

PROFESSIONAL SERVICES AGREEMENT

For

Medical (Cardiac Pathology) Consulting Services

Contract # 1328-13008

BETWEEN



COOK COUNTY GOVERNMENT

Cook County Medical Examiner's Office

AND

Northwestern Medical Faculty Foundation, doing business as Northwestern
Medical Group

PROFESSIONAL SERVICES AGREEMENT

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- Exhibit 1 Scope of Services
- Exhibit 2 Schedule of Compensation
- Exhibit 3 Cook County Transportation Expense Reimbursement
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AGREEMENT

This Agreement is made and entered into by and between the County of Cook, a public body corporate of the State of Illinois, on behalf of Office of the Chief Procurement Officer hereinafter referred to as "County" and Northwestern Medical Faculty Foundation, doing business as Northwestern Medical Group, a not-for profit corporation registered in the Corporation State of Illinois, hereinafter referred to as "Consultant", pursuant to authorization by the Cook County Procurement Codes.

BACKGROUND

The County of Cook issued a Request for Proposals "RFP" for Medical (Cardiac Pathology) Consulting Services. Proposals were evaluated in accordance with the evaluation criteria published in the RFP. The Consultant was selected based on the proposal submitted and evaluated by the County representatives.

Consultant represents that it has the professional experience and expertise to provide the necessary services and further warrants that it is ready, willing and able to perform in accordance with the terms and conditions as set forth in this Agreement.

NOW, THEREFORE, the County and Consultant agree as follows:

TERMS AND CONDITIONS

ARTICLE 1) INCORPORATION OF BACKGROUND

The Background information set forth above is incorporated by reference as if fully set forth here.

ARTICLE 2) DEFINITIONS

a) Definitions

The following words and phrases have the following meanings for purposes of this Agreement:

"Additional Services" means those services which are within the general scope of Services of this Agreement, but beyond the description of services required under Article 3, and all services reasonably necessary to complete the Additional Services to the standards of performance required by this Agreement. Any Additional Services requested by the Department require the approval of the Chief Procurement Officer in a written modification to this Agreement before Consultant is obligated to perform those Additional Services and before the County becomes obligated to pay for those Additional Services.

"Agreement" means this Professional Services Agreement, including all exhibits attached to it and incorporated in it by reference, and all amendments, modifications or revisions made in accordance with its terms.

ARTICLE 3) DUTIES AND RESPONSIBILITIES OF CONSULTANT

a) Scope of Services

This description of Services is intended to be general in nature and is neither a complete description of Consultant's Services nor a limitation on the Services that Consultant is to provide under this Agreement. Consultant must provide the Services in accordance with the standards of performance set forth in Section 3c. The Services that Consultant must provide include, but are not limited to, those described in Exhibit 1, Scope of Services and Time Limits for Performance, which is attached to this Agreement and incorporated by reference as if fully set forth here.

b) Deliverables

In carrying out its Services, Consultant must prepare or provide to the County various Deliverables. "**Deliverables**" include work product, such as written reviews, recommendations, reports and analyses, produced by Consultant for the County.

The County may reject Deliverables that do not include relevant information or data, or do not include all documents or other materials specified in this Agreement or reasonably necessary for the purpose for which the County made this Agreement or for which the County intends to use the Deliverables. If the County determines that Consultant has failed to comply with the foregoing standards, it has 30 days from the discovery to notify Consultant of its failure. If Consultant does not correct the failure, if it is possible to do so, within 30 days after receipt of notice from the County specifying the failure, then the County, by written notice, may treat the failure as a default of this Agreement under Article 9.

Partial or incomplete Deliverables may be accepted for review only when required for a specific and well-defined purpose and when consented to in advance by the County. Such Deliverables will not be considered as satisfying the requirements of this Agreement and partial or incomplete Deliverables in no way relieve Consultant of its commitments under this Agreement.

c) Standard of Performance

Consultant must perform all Services required of it under this Agreement with that degree of skill, care and diligence normally shown by a consultant performing services of a scope and purpose and magnitude comparable with the nature of the Services to be provided under this Agreement. Consultant acknowledges that it is entrusted with or has access to valuable and confidential information and records of the County and with respect to that information, Consultant agrees to be held to the standard of care of a fiduciary.

Consultant must assure that all Services that require the exercise of professional skills or judgment are accomplished by professionals qualified and competent in the applicable discipline and appropriately licensed, if required by law. Consultant must provide copies of any such licenses. Consultant remains responsible for the professional and technical accuracy of all Services or Deliverables furnished, whether by Consultant or its Subcontractors or others on its

behalf. All Deliverables must be prepared in a form and content satisfactory to the Department and delivered in a timely manner consistent with the requirements of this Agreement.

If Consultant fails to comply with the foregoing standards, Consultant must perform again, at its own expense, all Services required to be re-performed as a direct or indirect result of that failure. Any review, approval, acceptance or payment for any of the Services by the County does not relieve Consultant of its responsibility for the professional skill and care and technical accuracy of its Services and Deliverables. This provision in no way limits the County's rights against Consultant either under this Agreement, at law or in equity.

d) Personnel

i) Adequate Staffing

Consultant must, upon receiving a fully executed copy of this Agreement, assign and maintain during the term of this Agreement and any extension of it an adequate staff of competent personnel that is fully equipped, licensed as appropriate, available as needed, qualified and assigned exclusively to perform the Services. Consultant must include among its staff the Key Personnel and positions as identified below. The level of staffing may be revised from time to time by notice in writing from Consultant to the County and with written consent of the County, which consent the County will not withhold unreasonably. If the County fails to object to the revision within 14 days after receiving the notice, then the revision will be considered accepted by the County.

ii) Key Personnel

Consultant must not reassign or replace Key Personnel without the written consent of the County, which consent the County will not unreasonably withhold. "**Key Personnel**" means those job titles and the persons assigned to those positions in accordance with the provisions of this Section 3.d(ii). The Department may at any time in writing notify Consultant that the County will no longer accept performance of Services under this Agreement by one or more Key Personnel listed. Upon that notice Consultant must immediately suspend the services of the key person or persons and must replace him or them in accordance with the terms of this Agreement. A list of Key Personnel is found in Exhibit 1, Scope of Services.

e) Minority and Women's Business Enterprises Commitment

To the extent applicable in the performance of this Agreement, including the procurement and lease of materials or equipment, Consultant must abide by the minority and women's business enterprise commitment requirements of the Cook County Ordinance, (Article IV, Section 34-267 through 272) except to the extent waived by the Compliance Director. Consultant's completed MBE/WBE Utilization Plan evidencing its compliance with this requirement are a part of this Agreement, in Section 1 of the Economic Disclosure Statement, upon acceptance by the Compliance Director. Consultant must utilize minority and women's business enterprises at the greater of the amounts committed to by the Consultant for this Agreement in accordance with Section 1 of the Economic Disclosure Statement .

g) Insurance

The County's Risk Management Office maintains the right to add insurance requirements. "**Risk Management Office**" means the Risk Management Office, which is under the direction of the Director of Risk Management and is charged with reviewing and analyzing insurance and related liability matters for the County.

If required by the County at any time, during the term of this Contract, the Consultant shall purchase and maintain at all times during the terms of this Contract insurance coverage which is satisfactory to the County and will satisfactory insure the Consultant against claims and liabilities which arise or could arise because of the performance or nonperformance of the Contract. All such insurance, if required, shall meet the requirements of the County's Department of Risk Management and shall name the County as an additional insured unless such designation is unavailable due to commercial practices in the insurance industry as to a particular type of coverage. As stated in Article 10, Section (i), the Consultant is an Independent Contractor, and is not entitled to receive any benefits, including but not limited, to worker's compensation benefits and unemployment compensation.

h) Confidentiality and Ownership of Documents

Contractor acknowledges and agrees that information regarding this Contract is confidential and shall not be disclosed, directly, indirectly or by implication, or be used by Contractor in any way, whether during the term of this Contract or at any time thereafter, except solely as required in the course of Contractor's performance hereunder. Contractor shall comply with the applicable privacy laws and regulations affecting County and will not disclose any of County's records, materials, or other data to any third party. Contractor shall not have the right to compile and distribute statistical analyses and reports utilizing data derived from information or data obtained from County without the prior written approval of County. In the event such approval is given, any such reports published and distributed by Contractor shall be furnished to County without charge.

All documents, data, studies, reports, work product or product created as a result of the performance of the Contract (the "Documents") shall be included in the Deliverables and shall be the property of the County of Cook. It shall be a breach of this Contract for the Contractor to reproduce or use any documents, data, studies, reports, work product or product obtained from the County of Cook or any Documents created hereby, whether such reproduction or use is for Contractor's own purposes or for those of any third party. During the performance of the Contract Contractor shall be responsible of any loss or damage to the Documents while they are in Contractor's possession, and any such loss or damage shall be restored at the expense of the Contractor. The County and its designees shall be afforded full access to the Documents and the work at all times.

i) Patents, Copyrights and Licenses

If applicable, Contractor shall furnish the Chief Procurement Officer with all licenses required for the County to utilize any software, including firmware or middleware, provided by Contractor as part of the Deliverables. Such licenses shall be clearly marked with a reference to the number of this County Contract. Contractor shall also furnish a copy of such licenses to the Chief Procurement Officer. Unless otherwise stated in these Contract documents, such licenses shall be perpetual and shall not limit the number of persons who may utilize the software on behalf of the County.

Contractor agrees to hold harmless and indemnify the County, its officers, agents, employees and affiliates from and defend, at its own expense (including reasonable attorneys', accountants' and consultants' fees), any suit or proceeding brought against County based upon a claim that the ownership and/or use of equipment, hardware and software or any part thereof provided to the County or utilized in performing Contractor's services constitutes an infringement of any patent, copyright or license or any other property right.

In the event the use of any equipment, hardware or software or any part thereof is enjoined, Contractor with all reasonable speed and due diligence shall provide or otherwise secure for County, at the Contractor's election, one of the following: the right to continue use of the equipment, hardware or software; an equivalent system having the Specifications as provided in this Contract; or Contractor shall modify the system or its component parts so that they become non-infringing while performing in a substantially similar manner to the original system, meeting the requirements of this Contract.

j) Examination of Records and Audits

The Contractor agrees that the Cook County Auditor or any of its duly authorized representatives shall, until expiration of three (3) years after the final payment under the Contract, have access and the right to examine any books, documents, papers, canceled checks, bank statements, purveyor's and other invoices, and records of the Contractor related to the Contract, or to Contractor's compliance with any term, condition or provision thereof. The Contractor shall be responsible for establishing and maintaining records sufficient to document the costs associated with performance under the terms of this Contract.

The Contractor further agrees that it shall include in all of its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Cook County Auditor or any of its duly authorized representatives shall, until expiration of three (3) years after final payment under the subcontract, have access and the right to examine any books, documents, papers, canceled checks, bank statements, purveyor's and other invoices and records of such subcontractor involving transactions relating to the subcontract, or to such subcontractor's compliance with any term, condition or provision thereunder or under the Contract.

In the event the Contractor receives payment under the Contract, reimbursement for which is later disallowed by the County, the Contractor shall promptly refund the disallowed amount to the County on request, or at the County's option, the County may credit the amount disallowed from the next payment due or to become due to the Contractor under any contract with the County.

To the extent this Contract pertains to Deliverables which may be reimbursable under the Medicaid or Medicare Programs, Contractor shall retain and make available upon request, for a period of four (4) years after furnishing services pursuant to this Agreement, the contract, books, documents and records which are necessary to certify the nature and extent of the costs of such services if requested by the Secretary of Health and Human Services or the Comptroller General of the United States or any of their duly authorized representatives. If Contractor carries out any of its duties under the Agreement through a subcontract with a related organization involving a value of cost of \$10,000.00 or more over a 12 month period, Contractor will cause such subcontract to contain a clause to the effect that, until the expiration of four years after the furnishing of any service pursuant to said subcontract, the related organization will make available upon request of the Secretary of Health and Human Services or the Comptroller General of the United States or any of their duly authorized representatives, copies of said subcontract and any books, documents, records and other data of said related organization that

are necessary to certify the nature and extent of such costs. This paragraph relating to the retention and production of documents is included because of possible application of Section 1861(v)(1)(I) of the Social Security Act to this Agreement; if this Section should be found to be inapplicable, then this paragraph shall be deemed inoperative and without force and effect.

k) Subcontract Subcontracting or Assignment of Contract or Contract Funds

Once awarded, this Contract shall not be subcontracted or assigned, in whole or in part, without the advance written approval of the Chief Procurement Officer, which approval shall be granted or withheld at the sole discretion of the Chief Procurement Officer. In no case, however, shall such approval relieve the Contractor from its obligations or change the terms of the Contract. The Contractor shall not transfer or assign any Contract funds or any interest therein due or to become due without the advance written approval of the Chief Procurement Officer. The unauthorized subcontracting or assignment of the Contract, in whole or in part, or the unauthorized transfer or assignment of any Contract funds, either in whole or in part, or any interest therein, which shall be due or are to become due the Contractor shall have no effect on the County and are null and void.

Prior to the commencement of the Contract, the Contractor shall identify in writing to the Chief Procurement Officer the names of any and all subcontractors it intends to use in the performance of the Contract. The Chief Procurement Officer shall have the right to disapprove any subcontractor. Identification of subcontractors to the Chief Procurement Officer shall be in addition to any communications with County offices other than the Chief Procurement Officer. All subcontractors shall be subject to the terms of this Contract. Contractor shall incorporate into all subcontracts all of the provisions of the Contract which affect such subcontract. Copies of subcontracts shall be provided to the Chief Procurement Officer upon request.

The Contractor must disclose the name and business address of each subcontractor, attorney, lobbyist, accountant, consultant and any other person or entity whom the Contractor has retained or expects to retain in connection with the Matter, as well as the nature of the relationship, and the total amount of the fees paid or estimated to be paid. The Contractor is not required to disclose employees who are paid or estimated to be paid. The Contractor is not required to disclose

employees who are paid solely through the contractor's regular payroll. "Lobbyist" means any person or entity who undertakes to influence any legislation or administrative action on behalf of any person or entity other than: 1) a not-for-profit entity, on an unpaid basis, or (2), himself. "Lobbyist" also means any person or entity any part of whose duties as an employee of another includes undertaking to influence any legislative or administrative action. If the Contractor is uncertain whether a disclosure is required under this Section, the Contractor must either ask the County, whether disclosure is required or make the disclosure.

The County reserves the right to prohibit any person from entering any County facility for any reason. All contractors and subcontractors of the Contractor shall be accountable to the Chief Procurement Officer or his designee while on any County property and shall abide by all rules and regulations imposed by the County.

ARTICLE 4) TERM OF PERFORMANCE

a) Term of Performance

This Agreement takes effect when approved by the Cook County Chief Procurement Officer and its term shall begin on the date of contract execution ("**Effective Date**") and continue for one year or until this Agreement is terminated in accordance with its terms, whichever occurs first.

b) Timeliness of Performance

i) Consultant must provide the Services and Deliverables within the term and within the time limits required under this Agreement, pursuant to the provisions of Section 4.a and Exhibit 1. Further, Consultant acknowledges that **TIME IS OF THE ESSENCE** and that the failure of Consultant to comply with the time limits described in this Section 4.2 may result in economic or other losses to the County.

ii) Neither Consultant nor Consultant's agents, employees or Subcontractors are entitled to any damages from the County, nor is any party entitled to be reimbursed by the County, for damages, charges or other losses or expenses incurred by Consultant by reason of delays or hindrances in the performance of the Services, whether or not caused by the County.

c) Agreement Extension Option

The Chief Procurement Officer may at any time before this Agreement expires elect to extend this Agreement for up to three additional one-year periods under the same terms and conditions as this original Agreement, except as provided otherwise in this Agreement, by notice in writing to Consultant, and subject to agreement of Consultant. After notification by the Chief Procurement Officer, this Agreement must be modified to reflect the time extension in accordance with the provisions of Section 10.c.

ARTICLE 5) COMPENSATION

a) Basis of Payment

The County will pay Consultant according to the Schedule of Compensation in the attached Exhibit 2 for the successful completion of services.

b) Method of Payment

All invoices submitted by the Contractor shall be in accordance with the cost provisions according to the Schedule of Compensation in the attached Exhibit 2. The invoices shall contain a detailed description of the Deliverables for which payment is requested. All invoices shall reflect the amounts invoiced by and the amounts paid to the Contractor as of the date of the invoice, and shall be submitted together with a properly completed County Voucher form (29A). Invoices for new charges shall not include "past due" amounts, if any, which amounts must be set forth on a separate invoice. No payments shall be made with respect to invoices which do not include the County Voucher form or which otherwise fail to comply with the requirements of this paragraph. Contractor shall not be entitled to invoice the County for any late fees or other penalties.

c) Funding

The maximum source of funding for payments under this Agreement is identified in Exhibit 2, Schedule of Compensation. Payments under this Agreement must not exceed the dollar amount shown in Exhibit 2 without a written amendment in accordance with Section 10.c.

d) Non-Appropriation

If no funds or insufficient funds are appropriated and budgeted in any fiscal period of the County for payments to be made under this Agreement, then the County will notify Consultant in writing of that occurrence, and this Agreement will terminate on the earlier of the last day of the fiscal period for which sufficient appropriation was made or whenever the funds appropriated for payment under this Agreement are exhausted. Payments for Services completed to the date of notification will be made to Consultant. No payments will be made or due to Consultant and under this Agreement beyond those amounts appropriated and budgeted by the County to fund payments under this Agreement.

e) Taxes

Federal Excise Tax does not apply to materials purchased by the County by virtue of Exemption Certificate No. 36-75-0038K. Illinois Retailers' Occupation Tax, Use Tax and Municipal Retailers' Occupation Tax do not apply to deliverables, materials or services purchased by the County by virtue of statute. The price or prices quoted herein shall include any and all other federal and/or state, direct and/or indirect taxes which apply to this Contract. The County's State of Illinois Sales Tax Exemption Identification No. is E-9998-2013-05.

f) Price Reduction

If at any time after the contract award, Contractor makes a general price reduction in the price of any of the Deliverables, the equivalent price reduction based on similar quantities and/or considerations shall apply to this Contract for the duration of the Contract period. For purposes of this Section 5.f., Price Reduction, a general price reduction shall include reductions in the effective price charged by Contractor by reason of rebates, financial incentives, discounts, value points or other benefits with respect to the purchase of the Deliverables. Such price reductions shall be effective at the same time and in the same manner as the reduction Contractor makes in the price of the Deliverables to its prospective customers generally.

g) Contractor Credits

To the extent the Contractor gives credits toward future purchases of goods or services, financial incentives, discounts, value points or other benefits based on the purchase of the materials or services provided for under this Contract, such credits belong to the County and not any specific using department. Contractor shall reflect any such credits on its invoices and in the amounts it invoices the County.

ARTICLE 6) DISPUTES

Any dispute arising under the Contract between the County and Contractor shall be decided by the Chief Procurement Officer. The complaining party shall submit a written statement detailing the dispute and specifying the specific relevant Contract provision(s) to the Chief Procurement Officer. Upon request of the Chief Procurement Officer, the party complained against shall respond to the complaint in writing within five days of such request. The Chief Procurement Officer will reduce her decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Chief Procurement Officer will be final and binding. Dispute resolution as provided herein shall be a condition precedent to any other action at law or in equity. However, unless a notice is issued by the Chief Procurement Officer indicating that additional time is required to review a dispute, the parties may exercise their contractual remedies, if any, if no decision is made within sixty (60) days following notification to the Chief Procurement Officer of a dispute. No inference shall be drawn from the absence of a decision by the Chief Procurement Officer. Notwithstanding a dispute, Contractor shall continue to discharge all its obligations, duties and responsibilities set forth in the Contract during any dispute resolution proceeding unless otherwise agreed to by the County in writing.

ARTICLE 7) COMPLIANCE WITH ALL LAWS

The Contractor shall observe and comply with the laws, ordinances, regulations and codes of the Federal, State, County and other local government agencies which may in any manner affect the performance of the Contract including, but not limited to, those County Ordinances set forth in the Certifications attached hereto and incorporated herein. Assurance of compliance with this requirement by the Contractor's employees, agents or subcontractors shall be the responsibility of

the Contractor.

The Contractor shall secure and pay for all federal, state and local licenses, permits and fees required hereunder.

ARTICLE 8) SPECIAL CONDITIONS

a) Warranties and Representations

In connection with signing and carrying out this Agreement, Consultant:

- i) warrants that Consultant is appropriately licensed under Illinois law to perform the Services required under this Agreement and will perform no Services for which a professional license is required by law and for which Consultant is not appropriately licensed;
- ii) warrants it is financially solvent; it and each of its employees, agents and Subcontractors of any tier are competent to perform the Services required under this Agreement; and Consultant is legally authorized to execute and perform or cause to be performed this Agreement under the terms and conditions stated in this Agreement;
- iii) warrants that it will not knowingly use the services of any ineligible consultant or Subcontractor for any purpose in the performance of its Services under this Agreement;
- iv) warrants that Consultant and its Subcontractors are not in default at the time this Agreement is signed, and have not been considered by the Chief Procurement Officer to have, within 5 years immediately preceding the date of this Agreement, been found to be in default on any contract awarded by the County ;
- v) represents that it has carefully examined and analyzed the provisions and requirements of this Agreement; it understands the nature of the Services required; from its own analysis it has satisfied itself as to the nature of all things needed for the performance of this Agreement; this Agreement is feasible of performance in accordance with all of its provisions and requirements, and Consultant warrants it can and will perform, or cause to be performed, the Services in strict accordance with the provisions and requirements of this Agreement;
- vi) represents that Consultant and, to the best of its knowledge, its Subcontractors are not in violation of the provisions of the Illinois Criminal Code, 720 ILCS 5/33E as amended, and the Illinois Municipal Code, 65 ILCS 5/11-42.1-1; and
- vii) acknowledges that any certification, affidavit or acknowledgment made under oath in connection with this Agreement is made under penalty of perjury and, if false, is also cause for termination under Sections 9.1 and 9.3.

b) Ethics

i) In addition to the foregoing warranties and representations, Consultant warrants:

(1) no officer, agent or employee of the County is employed by Consultant or has a financial interest directly or indirectly in this Agreement or the compensation to be paid under this Agreement except as may be permitted in writing by the Board of Ethics.

