acid synergize to activate Kupffer cells and modulate the fibrogenic response via TNFα, GSH, and TGFβ-dependent mechanisms. American Association for the Study of Liver Diseases (San Francisco, USA, 2008).

28. Yan W, Conde de la Rosa L, Urtasun R, Cubero FJ, Shannon P, Moron J, Nieto N. Argininosuccinate synthase and the regulation of inducible nitric oxide synthase in alcoholic liver disease. American Association for the Study of Liver Diseases (San Francisco, USA, 2008).

29. Urtasun R, Wang X, Fiel MI, Kalantari F, Nieto N. Osteopontin, an extracellular protein induced in liver injury, triggers a fibrogenic response in stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2009).

30. Leung TM, Lu Y, Ward SC, Nieto N. Argininosuccinate synthase and alcoholic liver disease. American Association for the Study of Liver Diseases (Boston, USA, 2009).

31. Mormone E, Nieto N. Fibromodulin, a novel factor modulating Collagen I deposition. American Association for the Study of Liver Diseases (Boston, USA, 2009).

32. Lu Y, Ward SC, Nieto N. Deficiency of argininosuccinate synthase attenuates liver injury by decreasing the induction of nitric oxide synthase-2. American Association for the Study of Liver Diseases (Boston, USA, 2009).

33. Urtasun R, Cubero FJ, Nieto N. Krüppel-like factor 6 and its splice variants are sensitive to reactive oxygen species and modulate TNFα levels. American Association for the Study of Liver Diseases (Boston, USA, 2009).

34. Nieto N. Osteopontin and the fibrogenic response to liver injury. Osteopontin FASEB Meeting (Denver, USA, 2010).

35. Mormone E, Nieto N. Fibromodulin, a novel factor modulating collagen-I deposition in liver fibrosis. International Society of the Cells of the Hepatic Sinusoid. (Pasadena, USA, 2010).

36. Leung TM, Lu Y, Ward S, Nieto N. Argininosuccinate synthase and alcoholic liver disease. International Society of the Cells of the Hepatic Sinusoid. (Pasadena, USA, 2010).

37. Urtasun R, Wang X, Lopategi A, George J, Fiel MI, Kalantari F, Nieto N. Osteopontin, a cytokine induced in liver injury, contributes to the fribrogenic response of Hepatic Stellate Cells via Integrin αvβ3 and PI3K/pAkt Pathway. International Society of the Cells of the Hepatic Sinusoid. (Pasadena, USA, 2010).

38. Arriazu E, Leung TM, Paganos S, George J, Fiel MI, Nieto N. Spp1 contributes to non-alcoholic steatohepatitis in mice fed a methionine-choline deficient diet. American Association for the Study of Liver Diseases (Boston, USA, 2010).

39. Leung TM, Lu Y, Ward SC, Nieto N. Ablation of argininosuccinate synthase promotes alcohol-induced liver damage. American Association for the Study of Liver Diseases (Boston, USA, 2010).

40. George J, Fiel MI, Nieto N. Carbon tetrachloride-induced liver injury and fibrosis correlates with osteopontin expression in mice. American Association for the Study of Liver Diseases (Boston, USA, 2010).

41. Lopategi A, George J, Nieto N. Oxidative stress up-regulation of osteopontin drives collagen-I induction in hepatic stellate cells by binding αvβ3 integrin and signaling via the THE PI3K/PAKT pathway. American Association for the Study of Liver Diseases (Boston, USA, 2010).

42. Lu Y, Fiel MI, Nieto N. Spp1 promotes periportal liver fibrosis induced by common bile duct ligation. American Association for the Study of Liver Diseases (Boston, USA, 2010).

43. Mormone E, Lu Y, Fiel MI, Nieto N. Fibromodulin, a novel factor modulating Collagen I deposition in liver fibrosis. American Association for the Study of Liver Diseases (Boston, USA, 2010).

44. Arriazu E, Pérez de Obanos MP, López-Zabalza MJ, Leung TM, Nieto N, Herraiz MT, Iraburu MJ. Amino acid deprivation decreases intracellular reactive oxygen species and collagen I levels in hepatic stellate cells via GCN2 activation. American Association for the Study of Liver Diseases (Boston, USA, 2010).

45. Arriazu E, Ge X, Leung TM, Lopategi A, Lu Y, Kitamura N, Urtasun R, Theise N, D'Souza L, Bianchi ME, Nieto N. The osteopontin and high-mobility group-1 axis and liver fibrosis. European Association for the Study of the Liver (Barcelona, Spain, 2012).

46. Lopategi A, Wang X, Lu Y, Kitamura N, Ge X, Urtasun R, Leung TM, Fiel MI, Nieto N. Osteopontin induces ductular reaction and contributes to liver fibrosis. European Association for the Study of the Liver (Barcelona, Spain, 2012).

