

NCS Formative Research Template for OIRA Clearance**TO BE COMPLETED BY STUDY CENTER:**

LOI #: LOI - - - -

Title of Formative Research: [Metagenomic Assessment of the Microbiome](#)

Participating Institutions: **Baylor College of Medicine, University of Wisconsin**

SME:

COTR: **Various**

Purpose of the Study: [To evaluate the feasibility, acceptability, and cost of incorporating large-scale microbiome research into the Vanguard Study. We propose to leverage the microbiome genomic sciences infrastructure developed for the Human Microbiome Project \(HMP\), an NIH Roadmap Initiative, as well as the clinical sample and data collection procedures developed for the National Children’s Study. This will help us to establish refined, optimal protocols for banking microbial samples for future metagenomics analyses. The overall goal is to enable a comprehensive investigation of the human gut microbiome from gestation to birth and through early adulthood within the NCS. For more information, please see pages 3-5 of the attached IRB Protocol.](#)

Benefit to NCS Vanguard or Main Study: [Human-associated microorganisms are present in large numbers beginning in the neonatal period, and recent research has shown that such microorganisms are diverse in their nature and interactions with the human system. Though current research initiatives such as the HMP are working to enable sequence-based characterization of human microbiota, there has not been a focus on the pregnancy, infancy, and early childhood microbiome. Characterizing the changes that occur to the microbiome throughout early development will help address gaps in research related to the impact of the environment on an individual as well as the impact of the intestinal environment on overall health and human development. Additionally, this study will provide information on the feasibility of banking microbial specimens acquired longitudinally with the intent to continue analysis of the microbiome using new technologies as the science improves. For more information, please see page 5 of the attached IRB Protocol.](#)

Study Design: [This study will collect three sets of samples from women and their infants. For NCS Vanguard Study participants, sample collections will coincide with existing Vanguard Study visits. Samples will be collected by NCS staff or, in the case of infant stool, by participants with materials provided by the Study Centers. Study Centers will collect a vaginal swab specimen at Pregnancy Visit 2 \(during the third trimester\), placental tissue and infant meconium at birth, and participant-collected infant stool samples at one month and again between two and six months of age. Study Centers will provide self-collection kits for infant stool; following collection, specimens collected at the University of Wisconsin will undergo primary analysis; following this, samples will be sent to Baylor College of Medicine for processing and storage. Participant information, including general health information and will be collected via medical record abstraction. For more information, please see pages 8-9 of the attached IRB Protocol.](#)

Sample Size Calculation: We anticipate that we will be able to recruit enough participants for a total of 75 sets of samples across the two study locations for this methodological substudy. Based on prior experience with similar methodological studies, there will be statistical validity in assessing the feasibility of collecting these samples, and enough specimens to address the validity of the methodology. Additionally, a sample size of 75 participants will not overly burden NCS Vanguard Study participants or women who are demographically similar to NCS Vanguard Study Participants and therefore eligible for this substudy.

Target Respondents: [This project will recruit NCS Vanguard Study pregnant women and women who are demographically similar to NCS Vanguard participants, but not geographically eligible for participation in the Vanguard Study. Non-NCS Vanguard Study participants may be invited to participate in this formative research in the event that the participating study locations do not have enough eligible Vanguard Study participants to meet enrollment targets for this substudy. Enrollment into this substudy will occur around 28 weeks of gestation and would coincide with Pregnancy Visit Two of the NCS Vanguard](#)

NCS Formative Research Template for OIRA Clearance

Study. Participants who are not participating in the NCS Vanguard Study will be invited to participate in this substudy during regularly-scheduled clinic visits. For more information, please see pages 6-7 and page 10 of the attached IRB Protocol.

Method of Recruiting: Participants who are currently enrolled in the Vanguard Study will be invited to participate at Study visits. Participants who are not NCS Vanguard Study participants will be recruited as a convenience sample during regularly-scheduled clinical visits. Enrollment will continue until project-specific recruitment targets have been reached. For more information, please see pages 6-7 of the attached IRB Protocol.

***Confidentiality:** Study Centers must abide by the terms of their Data Use Agreement, which should reference all formative research efforts involving the collection or management of NCS restricted-use data. All participating Study Centers will have approved Data Use Agreements and Security Plans prior to launch.

***IRB Approval:** Local IRB clearance for this activity has been obtained by all participating Study Centers. Please see attached IRB approval letters.

Incentives: We propose to offer participants a \$25 monetary incentive after collection of vaginal swab samples, and again after collection of the second participant-collected infant stool samples. Additionally, we may choose to offer participants small, non-monetary NCS logo gifts following collection of the placenta and infant meconium, particularly for participants who are not receiving birth visit incentives as part of the Vanguard Study. These amounts would be in addition to other monetary incentives approved for participants in the NCS Vanguard Phase 2.