(2) no payment, gratuity or offer of employment will be made in connection with this Agreement by or on behalf of any Subcontractors to the prime Consultant or higher tier Subcontractors or anyone associated with them, as an inducement for the award of a subcontract or order.

c) Joint and Several Liability

If Consultant, or its successors or assigns, if any, is comprised of more than one individual or other legal entity (or a combination of them), then under this Agreement, each and without limitation every obligation or undertaking in this Agreement to be fulfilled or performed by Consultant is the joint and several obligation or undertaking of each such individual or other legal entity.

d) Business Documents

At the request of the County, Consultant must provide copies of its latest articles of incorporation, by-laws and resolutions, or partnership or joint venture agreement, as applicable.

e) Conflicts of Interest

i) No member of the governing body of the County or other unit of government and no other officer, employee or agent of the County or other unit of government who exercises any functions or responsibilities in connection with the Services to which this Agreement pertains is permitted to have any personal interest, direct or indirect, in this Agreement. No member of or delegate to the Congress of the United States or the Illinois General Assembly and no Commissioner of the Cook County Board or County employee is allowed to be admitted to any share or part of this Agreement or to any financial benefit to arise from it.

ii) Consultant covenants that it, and to the best of its knowledge, its Subcontractors if any (collectively, "**Consulting Parties**"), presently have no direct or indirect interest and will not acquire any interest, direct or indirect, in any project or contract that would conflict in any manner or degree with the performance of its Services under this Agreement.

iii) Upon the request of the County, Consultant must disclose to the County its past client list and the names of any clients with whom it has an ongoing relationship. Consultant is not permitted to perform any Services for the County on applications or other documents submitted to the County by any of Consultant's past or present clients. If Consultant becomes aware of a

conflict, it must immediately stop work on the assignment causing the conflict and notify the County.

iv) Without limiting the foregoing, if the Consulting Parties assist the County in determining the advisability or feasibility of a project or in recommending, researching, preparing, drafting or issuing a request for proposals or bid specifications for a project, the Consulting Parties must not participate, directly or indirectly, as a prime, subcontractor or joint venturer in that project or in the preparation of a proposal or bid for that project during the term of this Agreement or afterwards. The Consulting Parties may, however, assist the County in reviewing the proposals or bids for the project if none of the Consulting Parties have a relationship with the persons or entities that submitted the proposals or bids for that project.

v) The Consultant further covenants that, in the performance of this Agreement, no person having any conflicting interest will be assigned to perform any Services or have access to any confidential information, as defined in Section 3.11 of this Agreement. If the County, by the Chief Procurement Officer in his reasonable judgment, determines that any of Consultant's Services for others conflict with the Services Consultant is to render for the County under this Agreement, Consultant must terminate such other services immediately upon request of the County.

vi) Furthermore, if any federal funds are to be used to compensate or reimburse Consultant under this Agreement, Consultant represents that it is and will remain in compliance with federal restrictions on lobbying set forth in Section 319 of the Department of the Interior and Related Agencies Appropriations Act for Fiscal year 1990, 31 U.S.C. § 1352, and related rules and regulations set forth at 54 Fed. Reg. 52,309 ff. (1989), as amended. If federal funds are to be used, Consultant must execute a Certification Regarding Lobbying, which will be attached as an exhibit and incorporated by reference as if fully set forth here.

f) Non-Liability of Public Officials

Consultant and any assignee or Subcontractor of Consultant must not charge any official, employee or agent of the County personally with any liability or expenses of defense or hold any official, employee or agent of the County personally liable to them under any term or provision of this Agreement or because of the County's execution, attempted execution or any breach of this Agreement.

ARTICLE 9) EVENTS OF DEFAULT, REMEDIES, TERMINATION, SUSPENSION AND RIGHT TO OFFSET

a) Events of Default Defined

The following constitute events of default:

i) Any material misrepresentation, whether negligent or willful and whether in the inducement or in the performance, made by Consultant to the County.

ii) Consultant's material failure to perform any of its obligations under this Agreement including the following:

(a) Failure due to a reason or circumstances within Consultant's reasonable control to perform the Services with sufficient personnel and equipment or with sufficient material to ensure the performance of the Services;

(b) Failure to perform the Services in a manner reasonably satisfactory to the Chief Procurement Officer or inability to perform the Services satisfactorily as a result of insolvency, filing for bankruptcy or assignment for the benefit of creditors;

(c) Failure to promptly re-perform within a reasonable time Services that were rejected as erroneous or unsatisfactory;

(d) Discontinuance of the Services for reasons within Consultant's reasonable control; and

(e) Failure to comply with any other material term of this Agreement, including the provisions concerning insurance and nondiscrimination.

iii) Any change in ownership or control of Consultant without the prior written approval of the Chief Procurement Officer, which approval the Chief Procurement Officer will not unreasonably withhold.

iv) Consultant's default under any other agreement it may presently have or may enter into with the County during the life of this Agreement. Consultant acknowledges and agrees that in the event of a default under this Agreement the County may also declare a default under any such other Agreements.

(v) Failure to comply with Section 7a. in the performance of the Agreement.

(vi) Consultant's repeated or continued violations of County ordinances unrelated to performance under the Agreement that in the opinion of the Chief Procurement Officer indicate a willful or reckless disregard for County laws and regulations.

b) Remedies

The occurrence of any event of default permits the County, at the County's sole option, to declare Consultant in default. The Chief Procurement Officer may in his sole discretion give Consultant an opportunity to cure the default within a certain period of time, which period of time must not exceed 30 days, unless extended by the Chief Procurement Officer. Whether to declare Consultant in default is within the sole discretion of the Chief Procurement Officer and neither that decision nor the factual basis for it is subject to review or challenge under the Disputes provision of this Agreement.

The Chief Procurement Officer will give Consultant written notice of the default, either in the form of a cure notice ("**Cure Notice**"), or, if no opportunity to cure will be granted, a default notice ("**Default Notice**"). If the Chief Procurement Officer gives a Default Notice, he will also indicate any present intent he may have to terminate this Agreement, and the decision to terminate (but not the decision not to terminate) is final and effective upon giving the notice. The Chief Procurement Officer may give a Default Notice if Consultant fails to effect a cure within the cure period given in a Cure Notice. When a Default Notice with intent to terminate is given as provided in this Section 9.b and Article 11, Consultant must discontinue any Services, unless otherwise directed in the notice, and deliver all materials accumulated in the performance of this Agreement, whether completed or in the process, to the County. After giving a Default Notice, the County can exercise any remedies available to it at equity or in law.

If the Chief Procurement Officer considers it to be in the County's best interests, he may elect not to declare default or to terminate this Agreement. The parties acknowledge that this provision is solely for the benefit of the County and that if the County permits Consultant to continue to provide the Services despite one or more events of default, Consultant is in no way relieved of any of its responsibilities, duties or obligations under this Agreement, nor does the County waive or relinquish any of its rights.

The remedies under the terms of this Agreement are not intended to be exclusive of any other remedies provided, but each and every such remedy is cumulative and is in addition to any other remedies, existing now or later, at law, in equity or by statute. No delay or omission to exercise any right or power accruing upon any event of default impairs any such right or power, nor is it a waiver of any event of default nor acquiescence in it, and every such right and power may be exercised from time to time and as often as the County considers expedient.

c) Early Termination

In addition to termination under Sections 9.1 and 9.2 of this Agreement, the County may terminate this Agreement, or all or any portion of the Services to be performed under it, at any time by a notice in writing from the County to Consultant. The County will give notice to Consultant in accordance with the provisions of Article 11. The effective date of termination will be the date the notice is received by Consultant or the date stated in the notice, whichever is later. If the County elects to terminate this Agreement in full, all Services to be provided under it must cease and all materials that may have been accumulated in performing this Agreement, whether completed or in the process, must be delivered to the County effective 10 days after the date the notice is considered received as provided under Article 11 of this Agreement (if no date is given) or upon the effective date stated in the notice.

After the notice is received, Consultant must restrict its activities, and those of its Subcontractors, to winding down any reports, analyses, or other activities previously begun. No costs incurred after the effective date of the termination are allowed. Payment for any Services actually and satisfactorily performed before the effective date of the termination is on the same basis as set forth in Article 5, but if any compensation is described or provided for on the basis of a period longer than 10 days, then the compensation must be prorated accordingly. No amount

of compensation, however, is permitted for anticipated profits on unperformed Services. The County and Consultant must attempt to agree on the amount of compensation to be paid to Consultant, but if not agreed on, the dispute must be settled in accordance with Article 6 of this Agreement. The payment so made to Consultant is in full settlement for all Services satisfactorily performed under this Agreement.

Consultant must include in its contracts with Subcontractors an early termination provision in form and substance equivalent to this early termination provision to prevent claims against the County arising from termination of subcontracts after the early termination. Consultant will not be entitled to make any early termination claims against the County resulting from any Subcontractor's claims against Consultant or the County to the extent inconsistent with this provision.

If the County's election to terminate this Agreement for default under Sections 9.1 and 9.2 is determined in a court of competent jurisdiction to have been wrongful, then in that case the termination is to be considered to be an early termination under this Section 9.3.

The Consultant may elect an early termination of the Agreement provided a 60 days notification is given to the Office of the Chief Procurement Officer and the Cook County Medical Examiner in accordance with Article 11 of this Agreement. Should the consultant notification to the County OCPO and ME differ; the latest notification date to the agency shall prevail.

d) Suspension

The County may at any time request that Consultant suspend its Services, or any part of them, by giving 15 days prior written notice to Consultant or upon informal oral, or even no notice, in the event of emergency. No costs incurred after the effective date of such suspension are allowed. Consultant must promptly resume its performance of the Services under the same terms and conditions as stated in this Agreement upon written notice by the Chief Procurement Officer and such equitable extension of time as may be mutually agreed upon by the Chief Procurement Officer and Consultant when necessary for continuation or completion of Services. Any additional costs or expenses actually incurred by Consultant as a result of recommencing the Services must be treated in accordance with the compensation provisions under Article 5 of this Agreement.

No suspension of this Agreement is permitted in the aggregate to exceed a period of 45 days within any one year of this Agreement. If the total number of days of suspension exceeds 45 days, Consultant by written notice may treat the suspension as an early termination of this Agreement under Section 9.3.

e) Right to Offset

i) In connection with performance under this Agreement:

The County may offset any excess costs incurred:

(i) if the County terminates this Agreement for default or any other reason resulting from Consultant's performance or non-performance;

(ii) if the County exercises any of its remedies under Section 9.2 of this Agreement; or

(iii) if the County has any credits due or has made any overpayments under this Agreement.

The County may offset these excess costs by use of any payment due for Services completed before the County terminated this Agreement or before the County exercised any remedies. If the amount offset is insufficient to cover those excess costs, Consultant is liable for and must promptly remit to the County the balance upon written demand for it. This right to offset is in addition to and not a limitation of any other remedies available to the County.

f.) Delays

Contractor agrees that no charges or claims for damages shall be made by Contractor for any delays or hindrances from any cause whatsoever during the progress of any portion of this Contract.

g.) Prepaid Fees

In the event this Contract is terminated by either party, for cause or otherwise, and the County has prepaid for any Deliverables, Contractor shall refund to the County, on a prorated basis to the effective date of termination, all amounts prepaid for Deliverables not actually provided as of the effective date of the termination. The refund shall be made within fourteen (14) days of the effective date of termination.

ARTICLE 10) GENERAL CONDITIONS

a) Entire Agreement

i) General

This Agreement, and the exhibits attached to it and incorporated in it, constitute the entire agreement between the parties and no other warranties, inducements, considerations, promises or interpretations are implied or impressed upon this Agreement that are not expressly addressed in this Agreement.

ii) No Collateral Agreements

Consultant acknowledges that, except only for those representations, statements or promises expressly contained in this Agreement and any exhibits attached to it and incorporated by reference in it, no representation, statement or promise, oral or in writing, of any kind

whatsoever, by the County, its officials, agents or employees, has induced Consultant to enter into this Agreement or has been relied upon by Consultant, including any with reference to: (i) the meaning, correctness, suitability or completeness of any provisions or requirements of this Agreement; (ii) the nature of the Services to be performed; (iii) the nature, quantity, quality or volume of any materials, equipment, labor and other facilities needed for the performance of this Agreement; (iv) the general conditions which may in any way affect this Agreement or its performance; (v) the compensation provisions of this Agreement; or (vi) any other matters, whether similar to or different from those referred to in (i) through (vi) immediately above, affecting or having any connection with this Agreement, its negotiation, any discussions of its performance or those employed or connected or concerned with it.

iii) **No Omissions**

Consultant acknowledges that Consultant was given an opportunity to review all documents forming this Agreement before signing this Agreement in order that it might request inclusion in this Agreement of any statement, representation, promise or provision that it desired or on that it wished to place reliance. Consultant did so review those documents, and either every such statement, representation, promise or provision has been included in this Agreement or else, if omitted, Consultant relinquishes the benefit of any such omitted statement, representation, promise or provision and is willing to perform this Agreement in its entirety without claiming reliance on it or making any other claim on account of its omission.

b) **Counterparts**

This Agreement is comprised of several identical counterparts, each to be fully signed by the parties and each to be considered an original having identical legal effect.

c) **Modifications and Amendments**

The parties may during the term of the Contract make modifications and amendments to the Contract but only as provided in this section. Such modifications and amendments shall only be made by mutual agreement in writing.

In the case of Contracts not approved by the Board, the Chief Procurement Officer may amend a contract provided that any such amendment does not extend the Contract by more than one (1) year, and further provided that the total cost of all such amendments does not increase the total amount of the Contract beyond \$150,000. Such action may only be made with the advance written approval of the Chief Procurement Officer. If the amendment extends the Contract beyond one (1) year or increases the total award amount beyond \$150,000, then Board approval will be required.

No County department or employee thereof has authority to make any modifications or amendments to this Contract. Any modifications or amendments to this Contract made without the express written approval of the Chief Procurement Officer is void and unenforceable.

Consultant is hereby notified that, except for modifications and amendments which are made in accordance with this Section 10.c., Modifications and Amendments, no County department or employee thereof has authority to make any modification or amendment to this Contract.

d) Governing Law and Jurisdiction

This Contract shall be governed by and construed under the laws of the State of Illinois. The Contractor irrevocably agrees that, subject to the County's sole and absolute election to the contrary, any action or proceeding in any way, manner or respect arising out of the Contract, or arising from any dispute or controversy arising in connection with or related to the Contract, shall be litigated only in courts within the Circuit Court of Cook County, State of Illinois, and the Contractor consents and submits to the jurisdiction thereof. In accordance with these provisions, Contractor waives any right it may have to transfer or change the venue of any litigation brought against it by the County pursuant to this Contract.

e) Severability

If any provision of this Agreement is held or considered to be or is in fact invalid, illegal, inoperative or unenforceable as applied in any particular case in any jurisdiction or in all cases because it conflicts with any other provision or provisions of this Agreement or of any constitution, statute, ordinance, rule of law or public policy, or for any other reason, those circumstances do not have the effect of rendering the provision in question invalid, illegal, inoperative or unenforceable in any other case or circumstances, or of rendering any other provision or provisions in this Agreement invalid, illegal, inoperative or unenforceable to any extent whatsoever. The invalidity, illegality, inoperativeness or unenforceability of any one or more phrases, sentences, clauses or sections in this Agreement does not affect the remaining portions of this Agreement or any part of it.

f) Assigns

All of the terms and conditions of this Agreement are binding upon and inure to the benefit of the parties and their respective legal representatives, successors and assigns.

g) Cooperation

Consultant must at all times cooperate fully with the County and act in the County's best interests. If this Agreement is terminated for any reason, or if it is to expire on its own terms, Consultant must make every effort to assure an orderly transition to another provider of the Services, if any, orderly demobilization of its own operations in connection with the Services, uninterrupted provision of Services during any transition period and must otherwise comply with the reasonable requests and requirements of the Department in connection with the termination or expiration.

h) Waiver

Nothing in this Agreement authorizes the waiver of a requirement or condition contrary to law or ordinance or that would result in or promote the violation of any federal, state or local law or ordinance.

Whenever under this Agreement the County by a proper authority waives Consultant's performance in any respect or waives a requirement or condition to either the County's or Consultant's performance, the waiver so granted, whether express or implied, only applies to the particular instance and is not a waiver forever or for subsequent instances of the performance, requirement or condition. No such waiver is a modification of this Agreement regardless of the number of times the County may have waived the performance, requirement or condition. Such waivers must be provided to Consultant in writing.

i) Independent Contractor

This Agreement is not intended to and will not constitute, create, give rise to, or otherwise recognize a joint venture, partnership, corporation or other formal business association or organization of any kind between Consultant and the County. The rights and the obligations of the parties are only those expressly set forth in this Agreement. Consultant must perform under this Agreement as an independent contractor and not as a representative, employee, agent, or partner of the County.

This Agreement is between the County and an independent contractor and, if Consultant is an individual, nothing provided for under this Agreement constitutes or implies an employer-employee relationship such that:

- i) The County will not be liable under or by reason of this Agreement for the payment of any compensation award or damages in connection with the Consultant performing the Services required under this Agreement.
- ii) Consultant is not entitled to membership in the County Pension Fund, Group Medical Insurance Program, Group Dental Program, Group Vision Care, Group Life Insurance Program, Deferred Income Program, vacation, sick leave, extended sick leave, or any other benefits ordinarily provided to individuals employed and paid through the regular payrolls of the County.
- iii) The County is not required to deduct or withhold any taxes, FICA or other deductions from any compensation provided to the Consultant.

j) Governmental Joint Purchasing Agreement

Pursuant to Section 4 of the Illinois Governmental Joint Purchasing Act (30 ILCS 525) and the Joint Purchase Agreement approved by the Cook County Board of Commissioners (April 9, 1965), other units of government may purchase goods or services under this contract.

ARTICLE 11) NOTICES

All notices required pursuant to this Contract shall be in writing and addressed to the parties at their respective addresses set forth below. All such notices shall be deemed duly given if hand delivered or if deposited in the United States mail, postage prepaid, registered or certified, return receipt requested. Notice as provided herein does not waive service of summons or process.

If to the County: Cook County Medical Examiner's Office
2121 W. Harrison Street
Chicago, Illinois 60602
Attention: Deputy Executive Director

and

Cook County Chief Procurement Officer
118 North Clark Street, Room 1018
Chicago, Illinois 60602
(Include County Contract Number on all notices)

If to Consultant:

Northwestern Medical Faculty Foundation, d/b/a Northwestern Medical Group
680 N. Lake Shore Drive, Suite 1118
Chicago, Illinois 60611
Attention: Judy Elleson, Department of Pathology Administrator

And

Attention: Danae K. Prousis, Deputy General Counsel

Changes in these addresses must be in writing and delivered in accordance with the provisions of this Article 11. Notices delivered by mail are considered received three days after mailing in accordance with this Article 11. Notices delivered personally are considered effective upon receipt. Refusal to accept delivery has the same effect as receipt.

ARTICLE 12) AUTHORITY

Execution of this Agreement by the Chief Procurement Officer is authorized under Section 34-123 of the County Procurement Codes. Execution of this Agreement by the Consultant is with the understanding that the signature(s) of the Consultant have been made with complete and full authority to commit Consultant to all terms and conditions of this Agreement, including each and every representation, certification and warranty contained in it, including the representations, certifications and warranties collectively incorporated by reference in it.

COOK COUNTY
OFFICE OF THE CHIEF PROCUREMENT OFFICER
CERTIFICATION FOR CONSULTING OR AUDITING SERVICES
OFFICES OF THE PRESIDENT

This Certification is made and required pursuant to Section 34-193 (a) of the Procurement Code, and must be completed by any Contractor providing Consulting or Auditing Services for Cook County. For purposes of this Certification, "County" shall mean the offices which are administered by the President of the County Board. Please print or type responses clearly and legibly. Add additional pages if needed, being careful to identify each portion of the form to which each additional page refers to.

SECTION 1: CONTRACTOR'S INFORMATION

COMPANY NAME: Northwestern Medical Faculty Foundation
ADDRESS: 680 N. Lake Shore Drive, Suite 1118, Chicago, IL 60611
TELEPHONE: 312-695-8391
CONTACT NAME: Judy Elleson
CONTACT EMAIL: judy.elleson@northwestern.edu

SECTION 2: AFFILIATE INFORMATION

If the Contractor has any "Affiliates" please provide the names, addresses and telephone numbers of each Affiliate below. For purposes of this Certification "Affiliates" shall mean a person or "Entity" that directly or indirectly controls the Contractor, is controlled by it, or with the Contractor, is under common control of another person or entity. For purposes of this Certification, "Entity" shall mean a sole proprietorship, corporation, partnership, association, business trust, estate, two or more persons having a joint or common interest, trustee of a land trust, other commercial or legal entity or any beneficiary or beneficiaries thereof.

Northwestern Memorial HealthCare, 251 E. Huron, Suite 3-710, Chicago, IL 60611, 312-926-2000

Northwestern Foundation for Research and Education, 680 N. Lake Shore Drive, Suite 1118, Chicago, IL 60611, 312-695-8391

Northwestern Memorial Physicians Group, 680 N. Lake Shore Drive, Suite 818, Chicago, IL 60611, 312-926-3107

SECTION 3: CONTRACT INFORMATION

- a. This Certification relates to the following Contract: Cardiac Pathology
- b. The Contractor is providing the following type of Services: [] Auditing or [X] Consulting
- c. The Contractor is providing the Services under the Contract for the following Cook County Business Unit or Office: Medical Examiner
- d. Is the Contractor or its Affiliates, if any, providing Consulting or Auditing Services, either directly, or as a subcontractor to the County under any other Contracts? [X] Yes or [] No.

If yes, please state the other Contract Number(s) and the Nature of Services.

1. H13-25-023 – Northwestern Medical Faculty Foundation provides Otolaryngology services at CCHHS

2. Northwestern Medical Faculty Foundation provides Maternal Fetal Medicine services to CCHHS

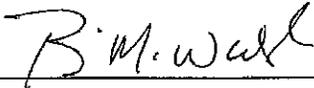
THE CONTRACTOR ACKNOWLEDGES, UNDERSTANDS AND AGREES AS FOLLOWS:

a. It has read Section 34-193 (a) of the Procurement Code, which provides as follows:

The County will not enter into any Contract for Auditing Services, nor shall it consent to a subcontract for such Auditing Services, with any Person, if such Person, or any Affiliate of such Person, has a Contract or subcontract for consulting services for or with the County. Additionally, the County will not enter into any Contract for Consulting Services, nor shall it consent to a subcontract for such Consulting Services, with any Person, if such Person, or any Affiliate of such Person, has a Contract or subcontract for Auditing Services for or with the County. For purposes of this provision, "County" shall refer only to offices which are administered by the President of the County Board and shall not refer to offices which are administered by Elected Officials.

b. The Contractor's Services under the Contract shall not violate Section 34-193 (a) of the Procurement Code.

c. The information provided herein is a material inducement to the CPO's execution of the Contract, and the CPO may rely on the information provided herein. The Contractor warrants that the information contained herein is true and correct. If the CPO determines that any information provided herein is false, incomplete, or incorrect, the CPO may terminate the Contract.



Signature

Brian M. Walsh

Name (Type or Print)

Vice President & Treasurer

Title

10/3/13

Date

**ECONOMIC DISCLOSURE STATEMENT
AND EXECUTION DOCUMENT
INDEX**

Section	Description	Pages
Instructions	Instructions for Completion of EDS	EDS I - II
1	MBE/WBE Utilization Plan	EDS 1
2	Letter of Intent	EDS 2
3	Petition for Reduction/Waiver of MBE/WBE Participation Goals	EDS 3
4	Certifications	EDS 4, 5
5	Economic and Other Disclosures, Affidavit of Child Support Obligations and Disclosure of Ownership Interest	EDS 6 - 12
6	Sole Proprietor Signature Page	EDS 13a/b/c
7	Partnership Signature Page	EDS 14/a/b/c
8	Limited Liability Corporation Signature Page	EDS 15a/b/c
9	Corporation Signature Page	EDS 16a/b/c
10	Cook County Signature Page	EDS 17

**INSTRUCTIONS FOR COMPLETION OF
ECONOMIC DISCLOSURE STATEMENT AND EXECUTION DOCUMENT**

This Economic Disclosure Statement and Execution Document ("EDS") is to be completed and executed by every Bidder on a County contract, every party responding to a Request for Proposals or Request for Qualifications ("Proposer"), and others as required by the Chief Procurement Officer. If the Undersigned is awarded a contract pursuant to the procurement process for which this EDS was submitted (the "Contract"), this Economic Disclosure Statement and Execution Document shall stand as the Undersigned's execution of the Contract.

Definitions. Capitalized terms used in this EDS and not otherwise defined herein shall have the meanings given to such terms in the Instructions to Bidders, General Conditions, Request for Proposals, Request for Qualifications, or other documents, as applicable.

"Affiliated Entity" means a person or entity that, directly or indirectly: controls the Bidder, is controlled by the Bidder, or is, with the Bidder, under common control of another person or entity. Indicia of control include, without limitation, interlocking management or ownership; identity of interests among family members; shared facilities and equipment; common use of employees; and organization of a business entity following the ineligibility of a business entity to do business with the County under the standards set forth in the Certifications included in this EDS, using substantially the same management, ownership or principals as the ineligible entity.