47. Arriazu E, Ge X, Leung TM, Lopategi A, Lu Y, Kitamura N, Urtasun R, Theise ND, D'Souza L, Nieto N. The Osteopontin and High-mobility group-1 axis is involved in the pathogenesis of liver fibrosis. American Association for the Study of Liver Diseases (Boston, USA, 2012).

48. Hilscher M, Hernandez-Gea V, Rozenfeld R, Lim M, Nieto N, Werner S, Devi LA, Friedman SL. Oxidant- and ER-stress convergently stimulate autophagy during cellular fibrogenesis. American Association for the Study of Liver Diseases (Boston, USA, 2012).

49. Ge X, Leung TM, Arriazu E, Lu Y, Urtasun R, Christensen B, Fiel MI, Mochida S, Sørensen ES, Nieto N. The good side of a double-edged sword: Overexpression of osteopontin in hepatocytes prevents alcohol-induced liver injury in mice. American Association for the Study of Liver Diseases (Boston, USA, 2012).

50. Wang X, Lopategi A, Lu Y, Kitamura N, Ge X, Urtasun R, Leung TM, Fiel MI, Nieto N. Osteopontin induces Ductular Reaction Contributing to Liver Fibrosis. American Association for the Study of Liver Diseases (Washington, USA, 2013).

51. Arriazu E, Ge X, Leung TM, Lopategi A, Lu Y, Kitamura N, Urtasun R, Theise ND, Nieto N. Signaling via the osteopontin and high-mobility group box-1 axis drives the fibrogenic response to liver injury. American Association for the Study of Liver Diseases (Washington, USA, 2013).

52. Arriazu E, Ge X, Leung TM, Lopategi A, Lu Y, Urtasun R, Theise ND, Nieto N. Signaling via the osteopontin and high-mobility group box-1 axis drives the fibrogenic response to liver injury. American Association for the Study of Liver Diseases (Boston, USA, 2014).

53. Ge X, Antoine DJ, Lu Y, Arriazu E, Leung TM, Klepper AL, Branch AD, Fiel MI, Nieto N. High-mobility group box-1 participates in the pathogenesis of alcoholic liver disease. American Association for the Study of Liver Diseases (Boston, USA, 2014).

54. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. American Association for the Study of Liver Diseases (San Francisco, USA, 2015).

55. Magdaleno F, Ge X, Fey H, Aloman C, Fiel MI, Nieto N. Osteopontin ablation drives extramedullary hematopoiesis in the liver. American Association for the Study of Liver Diseases (San Francisco, USA, 2015).

56. Chen Y, Ge X, Abraham-Enachescu I, Sun X, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. American Association for the Study of Liver Diseases (San Francisco, USA, 2015).

57. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. International Society of the Hepatic Sinusoid Research (Asilomar, CA, USA, 2015).

58. Magdaleno F, Ge X, Fey H, Aloman C, Fiel MI, Nieto N. Osteopontin ablation drives extramedullary hematopoiesis in the liver. International Society of the Hepatic Sinusoid Research (Asilomar, CA, USA, 2015).

59. Chen Y, Ge X, Abraham-Enachescu I, Sun X, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. International Society of the Hepatic Sinusoid Research (Asilomar, CA, USA, 2015).

60. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. Center for Wound Healing and Tissue Regeneration, University of Illinois at Chicago (Chicago, IL, USA, 2015).

61. Magdaleno F, Ge X, Fey H, Aloman C, Fiel MI, Nieto N. Osteopontin ablation drives extramedullary hematopoiesis in the liver. Osteopontin Meeting (Chicago, IL, USA, 2015).

62. Chen Y, Ge X, Abraham-Enachescu I, Sun X, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. Osteopontin Meeting (Chicago, IL, USA, 2015).

63. Nieto N. Osteopontin induced ductular reaction contributing to liver fibrosis. Osteopontin Meeting (Chicago, IL, USA, 2015).

64. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. Cancer Center, University of Illinois at Chicago (Chicago, IL, USA, 2015).

65. Chen Y, Ge X, Abraham-Enachescu I, Sun X, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. UIC College of Medicine Research Day (Chicago, IL, USA, 2015).

66. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. UIC College of Medicine Research Day (Chicago, IL, USA, 2015).

67. Ge X, Abraham-Enachescu I, Chen Y, Sun X, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. European Association for the Study of the Liver (Barcelona, Spain, 2016).

68. Magdaleno F, Arriazu E, Ruiz de Galarreta M, Chen Y, Ge X, Conde de la Rosa L, Nieto N. Cartilage oligomeric matrix protein participates in the pathogenesis of liver fibrosis. European Association for the Study of the Liver (Barcelona, Spain, 2016).