Sensitive Questions: We will not ask sensitive questions as a component of this study.

Proposed Project Schedule: We will begin this project upon receipt of all regulatory approvals.

Data Collection Burden:

Estimates of Annual Hour Burden -- Generic Substudy: LOI2-BIO-20, "Metagenomic Assessment of the Microbiome"

Data Collection Activity	Type of Respondent	Estimated Number of Respondents	Estimated Number of Responses per Respondent	Average Burden Hours Per Response	Estimated Total Annual Burden Hours
Informed Consent	Pregnant Women	75	1	0.17	13
Vaginal Swab Collection	Pregnant Women	75	1	0.08	6
Placenta and Meconium Collection	Mothers / Infants	75	1	0.17	13
Stool Sample Collection (Participant-Collected)	Infants	75	2	0.25	38
TOTAL		150			70

* To be completed before project proposal is submitted for OIRA clearance.

NCS Formative Research Template for OIRA Clearance

Annualized Cost to Respondents -- Generic Substudy: LOI2-BIO-20, "Metagenomic Assessment of the Microbiome"

Data Collection Activity	Type of Respondent	Estimated Number of Respondents	Estimated Number of Responses per Respondent	Hourly Wage Rate	Respondent Cost
Informed Consent	Pregnant Women	75	1	\$10.00	\$130.00
Vaginal Swab Collection	Pregnant Women	75	1	\$10.00	\$60.00
Placenta and Meconium Collection	Mothers / Infants	75	1	\$10.00	\$130.00
Stool Sample Collection (Participant-Collected)	Infants	75	2	\$10.00*	\$380.00
TOTAL		150			\$700.00

*The allotted hourly wage rate accounts for the mother's time associated with the data collection activity.

Please check here after ensuring that all calculations have been verified

Estimated Costs: Staff Hours: 140 hours.
Supervisor Hours: 35 hours.

Attachments: [Exemplar Informed Consent, IRB protocol, IRB approval letter, medical record abstraction forms.](#) Note: The consent will be customized for each participating study center and target population, as appropriate, and approved by the local IRB prior to use.

Please check here after ensuring that the OMB #: 0925-0647 and Expiration Date: 01/31/2015 date have been inserted as first-page headers on each proposed instrument.

Please check here after ensuring that the following OMB burden statement has been inserted as a first-page footer on each proposed instrument.

Public reporting burden for this collection of information is estimated to average [SC insert estimated response time] minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: NIH, Project Clearance Branch, 6705 Rockledge Drive, MSC 7974, Bethesda, MD 20892-7974, ATTN: PRA (0925-0647*). Do not return the completed form to this address.

NCS Formative Research Template for OIRA Clearance

Appendix 1. Maximum NCS Incentives, by Study Activity and Impact on Participants (Approved by OMB 1/5/12)

Data Collection Activity Characteristics	Initial NCS Vanguard Study	NCS Recruitment Substudy and Formative Research		
		Phase 1	Phase 2	Formative Research
Time for encounter	3 hours	0.5 to 1 hour	0.5 to 1 hour	0.5 to 1 hour
Sensitivity of questions	Sensitive, including sexual activity	Few sensitive questions	Few sensitive questions	Few sensitive questions
Physical measures	Yes	No	No	Yes*
Environmental specimens	Yes	No	Yes	Yes*
Biospecimens	Yes	No	Yes	Yes*
Participant observation	Yes	No	No	No
Monetary incentive, per visit	\$100	\$25	\$25 for the group of study questionnaires, plus \$25, in total, for any bio-specimens collected during a contact and, where appropriate for environmental specimens	\$25, in total, for any bio-specimens collected during a contact. For questionnaires, or any environmental specimens - up to \$25 when deemed necessary
Non-monetary incentives (tote bags, post its, key chains, etc.)	<u>In addition to the monetary incentive</u> , non-monetary incentives valued at \$25 or less may be offered to participants	<u>As an alternative to the monetary incentive</u> , NCS logo gifts valued at \$25 or less may be offered to the participants in lieu of cash or local incentives not exceeding \$25 in value and deemed non-coercive by local IRBs	<u>In addition to the monetary incentive</u> , NCS logo gifts valued at \$25 or less may be offered to the participants if these are deemed acceptable by local IRBs	<u>Instead of monetary incentives</u> , NCS logo gifts valued at \$25 or less may be offered to the participants if these are deemed acceptable by local IRBs