"Bidder," "Proposer," "Undersigned," or "Applicant," is the person or entity executing this EDS. Upon award and execution of a Contract by the County, the Bidder, Proposer, Undersigned or Applicant, as the case may be, shall become the Contractor or Contracting Party.

"Proposal," for purposes of this EDS, is the Undersigned's complete response to an RFP/RFQ, or if no RFQ/RFP was issued by the County, the "Proposal" is such other proposal, quote or offer submitted by the Undersigned, and in any event a "Proposal" includes this EDS.

"Code" means the Code of Ordinances, Cook County, Illinois available through the Cook County Clerk's Office website (<http://www.cookctyclerk.com/sub/ordinances.asp>). This page can also be accessed by going to www.cookctyclerk.com, clicking on the tab labeled "County Board Proceedings," and then clicking on the link to "Cook County Ordinances."

"Contractor" or "Contracting Party" means the Bidder, Proposer or Applicant with whom the County has entered into a Contract.

"EDS" means this complete Economic Disclosure Statement and Execution Document, including all sections listed in the Index and any attachments.

"Lobby" or "lobbying" means to, for compensation, attempt to influence a County official or County employee with respect to any County matter.

"Lobbyist" means any person or entity who lobbies.

"Prohibited Acts" means any of the actions or occurrences which form the basis for disqualification under the Code, or under the Certifications hereinafter set forth.

Sections 1 through 3: MBE/WBE Documentation. Sections 1 and 2 must be completed in order to satisfy the requirements of the County's MBE/WBE Ordinance, as set forth in the Contract Documents, if applicable. If the Undersigned believes a waiver is appropriate and necessary, Section 3, the Petition for Waiver of MBE/WBE Participation must be completed.

Section 4: Certifications. Section 4 sets forth certifications that are required for contracting parties under the Code. Execution of this EDS constitutes a warranty that all the statements and certifications contained, and all the facts stated, in the Certifications are true, correct and complete as of the date of execution.

Section 5: Economic and Other Disclosures Statement. Section 5 is the County's required Economic and Other Disclosures Statement form. Execution of this EDS constitutes a warranty that all the information provided in the EDS is true, correct and complete as of the date of execution, and binds the Undersigned to the warranties, representations, agreements and acknowledgements contained therein.

**INSTRUCTIONS FOR COMPLETION OF
ECONOMIC DISCLOSURE STATEMENT AND EXECUTION DOCUMENT**

Sections 6, 7, 8, 9: Execution Forms. The Bidder executes this EDS, and the Contract, by completing and signing three copies of the appropriate Signature Page. Section 6 is the form for a sole proprietor; Section 7 is the form for a partnership or joint venture; Section 8 is the form for a Limited Liability Corporation, and Section 9 is the form for a corporation. Proper execution requires **THREE ORIGINALS**; therefore, the appropriate Signature Page must be filled in, three copies made, and all three copies must be properly signed, notarized and submitted. The forms may be printed and completed by typing or hand writing the information required.

Required Updates. The information provided in this EDS will be kept current. In the event of any change in any information provided, including but not limited to any change which would render inaccurate or incomplete any certification or statement made in this EDS, the Undersigned will supplement this EDS up to the time the County takes action, by filing an amended EDS or such other documentation as is requested.

Additional Information. The County's Governmental Ethics and Campaign Financing Ordinances, impose certain duties and obligations on persons or entities seeking County contracts, work, business, or transactions. For further information please contact the Director of Ethics at (312) 603-4304 (69 W. Washington St. Suite 3040, Chicago, IL 60602) or visit our web-site at www.cookcountygov.com and go to the Ethics Department link. The Bidder must comply fully with the applicable ordinances.

MBE/WBE UTILIZATION PLAN (SECTION 1)

BIDDER/PROPOSER HEREBY STATES that all MBE/WBE firms included in this Plan are certified MBEs/WBEs by at least one of the entities listed in the General Conditions.

I. BIDDER/PROPOSER MBE/WBE STATUS: (check the appropriate line)

- Bidder/Proposer is a certified MBE or WBE firm. (If so, attach copy of appropriate Letter of Certification)
- Bidder/Proposer is a Joint Venture and one or more Joint Venture partners are certified MBEs or WBEs. (If so, attach copies of Letter(s) of Certification, a copy of Joint Venture Agreement clearly describing the role of the MBE/WBE firm(s) and its ownership interest in the Joint Venture and a completed Joint Venture Affidavit – available from the Office of Contract Compliance)
- Bidder/Proposer is not a certified MBE or WBE firm, nor a Joint Venture with MBE/WBE partners, but will utilize MBE and WBE firms either directly or indirectly in the performance of the Contract. (If so, complete Sections II and III).

II. Direct Participation of MBE/WBE Firms

Indirect Participation of MBE/WBE Firms

Where goals have not been achieved through direct participation, Bidder/Proposer shall include documentation outlining efforts to achieve Direct Participation at the time of Bid/Proposal submission. Indirect Participation will only be considered after all efforts to achieve Direct Participation have been exhausted. Only after written documentation of Good Faith Efforts is received will Indirect Participation be considered.

MBEs/WBEs that will perform as subcontractors/suppliers/consultants include the following:

MBE/WBE Firm: _____

Address: _____

E-mail: _____

Contact Person: _____ Phone: _____

Dollar Amount Participation: \$ _____

Percent Amount of Participation: _____ %

*Letter of Intent attached? Yes _____ No _____

*Letter of Certification attached? Yes _____ No _____

MBE/WBE Firm: _____

Address: _____

E-mail: _____

Contact Person: _____ Phone: _____

Dollar Amount Participation: \$ _____

Percent Amount of Participation: _____ %

*Letter of Intent attached? Yes _____ No _____

*Letter of Certification attached? Yes _____ No _____

Attach additional sheets as needed.

***Additionally, all Letters of Intent, Letters of Certification and documentation of Good Faith Efforts omitted from this bid/proposal must be submitted to the Office of Contract Compliance so as to assure receipt by the Contract Compliance Administrator not later than three (3) business days after the Bid Opening date.**

SEE WAIVER

COOK COUNTY GOVERNMENT LETTER OF INTENT (SECTION 2)

M/WBE Firm: _____ Certifying Agency: _____
Address: _____ Certification Expiration Date: _____
City/State: _____ Zip: _____ FEIN #: _____
Phone: _____ Fax: _____ Contact Person: _____
Email: _____ Contract #: _____

Participation: Direct Indirect

Will the M/WBE firm be subcontracting any of the performance of this contract to another firm?

No Yes – Please attach explanation. Proposed Subcontractor: _____

The undersigned M/WBE is prepared to provide the following Commodities/Services for the above named Project/ Contract:

Indicate the Dollar Amount, or Percentage, and the Terms of Payment for the above-described Commodities/ Services:

(If more space is needed to fully describe M/WBE Firm's proposed scope of work and/or payment schedule, attach additional sheets)

THE UNDERSIGNED PARTIES AGREE that this Letter of Intent will become a binding Subcontract Agreement conditioned upon the Bidder/Proposer's receipt of a signed contract from the County of Cook. The Undersigned Parties do also certify that they did not affix their signatures to this document until all areas under Description of Service/ Supply and Fee/Cost were completed.

Signature (M/WBE)

Signature (Prime Bidder/Proposer)

Print Name

Print Name

Firm Name

Firm Name

Date

Date

Subscribed and sworn before me

Subscribed and sworn before me

this ___ day of _____, 20___

this ___ day of _____, 20___

Notary Public _____

Notary Public _____

SEAL

SEAL

SEE WAIVER

PETITION FOR WAIVER OF MBE/WBE PARTICIPATION (SECTION 3)

A. BIDDER/PROPOSER HEREBY REQUESTS:

FULL MBE WAIVER FULL WBE WAIVER

REDUCTION (PARTIAL MBE and/or WBE PARTICIPATION)

_____ % of Reduction for MBE Participation

_____ % of Reduction for WBE Participation

B. REASON FOR FULL/REDUCTION WAIVER REQUEST

Bidder/Proposer shall check each item applicable to its reason for a waiver request. Additionally, supporting documentation shall be submitted with this request. If such supporting documentation cannot be submitted with bid/proposal/quotation, such documentation shall be submitted directly to the Office of Contract Compliance no later than three (3) days from the date of submission date.

- (1) Lack of sufficient qualified MBEs and/or WBEs capable of providing the goods or services required by the contract. (Please explain)
- (2) The specifications and necessary requirements for performing the contract make it impossible or economically infeasible to divide the contract to enable the contractor to utilize MBEs and/or WBEs in accordance with the applicable participation. (Please explain)
- (3) Price(s) quoted by potential MBEs and/or WBEs are above competitive levels and increase cost of doing business and would make acceptance of such MBE and/or WBE bid economically impracticable, taking into consideration the percentage of total contract price represented by such MBE and/or WBE bid. (Please explain)
- (4) There are other relevant factors making it impossible or economically infeasible to utilize MBE and/or WBE firms. (Please explain) SEE ATTACHED EXHIBIT 1

C. GOOD FAITH EFFORTS TO OBTAIN MBE/WBE PARTICIPATION

- (1) Made timely written solicitation to identified MBEs and WBEs for utilization of goods and/or services; and provided MBEs and WBEs with a timely opportunity to review and obtain relevant specifications, terms and conditions of the proposal to enable MBEs and WBEs to prepare an informed response to solicitation. (Please attach)
- (2) Followed up initial solicitation of MBEs and WBEs to determine if firms are interested in doing business. (Please attach)
- (3) Advertised in a timely manner in one or more daily newspapers and/or trade publication for MBEs and WBEs for supply of goods and services. (Please attach)
- (4) Used the services and assistance of the Office of Contract Compliance staff. (Please explain)
- (5) Engaged MBEs & WBEs for indirect participation. (Please explain)

D. OTHER RELEVANT INFORMATION

Attach any other documentation relative to Good Faith Efforts in complying with MBE/WBE participation.

EXHIBIT 1: PETITION FOR WAIVER OF MBE/WBE PARTICIPATION

Northwestern Medical Faculty Foundation will be providing board certified physicians specializing in pathology. Due to the highly specialized nature of services being rendered, a waiver is being requested. The Foundation is an equal opportunity employer and physicians providing services at the Cook County Medical Examiner's Office will abide by applicable policies and procedures.

CERTIFICATIONS (SECTION 4)

THE FOLLOWING CERTIFICATIONS ARE MADE PURSUANT TO STATE LAW AND THE CODE. THE UNDERSIGNED IS CAUTIONED TO CAREFULLY READ THESE CERTIFICATIONS PRIOR TO SIGNING THE SIGNATURE PAGE. SIGNING THE SIGNATURE PAGE SHALL CONSTITUTE A WARRANTY BY THE UNDERSIGNED THAT ALL THE STATEMENTS, CERTIFICATIONS AND INFORMATION SET FORTH WITHIN THESE CERTIFICATIONS ARE TRUE, COMPLETE AND CORRECT AS OF THE DATE THE SIGNATURE PAGE IS SIGNED. THE UNDERSIGNED IS NOTIFIED THAT IF THE COUNTY LEARNS THAT ANY OF THE FOLLOWING CERTIFICATIONS WERE FALSELY MADE, THAT ANY CONTRACT ENTERED INTO WITH THE UNDERSIGNED SHALL BE SUBJECT TO TERMINATION.

A. PERSONS AND ENTITIES SUBJECT TO DISQUALIFICATION

No person or business entity shall be awarded a contract or sub-contract, for a period of five (5) years from the date of conviction or entry of a plea or admission of guilt, civil or criminal, if that person or business entity:

- 1) Has been convicted of an act committed, within the State of Illinois, of bribery or attempting to bribe an officer or employee of a unit of state, federal or local government or school district in the State of Illinois in that officer's or employee's official capacity;
- 2) Has been convicted by federal, state or local government of an act of bid-rigging or attempting to rig bids as defined in the Sherman Anti-Trust Act and Clayton Act. Act. 15 U.S.C. Section 1 *et seq.*;
- 3) Has been convicted of bid-rigging or attempting to rig bids under the laws of federal, state or local government;
- 4) Has been convicted of an act committed, within the State, of price-fixing or attempting to fix prices as defined by the Sherman Anti-Trust Act and the Clayton Act. 15 U.S.C. Section 1, *et seq.*;
- 5) Has been convicted of price-fixing or attempting to fix prices under the laws the State;
- 6) Has been convicted of defrauding or attempting to defraud any unit of state or local government or school district within the State of Illinois;
- 7) Has made an admission of guilt of such conduct as set forth in subsections (1) through (6) above which admission is a matter of record, whether or not such person or business entity was subject to prosecution for the offense or offenses admitted to; or
- 8) Has entered a plea of *nolo contendere* to charge of bribery, price-fixing, bid-rigging, or fraud, as set forth in sub-paragraphs (1) through (6) above.

In the case of bribery or attempting to bribe, a business entity may not be awarded a contract if an official, agent or employee of such business entity committed the Prohibited Act on behalf of the business entity and pursuant to the direction or authorization of an officer, director or other responsible official of the business entity, and such Prohibited Act occurred within three years prior to the award of the contract. In addition, a business entity shall be disqualified if an owner, partner or shareholder controlling, directly or indirectly, 20 % or more of the business entity, or an officer of the business entity has performed any Prohibited Act within five years prior to the award of the Contract.

THE UNDERSIGNED HEREBY CERTIFIES THAT: The Undersigned has read the provisions of Section A, Persons and Entities Subject to Disqualification, that the Undersigned has not committed any Prohibited Act set forth in Section A, and that award of the Contract to the Undersigned would not violate the provisions of such Section or of the Code.

B. BID-RIGGING OR BID ROTATING

THE UNDERSIGNED HEREBY CERTIFIES THAT: *In accordance with 720 ILCS 5/33 E-11, neither the Undersigned nor any Affiliated Entity is barred from award of this Contract as a result of a conviction for the violation of State laws prohibiting bid-rigging or bid rotating.*

C. DRUG FREE WORKPLACE ACT

Northwestern Medical Faculty Foundation is not subject to this Act and makes no certification with respect to this Section C.

D. DELINQUENCY IN PAYMENT OF TAXES

THE UNDERSIGNED HEREBY CERTIFIES THAT: The Undersigned is not an owner or a party responsible for the payment of any tax or fee administered by Cook County, by a local municipality, or by the Illinois Department of Revenue, which such tax or fee is delinquent, such as bar award of a contract or subcontract pursuant to the Code, Chapter 34, Section 34-129.

E. HUMAN RIGHTS ORDINANCE

No person who is a party to a contract with Cook County ("County") shall engage in unlawful discrimination or sexual harassment against any individual in the terms or conditions of employment, credit, public accommodations, housing, or provision of County facilities, services or programs (Code Chapter 42, Section 42-30 *et seq.*).

F. ILLINOIS HUMAN RIGHTS ACT

THE UNDERSIGNED HEREBY CERTIFIES THAT: It is in compliance with the the Illinois Human Rights Act (775 ILCS 5/2-105), and agrees to abide by the requirements of the Act as part of its contractual obligations.

G. MACBRIDE PRINCIPLES, CODE CHAPTER 34, SECTION 34-132

If the primary contractor currently conducts business operations in Northern Ireland, or will conduct business during the projected duration of a County contract, the primary contractor shall make all reasonable and good faith efforts to conduct any such business operations in Northern Ireland in accordance with the MacBride Principles for Northern Ireland as defined in Illinois Public Act 85-1390.

H. LIVING WAGE ORDINANCE PREFERENCE (COOK COUNTY CODE, CHAPTER 34, SECTION 34-127;

The Code requires that a living wage must be paid to individuals employed by a Contractor which has a County Contract and by all subcontractors of such Contractor under a County Contract, throughout the duration of such County Contract. The amount of such living wage is determined from time to time by, and is available from, the Chief Financial Officer of the County.

For purposes of this EDS Section 4, H, "Contract" means any written agreement whereby the County is committed to or does expend funds in connection with the agreement or subcontract thereof. The term "Contract" as used in this EDS, Section 4, I, specifically excludes contracts with the following:

- 1) Not-For Profit Organizations (defined as a corporation having tax exempt status under Section 501(C)(3) of the United State Internal Revenue Code and recognized under the Illinois State not-for-profit law);
- 2) Community Development Block Grants;
- 3) Cook County Works Department;
- 4) Sheriff's Work Alternative Program; and
- 5) Department of Correction inmates.

4. REAL ESTATE OWNERSHIP DISCLOSURES.

The Undersigned must indicate by checking the appropriate provision below and providing all required information that either:

- a) The following is a complete list of all real estate owned by the Undersigned in Cook County:

PERMANENT INDEX NUMBER(S): See attached Exhibit 3

(ATTACH SHEET IF NECESSARY TO LIST ADDITIONAL INDEX NUMBERS)

OR:

- b) _____ The Undersigned owns no real estate in Cook County.

5. EXCEPTIONS TO CERTIFICATIONS OR DISCLOSURES.

If the Undersigned is unable to certify to any of the Certifications or any other statements contained in this EDS and not explained elsewhere in this EDS, the Undersigned must explain below:

If the letters, "NA", the word "None" or "No Response" appears above, or if the space is left blank, it will be conclusively presumed that the Undersigned certified to all Certifications and other statements contained in this EDS.

EXHIBIT 2: Cook County Locations

Dept Of Dermatology	878 N. St. Clair	19-150
Dept Of Gastroenterology	675 N. St. Clair	No suite
Department of Cardiology	675 N. St. Clair	#19-100
Dept. Of Radiology	675 N. St. Clair	13-800
Dept. Of Hem/Oncology	675 N. St. Clair	14-100
Dept. Of Transplant Surgery	672 N. St. Clair	17-200
Dept. Of Medicine	675 N. St. Clair	3-150
Liver & Kidney Transplant	2601 Compass Rd. Glenview	
NMFF Prinitica Women's Hospital	250 E. Superior	03-2304
Dept. Of Psychiatry	675 N. St. Clair	20-250
NMFF	675 N. St. Clair	
NMFF BMH Medical Group	1000 Central St. Evanston	#800
Feinberg	675 N. St. Clair	L-308
Dept. Of Emergency Medicine	250 E. Huron	
Dept. Of Radiology	201 E. Huron	13th floor
Dept. Of Radiology	250 E. Huron	
Dept. Of Anesthesiology	251 E. Huron	5-704
Dept. Of Otolaryngology	675 N. St. Clair	15-200
Dept. Of Ophthalmology	675 N. St. Clair	16-150
Dept. Of Ortho. Surgery	675 N. St. Clair	17-100
Dept. Of Inter. Medicine	675 N. St. Clair	18-200
Dept. Of OB/GYN	675 N. St. Clair	14-200
Dept. Of Psychiatry	446 E. Ontario	7-100
Dept. Of Dermatology	675 N. St. Clair	#1800
Cancer Center	675 N. St. Clair	21-100
Dept. Of Geriatric	675 N. St. Clair	2-111
Dept. Of Cardiology	675 N. St. Clair	19-100
Dept. Of Plastic Surgery	675 N. St. Clair	19-250
Dept. Of Gastro/Endo Surgery	675 N. St. Clair	17-250
Dept. Of Infectious Disease	675 N. St. Clair	13-208
Dept. Of Nephrology	675 N. St. Clair	18-250
Dept. Of Pulmonary	675 N. St. Clair	18-250
Dept. Of Endocrinology	675 N. St. Clair	18-250
Dept. Of Allergy	675 N. St. Clair	18-250
Dept. Of Rheumatology	675 N. St. Clair	18-250
Dept. Of Vascular Surgery	675 N. St. Clair	19-300
Dept. Of Neurosurgery	675 N. St. Clair	20-100
Dept. Of Urology	675 N. St. Clair	20-150
Lake Forest Diag.	2501 Compass Rd.	#105 Building A
Northwestern Medical Faculty Foundation	2701. Patriot Blvd. Glenview	
Nasal And Sinus Assoc.	675 N. St. Clair	#1575
Northwestern Neurology	444 N. Northwest Highway	Park Ridge #200
Chicago Lake Shore Medical	675 N. St. Clair	#2300
Chicago Center Surg. Of the Hand.	737 N. Michigan Ave.	
Dept. Of Neurology	675 N. St. Clair	20-100

EXHIBIT 3: REAL ESTATE OWNERSHIP DISCLOSURES

<u>Address</u>	<u>Permanent Index Numbers</u>
301 East Huron	17-10-202-091-0000
301 East Huron	17-10-202-093-0000
251 East Huron	17-10-202-095-0000
251 East Huron St	17-10-202-097-0000

COOK COUNTY DISCLOSURE OF OWNERSHIP INTEREST STATEMENT

The Cook County Code of Ordinances (§2-610 *et seq.*) requires that any Applicant for any County Action must disclose information concerning ownership interests in the Applicant. This Disclosure of Ownership Interest Statement must be completed with all information current as of the date this Statement is signed. Furthermore, this Statement must be kept current, by filing an amended Statement, until such time as the County Board or County Agency shall take action on the application. The information contained in this Statement will be maintained in a database and made available for public viewing.

If you are asked to list names, but there are no applicable names to list, you must state NONE. An incomplete Statement will be returned and any action regarding this contract will be delayed. A failure to fully comply with the ordinance may result in the action taken by the County Board or County Agency being voided.

"Applicant" means any Entity or person making an application to the County for any County Action.

"County Action" means any action by a County Agency, a County Department, or the County Board regarding an ordinance or ordinance amendment, a County Board approval, or other County agency approval, with respect to contracts, leases, or sale or purchase of real estate.

"Entity" or "Legal Entity" means a sole proprietorship, corporation, partnership, association, business trust, estate, two or more persons having a joint or common interest, trustee of a land trust, other commercial or legal entity or any beneficiary or beneficiaries thereof.

This Disclosure of Ownership Interest Statement must be submitted by :

1. An Applicant for County Action and
2. An individual or Legal Entity that holds stock or a beneficial interest in the Applicant and is listed on the Applicant's Statement (a "Holder") must file a Statement and complete #1 only under **Ownership Interest Declaration**.

Please print or type responses clearly and legibly. Add additional pages if needed, being careful to identify each portion of the form to which each additional page refers.

This Statement is being made by the Applicant or Stock/Beneficial Interest Holder

This Statement is an: Original Statement or Amended Statement

Identifying Information:

Name Northwestern Medical Faculty Foundation D/B/A: _____ EIN NO.: 36-3097297

Street Address: 680 N. Lake Shore Drive, Suite 1118

City: Chicago State: IL Zip Code: 60611

Phone No.: 312-695-9166

Form of Legal Entity:

Sole Proprietor Partnership Corporation Trustee of Land Trust

Business Trust Estate Association Joint Venture

Other (describe) not-for-profit corporation

Ownership Interest Declaration:

1. List the name(s), address, and percent ownership of each individual and each Entity having a legal or beneficial interest (including ownership) of more than five percent (5%) in the Applicant/Holder.

Name	Address	Percentage Interest in Applicant/Holder
None		

2. If the interest of any individual or any Entity listed in (1) above is held as an agent or agents, or a nominee or nominees, list the name and address of the principal on whose behalf the interest is held.

Name of Agent/Nominee	Name of Principal	Principal's Address
None		

3. Is the Applicant constructively controlled by another person or Legal Entity? [] Yes [] No
 If yes, state the name, address and percentage of beneficial interest of such person or legal entity, and the relationship under which such control is being or may be exercised.