69. Cordoba-Chacon J, Guzman G, Nieto N, Kineman R. How does growth hormone (GH) protect against, and reverse, liver damage? Department of Medicine 4th Annual Scholarly Activities Day, University of Illinois at Chicago (Chicago, IL, USA, 2015)

70. Saha B, Adejumo A, Kodys K, Lowe P, Catalano D, Giansiracusa D, Vo T, Kroll A, Barton B, Nieto N, McCullough A, Nagy L, McClain C, Mitchell M, Szabo G. Macrophage activation marker sCD163 and sCD206 predict mortality in patients with alcoholic hepatitis. American Association for the Study of Liver Diseases (Boston, USA, 2016).

71. Hicks DF, Goossens N, Blas-Garcia A, Wooden B, Wallace MC, Nieto N, Lade A, Readhead B, Dudley J, Lee YA, Hoshida Y, Friedman SL. Bioinformatic identification and validation of C1QTNF2 as a candidate antifibrotic molecule in hepatic stellate cells. American Association for the Study of Liver Diseases (Boston, USA, 2016).

72. Antoine D, Ge X, Nieto N and the DASH Consortium on Translational Research in Alcoholic Hepatitis. Identification and quantification of the post-translational modifications of HMGB1 in patients with moderate or with severe acute alcoholic hepatitis. American Association for the Study of Liver Diseases (Boston, USA, 2016).

73. Massie C, Varma V, Sreedhar H, Guzman G, Walsh M, Nieto N. Identification of early transformations and biochemical changes in patients with NASH by Fourier Transform Infrared spectroscopic imaging. American Association for the Study of Liver Diseases (Boston, USA, 2016).

74. Magdaleno F, Ge X, Fey H, Blajszczak CC, Fiel MI, Aloman C, Nieto N. Osteopontin ablation drives hematopoietic stem cell mobilization and increases hepatic iron contributing to alcoholic liver disease. American Association for the Study of Liver Diseases (Boston, USA, 2016).

75. Ge X, Abraham-Enachescu I, Blajszczak CC, Chen Y, Sun X, Koh A, Guzman G, Hoshida Y, Nieto N. Hepatocyte-derived osteopontin promotes the development of hepatocellular carcinoma. American Association for the Study of Liver Diseases (Boston, USA, 2016).

76. Ge X, Magdaleno F, Arriazu E, Chen Y, de la Cruz R, Theise N, Nieto N. High mobility group box-1 participates in the pathogenesis of liver fibrosis. American Association for the Study of Liver Diseases (Boston, USA, 2016).

77. Massie C, Varma V, Sreedhar H, Guzman G, Walsh M, Nieto N. Biochemical Changes in Steatohepatitis Progression in the Liver. Biomedical Engineering Society (Minneapolis, USA, 2016).

15. OTHER: COURSE WORK

07/1991 Training Course in Biotechnology at Bayer and Hoechst
(Leverkusen, Germany)

1995 First Certificate in English
University of Cambridge
(Cambridge, United Kingdom)

1997 English as a Second Language
International English Language Institute
Hunter College of the City University of New York
(New York, USA)

1996 Hazardous Chemical Communications and Laboratory Safety Training
Albert Einstein College of Medicine
(New York, USA)

2002 Advances in Molecular Medicine Workshop
(Pamplona, Spain)

2006 Proteomics Informatics Course
NHLBI Seattle Proteomics Center
Institute for Systems Biology
(Seattle, USA)

2008, 2012 Data Security
CITI Collaborative Institutional Training Initiative
Icahn School of Medicine at Mount Sinai
(New York, USA)

2008, 2012 HIPAA Training
CITI Collaborative Institutional Training Initiative
Icahn School of Medicine at Mount Sinai
(New York, USA)

2012 CITI Good Clinical Practice Course
CITI Collaborative Institutional Training Initiative
Icahn School of Medicine at Mount Sinai

(New York, USA)

2012 Investigators/Research Staff Curriculum
CITI Collaborative Institutional Training Initiative
Icahn School of Medicine at Mount Sinai
(New York, USA)

2014 Conflict of Interest Training for Investigators and Key Research Personnel
University of Illinois at Chicago
(Illinois, USA)

2014 NIH Prior Approval Requirements Overview
University of Illinois at Chicago
(Illinois, USA)

2014 Animals and Research at UIC
AALAS Learning Library
University of Illinois at Chicago
(Illinois, USA)

2014 Working with Mice and Rats at UIC
AALAS Learning Library
University of Illinois at Chicago
(Illinois, USA)

2015 Ethics training for University employees
University of Illinois at Chicago
(Illinois, USA)

2015 Privacy and HIPAA Training
US Department of Veterans Affairs
Jesse Brown VA Medical Center
(Illinois, USA)

2015 VA Privacy and Information Security Awareness and Rules of Behavior
US Department of Veterans Affairs
Jesse Brown VA Medical Center
(Illinois, USA)