Name	Address	Percentage of Beneficial Interest	Relationship
None			

Declaration (check the applicable box):

- I state under oath that the Applicant has withheld no disclosure as to ownership interest in the Applicant nor reserved any information, data or plan as to the intended use or purpose for which the Applicant seeks County Board or other County Agency action.
- I state under oath that the Holder has withheld no disclosure as to ownership interest nor reserved any information required to be disclosed.

Brian M. Walsh
 Name of Authorized Applicant/Holder Representative (please print or type)

B.M. Walsh
 Signature

bwalsh@nmff.org
 E-mail address

Vice President and Treasurer
 Title

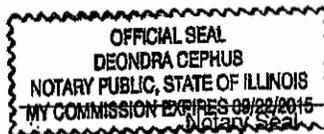
10/3/13
 Date

312-695-6300
 Phone Number

Subscribed to and sworn before me
 this 3 day of October 2013

x *Deondra Cephus*
 Notary Public Signature

My commission expires: 9/22/2015





COOK COUNTY BOARD OF ETHICS

69 W. WASHINGTON STREET, SUITE 3040

CHICAGO, ILLINOIS 60602

312/603-4304

312/603-9988 FAX 312/603-1011 TT/TDD

FAMILIAL RELATIONSHIP DISCLOSURE PROVISION:

Section 2-582 of the Cook County Ethics Ordinance requires any person or persons doing business with Cook County, upon execution of a contract with Cook County, to disclose to the Cook County Board of Ethics the existence of familial relationships they may have with all persons holding elective office in the State of Illinois, the County of Cook, or in any municipality within the County of Cook.

The disclosure required by this section shall be filed by January 1 of each calendar year or within thirty (30) days of the execution of any contract or lease. Any person filing a late disclosure statement after January 31 shall be assessed a late filing fee of \$100.00 per day that the disclosure is late. Any person found guilty of violating any provision of this section or knowingly filing a false, misleading, or incomplete disclosure to the Cook County Board of Ethics shall be prohibited, for a period of three (3) years, from engaging, directly or indirectly, in any business with Cook County. *Note:* Please see Chapter 2 Administration, Article VII Ethics, Section 2-582 of the Cook County Code to view the full provisions of this section.

If you have questions concerning this disclosure requirement, please call the Cook County Board of Ethics at (312) 603-4304. *Note:* A current list of contractors doing business with Cook County is available via the Cook County Board of Ethics' website at: http://www.cookcountygov.com/taxonomy/ethics/Listings/cc_ethics_VendorList_.pdf

DEFINITIONS:

"*Calendar year*" means January 1 to December 31 of each year.

"*Doing business*" for this Ordinance provision means any one or any combination of leases, contracts, or purchases to or with Cook County or any Cook County agency in excess of \$25,000 in any calendar year.

"*Familial relationship*" means a person who is related to an official or employee as spouse or any of the following, whether by blood, marriage or adoption:

- | | | |
|-----------|-------------------|----------------|
| ▪ Parent | ▪ Grandparent | ▪ Stepfather |
| ▪ Child | ▪ Grandchild | ▪ Stepmother |
| ▪ Brother | ▪ Father-in-law | ▪ Stepson |
| ▪ Sister | ▪ Mother-in-law | ▪ Stepdaughter |
| ▪ Aunt | ▪ Son-in-law | ▪ Stepbrother |
| ▪ Uncle | ▪ Daughter-in-law | ▪ Stepsister |
| ▪ Niece | ▪ Brother-in-law | ▪ Half-brother |
| ▪ Nephew | ▪ Sister-in-law | ▪ Half-sister |

"*Person*" means any individual, entity, corporation, partnership, firm, association, union, trust, estate, as well as any parent or subsidiary of any of the foregoing, and whether or not operated for profit.

SWORN FAMILIAL RELATIONSHIP DISCLOSURE FORM

Pursuant to Section 2-582 of the Cook County Ethics Ordinance, any *person* doing business** with Cook County must disclose, to the Cook County Board of Ethics, the existence of *familial relationships** to any person holding elective office in the State of Illinois, Cook County, or in any municipality within Cook County. Please print your responses.

Name of Owner/Employee: _____ Title: _____

Business Entity Name: _____ Phone: _____

Business Entity Address: _____

_____ The following familial relationship exists between the owner or any employee of the business entity contracted to do business with Cook County *and* any person holding elective office in the State of Illinois, Cook County, or in any municipality within Cook County.

Owner/Employee Name:	Related to:	Relationship:
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

If more space is needed, attach an additional sheet following the above format.

There is *no* familial relationship that exists between the owner or any employee providing pathology services under this contract of the business entity contracted to do business with Cook County and any person holding elective office in the State of Illinois, Cook County, or in any municipality within Cook County.

To the best of my knowledge and belief, the information provided above is true and complete.

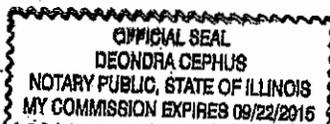
B.M. Wash _____ Date 10/31/13
Owner/Employee's Signature

Subscribe and sworn before me this 3 Day of October, 2013

a Notary Public in and for Cook County

Deondra Cephus
(Signature)

NOTARY PUBLIC
SEAL



My Commission expires 9/22/2015

Completed forms must be filed within 30 days of the execution of any contract or lease with Cook County and should be mailed to:

Cook County Board of Ethics
69 West Washington Street,
Suite 3040
Chicago, Illinois 60602

SIGNATURE BY A CORPORATION
(SECTION 9)

The Undersigned hereby certifies and warrants: that all of the statements, certifications, and representations set forth in this EDS are true, complete and correct; that the Undersigned is in full compliance and will continue to be in compliance throughout the term of the Contract or County Privilege issued to the Undersigned with all the policies and requirements set forth in this EDS; and that all of the facts and information provided by the Undersigned in this EDS are true, complete and correct. The Undersigned agrees to inform the Chief Procurement Officer in writing if any of such statements, certifications, representations, facts or information becomes or is found to be untrue, incomplete or incorrect during the term of the Contract or County Privilege.

BUSINESS NAME: Northwestern Medical Faculty Foundation

BUSINESS ADDRESS: 680 N. Lake Shore Drive, Suite 1118, Chicago, IL 60611

BUSINESS TELEPHONE: 312-695-9166 FAX NUMBER: 312-695-9505

CONTACT PERSON: _____

FEIN: 36-3097297 *IL CORPORATE FILE NUMBER: N 5217-965-3

LIST THE FOLLOWING CORPORATE OFFICERS:

PRESIDENT: David Mahvi, MD

VICE PRESIDENT: Brian M. Walsh

SECRETARY: Danae K. Prousis

TREASURER: Brian M. Walsh

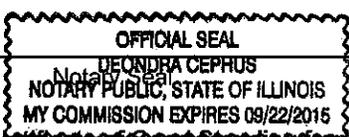
**SIGNATURE OF VICE PRESIDENT & TREASURER: *B.M. Walsh*

ATTEST: *Danae K. Prousis* (CORPORATE SECRETARY)

Subscribed and sworn to before me this
3 day of October, 2013

x *Deondra Cephus*
Notary Public Signature

My commission expires: 9/22/2015



* If the corporation is not registered in the State of Illinois, a copy of the Certificate of Good Standing from the state of incorporation must be submitted with this Signature Page.

** In the event that this Signature Page is signed by any persons than the President and Secretary, attach either a certified copy of the corporate by-laws, resolution or other authorization by the corporation, authorizing such persons to sign the Signature Page on behalf of the corporation.

COOK COUNTY SIGNATURE PAGE
(SECTION 10)

ON BEHALF OF THE COUNTY OF COOK, A BODY POLITIC AND CORPORATE OF THE STATE OF ILLINOIS, THIS CONTRACT IS HEREBY EXECUTED BY:



COOK COUNTY CHIEF PROCUREMENT OFFICER

DATED AT CHICAGO, ILLINOIS THIS 25 DAY OF February, 2014.

IN THE CASE OF A BID PROPOSAL, THE COUNTY HEREBY ACCEPTS:

THE FOREGOING BID/PROPOSAL AS IDENTIFIED IN THE CONTRACT DOCUMENTS FOR CONTRACT NUMBER

1328-13008

OR

ITEM(S), SECTION(S), PART(S): _____

TOTAL NOT TO EXCEED AMOUNT OF CONTRACT: \$ 24,000.00
(DOLLARS AND CENTS)

FUND CHARGEABLE: _____

EXHIBIT 1

Scope of Services

Key Personnel:

See attached Resumes

Scope of Services:

Provide routine consultation services to the CCMEO within two weeks of notice.

Provide emergent consultation services to the CCMEO within 48 hours of notice.

Provide written reports of findings within 30 days of examination of the heart.

Assist in training CCMEO fellows and staff with practical didactic sessions annually to include proper dissection of the adult and infant heart and evaluation of the cardiac conduction system.

Perform histological evaluation of hearts in all cases and include findings in consultant report.

Services will be provided at the CCMEO and, at the direction of the Cook County Medical Examiner, at Northwestern Memorial Hospital. When services are provided at Northwestern Memorial Hospital, CCMEO, at its expense, shall arrange for and provide transportation of the specimens to Northwestern Memorial Hospital as determined solely by CCMEO.

CURRICULUM VITAE

Jon W. Lomasney, M.D.

Department of Pathology
Feinberg School of Medicine, Northwestern University
Ward 6-204
303 East Chicago Avenue
Chicago, Illinois 60611-3008
Fax: 312-503-4818
Phone: 312-503-0450

EDUCATION:

- 1978-1982 B.A., Johns Hopkins University, Baltimore, Maryland
1982-1987 M.D., Dartmouth Medical School, Hanover, New Hampshire

POSTDOCTORAL TRAINING:

Internship and Residencies:

- 1987 - 1992 Resident, Department of Pathology, Duke University Medical Center
Durham, North Carolina

Research Fellowships:

- 1979 - 1982 Student Research, Laboratory of Y.C. Lee, Ph.D.
Department of Biochemistry, Johns Hopkins University, Baltimore, Maryland
1984 - 1985 Sarnoff Fellow, Laboratory of Robert J. Lefkowitz, M.D.
Howard Hughes Medical Institute, Duke University Medical Center
Durham, North Carolina
1988 - 1992 Sarnoff Scholar and Research Fellow, Laboratory of Robert J. Lefkowitz,
M.D., Duke University Medical Center, Durham, North Carolina

LICENSURE AND CERTIFICATION:

- 1992 North Carolina License Registration
1993 Illinois License Registration
1994 American Board of Pathology Certification in Anatomic Pathology

ACADEMIC APPOINTMENTS:

- 1992 - 1993 Visiting Associate, Department of Anesthesiology
Duke University Medical Center, Durham, North Carolina
1993 - 2002 Assistant Professor, Department of Pathology and Department of Molecular
Pharmacology and Biological Chemistry
Feinberg School of Medicine at Northwestern University, Chicago, Illinois
2002 - Associate Professor with tenure, Department of Pathology and Department of
Molecular Pharmacology and Biological Chemistry
Feinberg School of Medicine at Northwestern University, Chicago, Illinois

Jon Whitcomb Lomasney
HONORS AND AWARDS:

1984 Sarnoff Fellow
1985 American Federation for Clinical Research Medical Student Prize
1988 Sarnoff Scholar
1993 - 1996 Member Scientific Board of Directors, Stanley J. Sarnoff Endowment for
1997 - 1999 Cardiovascular Science
1993 - Feinberg Scholar
1994 - 1996 Pfizer Scholar in Cardiovascular Medicine
1999 - 2004 Independent Scientist Award (RCDA), NIH
2000- 2001 Searle Teaching Fellow
2005 - Member Board of Directors, Stanley J. Sarnoff Endowment for
Cardiovascular Science
2007 - Treasurer, Stanley J. Sarnoff Endowment for
Cardiovascular Science
2010 Alumni Achievement Award, Sarnoff Cardiovascular Research Foundation

EDUCATION

Course Director, Scientific Basis of Medicine 2006-10
Curriculum Committee
Director, Pathology PSTP 2002-2010
Leader Competency Committee on Medical Knowledge
and Scholarship 2007-09
Founding Director Feinberg Academy of Medical Educators 2010-

CLINICAL SERVICE

Director Autopsy Service, NMH, 2002-
Cardiovascular Pathologist, 1993-

COMMITTEE ASSIGNMENTS

Residency Committee, Pathology
Investment Committee, Northwestern Medical Faculty Foundation
Laboratory Finance Committee, Northwestern Memorial Hospital
Appointment, Promotion and Tenure Committee, Pathology, Chair

EDITORIAL BOARD MEMBERSHIP

Gene Expression

AD HOC REVIEWER

Journal of Biological Chemistry
Hypertension
Circulation
Molecular Pharmacology
European Journal of Pharmacology
Biochemistry
PNAS
Cardiovascular Pathology

Jon Whitcomb Lomasney

MEMBERSHIPS, OFFICES, AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

Member, Society for Cardiovascular Pathology
Member, American Society for Investigative Pathology

STUDY SECTIONS

1998 - 2002 American Heart Association (Molecular Signaling)
2000 AD HOC NHLBI SCORs in Thrombosis and Hemostasis
2002 - 2004 American Heart Association (Vascular Biology, Chair 2003)

RESEARCH FUNDING INFORMATION:

Past

7/94 - 7/96 Pfizer Scholars Program, Molecular Basis for Function of Alpha-1-Adrenergic Receptors, \$130,000.

10/93 - 10/94 NMF, Mutant Receptor and Effector Genes in Cardiovascular Disease, \$20,000.

9/95 - 9/96 NUMS Intramural, Crystal Structure of Native and Mutant Human Phospholipase C Delta 1, \$17,500.

9/96 - 9/97 Lurie Cancer Center Prostate Program, Role of Adrenergic Receptor Signal Transduction in the Development and Progression of Prostate Carcinoma, \$36,411.

9/96 - 9/99 1F31MH1219 Predoctoral NRSA for Paul Bromann, Phospholipid Regulation of Effector Molecules, \$39,024.

9/96 - 9/98 Fellowship for Evan Boetticher, Carcinogenesis Training Grant, \$20,016.

5/98 - 9/99 Beckman Scholars Program, for Eric Mak, \$17,000.

10/99 - 10/2002 Merit Review Award (VA), Regulation and Function of a Novel Phospholipase C, Direct costs \$360,000. Terminated due to overlap with R01 HL63407

5/98 - 4/2002 K01 HL03836 Career Development Award for Isabel Lopez, Phospholipase C in Cardiac Disease: Transgenic Models, Direct costs \$373,631. Grant transferred to UIC where Dr. Lopez is now a tenure track faculty member.

2/99 - 1/2004 K02 HL03961 Independent Scientist Development Award, Molecular Basis for Protein-Phospholipid Interaction, Direct costs \$500,000.

7/00 - 6/2005 RO1 HL63407, Direct Costs \$600,000
Regulation and Function of a Novel Phospholipase C

4/1/06 - 3/31/07 "Use of Stem Cells and Nanofibers for Treatment of Ischemia"
Principal Investigator: Jon W Lomasney M.D.
Agency: Baxter-IBNAM \$50,000

Jon Whitcomb Lomasney
1P01HL078826 (PI. Haldar, Co-PI. Lomasney) 7/1/05-6/30/10
NIH/NHLBI \$1,639,138
Program Project Title: Mechanisms of Erythrocytic Infection and Anemia in Malaria
The goals are to investigate mechanisms of Gs signaling in erythrocytic infection by malaria parasites.

“Use of Stem Cells and Nanofibers for Treatment of Ischemia”

Principal Investigator: Jon W Lomasney M.D.

Agency: Northwestern Translational Grant

9/1/06 – 8/31/08 \$90,000

5 R01 HL55591 (PI. Lomasney) 4/1/02-3/31/07
NIH/NHLBI Annual Direct costs; \$200,000
Title: Molecular Basis for Protein-Phospholipid Interaction
This grant examines the ability of lipids to directly regulate enzymes.

5 R01 DK064106 (PI. Kanwar) 3/1/03-1/31/07
NIH/NIDDK \$220,000
Title: Pathobiology of HMG-CoA Reductase Inhibitors in Diabetes
The grant supports the studies of biology of Rho family of GTPases in Ang II-induced mesangial cell hypertrophy and ECM expansion and the role of HMG-CoA inhibitors in the modulation of GTPases in various mouse models of diabetic nephropathy.

**PRINCIPAL CLINICAL AND HOSPITAL
SERVICE RESPONSIBILITIES:**

1993 Associate Medical Staff, Northwestern Memorial Hospital
Staff Physician, Lakeside VA Medical Center
2003 Director Autopsy Service NMH 2003-present

SELF REPORT OF TEACHING:

Medical School

1994 -- Scientific Basis of Medicine-Pathology
Medical Pharmacology
2006--2010 Course Director Scientific Basis of Medicine

Graduate School

1994 -- Receptors
Ligands and Signal Transduction
1996 -- Cellular and Molecular Neuroscience
Colloquium on Integrity in Biomedical Research
2000 -- Biochemistry

Dental School

1996 -- 2002 Pathology

Undergraduate

1995 -- 1999 C40 Biological Aspects of Disease

Jon Whitcomb Lomasney
PUBLICATIONS:

Refereed Journals:

1. Leeb-Lundberg, L.M.F., Cotecchia, S., **Lomasney, J.W.**, Debernardis, J.F., Lefkowitz, R.J. and Caron, M.G. Phorbol esters promote α_1 -adrenergic receptor phosphorylation and receptor uncoupling from inositol phospholipid metabolism. Proc. Natl. Acad. Sci., USA, 82:5651, 1985.
2. **Lomasney, J.W.**, Leeb-Lundberg, L.M.F., Cotecchia, S., Regan, J.W., Debernardis, J.F., Caron, M.G. and Lefkowitz, R.J. Mammalian α_1 -adrenergic receptor: Purification and characterization of the native receptor ligand binding subunit. J. Biol. Chem. 261:7710, 1986.
3. **Lomasney, J.W.**, Bergin, C.J., **Lomasney, J.W.**, Roggli, V. and Foster, W. CT appearance of the Lunate Trachea. J. of Computer Assisted Tomography 13(3):520-522, May/June, 1989.
4. Schwinn, D.A., **Lomasney, J.W.**, Lorenz, W., Szklut, P.J., Freneau, R.T., Yang-Feng, T.L., Caron, M.G., Lefkowitz, R.J. and Cotecchia, S. Molecular cloning and expression of the cDNA for a novel α_1 -adrenergic receptor subtype. J. Biol. Chem. 265:8183, 1990.
5. **Lomasney, J.W.**, Lorenz, W., Allen, L.F., King, K., Regan, J.W., Yang-Feng, T.L., Caron, M.G. and Lefkowitz, R.J. Expansion of the α_2 -adrenergic receptor family: Cloning and characterization of a human α_2 -adrenergic receptor subtype, the gene for which is located on chromosome 2. Proc. Natl. Acad. Sci., USA. 87:5094-5098, July 1990.
6. Lorenz, W., **Lomasney, J.W.**, Collins, S., Regan, J.W., Caron, M.G. and Lefkowitz, R.J. Expression of three alpha-2 adrenergic receptor subtypes in rat tissues: Implications for alpha-2 receptor classification. Mol. Pharmacol. 38:599-603, 1990.
7. Cutson, T.M., **Lomasney, J.W.** and Schmader, K.E. Fever of unknown origin in an elderly patient diagnosed at post mortem as Multifocal Angiofollicular Lymph Node Hyperplasia. J. of the Amer. Geriatrics Soc. 38:989-992, 1990.
8. **Lomasney, J.W.**, Cotecchia, S., Lorenz, W., Leung, W., Schwinn, D.A., Yang-Feng, T.L., Brownstein, M., Lefkowitz, R.J. and Caron, M.G. Molecular cloning and expression of the cDNA for the α_{1A} -adrenergic receptor. J. Biol. Chem. 266:6365-6369, 1991.
9. **Lomasney, J.W.**, Cotecchia, S., Lefkowitz, R.J. and Caron, M.G. Molecular biology of alpha-adrenergic receptors: Implications for receptor classification and for structure/function relationships. Biochim. et Biophys. Acta 1095:127-139, 1991.
10. Bylund, D.B., Blaxall, H.S., Iversen, L.J., Caron, M.G., Lefkowitz, R.J. and **Lomasney, J.W.** Pharmacological characteristics of alpha-2 adrenergic receptors: Comparison of pharmacologically defined subtypes with subtypes identified by molecular cloning. Mol. Pharmacol. 42:1-5, 1992.
11. Schwinn, D.A. and **Lomasney, J.W.** Pharmacologic characterization of cloned α_1 -adrenergic receptor subtypes: Selective antagonists suggest the existence of a fourth subtype. Eur. J. Pharmacol. 227:433-6, 1992.
12. Price, D.T., Schwinn, D.A., **Lomasney, J.W.**, Allen, L.F., Caron, M.G. and Lefkowitz, R.J. Identification, quantitation, and localization of mRNA for three distinct alpha-1-adrenergic receptor subtypes in human prostate. J. of Urology. 150 (pt 1):546-551, 1993.
13. Scheinin, M., **Lomasney, J.W.**, Hayden-Hixson, D., Schambra, U.M., Caron, M.G., Lefkowitz, R.J. and Freneau, R.T. Distribution of α_2 -adrenergic receptor subtype gene expression in rat brain. Brain Research. 21:133-149, 1994.

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14. Yang-Feng, T.L., Han, H., **Lomasney, J.W.**, and Caron, M.G. Chromosomal localization of the cDNA for an alpha-1-adrenergic receptor subtype. Cytogenetics and Cell Genetics. 66:170-171, 1994.
15. O'Rourke, M.F., Iversen, L.J., **Lomasney, J.W.** and Bylund, D.B. Species orthologues of the alpha-2A adrenergic receptor: Pharmacologic comparisons of the bovine, rat, human and porcine receptors. J. Pharm. and Exp. Therapeutics, 271:735-740, 1994.
16. Jiang, M-J., Chen, C-L., Liu, S-M, Wong, L-P, **Lomasney, J.W.**, and King, K. Cloning and identification of amino acid residues of human phospholipase C $\delta 1$ essential for catalysis. J. Biol. Chem. 270:5495-5505, 1995.
17. DebBurman, S.K., Ptasienski, J., Boetticher, E., **Lomasney, J.W.**, Benovic, J.L., and Hosey, M.M. Lipid-mediated regulation of G protein-coupled receptor kinases 2 and 3. J. Biol. Chem. 270:5742-5747, 1995.
18. **Lomasney, J.W.**, Wang, L-P., Kuan, Y-S., Liu, S-M, Fesik, S.W., and King, K. Phosphatidylinositol-4,5-bisphosphate binding to the pleckstrin homology domain of phospholipase C $\delta 1$ enhances enzyme activity. J. Biol. Chem. 271:25316-25326, 1996.
19. Sizmann, D., Kuusinen, H., Keranen, S., **Lomasney, J.W.** Lefkowitz, R.J., and Keinanen, K. Production of Adrenergic Receptors in Yeast. Receptors and Channels. 4:197-203, 1996.
20. Bromann, P., Boetticher, E., and **Lomasney, J.W.** A single amino acid substitution in the PH domain of PLC delta 1 increases catalytic activity. J. Biol. Chem. 272: 16240-16246, 1997.
21. **Lomasney, J.W.**, Cheng, H-F, Roffler, S.R. and King, K. Activation of PLC $\delta 1$, by a Ca^{++} -Enzyme-Phosphatidylserine Ternary Complex. J. Biol. Chem. 274; 21995-22001, 1999.
22. Murthy, S.N.P., **Lomasney, J.W.**, Mak, E. and Lorand, L. Binding of G_{12} /transglutaminase to phospholipase C $\delta 1$ is regulated by GTP. Proc. Nat'l. Acad. Sci., USA 96:21; 11815-11819, 1999.
23. Horvath, K.A., Chiu, E., Maun, D.C., **Lomasney, J.W.**, Greene, R., Pearce, W.H. and Fullerton, D.A. Up-regulation of vascular endothelial growth factor mRNA and angiogenesis after transmymocardial laser revascularization. Ann. Thorac. Surg. 68; 825-829, 1999.
24. Frank, M.W., Mehlman, D.J., Tsai, F., **Lomasney, J.W.**, and Joob, A.W. Syphilitic Aortitis. Circulation 100; 1582-1583, 1999.
25. Fieno, D.S., Raymond, K.J., Chen, E-L, **Lomasney, J.W.**, Klocke, F.J., and Judd, R.M. Contrast enhanced MRI of myocardium at risk: Distinction between reversible and irreversible injury throughout infarct healing. J. of the Amer. Col. of Cardiology. 36;1985-1991, 2000.
26. Lopez, I., Mak, E.C., Ding, J., Hamm, H.E., and **Lomasney, J.W.** A novel phospholipase C that links G alpha 12 to the Ras/MAP kinase pathway. J. Biol. Chem. 276; 2758-2765, 2001.
27. Schmidt, M., Evellin, S., Weermink, P.A.O., vom Dorp, F., Rehmann, H.R., **Lomasney, J.W.**, Jakobs, K.H. A novel phospholipase C/calcium signalling pathway mediated by cyclic AMP and a Rap GTPase. Nature Cell Biology. 3(11): 1020-1024, Nov. 2001.
28. Horvath, K.A., Belkind, N., Wu, I., Greene, R., Doukas, J., **Lomasney, J.W.**, McPherson, D.D., Fullerton, D.A. Functional Comparison of Transmymocardial Revascularization by Mechanical and Laser Means. Ann. Thorac. Surg. 72:1997-2002. 2001.
29. Evellin S, Nolte J, Tysack K, vom Dorp F, Thiel M, Weernink PA, Jakobs KH, Webb EJ, **Lomasney JW**, Schmidt M. Stimulation of phospholipase C-epsilon by the M3 muscarinic

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acetylcholine receptor mediated by cyclic AMP and the GTPase Rap2B. J Biol Chem 2002
May 10;277(19):16805-13
30. Lin S, Sahai A, Chugh SS, Pan X, Wallner EI, Danesh FR, **Lomasney JW**, Kanwar YS.
High glucose stimulates synthesis of fibronectin via a novel protein kinase C, Rap1b and B-
Raf signaling. J Biol Chem 2002 Nov 1;277(44):41725-35.
 31. Kanwar YS, Pan X, Lin S, Kumar A, Wada J, Haas CS, Liao G, **Lomasney JW**. Imprinted
mesodermal specific transcript (MEST) and H19 genes in renal development and diabetes.
Kidney Int. 2003 May;63(5):1658-70.
 32. Danesh FR, Anel RL, Zeng L, **Lomasney J**, Sahai A, Kanwar YS. Immunomodulatory
effects of HMG-CoA reductase inhibitors. Arch Immunol Ther Exp (Warsz). 2003;51
(3):139-48.
 33. Harrison T, Samuel BU, Akompong T, Hamm H, Mohandas N, **Lomasney JW**, Halda K.
Erythrocyte G protein-coupled receptor signaling in malaria infection.
Science 2003 Sep;301:1734-1736.
 34. Kanwar YS, Wada J, Lin S, Danesh FR, Chugh SS, Yang Q, Banerjee T, **Lomasney JW**.
Links Update of extracellular matrix, its receptors, and cell adhesion molecules in
mammalian nephrogenesis. Am J Physiol Renal Physiol. 2004 Feb;286(2):F202-15.
 35. Minae Kobayashi, R. Kannan Mutharasan, Jianwen Feng, Mary F. Roberts and **Jon W.
Lomasney**. Identification of hydrophobic interactions between proteins and lipids:
Free fatty acids activate Phospholipase C delta 1 via allosterism Biochemistry 2004
Jun 15;43(23):7522-33.
 36. Kobayashi M, Gryczynski Z, Lukomska J, Feng J, Roberts MF, Lakowicz JR and
Lomasney JW. Spectroscopic characterization of the EF-hand domain of phospholipase C
delta 1: Identification of a lipid interacting domain. archives of Biochem and Biophysics
2005 Aug 15;440(2):191-203.
 37. Murphy SC, Hiller NL, Harrison T, **Lomasney JW**, Mohandas N, Haldar K. Lipid rafts and
malaria parasite infection of erythrocytes (Review). Mol Membr Biol. 2006 Jan-
Feb;23(1):81-8.
 38. Murthy SN, Chung PH, Lin L, **Lomasney JW**. Activation of phospholipase epsilon by free
Fatty acids and cross talk with phospholipase delta and phospholipase alpha(2).
Biochemistry. 2006 Sep 12;45(36):10987-97.
 39. Rajangam K, Behanna HA, Hui MJ, Han X, Hulvat JF, **Lomasney JW**, Stupp SI.
Heparin Binding Nanostructures to Promote Growth of Blood Vessels.
Nano Lett. 2006 Sep 13;6(9):2086-2090.
 40. Murphy SC, Harrison T, Hamm HE, **Lomasney JW**, Mohandas N, Haldar K. Erythrocyte G
protein as a novel target for malarial chemotherapy. PLoS Med. 2006 Dec;3(12):e528.
 41. Murphy SC, Fernandez-Pol S, Chung PH, Prasanna Murthy SN, Milne SB, Salomao M,
Brown HA, **Lomasney JW**, Mohandas N, Haldar K. Cytoplasmic remodeling of erythrocyte
raft lipids during infection by the human malaria parasite Plasmodium falciparum. Blood.
2007 Sep 15;110(6):2132-9. Epub 2007 May 25.
 42. Robin J, Meyers S, Nahlawi M, Puthumana J, **Lomasney J**, Mehlman D, Rigolin V,
Davidson C. Accelerating restrictive cardiomyopathy after liver transplantation in a
patient with familial amyloidotic polyneuropathy: a case report. J Med Case Reports.
2008 Feb 1;2:35.

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43. Eldredge LC, Gao XM, Quach DH, Li L, Han X, **Lomasney J**, Tourtellotte WG. Abnormal sympathetic nervous system development and physiological dysautonomia in Egr3-deficient mice. *Development*. 2008 Sep;135(17):2949-57. Epub 2008 Jul 24.
44. Murphy SC, Fernandez-Pol S, Chung PH, Prasanna Murthy SN, Milne SB, Salomao M, Brown HA, **Lomasney JW**, Mohandas N, Haldar K. Cytoplasmic remodeling of erythrocyte raft lipids during infection by the human malaria parasite *Plasmodium falciparum*. *Blood*. 2007 Sep 15;110(6):2132-9. Epub 2007 May 25.
45. Capturing the stem cell paracrine effect using heparin-presenting nanofibres to treat cardiovascular diseases. Webber MJ, Han X, Prasanna Murthy SN, Rajangam K, Stupp SI, Lomasney JW. *J Tissue Eng Regen Med*. 2010 Mar 10. [Epub ahead of print] PMID: 20222010 [PubMed - as supplied by publisher]
46. Embryonic stem cells overexpressing Pitx2c engraft in infarcted myocardium and improve cardiac function. Guddati AK, Otero JJ, Kessler E, Aistrup G, Wasserstrom JA, Han X, Webber MJ, Stupp SI, Lomasney JW, Kessler JA. *Int Heart J*. 2009 Nov;50(6):783-99. PMID: 19952475 [PubMed - indexed for MEDLINE]
47. Autonomic Remodeling in the Left Atrium and Pulmonary Veins in Heart Failure - Creation of a Dynamic Substrate for Atrial Fibrillation. Ng J, Villuendas R, Cokic I, Schliamser JE, Gordon D, Koduri H, Benefield B, Simon J, Murthy SN, Lomasney JW, Wasserstrom JA, Goldberger JJ, Aistrup GL, Arora R. *Circ Arrhythm Electrophysiol*. 2011 Mar 18. PMID: 21421805
48. Near-complete obstruction of an aortic homograft. Sales VL, McCarthy PM, Carr JC, Mehlman DJ, Lomasney J. *Circulation*. 2012 Feb 28;125(8):e392-4. No abstract available. PMID: 22371446
49. Structural Basis for Calcium and Phosphatidyl Serine Regulation of PLC Delta1 King, Klim, Kobayashi, Minae, Cheng, Hwei-Fang, and Lomasney JW. *Biochemistry*. 2012 Mar 20;51(11):2246-57. Epub 2012 Mar 9. PMID: 22385159
50. Mitotically Inactivated Embryonic Stem Cells can be Utilized as an In Vivo Feeder Layer to Nurse Damaged Myocardium Following Acute Myocardial Infarction: A Pre-Clinical Study. Burt RK, Chen YH, Verda L, Lucena C, Navale S, Johnson J, Han X, **Lomasney J**, Baker JM, Ngai KL, Kino A, Carr J, Kajstura J, Anversa P. *Circ Res*. 2012 Aug 22. [Epub ahead of print] PMID: 22914647

Non Refereed Publications:

1. Caron, M.G., Benovic, J.L., Leeb-Lundberg, L.M.F., Cerione, R.A., Regan, J.W., Cotecchia, S., **Lomasney, J.W.**, Nakata, H., Sibley, D.R., Strasser, R.H., Strulovici, B. and Lefkowitz, R.J. Biochemical pharmacology of the adrenergic receptors: Regulation of responsiveness by phosphorylation of the receptors. In *New Tests for New Drugs*, (S. Garattini, ed.), Wichtig Editore, Milano, Italy. 1985.
2. Caron, M.G., Benovic, J.W., Leeb-Lundberg, L.M.F., Cerione, R.A., Regan, J.W., **Lomasney, J.W.**, Cotecchia, S., Nakata, H., Sibley, D.R., Strasser, R.H. and Lefkowitz, R.J. Responsiveness by phosphorylation of the receptors. In *The Ninth International Symposium on Brain Sciences*. (Tsukata, Y., ed.) Japan Scientific Societies, 1986.

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3. **Lomasney, J.W.**, Cotecchia, S., Lorenz, W., Schwinn, D.A., Caron, M.G. and Lefkowitz, R.J. Structure and molecular characterization of α -adrenergic receptors. In *The Pharmacology of Adrenoceptors* (Szabadi, E., ed.) Birkhauser Verlag, 1990.
4. **Lomasney, J.W.**, Allen, L.F. and Lefkowitz, R.J. Cloning and regulation of catecholamine receptor genes. In *Molecular Endocrinology: Basic Concepts and Clinical Correlations*, (Weintraub, B., ed.) Raven Press, 1995.
5. **Lomasney, J.W.** Criteria for the classification of hormone receptors with implications for nomenclature: An impossible task? *Annals of the NY Academy of Science*, Vol. 812, 1997
6. **Lomasney, J.W.** and Allen, L.F. Adrenergic receptors in the cardiovascular system. In *Heart Physiology and Pathophysiology*, 4th edition, (Sperelakis, N., ed.) Academic Press, 2000.

Curriculum Vitae

Linda M. Ernst, M.D., M.H.S.

August, 2013

PERSONAL INFORMATION:

Date of Birth: 5-30-1965

Citizenship: United States of America

Home Address: 4141 N Damen Ave
Chicago, IL 60618

Home Phone: 215-520-7162

Business Address: Northwestern University, Feinberg School of Medicine
Department of Pathology
Olson Pavilion 2-454
710 N. Fairbanks Ct.
Chicago, IL 60611

Business Phone: 312-926-4069

Fax: 312-926-9830

Email: linda-ernst@northwestern.edu

EDUCATION:

1987	University of Illinois, Urbana-Champaign	B.S.	Biology
1991	Quinnipiac College	M.H.S.	Pathology
1999	University of Connecticut School of Medicine	M.D.	Medicine

TRAINING:

1999-2002	Yale University School of Medicine	Resident, Anatomic and Clinical Pathology
2002-2003	Yale University School of Medicine	Chief Resident Anatomic and Clinical Pathology
2003-2005	The Children's Hospital of Philadelphia	Fellow, Pediatric Pathology

LICENSURE/CERTIFICATION:

2004	Anatomic and Clinical Pathology	American Board of Pathology
2005	Pediatric Pathology	American Board of Pathology
2006-2009	Licensure, Commonwealth of Pennsylvania	
2008-present	Licensure, State of Illinois	

ACADEMIC APPOINTMENTS:

1991-1995	Instructor	University of Connecticut School of Medicine Department of Pathology
2000-2003	Adjunct Assistant Professor	Quinnipiac University Department of Health Sciences
2005-2008	Assistant Professor	University of Pennsylvania School of Medicine Department of Pathology and Laboratory Medicine

2008-present Assistant Professor Northwestern University Feinberg School of Medicine
Department of Pathology

HOSPITAL APPOINTMENTS:

2005-2008 Staff Pathologist, The Children's Hospital of Philadelphia
2006-2008 Director of Pathologists' Assistants in Surgical and Autopsy Pathology
2006-2008 Director of Clinical Site Rotations for Pathologists' Assistant students from Drexel
University College of Medicine
2008-present Director, Perinatal Pathology, Northwestern Memorial Hospital

OTHER EMPLOYMENT:

1991-1995 Pathologists' Assistant
University of Connecticut, John Dempsey Hospital

HONORS AND AWARDS:

1984 Alpha Lambda Delta Honor Society
1987 Golden Key Honor Society
1990 Quinnipiac College Outstanding Academic Achievement Award
2000 Halina Goldstein Award, outstanding performance on the autopsy service
2003 Gordon Vawter Award, Society for Pediatric Pathology
2010 Perinatal Pathology Award, runner up.

PROFESSIONAL ORGANIZATIONS:

International:

2003-present United States and Canadian Academy of Pathology

National:

2003-present Society for Pediatric Pathology
2005-2008 Finance committee
2008-2010 Chairperson, Finance committee
2010-present Chairperson, Development subcommittee

PROFESSIONAL ACTIVITIES

INSTITUTIONAL SERVICE (Committees, Councils, Task Forces)

Hospital committees:

2009-present Clinical Specimen Release Committee, Northwestern Memorial Hospital
2010-2011 Information Technology Committee, Northwestern Memorial Hospital
2011-2012 Operations and Services Committee, Northwestern Memorial Hospital

TEACHING (past and present)

Undergraduate and Graduate Medical Education:

2005-2008 Teaching of residents and fellows in Surgical and Autopsy Pathology
The Children's Hospital of Philadelphia
~35 hours/month
2007-2008 General Pathology Laboratory Section Preceptor and Perinatal Pathology Lecturer

- Mechanisms of Disease and Therapeutic Intervention,
University of Pennsylvania School of Medicine
- 2008-present Teaching of residents and fellows in Surgical and Autopsy Pathology,
Northwestern Memorial Hospital
~50 hours/month
- 2008-present Team-Based Learning Preceptor and Perinatal Pathology Lecturer
Scientific Basis of Medicine course,
Northwestern University, Feinberg School of Medicine

Community service/high school:

- 2010 Infectious Disease Summer Academy, Perinatal infectious disease
Gross placental dissection laboratory
Young Women's Leadership Charter School of Chicago.

Organizing Roles in Scientific Meetings:

- Feb 2006 TriState Pediatric Pathology Society
The Children's Hospital of Philadelphia
- Aug 2006 Tristate Pediatric Pathology Society
The Children's Hospital of Philadelphia
- 2006-2008 Clinical Pathologic Correlation Conferences for Pediatric Grand Rounds
The Children's Hospital of Philadelphia

TRAINEES

Supervision in a research setting:

- 2006-2007 James A. Feinstein, 4th year Medical Student, University of Pennsylvania
- 2007-2008 Aqiba Bokhari, fellow Pediatric Pathology at The Children's Hospital of
Philadelphia
- 2007- 2009 Adrienne Carruth, Pathology resident, Hospital of the University of
Pennsylvania
- Oct 2009: Winner of Gordon Vawter award for best presentation by
Pathologist in training
- 2010-2012 Michael Huang, undergraduate student, work-study program, Northwestern University
- 2012-present Bryan Huang, undergraduate student, work-study program, Northwestern University

EXTRAMURAL MEMBERSHIP

National committees:

- 2005-2008 Finance committee member, Society for Pediatric Pathology
- 2008-2010 Finance committee chair, Society for Pediatric Pathology
- 2008-2010 Council member, Society for Pediatric Pathology
- 2010-present Development subcommittee chairperson, Society for Pediatric Pathology
- 2011-present Test Development and Advisory Committee, American Board of Pathology

EDITORIAL RESPONSIBILITIES

- 2008-present Editorial Board, Pediatric and Developmental Pathology

REVIEW RESPONSIBILITIES

- 2003-present Ad hoc reviewer, Pediatric and Developmental Pathology

2009-present Ad hoc reviewer, Placenta

GRANT AWARDS (past, current):

1. Dr. Charles Stanley PI, National Institutes of Health, 5R01-DK56268-08, Islet dysregulation in Infants with Congenital Hyperinsulinism. 07/01/2006-06/30/2009, Linda Ernst 5% effort through 8-2008, annual direct costs \$401,426.00

2. Carolyn M Salafia PI, NICHD, Grant Number: 1 R43HD062307-01, Project Title: Placental Pathology: Digital Assessment and Validation, Budget/Project Period: 09-29-2009 – 08-31-2010, Total award \$125,815. Linda Ernst consultant.

3. Linda M. Ernst, PI, Friends of Prentice, Project Title: Stillbirth: Identification of Pathologic and Genetic Risk Factors: 09-01-2011 – 08-30-2012, Total award \$98,830.

INVITED LECTURES (5 years):

- April 2006 "Placental Pathology: What should a pathologist recognize?"
Thomas Jefferson University, Anatomic Pathology, Philadelphia, Pennsylvania
- June 2006 "Placental Pathology: What should the pathologists' assistant know?"
Mid Atlantic Pathologists Assistants Regional Conference, Lancaster, Pennsylvania
- Sep 2006 "Placental pathology: Major Pathologic Processes Contributing to Stillbirth and Implications for Live births."
University of Pennsylvania of Pennsylvania Department of Obstetrics and Gynecology Grand Rounds, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania.
- Nov 2006 "Pediatric Autopsy: Major Pathology in Stillbirth and Neonatal Death", Hahnemann University Hospital/Drexel University College Of Medicine, Department of Pathology, Philadelphia, Pennsylvania
- Nov 2006 "Placental pathology: Three major pathologic processes", Hahnemann University Hospital/Drexel University College of Medicine, Department of Pathology, Philadelphia, Pennsylvania
- Dec 2006 "The importance of autopsy and placental examination in the investigation of pregnancy loss", March of Dimes sponsored conference: Investigating ways to improve pregnancy outcomes, Princeton, New Jersey.
- Feb 2007 "Placental Pathology in Mouse Model of Thrombophilia due to Factor V Leiden and High Levels of Factor IX", Children's Medical Center, Dallas, Texas.
- June 2007 "Placental Pathology in a Mouse Model of Thrombophilia", Children's Memorial Hospital Pathology Grand Rounds, Chicago, Illinois.
- Feb 2008 "Investigating the Pathologic Processes Contributing to Pregnancy Loss", Hospital for Sick Children, Toronto, Canada
- April 2008 "Localized Islet Cell Nuclear Enlargement in Congenital Hyperinsulinism: A Distinct Clinicopathologic Entity", Children's Hospital Boston, Boston Massachusetts.
- April 2008 "Investigating the Placental Pathologic Processes Contributing to Pregnancy Loss", Brigham and Women's Hospital, Department of Pathology, Perinatal Division Research Rounds, Boston, Massachusetts.
- Sept 2009 "Pathologic Examination of the Placenta, Why bother?" Grand rounds,

Department of Obstetrics and Gynecology, Prentice Women's Hospital,
Chicago, Illinois.

- Feb 2010 "The Value of the Perinatal Autopsy in the Work-up of Genetic Disease",
Educational symposium for The Genetic Task Force of Illinois and the
Illinois Department of Public Health, Prentice Women's Hospital, Chicago,
Illinois.
- Feb 2011 "Placental Pathologic Correlations with Neonatal Outcome", Children's Memorial
Hospital, Pathology Grand Rounds, Chicago, Illinois.
- March 2011 "Placental Pathologic Correlations with Neonatal Outcome", Northwestern University
Feinberg School of Medicine, Pathology Grand Rounds, Chicago, Illinois.
- April 2011 "Placental Pathologic Correlations with Neonatal Outcome", Children's Hospital of Los
Angeles, Pathology Grand Rounds, Los Angeles, California.
- March 2012 Pediatric Specialty Conference, Expert panel discussion, Vancouver, BC, Canada.
- June 2012 "Pathologic Evaluation of Stillbirth", Grand Rounds, Department of Obstetrics &
Gynecology, Prentice Women's Hospital, Chicago, IL.

PUBLICATIONS:

A. Original, peer-reviewed research articles:

1. Ernst LM, Salafia CM, Carter A: Intrauterine growth retardation in guinea pigs
Following uterine artery ligation: hepatic histology. *Pediatric Pathology* Vol. 13; 763-772, November-
December 1993. PMID: 8108296.
2. Salafia CM, Ernst LM, Pezzulo JC, Wolf EJ, Rosenkrantz TS, Vintzileos AM: The very low birth
weight infant: maternal complications leading to preterm birth, placental lesions, and intrauterine growth.
American Journal of Perinatology Vol. 12: 106-110, March 1995. PMID: 7779189.
3. Cusick W, Salafia CM, Ernst L, Rodis JF, Campbell WA, Vintzileos AM: Low-dose aspirin
therapy and placental pathology in women with poor pregnancy outcomes. *American Journal of
Reproductive Immunology* 34(3): 141-7, September 1995. PMID: 8561870.
4. Sherer DM, Salafia CM, Minior VK, Sanders MM, Ernst L, Vintzileos AM: Placental basal plate
myometrial fibers: clinical correlations of abnormally deep trophoblast invasion *Obstetrics and
Gynecology* 87(3): 444-9, March 1996. PMID: 8598971.
5. Ernst LM, Sanders MM, Salafia CM, Carter AM: Cell populations in the bone marrow of guinea
pig fetuses with intrauterine growth retardation. *Pediatric Pathology and Laboratory Medicine* 17(4):
561-8, July-August 1997. PMID: 9211548.
6. Ernst LM, Parkash V: Placental pathology in fetal Bartter syndrome. *Pediatric and
Developmental Pathology* 5(1): 76-9, January-February 2002. PMID: 11815871.
7. Ernst LM, Rimm DL: Quantitative examination of the mechano-physical tumor cell enrichment
of fine needle aspiration specimens. *Cancer Cytopathology* 96(5): 275-279, October 2002. PMID:
12378594.

8. Ernst LM, Crouch J, Rinder H, Howe JG: Bacterial etiology for chronic villitis is not supported by polymerase chain reaction for 16S rRNA DNA. *Pediatric and Developmental Pathology* 8(6): 647-653, November-December 2005. PMID: 16010482.
9. Salafia CM, Pezzullo JC, Charles AK, Ernst LM, Mass EM, Gross B, Pijnenborg R: Morphometry of the basal plate superficial uteroplacental vasculature in normal mid-trimester and at term. *Pediatric and Developmental Pathology*. 8(6): 639-646, November-December 2005. PMID: 16010484.
10. Ernst LM, Sondheimer N, Deardorff M, Bennett MJ, Pawel B: The value of the metabolic autopsy in the pediatric hospital setting. *Journal of Pediatrics* 148(6): 779-783, June 2006. PMID: 16769386
11. Heltzer ML, Choi JK, Ochs HD, Sullivan KE, Torgerson TR, Ernst LM: A potential screening tool for IPFX syndrome. *Pediatric and Developmental Pathology* 10(2): 98-105, March-April 2007. PMID: 17378693.
12. Kreiger PA, Ernst LM, Elden L, Kazahya K, Alawi F, Russo P: Hamartomatous tongue lesions in children. *American Journal of Surgical Pathology* 31(8): 1186-1190, August 2007. PMID: 17667541.
13. Ernst LM, Spinner NB, Piccoli DA, Mauger J, Russo P: Interlobular bile duct loss in pediatric cholestatic disease is associated with aberrant cytokeratin-7 expression by hepatocytes. *Pediatric and Developmental Pathology* 10(5): 383-390, September-October 2007. PMID: 17929991.
14. Simpson MA, Hsu R, Keir LS, Hao J, Sivapalan G, Ernst L, Zackai EH, Al Gazali LI, Hulskamp G, Kingston HM, Prescott TE, Ion A, Patton MA, Murday V, George A, Crosby AH: Mutation of FAM20C leads to lethal osteosclerotic bone dysplasia (Raine syndrome), highlighting a crucial molecule in bone development. *American Journal of Human Genetics* 81:906-912, November 2007. PMID: 2265657 PMID: 17924334.
15. Dueterhoeft SM, Ernst LM, Siebert JR, Kapur RP: Five cases of caudal regression with an aberrant abdominal umbilical artery: further support for a caudal regression-sirenomelia spectrum. *American Journal of Medical Genetics A* 143(24):3175-84, December 2007. PMID: 17963219.
16. Feinstein JA, Ernst LM, Ganesh J, Feudtner C: What new information do pediatric autopsies provide? A retrospective evaluation of 100 consecutive autopsies using family-centered criteria. *Archives of Pediatrics and Adolescent Medicine* 161(12):1190-1196, December 2007. PMID: 18056565.
17. Hardy OT, Hernandez-Pampaloni M, Saffer JR, Scheuermann J, Ernst LM, Freifelder R, Zhuang H, MacMullen C, Alavi A, Becker S, Adzick NS, Divgi C, Stanley CA: Accuracy of [18F]-fluorodopa PET for diagnosing and localizing focal congenital hyperinsulinism. *The Journal of Clinical Endocrinology and Metabolism* 92(12): 4706-4711, December 2007. PMID: 1785314.
18. Srinivas SK, Ernst LM, Edlow AG, Elovitz MA: Can placental pathology explain second trimester pregnancy loss and subsequent pregnancy outcomes? *American Journal of Obstetrics and Gynecology* 199(4):402.e1-5, October 2008. PMID: 18928989.

19. Danzer E, Adzick NS, Rintoul NE, Zarnow DM, Schwartz ES, Melchionni J, **Ernst LM**, Flake AW, Sutton LN, Johnson MP: Intradural inclusion cysts following in utero closure of myelomeningocele: clinical implications and follow-up findings. *Journal of Neurosurgery Pediatrics* 2(6):406-13, Dec 2008. PMID: 190356686.
20. **Ernst LM**, Chou D, Parry S: Fetal Thrombotic Vasculopathy in Twin Placentas with Complete Hydatidiform Mole. *Pediatric and Developmental Pathology* 12(1):63-7, January-February 2009. PMID: 18702565
21. Danzer E, **Ernst LM**, Rintoul NE, Johnson MP, Adzick NS, Flake AW: In utero meconium passage in fetuses and newborns with myelomeningocele. *Journal of Neurosurgery Pediatrics* 3(2):141-6, February 2009. PMID: 19278315.
22. Corao D, Biegel JA, Coffin CM, Barr FG, Wainwright LM, **Ernst LM**, Choi JK, Zhang PJ, Pawel B: ALK Expression in Rhabdomyosarcomas: Correlation with Histologic Subtype and Fusion Status. *Pediatric and Developmental Pathology* 12(4):275-83, July-August 2009. PMID: 18788887
23. Purandare SM, **Ernst L**, Medne L, Huff D, Zackai EH: Developmental anomalies with features of disorganization (Ds) and amniotic band sequence (ABS): A report of four cases. *American Journal of Medical Genetics, Part A* 149A:1740-1748, August 2009. PMID: 19606475.
24. Conlin LK, Thiel BD, Bonnemann CG, Medne L, **Ernst LM**, Zackai E, Deardorff MA, Krantz ID, Hakonarson H, Spinner NB: Mechanisms of mosaicism, chimerism, and uniparental disomy identified by SNP array analysis. *Human Molecular Genetics* 19(7):1263-75, Apr 1 2010. PMCID: 3146011 PMID: 20053666.
25. **Ernst LM**, Gonzalez J, Ofori E, Elovitz M: Inflammation-Induced Preterm Birth in a Murine Model is Associated with Increases in Fetal Macrophages and Circulating Erythroid Precursors. *Pediatric and Developmental Pathology* 13(4):273-81, July-August 2010. PMID: 19663449.
26. Khan R, Sander M, **Ernst L**, Egan J, Campbell W: Association between placental mineral deposition, villous architecture and fetal aneuploidy. *Journal of Obstetrics and Gynecology* 30(8): 800-803, November 2010. PMID: 21126116.
27. Su EJ, **Ernst L**, Abdallah N, Chatterton R, Xin H, Monsivais D, Coon J, Bulun SE: Estrogen receptor-beta and fetoplacental endothelial prostanoid biosynthesis: A link to clinically demonstrated fetal growth restriction. *Journal of Clinical Endocrinology and Metabolism*, 96(10):E1558-67, October 2011, Epub August 10, 2011. PMCID: 3200254, PMID: 21832119.
28. Schrier SA, Sherer I, Deardorff MA, Clark D, Audette L, Gillis L, Kline AD, **Ernst L**, Loomes K, Krantz ID, Jackson LG. Causes of death and autopsy findings in a large study cohort of individuals with Cornelia de Lange syndrome and review of the literature. *American Journal of Medical Genetics, Part A*. 2011 Dec;155A(12):3007-24. Epub 2011 Nov 8. PMCID: 3222915 PMID: 22069164.

29. Mestan K, Matoba N, Arguelles L, Harvey C, **Ernst LM**, Farrow K, Wang X. Cord blood 8-isoprostane in the preterm infant. *Early Human Development* 2012 Aug;88(8):683-9. PMID: 22425039. PMID: 22425039.
30. Robinson BK, Su E, Grobman W, Huang M, **Ernst LM**. The association of placental inflammation with category II fetal heart tracings. *Pediatric and Developmental Pathology* 2012 Jul-Aug;15(4):298-302, PMID: 22671990.
31. Carruth Griffin A, Strauss AW, Bennett, MJ, **Ernst LM**. Mutations in Long-Chain 3-Hydroxyacyl-CoA Dehydrogenase are Associated with Placental Maternal Floor Infarction/Massive Perivillous Fibrin Deposition. *Pediatric and Developmental Pathology* 2012 Sep-Oct;15(5):368-74. PMID: 22746996.
32. **Ernst LM**, Grobman WA, Wolfe K, Huang MH, McDade TW, Holl JL, Borders AEB. Biological markers of stress in pregnancy: associations with chronic placental inflammation at delivery. *American Journal of Perinatology* 2012 Dec 27. [Epub ahead of print], PMID: 23271381.
33. Gawron LM, Hammond C, **Ernst LM**. Perinatal Pathologic Examination of Non-Intact, Second Trimester Fetal Demise Specimens: The Value of Standardization. *Arch Pathol Lab Med*. 2013 Mar;137(3):326-37. PMID: 23451744.
34. **Ernst LM**, Minturn L, Huang MH, Curry E, Su EJ. Gross Patterns of Umbilical Cord Coiling: Correlations with Placental Histology and Stillbirth. *Placenta*. 2013 May 2. [Epub ahead of print] PMID: 23642640.

Contributions to peer-reviewed clinical research publications, participation cited but not by authorship:

1. Bhandari V, Bizzarro MJ, Shetty AH, Zhong XA, Page GP, Zhang H, Ment LR, Gruen: Familial and genetic susceptibility to major neonatal morbidities in preterm twins. *Pediatrics* 117(6): 1901-6, June 2006. PMID: 16740829.

B. Reviews, Case Reports(peer-reviewed), Letters, Editorials

1. **Ernst LM**, Hui P, Parkash V: Intraplacental smooth muscle tumor; a case report. *International Journal of Gynecologic Pathology* 20(3): 284-288, July 2001. PMID: 11444205.
2. Wang S, **Ernst LM**, Smith BR, Tallini G, Howe JG, Crouch J, Cooper DL: Systemic Tropheryma whipplei infection associated with monoclonal B-cell proliferation: a Helicobacter pylori-type pathogenesis? *Archives of Pathology and Laboratory Medicine* 127 (12): 1619-22, December 2003. PMID: 14632565.
3. Brucker B, Meadows A, **Ernst LM**, Zedric S: A second leiomyosarcoma in the urinary bladder of a child with a history of retinoblastoma 12 years following partial cystectomy. *Pediatric Blood & Cancer*. 46(7):811-4, June 2006. PMID: 16470582.

4. Badillo AT, Kreiger PA, Schmitz KR, Ernst LM, Kaiser LR, Leichty KW: Wilms tumor arising within a mediastinal teratoma. *Journal of Pediatric Surgery* 41(8e1-5): e1-5, August 2006. PMID: 16863828.
5. Ernst LM, Quinn PD, Alawi F: Novel oral findings in Schimmelpenning syndrome. *American Journal of Medical Genetics* 143(8): 881-3, April 2007. PMID: 17366580.
6. Magge SN, Chen HI, Stiefel MF, Ernst L, Cahill AM, Hurst R, Storm PB: Multiple ruptured cerebral aneurysms in a child with Takayasu arteritis. *Journal of Neurosurgery: Pediatrics*. 1(1):83-7, January 2008. PMID: 18352809.
7. Ernst LM, Grossman AB, Ruchelli ED: Familial Perinatal Liver Disease and Fetal Thrombotic Vasculopathy. *Pediatric and Developmental Pathology* 11(2):160-163, March-April 2008. PMID: 17990937.
8. Haas EJ, Ernst L: Picture of the month--quiz case. *Archives of Pediatric and Adolescent Medicine* 163(1):85. January 2009. PMID: 19124708.
9. Hall EK, Glatz J, Kaplan P, Kaplan BS, Hellinger J, Ernst L, Gaynor JW: A case report of rapid progressive coarctation and severe middle aortic syndrome in an infant with Williams syndrome. *Congenital Heart Disease* 4(5):373-7, September 2009. PMID: 19740193.
10. Pinney SE, Oliver-Krasinski J, Ernst L, Hughes N, Patel P, Stoffers DA, Russo P, De Leon DD: Neonatal diabetes and congenital malabsorptive diarrhea attributable to a novel mutation in the human neurogenin-3 gene coding sequence. *Journal of Clinical Endocrinology and Metabolism* 96(7): 1960-1965, July 2011. PMCID: 3135203 PMID: 21490072.
11. Huang M, Cham E, Eppes CS, Gerber S, Reed K, Ernst LM. Placental and fetal findings in intrauterine *Candida lusitanae* infection following in vitro fertilization and embryo transfer. *Pediatric and Developmental Pathology*. 2012 Mar-Apr;15(2):127-31. PMID: 21864122.
12. Lo AA, Faye-Petersen OM, Ernst LM. Intrauterine Fetal Death of a Monchorionic Twin with Peripheral Pulmonary Infarcts: Potential Thromboembolic Events Following Death of Co-twin. *Pediatric and Developmental Pathology* 2012 Mar-Apr;15(2):142-5. PMID: 22070756.
13. Ernst LM, Gawron LM, Fritsch MK. Pathologic examination of fetal and placental tissue obtained by dilation and evacuation. *Archives of Pathology and Laboratory Medicine* 2013 Mar;137(3):326-37. PMID: 23451744.
14. Faye-Petersen OM, Ernst LM. Maternal Floor Infarction and Massive Perivillous Fibrin Deposition. *Surgical Pathology* 6 (2013) 101-114.
15. Linn RL, Kiley J, Minturn L, Fritsch MK, DeJulio T, Rostlund E, Ernst LM. Recurrent Massive Perivillous Fibrin Deposition in the Placenta Associated with Fetal Renal Tubular Dysgenesis: Case Report and Literature Review. *Pediatr Dev Pathol*. 2013 Jul 30. [Epub ahead of print]. PMID: 23899317.

16. Faye-Petersen OM, Schauer G, **Ernst LM**, Williamson AK, Legallo R, Pacheco, C. Small Patients, Complex Challenging Cases - A Reappraisal of Professional Efforts in Perinatal Autopsies. Archives of Pathology and Laboratory Medicine 2013, accepted for publication July 2013.

C. Books and Book Chapters

1. Color Atlas of Human Fetal and Neonatal Histology, **Ernst LM**, Ruchelli ED, Huff DS editors Philadelphia: Springer-Verlag, 2011.

14 Chapters authored: Heart and blood vessels

Vas deferens
Seminal vesicle
Prostate gland
Adrenal gland
Thyroid gland
Parathyroid gland
Pituitary gland
Thymus gland
Spleen
Palatine Tonsil
Bone
Skeletal muscle
Placenta

31 Total chapters edited.

D. Abstracts (most recent):

1. **Ernst LM**, Wolfe K, Grobman WA, Hall JL, Borders AEB. Maternal Serum C-Reactive Protein in the Second and Third Trimester: Correlations with Placental Inflammation at Delivery, Society for Pediatric Pathology, Interim meeting, Banff, Alberta, Canada. Oct 14-17 2010, Abstract # 15. Platform presentation. Runner up for best presentation in perinatal pathology.
2. Su EJ, **Ernst L**, Abdallah N, Chatterton R, Luan C, Yin P, Bulun S. Novel regulation of fetoplacental vascular blood flow by estrogen receptor-beta (ESR2). American Society for Clinical Investigation/Association of American Physicians 2010 Joint Annual Meeting, Chicago, IL. Poster presentation.
3. Su EJ, Abdallah N, **Ernst L**, Yin P, Bulun SE. Fetoplacental endothelial 17-beta hydroxysteroid dehydrogenase type 2 mediates cyclooxygenase expression. Society for Gynecologic Investigation 2010 Annual Meeting, Orlando, FL. Poster presentation.
4. Su EJ, **Ernst L**, Abdallah N, Yin P, Bulun SE. Estrogen receptor-beta-mediated regulation of fetoplacental endothelial prostanooid synthases in fetal growth restriction. Society for Maternal-Fetal Medicine 2010 Annual Meeting, Chicago, IL. Poster presentation.

5. **Ernst LM**, Huang M, Plunkett BA, Machut K, Lossia A, Deregnier R. Major and minor placental pathology contribute to reduced 6 month cognitive scores in growth restricted infants. Society for Pediatric Pathology, Annual Meeting, San Antonio Texas, Feb 25-27, 2011 Abstract # 13. Platform presentation.
6. Matoba N, Baehl S, Harvey C, Check J, **Ernst L**, Mestan K. Intrauterine inflammation, birth weight discordance, and early postnatal growth: A preterm infant twin study. Peds Res 2011; E-PAS2011:3836. Presented at the Pediatric Academic Societies' Annual Conference in Denver, Colorado, May 2011.
7. Huang M, Curry E, **Ernst LM**. Gross Patterns of Umbilical Cord Coiling: Correlations with Placental Histology and Perinatal Outcome. Society for Pediatric Pathology, Fall Meeting, Milwaukee, Wisconsin, Sept 29-Oct 2, 2011 Abstract # 11. Platform presentation.
8. Gawron LM, Hammond C, **Ernst LM**. The Value of a Standardized Pathologic Examination of Non-Intact, Second Trimester Fetal Demise, Society for Pediatric Pathology, Fall Meeting, Milwaukee, Wisconsin, Sept 29-Oct 2, 2011 Abstract # 13. Poster presentation.
9. **Ernst LM**, deRegnier RO, Boswell L, Huang MH, Khan JY. Clinicopathological Factors as Predictors of Outcome in Term Infants with Hypoxic Ischemic Encephalopathy Undergoing Therapeutic Hypothermia. Society for Pediatric Pathology, Fall Meeting, Milwaukee, Wisconsin, Sept 29-Oct 2, 2011 Abstract # 20. Poster presentation.
10. Check J, **Ernst LM**, Gotteiner N, Porta N, Steinhorn R, Mestan K. Placental growth restriction is associated with pulmonary hypertension in extremely low gestational age infants with bronchopulmonary dysplasia. Pediatric Research 2012; E-PAS2012:4521. Presented at the Pediatric Academic Societies' Annual Conference in Boston, MA, May 2012.
11. Baehl S, **Ernst LM**, Matoba N, Harvey C, Farrow KN, Mestan K. Cord blood biomarkers of vascular endothelial growth (VEGF and sFlt-1) are associated with postnatal growth failure in the premature infant. Peds Res 2012; E-PAS2012:1536. Presented at the Pediatric Academic Societies' Annual Conference in Boston, MA, May 2012.
12. Khan JY, deRegnier RO, Boswell L, **Ernst LM**. Role of Pathological Factors as Predictors of Spastic Quadriplegia in Term Infants with HIE Treated With Therapeutic Hypothermia. Society for Pediatric Research, April 2012. Presented at the Pediatric Academic Societies' Annual Conference in Boston, MA, May 2012.
13. **Ernst LM**, Mestan K, Minturn L, Huang M, Cadichon SB. Correlation Between Neonatal C-reactive Protein and Histologic Placental Inflammation. Society for Pediatric Pathology, Fall Meeting, Houston TX, October 11-14, 2012, Abstract # 24. Poster presentation.
14. **Ernst LM**, Fritsch MK. The Value of Fetal Autopsy for Midtrimester Dilatation and Evacuation Specimens: What the American Board of Pathology is Missing. Society for Pediatric Pathology, Annual Spring Meeting, Baltimore, MD, March 2-3, 2013, Abstract # 15. Platform presentation.

15. Voller SB, Ernst LM, Minturn L, Matoba N, Mestan KK. Decreased Placental Acute Inflammation with Postnatal Growth Failure in Extremely Premature Infants. *Pediatric Research* (selected for poster presentation at PAS, Washington DC, May 2013).

16. Mestan K, Minturn L, Gotteiner N, Porta N, Ernst LM. Placental Maternal Vascular Underperfusion is Associated with Bronchopulmonary Dysplasia and Pulmonary Hypertension. *Pediatric Research* (selected for poster presentation at PAS, Washington DC, 2013).

CURRICULUM VITAE (August 2013)

PERSONAL

Michael K. Fritsch, MD, PhD
Associate Professor and Staff Pathologist
Northwestern Feinberg School of Medicine and
Ann and Robert H. Lurie Children's Hospital of Chicago
Department of Pathology and Laboratory Medicine
225 East Chicago Ave., Box #17
Chicago, IL 60611-2605
312-227-3966 mfritsch@luriechildrens.org

POSITIONS

12/10 – present Associate Professor and Staff Pathologist (non-tenured)
Northwestern Feinberg School of Medicine and
Ann and Robert H. Lurie Children's Hospital
Department of Pathology and Laboratory Medicine

07/07 – 11/10 Associate Professor (tenured)
University of Wisconsin – Madison
Department of Pathology and Laboratory Medicine

09/00 - 07/07 Assistant Professor (tenure-track)
University of Wisconsin – Madison
Department of Pathology and Laboratory Medicine

07/99 - 08/00 Assistant Pathologist (non-tenure-track)
Johns Hopkins Medical Institutions
Department of Pathology (Division of Pediatric Pathology)

POSTDOCTORAL TRAINING

07/98 - 06/99 Pediatric Pathology Fellow
Johns Hopkins Medical Institutions
Department of Pathology - (Elizabeth Perlman)

07/95 - 06/98 Pathology Resident
National Institutes of Health
Laboratory of Pathology - (Chairman: Lance Liotta)

04/93 - 06/95 Postdoctoral Research Fellow
National Institutes of Health
Laboratory of Biochemistry
Developmental Biology Section - (Lab Chief: Carl Wu)

11/91- 01/93 Postdoctoral Research Fellow
University of Wisconsin, Madison, Wisconsin
Department of Human Oncology - (V. Craig Jordan)

06/85 - 06/86 Pediatric Internship
University of Washington, Seattle, Washington
Department of Pediatrics and Children's Hospital

EDUCATION

08/86 - 10/91 Ph. D. - awarded Dec. 1991
University of Wisconsin, Madison, Wisconsin
Department of Biochemistry - (Advisor: Jack Gorski)

08/81 - 05/85 M. D. - awarded May 1985
University of Wisconsin, Madison, Wisconsin
Medical School

08/76 - 05/80 B. S. - awarded May 1980
University of Wisconsin, Madison, Wisconsin
Majors: Biochemistry (honors) and Chemistry

AWARDS

1984 Alpha Omega Alpha
1979 Phi Beta Kappa

BOARD CERTIFICATIONS AND MEDICAL LICENSES

11/01 Board Certification in Pediatric Pathology
11/99 Board Certification in Anatomic Pathology
1986-present Wisconsin license (# 27971-20)
2010-present Illinois license (#036.126827)
1999 - 2000 Maryland license (expired)

CLINICAL ACTIVITIES

12/10-present General pediatric pathology at Lurie Children's Hospital – 18 weeks/year.
12/10-present Perinatal pathology (placentas and fetal autopsies) at Northwestern Memorial Hospital – 13 weeks/year.
1/01-11/10 Autopsy pathology (about 50% fetal:adult cases) and pediatric pathology consultant at University of Wisconsin. Approximately 50 autopsies per year.
07/99 - 08/00 Assistant Pathologist (Division of Pediatric Pathology Johns Hopkins Medical Institutions) Nontenure track junior faculty: one week per month as autopsy attending for pediatric and perinatal cases and one week per month signing out pediatric surgical pathology cases.

RESEARCH ACTIVITIES

Grants

Active Grant

07/12-present

R21 grant co-investigator with Dr. Elizabeth Perlman (PI). Function of SMARCB1 in rhabdoid tumor of the kidney. 2% salary support.

Expired Grants

07/09-11/10

Research & Development bridge grant from the University of Wisconsin Department of Pathology and Laboratory Medicine. (\$50,000).

03/03 - 01/09

NIH - NIDDK RO1 (DK064243-01) - "Hormonal Control of Histone Modifications in ES Cells." PI Michael K Fritsch. (Direct costs \$198,000 per year for 5 years).

07/06 - 06/07

UW Graduate School Fall Research Competition - "Endogenous estrogen receptor complexes in breast cancer cells." PI: Michael K Fritsch (total costs \$21,120).

03/05 - 07/07

Predocctoral Fellowship from the Department of Defense. Title: "A biochemical model for the development of tamoxifen resistance in breast cancer cells." Total costs \$90,000. PI Amy Weinberg (CMB graduate student), Mentor Michael K Fritsch

2001 - 2007

Distinguished Rath Graduate Fellowship from the UW Graduate School. Paid salary and tuition. PI Elliot Lee (MD/PhD Cancer Biology graduate student), Mentor Michael K Fritsch

07/05 - 07/06

Concept Award from the Department of Defense. Title: "The impact of long-term hormonal therapy on chromatin structure in breast cancer cells." Total costs: \$106,622. Fern E. Murdoch PhD (Senior Scientist), Co-PI Michael K Fritsch

01/02 - 12/05

American Cancer Society Research Scholar Grant for Beginning Investigators (RSG-02-071-01-TBE) - "Characterization of endogenous estrogen receptor-coactivator complexes." PI Michael K Fritsch (Total costs \$898,000 over 4 years – indirect costs limited to 25%).

07/01 - 07/02

Concept Award from the Department of Defense. Title: "The role of AIB1 in estrogen-dependent breast tumor cell growth." Total costs: \$72,000. PI Fern E. Murdoch PhD (Senior Scientist), Co-PI Michael K. Fritsch

03/01 - 03/02

Society for Pediatric Pathology Young Investigator Award "The role of histone acetylation in regulating embryonic stem cell differentiation" PI Michael K Fritsch (\$10,000)

11/00 - 11/02

UW Howard Hughes Medical Institute Faculty Development Award - additional start-up funds for first year faculty . PI Michael K Fritsch (\$45,000)

10/00 - 10/01

American Cancer Society Institutional Research Grant "Functional significance of estrogen receptor interaction with co-activator proteins in human breast cancer cells." PI Michael K Fritsch (\$18,000)

- 07/99 - 06/00 Bear Necessities Pediatric Cancer Foundation Research Grant
"Defining the molecular pathways of tumorigenesis in ovarian germ cell tumors using differential gene expression." PI Michael K Fritsch (\$10,000)
- 01/89 - 12/90 American Cancer Society, Inc. - Physician's Research Training Fellowship

Peer Reviewed Publications

1. Ernst Lm, Gawson L, Fritsch MK. Pathologic examination of fetal and placental tissue obtained by dilation and evacuation. **Arch Pathol Lab Med** 137(3):326-337, 2013.
2. Mandal R, Loeffler AG, Salamat S, Fritsch MK. Organ weight changes associated with body mass index determined from a medical autopsy population. **Am J Foren Med Pathol** 33:382-389, 2012.
3. Huang CC, Gadd S, Breslow N, Cutcliffe C, Sredni ST, Helenowski IB, Dome JS, Grundy PE, Green DM, Fritsch MK, Perlman EJ. Predicting relapse in favorable histology Wilms tumor using gene expression analysis. A report from the Renal Tumor Committee of the Children's Oncology Group. **Clin Cancer Res** 15:1770-1778, 2009.
4. Oduro AK, Fritsch MK, Murdoch FE. Chromatin context dominates estrogen regulation of pS2 gene expression. **Exp Cell Res** 314:2796-2810, 2008.
5. De Jong A, Warren M, Rehrauer W, Harter J, Baraboo M, Chandra S, Pauli RM, Singer DB, Fritsch MK. Fraser syndrome: affected siblings born to non-consanguineous parents and diagnosed at autopsy. **Pediatr Dev Pathol** 11:220-225, 2008.
6. Weinberg AL, Carter D, Ahonen M, Alarid ET, Murdoch FE, Fritsch MK. The DNA binding domain of estrogen receptor alpha is required for high affinity nuclear interaction induced by estradiol. **Biochemistry** 46:8933-8942, 2007.
7. Lee ER, Murdoch FE, Fritsch MK. High histone acetylation and decreased polycomb repressive complex 2 member levels regulate gene specific transcriptional changes during early embryonic stem cell differentiation induced by retinoic acid. **Stem Cells** 25:2191-2199, 2007.
8. McCool KW, Xu X, Singer DB, Murdoch FE, Fritsch MK. The role of histone acetylation in regulating gene expression patterns during early embryonic stem cell differentiation. **J Biol Chem** 282:6696-6706, 2007.
9. Lee ER, McCool KW, Murdoch FE, Fritsch MK. Dynamic changes in histone H3 phosphoacetylation during early embryonic stem cell differentiation are directly mediated by mitogen- and stress-activated protein kinase 1 via activation of mitogen activated protein kinase pathways. **J Biol Chem**. 281:21162-21172, 2006.

10. Fritsch MK, Schneider DT, Schuster AE, Murdoch FE, Perlman EJ. Activation of wnt/ β -catenin signaling in distinct histologic subtypes of human germ cell tumors. **Pediatr Dev Pathol** 9:115-131, 2006.
11. Sauter C, McDermid R, Murdoch FE, Greco T, Stoddard A, Xu X, Fritsch MK. Progesterone receptor gene expression during early murine embryonic stem cell differentiation. **Exp Cell Res** 311:251-264, 2005.
12. Xu X, Murdoch FE, Curran EM, Welshons WV, Fritsch MK. Transcription factor accessibility and histone acetylation of the progesterone receptor gene differs between parental MCF-7 cells and a subline that has lost progesterone receptor expression. **Gene** 328:143-151, 2004.
13. Schuster AE, Schneider DT, Fritsch MK, Grundy P, Perlman EJ. Genetic and genetic expression analyses of clear cell sarcoma of the kidney. **Lab Invest** 83:1293-1299, 2003.
14. Fritsch MK, Bridge JA, Schuster AE, Perlman EJ, Argani P. Performance characteristics of a reverse transcriptase-polymerase chain reaction assay for the detection of tumor-specific fusion transcripts from archival tissue. **Pediatr Dev Pathol** 6:43-53, 2003.
15. Schneider DT, Schuster AE, Fritsch MK, Calaminus G, Gobel U, Harms D, Lauer S, Olson T, Perlman EJ. Genetic analysis of mediastinal nonseminomatous germ cell tumors in children and adolescents. **Genes Chromosomes Cancer** 34:115-125, 2002.
16. Hu J, Schuster AE, Fritsch MK, Schneider DT, Lauer S, Perlman EJ. Deletion mapping of 6q21-26 and frequency of 1p36 deletion in childhood endodermal sinus tumors by microsatellite analysis. **Oncogene** 20:8042-8044, 2001.
17. Schneider DT, Schuster AE, Fritsch MK, Hu J, Olson T, Lauer S, Gobel U, Perlman EJ. Multipoint imprinting analysis indicates a common precursor cell for gonadal and extragonadal pediatric germ cell tumors. **Cancer Res** 61:7268-7276, 2001.
18. Schneider DT, Schuster AE, Fritsch MK, Calaminus G, Harms D, Gobel U, Perlman EJ. Genetische Analyse der Keimzelltumoren im Kindesalter mit komparativer genomischer Hybridisierung. **Klin Padiatr** 213:204-211, 2001.
19. Volmar KE, Fritsch MK, Perlman EJ, Hutchins GM. Patterns of congenital lower urinary tract obstructive uropathy: relation to abnormal prostate and bladder development and the prune belly syndrome. **Pediatr Develop Pathol** 4:467-472, 2001.
20. Fritsch M, Rosenberg SA, Duray PH. Immunohistologic responses within dermal metastatic melanoma lesions of patients treated with a synthetic peptide vaccine. **J Immunotherapy** 23:557-569, 2000.
21. Fritsch M, Epstein J, Perlman E, Watts J, Argani P. Molecularly confirmed primary prostatic synovial sarcoma. **Hum Pathol** 31:246-250, 2000.

22. Argani P, Fritsch M, Kadkol SS, Schuster A, Beckwith JB, Perlman EJ. Detection of the ETV6-NTRK3 chimeric RNA of infantile fibrosarcoma/cellular congenital mesoblastic nephroma in paraffin-embedded tissue: application to challenging pediatric renal stromal tumors. **Mod Pathol** 13:29-36, 2000.
23. Fritsch M and Wu C. Phosphorylation of Drosophila heat shock transcription factor. **Cell Stress Chap** 4:102-117, 1999.
24. Fritsch M, Aluker M, Murdoch FE. Identification of a unique liganded estrogen receptor complex released from the nucleus by decavanadate. **Biochemistry** 38:6987-6996, 1999.
25. Fritsch M, Jaffe ES, Griffin C, Camacho J, Raffeld M, Kingma DW. Lymphoproliferative disorder of fetal origin presenting as oligohydramnios. **Am J Surg Pathol** 23:595-601, 1999.
26. Fritsch M, Anderson I, Leary CM, Gorski J. Two populations of the estrogen receptor separated and characterized using aqueous two-phase partitioning. **Biochemistry** 36(20):6230-6242, 1997.
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32. Fritsch M, Welch R, Murdoch FE, Anderson I, Gorski J. DNA allosterically modulates the steroid binding domain of the estrogen receptor. **J Biol Chem** 267(3): 1823-1828, 1992.
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34. Hoffman L, Fritsch M, Gorski J. Probable nuclear precursors of preprolactin mRNA in rat

pituitary cells. *J Biol Chem* 256(6): 2597-2600, 1981.

Invited Reviews and Textbook Chapters

1. Perlman EJ and Fritsch MK. The female reproductive system. In: Stock & Dehner's Pediatric Pathology 3rd ed. (Husain A, Stocker JT and Dehner LP eds.) Wolters Kluwer Health/Lippincott Williams & Wilkins, 2011.
2. Perlman EJ and Fritsch MK. Female and male reproductive systems. In: Color Atlas of Pediatric Pathology (Husain A and Stocker JT eds.), Demosmedical, 2011.
3. Fritsch MK and Singer DB. Embryonic stem cell biology. In: Advances in Pediatrics (Kappy MS ed.) 55:43-77, 2008.
4. Fritsch MK. Female reproductive system. In: Potter's Pathology of the Fetus, Infant and Child 2nd ed. (Gilbert-Barness E, Kapur R, Oligny L, Siebert JR eds.). Mosby Elsevier, 2007.
5. Fritsch M and Murdoch FE. Estrogens, progestins, and oral contraceptives. In: Human Pharmacology: Molecular-to-Clinical. 4th ed. (Wingard LB and Brody TM, eds.). The C. V. Mosby Co, 2005. (We contributed this chapter to all three prior editions as well)
6. Fritsch MK. Commentary: Keeping up with the pace - molecular genetics and pediatric pathology. In: Perspectives in Pediatric Pathology (Kalousek DK, Dimmick JE, & Singer DB eds.) 24:217-220, 2003.
7. Perlman EJ and Fritsch MK. The female reproductive system. In: Pediatric Pathology 2nd ed. (Stocker JD and Dehner LP eds.) Lippincott Williams and Wilkins, 2001.
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12. Murdoch FE, Fritsch M, Gorski J. The estrogen receptor: mechanism of action and relationship to human breast cancer. *ISI Atlas of Science: Pharmacology* 2(3): 267-275, 1988.

Meeting Presentations and Abstracts

1. Ernst LM and *Fritsch MK*. (2013) The value of fetal autopsy for midtrimester dilation and evacuation specimens: What the American Board of Pathology is missing. **Society for Pediatric Pathology Spring Meeting (Baltimore)**.
2. *Fritsch MK* and Singer DB. (2010) Amnion stem cells in perinatal disease. **Society for Pediatric Pathology Interim Meeting (Banff)**.
3. *Fritsch MK*, Alexanian, R, Singer DB, Murdoch FE (2009). Altered retinoic acid (RA)-induced lineage specification of mouse embryonic stem cells (mESCs) following a transient pulse of a histone deacetylase inhibitor. **American Association of Anatomists - Experimental Biology 09**.
4. Oduro AK, Murdoch FE, *Fritsch MK* (2007) Estrogen regulation of pS2 (TFF1) gene expression is dependent upon the chromatin context. **The Endocrine Society, 89th Annual Meeting**.
5. Lee ER, Murdoch FE, *Fritsch MK*. (2007) Multiple phases of loss of PRC2 binding and derepression of K27me3 target genes during early embryonic stem cell differentiation induced with retinoic acid. **Keystone Symposium**.
6. Lee ER, McCool KW, Murdoch FE, *Fritsch MK*. (2006) Commitment to differentiation in mouse embryonic stem (mES) cells is associated with dynamic changes in epigenetic histone modifications. Oral presentation. **The Endocrine Society, 88th Annual Meeting**.
7. Lee ER, McCool KW, Murdoch FE, *Fritsch MK*. (2006) Dynamic changes in histone H3 phosphoacetylation during early embryonic stem cell differentiation are directly mediated by mitogen- and stress-activated protein kinase 1 via activation of MAPK pathways. **American Society of Clinical Investigation/Association of American Physicians Joint Meeting, Chicago, IL**
8. Greco, TL, McCool K, McDermid RL, Murdoch FE, *Fritsch, MK*. (2005) Mechanism of retinoic acid induction at the estrogen receptor alpha promoter in mouse embryonic stem cells. **Second Great Lakes Nuclear Receptor Conference**. University of Wisconsin. Madison, Wisconsin.
9. Stoddard AL, Murdoch FE, & *Fritsch MK*. (2005) "Purification of an Endogenous Tamoxifen-Occupied ER α Complex from MCF-7 Cells". **The Endocrine Society, 87th Annual Meeting**. San Diego, CA.
10. *Fritsch M*, Xu X, McDermid R, McCool K, Murdoch F. (2005) Global histone H4 acetylation follows "commitment" to differentiation in mouse embryonic stem (mES) cells. **Keystone Symposium – Chromatin Modification Pathways**.
11. Singer DB, *Fritsch MK*, Murdoch FE. (2004) Trichostatin-A accelerates differentiation of

embryonic stem cells. **Society for Pediatric Pathology Interim Meeting.**

12. Stoddard AL, Murdoch FE, *Fritsch MK* (2004) Biochemical characterization of endogenous ER α protein complexes from MCF-7 cells. **The Endocrine Society, 86th Annual Meeting.**
13. Greco T, Sauter CN, McDermid RL, Murdoch FE, *Fritsch MK* (2004) Retinoic acid induces estrogen receptor-alpha expression in mouse embryonic stem cells. **The Endocrine Society, 86th Annual Meeting.**
14. Stoddard A, Murdoch, FE, *Fritsch MK* (2003) Biochemical characterization of endogenous ER-protein complexes. **The First Annual Great Lakes Nuclear Receptor Conference, Medical College of Ohio, Toledo Ohio.**
15. *Fritsch M*, Sauter C, Murdoch FE (2003) Histone acetylation facilitates differentiation in embryonic stem (ES) cells. **Society for Pediatric Pathology Annual Meeting.**
16. Sauter CN, Kruser TJ, Murdoch FE, *Fritsch MK*. (2002) Progesterone receptor (PR), estrogen receptors alpha (ER α) and beta (ER β) expression patterns during differentiation of mouse embryonic stem (ES) cells in culture. **The Endocrine Society, 84th Annual Meeting.**
17. *Fritsch MK*, Xu X, Murdoch FE. (2002) Histone acetylation patterns and estrogen receptor alpha (ER α) interaction on the human progesterone receptor gene in vivo. **Keystone Symposium - Nuclear Receptor Superfamily.**
18. *Fritsch MK*, Schneider DT, Schuster AE, Perlman EJ. (2002) Human endogenous retrovirus-type K (HERV-K) expression in childhood germ cell tumors. **Society for Pediatric Pathology Annual Meeting.**
19. *Fritsch MK*, Schneider DT, Schuster AE, Perlman EJ. (2002) Beta-catenin protein expression in childhood and adult germ cell tumors. **Society for Pediatric Pathology Annual Meeting.**
20. Xu X, Murdoch FE, *Fritsch MK*. (2001) Characterization of estrogen receptor complex binding on the progesterone receptor gene in vivo. **The 22nd Annual Minisymposium on Reproductive Biology.**
21. *Fritsch M*, Schuster A, Schneider DT, Perlman EJ. (2001) Microarray Analysis of Gene Expression patterns in Ovarian Germ Cell Tumors. **Society for Pediatric Pathology Annual Meeting.**
22. Schneider DT, Schuster AE, *Fritsch MK*, Perlman EJ. (2001) Genetic analysis of mediastinal germ cell tumors in children and adolescents. **Society for Pediatric Pathology Annual Meeting.**
23. Schneider DT, Schuster A, *Fritsch M*, Lauer S, Olson T, Harms D, Gobel U, Perlman EJ. (2000) Genetic analysis of primary mediastinal germ cell tumors in children and adolescents. **International Society of Paediatric Oncology (SIOP) 32nd Meeting.**

24. *Fritsch M*, Argani P, Murdoch F, Perlman EJ. (2000) Patterns of gene expression in Wilms tumors of different stage and recurrence state. **Society for Pediatric Pathology Annual Meeting.**
25. Argani P, *Fritsch MK*, Schuster A, Perlman EJ, Coffin C. (2000) Reassessment of infantile fibrosarcoma and related lesions by RT-PCR for the ETV6/NTRK3 fusion transcript. **Society for Pediatric Pathology Annual Meeting.**
26. Volmar KE, *Fritsch MK*, Perlman EJ, and Hutchins GM. (2000) Patterns of congenital lower urinary tract obstructive uropathy: relation to abnormal prostatic and bladder development and the prune belly syndrome. **Society for Pediatric Pathology Annual Meeting.**
27. *Fritsch M*, Schuster A, Perlman EJ. (2000) Patterns of gene expression between two malignant ovarian germ cell tumors. **The Eighth International Workshop on Chromosomes in Solid Tumors.**
28. *Fritsch M*, Perlman EJ, Argani P. (1999) Performance characteristics of an assay for tumor specific fusion transcripts from archival tissue. **Society for Pediatric Pathology Annual Meeting.**
29. *Fritsch M* and Jordan VC. (1993) Consensus conference on adjuvant therapy in early breast cancer. Tamoxifen - long term effects. **Fourth International Congress on Anti-cancer Chemotherapy.**
30. *Fritsch M* and Gorski J. (1991) Ligand induced changes in the conformation of the steroid binding domain of the estrogen receptor (ER). **The Endocrine Society, 73rd Annual Meeting: 361.**
31. Gorski J, Murdoch F, *Fritsch M*, Hansen J. (1990) Relationship of estrogen-induced changes in receptor structure and gene expression. Presented at the **Tenth Scientific Symposium of the National Foundation for Cancer Research.**
32. *Fritsch M* and Gorski J. (1989) Two forms of uterine estrogen receptor separated and characterized using aqueous two-phase partitioning. **The Endocrine Society, 71st Annual Meeting: 544.**

Invited Research Talks

- 7/12 "Early cell fate decisions in mouse embryonic stem cells." Department of Pathology, Ann and Robert H. Lurie Children's Hospital of Chicago, Pathology Grand Rounds.
- 11/08 "Trichostatin A-Mediated Lineage Switching" or "How to Create Trophoblasts from Mouse Embryonic Stem Cells without Really Trying." Department of Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee Wisconsin.
- 05/08 Gilbert-Barness Lectureship - "Embryonic stem cells - a model for early development" - University of Wisconsin - Madison.
- 04/08 "The role of chromatin modifications in regulating mouse embryonic stem cell

"EXIT" from the undifferentiated state." Department of Biological Sciences,
Marshall University, WV.

- 04/08 American Association of Anatomists - FASEB Experimental Biology Meeting:
"Role of epigenetic histone modifications during early embryonic stem cell
differentiation." *Michael Fritsch*, Fern Murdoch, Don Singer, Elliot Lee, Kevin
McCool, Ruben Alexanian, Akua Oduro.
- 10/06 Department of Pathology Seminar Series - "A tale of tails: Histone modifications
during early embryonic stem cell differentiation." University of Wisconsin -
Madison.
- 10/05 The Second Great Lakes Nuclear Receptor Conference
"Purification of a new nuclear ER α chaperoned(NERC) multi-protein complex."
(presented by Amy Weinberg – graduate student in my lab). University of
Wisconsin - Madison.
- 06/05 "Role of Histone Tail Modifications During Early Murine Embryonic Stem Cell
Differentiation." Laboratory of Biochemistry and Molecular Biology, Chromosome
Structure and Gene Regulation Section, National Institutes of Health.
- 02/04 Biomolecular Chemistry Seminar Series "Histone modifications during early
embryonic stem cell differentiation." University of Wisconsin - Madison.
- 11/03 Endocrinology Reproductive Physiology Program Seminar "Progesterone receptor
expression and function during mouse embryonic stem cell differentiation."
University of Wisconsin - Madison.
- 11/03 The First Annual Great Lakes Nuclear Receptor Conference "Progesterone receptor
expression as an early marker of mouse embryonic stem (ES) cell differentiation."
Medical College of Ohio, Toledo Ohio.

Research Collaborators

Don Singer, MD, Professor Emeritus – Brown University

Past Laboratory Members

- Senior Scientist Fern E Murdoch, PhD, collaborator 2000 to 2008, now at
Northwestern University, Evanston IL.
- Post-doctoral Xiaojie Xu, PhD, was in our laboratory for 2.5 years (left Oct 2003).
She examined the chromatin structure of the progesterone receptor
gene in breast cancer cells following various hormonal treatments.
This work was published in 2004 in *Gene*.
- Visiting Professor Tamara Greco, PhD, was in our laboratory for 1 year (Aug. 2003 to
Aug 2004). Associate Professor of biology at Eastern
Michigan University.
- Graduate Students Akua Oduro (PhD awarded 8/08, CMP), post-doctoral training
Amy Weinberg (PhD awarded 7/07, CMB), high school teacher NY
Elliot Lee (PhD awarded 5/07, Cancer Biology; MD, PhD program)

Yi Mu (graduated with a Master's Degree from CMP - 2006)
currently in private industry.
Alice Wright (CMB graduate student) left for private industry.

Associate Research Specialist Rebecca McDermid has left research to become a high school science teacher.
Carley Sauter was in the lab for 2 years and has now completed medical school.
Tim Kruser was in the lab for 1 year and graduated from medical school 2006.

Undergraduates
Ruben Alexanian (Senior Honors Thesis student) now third year Medical student at UW-Madison
Flavian LeClere (Senior Honors Thesis student) unknown
Nicole Van Handel (graduated 2006) now in private industry
Kevin McCool (senior thesis student) currently in UW MD/PhD program.
Brittany Conrad was in the lab for 2 years and is now applying for vet school.
Kendall Krebs was in the lab for 1 year, now in private industry.

TEACHING ACTIVITIES

Teaching Awards

2009 Golden Microscope Award, UW Pathology Resident's teaching award.
2008 Dean's Teaching Award - University of Wisconsin School of Medicine and Public Health

National Pathology Educational Course

08/12 Four 1 hour lectures on placental pathology at 34th Aspen Pediatric Pathology Conference.

Medical School Teaching Experience at Northwestern Feinberg School of Medicine

01/13 Scientific Basis of Medicine: Reproduction section. 1 hour lecture to second year medical students on implantation and early placental development.

Medical School Teaching Experience at UW-Madison (by course)

Foundations of Medicine 1

Fall 2010 (150 second year medical students) **Instructor.** Integrated Pathology, Pharmacology, and Nutrition for second year medical students. Foundations of Medicine 1 involves lectures and labs on fundamental Pathology topics. My duties include:
Orienting new Pathology Co-Course Director
Lectures (Autopsy, Repair, Neoplasia) 6h
Lab Instructor 10h

Fall 2009 (150 second year medical students) **Co-Course Director and Instructor.** Newly developed course in the UW Medical School curriculum reform integrating Pathology, Pharmacology, and Nutrition. Foundations of Medicine 1 involved lectures and labs on fundamental Pathology topics. My duties included:

Co-Course Director	Lots
Lectures (Autopsy, Repair, Neoplasia)	6h
Lab Instructor	13h

Population Health Sciences 794

Fall 2009 (15 graduate students in Population Health) Instructor in a course entitled "Biological Basis of Population Health." This course provides basic concepts in biology to graduate students in Population Health. My duties included:

Lectures (Basic Concepts in Neoplasia)	2h
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Integrated Pathology Teaching in Organ-Based Courses for Second Year Medical Students

2009-2010	Lectures (Developmental Neuropathology) - Integrated Neurosciences	2h
	Lectures (Developmental Pathology) - Foundations in Medicine 4	2h
	Small group instructor - GI, CV, Respiratory, Renal	25h

Pathology 703

2004-2008 (150 second year medical students – Fall semester) **Course Director and Instructor.** This was the core pathology course for medical students at UW-Madison. In 2004, I took over as course director and the course was moved from the first year to the second year with major revisions including converting all laboratories to virtual microscopy and reorganization of the lectures and small group discussions. As course director I was primarily responsible for these changes. My duties included:

Course Director	Lots
Lectures (Autopsy, Developmental Pathology)	5h
Small group instructor	16h
Lab instructor	9h

2000-2003 During this time Pathology 703 was a 4 credit first year medical student course and Dr. Hart was course director. I taught 6h lectures (neoplasia and development) and 30h of combined small group and laboratory.

Pathology 704

2004-2008 (150 second year medical students – Fall semester) Co-course Director and Instructor. Following the move of Pathology 703 to the second year and reduction to 2 credits some of the pathology teaching was incorporated into the organ based courses already taught at UW. Pathology 704 is a 2 credit course. I played a key role in the development and design of this course during 2004 and was then made Co-course director. Pathology 704 consists of multiple small group discussions of pathology within each of the major organ based courses including (Neoplasia, Cardiovascular, Respiratory, Renal, GI, and Endocrine). My duties included:

Co-course director
 Small group instructor 20h

Pathology 750

2002-2007 (70-80 graduate students - Spring semester) Instructor. This is a three credit graduate student course covering general topics in cellular and molecular biology. My duties included:
 Lectures (apoptosis); writing and grading essay exams 2h
 Small group discussion 2h

Pathology 751

2005-Present (8-15 graduate students – Fall semester) Instructor. This is a 2 credit graduate student course covering current molecular topics in aging. This course is taught every other year. My duties include:
 Lectures (apoptosis); writing and grading essay exams 2h
 Small group discussion 1h

Neoplastic Diseases 721

2004-2008 (150 second year medical students – Fall semester) Instructor. This is the core course on neoplasia here at UW-Madison. My duties include:
 Lectures (Molecular Genetics of Neoplasia) 2h

Pathology 404

2005-Present (over 300 undergraduates – Spring semester) This is a large undergraduate course that covers many aspects of pathology. Many of the students are in the allied health related fields including nursing. My duties include:
 Lectures (Molecular Genetics of Neoplasia) 2h

Physiology 675

2001-2007 (15-20 graduate students and 5-10 faculty - Fall & Spring) This was a special topics course also referred to as the UW-Nuclear Receptor Club. Dr. Elaine Alarid, Dr. Fern Murdoch, and I co-founded this course upon arrival to UW. This course involved discussion of each student's unpublished data or review of a pertinent current journal article. We formally met 1.5 hours every 2 weeks, and informally on the other weeks Dr. Alarid's lab members and my lab members meet for a journal club. While no longer a formal course the UW-Nuclear Receptor Club continues to meet every 2 weeks.

Fellowship and Resident Teaching at Ann & Robert H Lurie Children's Hospital of Chicago and Northwestern Medical Hospital

2010-present I give 4-6 1 hour lectures to pediatric pathology fellow and residents at Ann & Robert H Lurie Children's Hospital on placental pathology, stillbirths, congenital malformations, cardiac pathology, and male and female reproductive tract abnormalities. I spend 1-2 hours per day with one on one teaching at the microscope during signout or while performing autopsies at both institutions. I am also the Pediatric Pathology Fellowship Director and residency Coordinator for Ann & Robert H Lurie Children's Hospital Department of Pathology (2-4 hours/week of

administrative duties).

UW Resident teaching

- 2001-2010 (pathology residents) I spend at least 100h per year performing one-on-one teaching of autopsy technique (especially related to fetal autopsies) and histology to the first year pathology residents.
- 2005-2010 (pediatric residents) I present 1-2h of lecture to the pediatric residents each year on pediatric pathology topics such as malformations, infectious disease, or neoplasia. I direct 1-2 pediatric residents annually in a two week pediatric pathology elective rotation from the Pediatrics Department's Residency Program.

Other UW teaching

(faculty, residents, fellows in pediatrics) I present 2-6 1h case presentations per year at the Newborn Nursery Morbidity and Mortality Conference and/or Perinatal Conference at Meriter Hospital.

Teaching Experience Prior to UW Faculty Appointment

Johns Hopkins Medical Institutions

- 1999-2000 Autopsy attending and pediatric surgical pathology sign out with residents.
- 1998-2000 Directed pathology laboratory sessions for 20 second year medical students in their core pathology course.

National Institutes of Health

- 1997-1998 Senior resident in pathology with teaching of junior residents including both autopsy techniques and surgical pathology.

University of Wisconsin-Madison (as a graduate student)

- 1990-91 Directed two short-term research projects for two first-year graduate students rotating through Dr. Jack Gorski's laboratory.
- 1989 Teaching Assistant for Biochemistry 210, "General Biochemistry."
- 1988 Teaching Assistant for Biochemistry 620, "Regulatory Mechanisms in Animal Cells." I also directed an undergraduate student in a summer research project.

SERVICE ACTIVITIES

National Committees

- 2011-present Society for Pediatric Pathology – Research Committee.
- 2004-2007 Society for Pediatric Pathology – Research Committee: Involved reviewing 5-10 research proposal grants for the SPP-Young Investigator's Award as well as email exchanges with other members.

Northwestern Feinberg School of Medicine Committee Member

- 2012-present Pathology Residency Committee Member

UW Committees

- 2004-present Faculty Senator for Pathology Department.
- Fall 2009 Dean's Realignment Task Force member. Goal was to realign the basic science departments within the Medical School.
- 2004-2008 UW Medical Scientist Training Program – MD/PhD Admissions Committee: Involved 6-8 1h meetings per year, detailed review and evaluation of admissions packets for about 30 applicants out of 150 total, and interviewing 5-10 candidates per year.
- 2006-2007 Curriculum reform meetings and Anatomy Task Force member, UW Medical School.
- 2004-2005 UW Department of Pediatrics Chairman Search Committee member (successfully completed).
- 2002-2004 Faculty Senate Alternate for Pathology Department

UW Student PhD Committee Member

- Shruti Goel (2007 - Dr. Alexander, Cellular and Molecular Pathology)
- Caroline Wagner (2004 – Dr. Alexander, Oncology)
- Weihua Shan (2006 - Dr. Oberley, Pathology)
- Jessica Crain (PhD final 2009 - Dr. Watters, CMB)
- Kristopher Carver (PhD Final 2009 - Dr. Schuler, CMB)
- Akua Oduro (Prelim 2006 & PhD Final 2008 - Dr. Fritsch, CMP)
- Elizabeth Vu (PhD Final 2007 – Dr. Mertz, Cancer Biology)
- Antonis Kirmizis (PhD Final 2004 – Dr. Farnham, Cancer Biology)
- Yafan Li (2003 Prelim & PhD Final 2005 – Dr. Oberley Toxicology)
- Melissa Cimafranca (Prelim 2003 & PhD Final 2006 – Dr. Jefcoate, Toxicology)
- Francisco Diaz (Prelim 2002 & PhD Final 2003 – Dr. Wiltbank, ERP)
- Amy Fowler (Prelim 2003, & PhD Final 2005 – Dr. Alarid CMB)
- Yi Mu (Master's Degree completed 2006, Dr. Fritsch, CMP)
- Lisa Arendt (PhD Final 2007, Dr. Schuler, CMB)
- Elliot Lee (PhD Final May 2007 - Dr. Fritsch, Cancer Biology)
- Amy Weinberg (Prelim 2003, PhD Final July 2007 – Dr. Fritsch, CMB)

UW Department of Pathology Committees

- 2001-2010 UW Pathology Website (IT) Committee-Chairman. In 2009 switched to co-Chairman with Dr. Stewart.
- 2003-2010 Faculty Recruitment Committee – UW Department of Pathology: This committee was formed to make formal recommendations to the Chairman of Pathology regarding hiring new faculty. We successfully hired 8 new faculty into our department during this time including 4 surgical pathologists, 1 hematopathologist, 1 autopsy pathologist, 1 head of molecular diagnostics lab, and 1 PhD researcher.
- 2003-2007 Education Committee – UW Department of Pathology.
- 2002-2006 UW Translational Research in Pathology Committee (TRIP lab).
- 2001-2002 UW Pathology Housestaff and Residency Selection Committee.
- 2000-2001 Continuing Medical Education Program for UW Pathology Committee
- 2001 UW Pathology Tissue Bank Committee

Peer Grant Reviewer

- 07/08 NIH ZRG1 GGG-A (52) special emphasis panel held on 07/25/08 - Discovery of Novel Epigenetic Marks (R21 and RO1 ad hoc reviewer).
- 02/08 Ad hoc grant reviewer for Association for International Cancer Research (AICR).
- 2002-2005 UW American Cancer Society Institutional Grant reviewer (4 year appointment by UW Chancellor): Involved reviewing 10-15 research grant proposals per year, interviewing 2 candidates per year, and attending one 2h meeting per year.
- 1992 Member of peer review for grants submitted to the American Institute of Biological Sciences (AIBS) for the Breast Cancer panel of the US Army Medical Research and Development Command.

Ad Hoc Reviewer for Journals

- 2010 FEBS Letters
- 2009-2010 Editorial Board Member --International Journal of Clinical and Experimental Pathology
- 2003 Proceedings of the National Academy of Sciences USA
- 2005 -2008 The Journal of Immunology
- 2005 Biochemistry and Cell Biology
- 2005 - 2008 Journal of Biochemical and Biophysical Methods
- 2006 Ophthalmic Plastic and Reconstructive Surgery

National Society Memberships

- American Association of Anatomists
- Society for Pediatric Pathology

Northwestern Program Membership

- 2012-present Northwestern Center for Reproductive Sciences

UW Training Programs and Memberships

- 2007-2010 UW Stem Cell and Regenerative Medicine Program
- 2001-2010 UW Cellular and Molecular Pathology
- 2001-2010 UW Cellular and Molecular Biology
- 2004-2009 UW Cancer Biology Training Program
- 2001-2009 University of Wisconsin Comprehensive Cancer Center
- 2001-2008 UW Molecular Biology Training Grant

EXHIBIT 2
Schedule of Compensation

PROPOSER: Northwestern Medical Faculty Foundation – Judy Elleson, Administrator

MEDICAL DISCIPLINE: Medical (Cardiac Pathology) Consulting Services

1. Professional Services Fees

The County will be billed on a time /material monthly basis, and invoices will reflect the total number of hours worked per occurrence. The hourly rate shall be fully loaded. This includes all benefits, taxes, health insurance, overhead, etc. The hourly rate shall be fixed for the term of the contract. The estimated yearly hours are provided as an estimate and maybe adjusted. The County is in no obligations to exhaust all hours. The term is one year base with three one-year extension options. The option to extend is sole discretion of the County.

Service Years	Description	Estimated Yearly Hours	Consultant Hourly Rate	Total
1	Medical Consulting Services	120	\$200	\$24,000
			Total	\$24,000

2. Consultant Expenses

Reimbursement for Consultant's travel times to/from the CCMEO or for personal expenses are not allowable. Consultant may invoice the County for expenses required in connection with the assigned task. Reimbursement shall be consistent with the normal reimbursements permitted to County Employee and subject to approval by the County Chief Medical Examiner Officer. Approval must be obtained prior to incurring the expense. Consultant must submit sales receipt for reimbursement. No mark-ups are allowed for expenses. Reimbursement shall be no greater than Cook County Travel Policy (Exhibit 3). All reimbursables shall be taken from the contract value.

3. Technical Expenses

When examination of the specimens occurs at Northwestern Memorial Hospital, any technical charges shall be reimbursed by the CCMEO. If the CCMEO requests that the consultant provide any technical services, the County shall reimburse the consultant for any such services. The technical services shall be deducted from the contract value.

Exhibit 3 Cook County Transportation Expense Reimbursement
and Travel Regulations Policy



**COOK COUNTY
TRANSPORTATION
EXPENSE REIMBURSEMENT
AND TRAVEL REGULATIONS
POLICY**

Adopted: FY2009

COOK COUNTY TRANSPORTATION EXPENSE REIMBURSEMENT

SECTION I. AUTOMOBILE REIMBURSEMENT PLAN

- A.** Any employee who is required and authorized to use their personally owned automobile in the conduct of official County Business shall be allowed and reimbursed. The number of County business miles driven per ½ month will be compensated at the standard IRS deduction for business related transportation currently in effect and authorized by the Bureau of Administration. IRS mileage rates adjusted midyear will not be made retroactive.
- B.** In addition, parking and tolls shall be allowed for reimbursement if items are supported by receipts. Proof of IPASS charges shall be submitted along with the Transportation Expense Voucher.

SECTION II. GUIDELINES

A. Commuting Expenses

Commuting expenses between an employee's home and regular place of assignment will not be reimbursed, even if an employee's regular place of assignment is at different locations on different days within the County.

***Example:** An employee working for the Assessor's Office is regularly assigned to the Assessor's Office in Markham on Mondays and to the Assessor's Office in Maywood on Tuesdays through Fridays. Travel expenses to and from the employee's home and Assessor's Office on any day will not be reimbursed when assignments are permanent.*

B. Temporary and Minor Assignments (residence to temporary duty point)

Employees who are required to perform County business in the form of temporary and minor assignments beyond the general area of their regular place of assignment in the County may be reimbursed for their transportation expenses between home and their first or last stop, for such travel attributed to County business.

Mileage to first stop or from last stop between home and temporary place of assignment may be allowed and reimbursed.

Authorization for reimbursement for transportation between home and first or last stop shall only be allowed when, in the judgment of the Department head, reporting to the regular place of assignment is not reasonable because of the elements of time, place, business purpose and employee effectiveness. The assignment must be temporary and not indefinite.

C. Temporary and Minor Assignments (mileage between temporary duty points)

Employees who receive one or more temporary assignments in a day may be reimbursed for transportation for getting from one place to the other. Mileage from the employee's regular place of assignment, or first duty point, to all temporary duty points and back to regular place of assignment, or last duty point, is entitled to reimbursement.

D. General Guidelines

1. Mileage must be computed on the basis of the most direct route. Any mileage incurred solely for personal reasons is not reimbursable.
2. Employees must bear the cost of their normal commuting expenses between residence and official place of assignment.
3. Close supervision shall be maintained over the use of privately owned vehicles by the Department Heads. Authorization for use of privately owned vehicles shall only be given when deemed a service and benefit to Cook County Government. Reimbursements for transportation shall only be as compensation for services performed for the County.

SECTION III. TRANSPORTATION EXPENSE VOUCHER

A. Preparation

1. All claims for compensation of transportation expenses including the use of privately owned automobile and incidental parking fees and tolls, and taxicab and bus fares shall be submitted and itemized in the Transportation Expense Voucher. (For each stop of business use, enter date, started from location, finished at location, miles and expense between each stop. Total the dollar amount and enter in the space for "Total.")
2. When travel between home and first or last temporary duty point is authorized, the employee's residence shall be entered on the Transportation Expense Voucher, "Started from Location" or "Finished at Location."
3. The Transportation Expense Voucher shall be supported by receipts for all items, individually.
4. The Transportation Expense Voucher shall be prepared and signed by the individual who has incurred the expense and signed by their Supervisor. The original Voucher shall be submitted to the Comptroller's Office and a copy should be retained by the employee and by the department. Falsification of a Transportation Expense Voucher is considered a major cause infraction subject to disciplinary action up to and including discharge.

5. The individual submitting the Transportation Expense Voucher is personally responsible for its accuracy and priority. Trip details shall be entered immediately following automobile use to eliminate possibility of errors. The form must be completed in its entirety, e.g., insurance coverage.

B. Approval and Submission

1. The Transportation Expense Voucher shall be approved by the Department Head or a designated representative, who shall sign the original copy of the Transportation Expense Voucher. The original Voucher shall be sent to the Comptroller's Office by the 10th day of the following month in which the travel expense was incurred. Transportation Expense Vouchers submitted 60 days after the end of the month in which travel expense was incurred will not be reimbursed. A copy of the Transportation Expense Voucher shall be retained by the department and the employee.
2. Any Transportation Expense Voucher not prepared in accordance with these regulations, including the proper signatures, will be returned to the originator for corrections.

C. Authorized Attendance at Seminars, Meetings, Conventions, etc., on County Business

These expenses shall be detailed in accordance with the procedure relating to "Cook County Travel Regulations."

SECTION IV. COUNTY-OWNED AUTOMOBILE

Section 162(a)(2) of the Internal Revenue Code requires that any employee who is assigned a County-owned vehicle for use in performance of the employee's duties and who uses the vehicle for use in performance of the employee's duties and who uses the vehicle to commute from home to work and/or from work to home must include in their compensation the value to the employee (as provided for by the IRS) for each day such vehicle is used for commuting purposes, and Cook County must include this compensation on employee W-2 form.

The use of County-owned vehicles for personal use is prohibited.

COOK COUNTY TRAVEL REGULATIONS

SECTION I TRAVEL EXPENSES

- A. Travel expenses are ordinary and necessary expenses for transportation, hotel accommodations, meals and incidental expenses for travel that is longer than an ordinary day's work, and the employee needs to get sleep or rest during non-working time while away.

Reimbursements shall be allowed if the following requirements are met:

1. Travel is for periods more than or equal to be employee's scheduled workdays hours, plus 2 hours (usually 10 hours).
2. The employee must get sleep or rest while away in order to complete County business. (This does not mean napping in the car.)
3. Lodging and air travel shall be arranged through a County travel vendor, as specified by the Purchasing Agent.

SECTION II RESPONSIBILITY OF DEPARTMENT HEAD

- A. The Department Head is responsible for the execution of all travel regulations as well as such other policies and guidelines regarding travel as published by the Bureau of Administration.
- B. All travel subject to these regulations shall be authorized in advance by the Department Head in accordance with current County directives.
- C. Each Department shall develop a system for the prior authorization and control of travel to prevent expenses exceeding appropriations and to hold travel to the minimum required for efficient and economical conduct of County business.
- D. The rates for reimbursements set forth in these regulations represent the maximums permitted under IRS guidelines.

SECTION III ALLOWABLE TRANSPORTATION EXPENSE

- A. Modes of transportation authorized for official travel in the course of County business will include automobiles, railroads, airlines, buses, taxicabs, and other usual means of conveyance. Transportation may include fares and expenses incidental to transportation such as baggage transfer, official telephone messages in connection with items classed as transportation, and reasonable tips.
- B. All taxicab fares shall be accompanied by a receipt indicating the amount paid.

- C. Transportation between place of lodging and place of business at a temporary work location shall be allowed as a transportation expense.

SECTION IV MODE OF TRAVEL

- A. All travel shall be by the most direct route.
- B. In cases where an individual for their own convenience travels by an indirect route or interrupts travel by direct route, that individual shall bear the extra expense. Reimbursement for expenses shall be based only on such charges as would have been incurred by the most direct and economical route.
- C. All travel shall be by the most economical mode of transportation available, considering travel time, costs, and work requirements.

SECTION V ACCOMMODATIONS ON AIRPLANES, TRAINS, AND BUSES

- A. First class travel is prohibited
- B. Travel on airplanes shall be coach class.
- C. Any charges incurred as a result of changes to an original airline reservation made prior to or during travel are subject to Department Head approval.

SECTION VI USE OF PRIVATELY OWNED OR RENTED CONVEYANCE

- A. When an individual rendering service to the County uses privately owned motor vehicles in the conduct of official business and such use is authorized or approved as advantageous to the County, payment shall be made on a mileage basis at rates not to exceed those published by the Bureau of Administration.
- B. Reimbursement for the cost of automobile parking fees and tolls shall be allowed. The fee for parking an automobile at a common carrier terminal, or other parking area, while the traveler is on official business, shall be allowed only to the extent that the fee does not exceed the cost of public transportation.
- C. When a privately owned automobile is used for travel, the total transportation cost (including mileage allowance, parking fees, tolls and per diem expenses) shall not exceed the cost of public transportation, if reasonable public transportation is available.
- D. The use of rented automobiles will be kept to an absolute minimum and rented only in an emergency upon prior approval of the responsible Department Head. Every effort shall be made to obtain other suitable transportation rather than to use rented vehicles. Where emergencies require the use of a rented vehicle, the most economical vehicle available and suitable for the conduct of County business shall be obtained.

SECTION VII LIVING EXPENSES

A. Meals and Incidental Expense (M&IE)

Employees assigned to out of town travel shall receive a per diem set by the current U.S. General Services Administration in their Federal Travel Regulations (FTR) Meal and Incidental Expense (M&IE) rate. Travel rates differ by travel location and are periodically revised by the Federal Government. These rates can be found at the GSA "Domestic Per Diem Rates" website page at www.gsa.gov/perdiem.

The per diem rate is intended to include all meals and incidental expenses during the period of travel. There will be no reimbursement for meals and incidental expenses beyond this rate.

In addition, the traveler may receive reimbursement for special expenses as provided in Paragraph "C-3" below.

B. Travel Without Lodging

When lodging is not required, the per diem M&IE allowance is not permitted. Travel shall be on "actual expenses incurred."

C. Reimbursable Expenses

1. Lodging - Reasonable costs of hotel accommodations incurred will be allowed. Lodging shall be reimbursed by receipt up to the limits of the current Federal Travel Regulations as shown on the GSA "Domestic Per Diem Rates" website page at www.gsa.gov/perdiem.

Questions of reasonable hotel accommodations should be referred to the Bureau of Administration. Receipts are to be submitted with the Invoice Form to support accommodation expenses claimed.

2. Transportation - Transportation to and from duty point; between places of lodging, business and meals shall be allowed.
3. Special Expenses - The reasonable cost of miscellaneous expenses incurred shall be allowed to a traveler. The following are examples of miscellaneous expenses that may be deemed reimbursable or non-reimbursable:

<u>Reimbursable</u>	<u>Non-Reimbursable</u>
Stenographic and Typing Services	Entertainment
Storage of Baggage	Alcoholic Beverages
Hire of Room for Official Business	Traffic Tickets
Telephone Calls on Official Business	

All special expenses shall be itemized on the Conference and Travel Reimbursement Voucher with receipts attached.

SECTION VIII CONFERENCES

When the cost of meals for approved seminars or official meetings is an integral part of the Registration Fee, the "per diem" traveler shall deduct such amounts from the "cost of meals and incidental expenses" allowance, and the traveler on "actual expenses incurred" shall not claim meals which are included in the conference fee.

SECTION IX CONFERENCE AND TRAVEL REIMBURSEMENT VOUCHER

A. Memorandum of Expenditures

A memorandum of all travel expenditures properly chargeable to the County shall be kept by individuals subject to these regulations. The information thus accumulated shall be available for proper Invoice Form preparation.

B. Conference and Travel Reimbursement Voucher Preparation

1. All claims for reimbursement of travel expenses shall be submitted on the Conference and Travel Reimbursement Voucher and shall be itemized in accordance with these regulations.
2. The Conference and Travel Reimbursement Voucher shall show the purpose of travel, the dates of travel, the points of departure and destination, mode of transportation, and the cost of the transportation secured or mileage allowance if automobile is used.
3. The Conference and Travel Reimbursement Voucher shall be supported by receipts in all instances for railroad and airplane transportation, for lodging, meals and incidental expense (M&IE) items, and all other items. Also, a copy of the travel authorization is to be included for out-of-state travel.
4. The Conference and Travel Reimbursement Voucher shall be prepared and signed by the individual who has incurred the expenses.
5. The individual submitting the Conference and Travel Reimbursement Voucher is personally responsible for accuracy and propriety. A misrepresentation shall be cause for disciplinary or legal action.

C. Approval and Submission of Invoice Form

1. The Conference and Travel Reimbursement Voucher shall be approved by the Department Head or a designated representative, who shall sign the original Voucher and submit to the Comptroller's Office. A copy of the Voucher shall be retained by the Department as well as the person submitting the Voucher.
2. Any Conference and Travel Reimbursement Voucher not prepared in accordance with these regulations or not properly supported by receipts where required will be returned to the originator for correction.

D. Frequency of Submission

The original Conference and Travel Reimbursement Voucher shall be sent to the Comptroller's Office by the 10th day of the following month in which the travel expense was incurred. Conference and Travel Reimbursement Vouchers submitted 60 days after the end of the month in which travel expense was incurred will not be reimbursed. A copy of the Conference and Travel Reimbursement Voucher shall be retained by the department and the employee.