CONSENT FORM COVER PAGE

STUDY TITLE: WHNRC Fiber Intervention Study

NCT Identification Number: NCT04543877

Date of Document: 03/10/2025

Title of research study: ***WHNRC Fiber Intervention Study***

Investigator: ***Danielle Lemay, Ph.D.***

California Experimental Subjects Bill of Rights

- Someone will explain this research study to you, including:
  - The nature and purpose of the research study.
  - The procedures to be followed.
  - Any drug or device to be used.
  - Any common or important discomforts and risks.
  - Any benefits you might expect.
  - Medical treatment, if any, that is available for complications.
- Whether or not you take part is up to you.
- You can choose without force, fraud, deceit, duress, coercion, or undue influence.
- You can choose not to take part.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- You can ask all the questions you want before you decide.
- If you agree to take part, you will be given a signed and dated copy of this document.

Key Information about This Research Study

You are invited to participate in a nutrition research study. The purpose of this research is to determine if adding dietary fiber, such as inulin, to a diet that does not have enough fiber would raise the levels of potentially beneficial bacteria, such as *Bifidobacterium,* in your gut. There is evidence to suggest that these microbes can affect gut health and immune response, including to vaccines. We would like to:

1. Examine how inulin in the diet causes short term changes in the composition and function of the microbes in the gut when compared to another fiber, maltodextrin.
2. Determine if consuming inulin reduces gut inflammation and gut leakiness (a condition when the lining of the gut becomes porous and substances in the gut could leak into the bloodstream) caused by the oral typhoid fever vaccine compared to maltodextrin.
3. Examine whether consuming inulin increases immune response to vaccination compared to maltodextrin.

You are invited to participate in this 9-week (66 days) WHNRC Fiber Intervention Study because you meet all the qualifications. Your participation in this study will involve 9 visits to WHNRC in Davis, CA and 1 visit to the UC Davis Medical Center Pavilion Pharmacy in Sacramento, CA during this 66-day study.

We expect about 60 people from Davis and the surrounding area who passed the screening to participate in the study.

Participation in this study will involve the following:

1) Urine pregnancy tests, if you are female.
2) HIV blood tests.
3) 12-hour overnight fasts, i.e. 8pm to 8 am.
4) Fill out a demographics recording form (age, sex, race, and ethnicity)
5) Fasting blood draws.
6) 3 visits requiring 17 hour fasting.
7) Consumption of an artificial sugar-sweetened drink consisting of 1) a lactulose solution, provided as a prescription in a dose cup and 2) D-mannitol dissolved in water prepared in the WHNRC Kitchen.
8) Consumption of fiber during the intervention period.
9) Collection of urine and stool.
10) Ingestion of Vivotif®, an oral live, attenuated typhoid fever vaccine (Ty21a).
11) Participate in phone interviews on the foods you consumed, i.e. dietary recall.
12) Multiple visits to WHNRC to pick up stool collection containers and fiber bottles and to drop off stool collection containers in addition to the procedure visits.
13) WHNRC follows UC Davis COVID-19 policy requirements, including wearing face coverings indoors regardless of vaccination status and completing the online UCD Daily Symptom Survey. You may remove face coverings only when consuming the sugar drink, water, and snack. You are required to adhere to the most current UC Davis campus COVID-19 guidelines.

All research studies involve some risk. These risks are described in detail later in this document.

<u>Here are some reasons you may not want to participate in this study:</u>

1) For female subjects: you are planning a pregnancy during the time of the WHNRC Fiber Intervention Study or you refuse to take measures to avoid becoming pregnant during the specified time of the study.
2) There are frequent visits to WHNRC that require overnight fasting, blood draws, picking up (and dropping off) stool collection containers and fiber bottles.
3) You may not like complying with study requirements, i.e. you are unable to collect your urine or stool at specified times, unable to complete dietary recall phone interviews at specified times, refuse to consume the vaccine, refuse or unable to call or text the study coordinator after every vaccine dose, unable to stop consuming food or drinks containing inulin, chicory root, or maltodextrin, or unable to stop consuming prebiotic, probiotic, or other supplements (except over-the-counter vitamin and mineral supplements) during the study.
4) You might experience some discomfort or mild side effects from the artificial sugar-sweetened drink that you will consume.
5) You do not want to adhere to the most current UC Davis COVID-19 guidelines, including wearing a face covering at WHNRC.

Your participation in this study is voluntary. You do not have to participate in this study if you do not want to. The alternative is not to participate. You will not lose any services, benefits, or rights you would normally have if you choose not to participate.

The remainder of this form contains a more complete description of this study. Please read this description carefully. You can ask any questions you need to help decide whether or not to join this study.

Information to help you understand research is online at http://www.research.ucdavis.edu/policiescompliance/irb-admin/for-research-participants.

What if I have Questions?

The person in charge of this study is Danielle Lemay, Ph.D. If you have questions or concerns about this study, please contact Dr. Lemay, at 530-376-3216 during evenings, weekends, or business hours or Ryan Snodgrass, Ph.D. at 530-754-4838 during business hours (Monday – Friday, 8 am – 5 pm). If Drs. Lemay and Snodgrass are unreachable, then Human Studies Manager, Ellen Bonnel, Ph.D., may be contacted at 530-752-4184. In the case of an emergency, dial 911 from any phone.

If you have any questions about your rights as a research subject or have complaints about the research study or study team, you may talk to a team member at the Institutional Review Board (IRB) at (916) 703-9151, hs-irbeducation@ucdavis.edu, or 2921 Stockton Blvd, Suite 1400, Room 1429, Sacramento, CA 95817. The IRB is a group of people who oversee research.

How is this research funded?

This research is being funded by USDA-Agricultural Research Service (ARS). USDA-ARS is the sponsor. Sponsors may change or be added.

Dr. Lemay and staff are receiving direct income from USDA-ARS. Dr. Lemay and staff do not have any conflict of interest to report.

What happens if I say yes, I want to be in this research?

If you decide to participate in this research study, you will be asked to visit the WHNRC at 430 West Health Sciences Drive, Davis, CA 95616 (located on the UC Davis campus). This study will last 9 weeks (66 days).

Lactulose and Vaccine Pickup

Once you are enrolled in this research study, you will pick up the lactulose and Vivotif® vaccine from the Pavilion Pharmacy, UC Davis Medical Center, 2315 Stockton Blvd, Sacramento, CA 95817-1418 to take home. The pharmacist will counsel you in person on how to take the prescribed drugs. Because the Vivotif® vaccine must be refrigerated, you must return home and place it in your refrigerator as soon as possible. A registered nurse will also counsel you by Zoom, Skype, phone call, or in person on when and how to take the lactulose and the Vivotif® before your first dose.

Confirmation of Taking the Vaccine Dose

You will be required to phone or text message the study coordinator each time you consume the vaccine dose on Day 30, 32, 34, and 36.

HIV Testing

Your participation in this study will involve two (2) HIV blood tests. The results from the tests will be reviewed by WHNRC's consulting UCD Medical Center physician Valentina Medici, M.D. We are testing you for HIV because anyone with HIV or AIDS should NOT take the oral, live Vivotif® typhoid fever vaccine. Based on California state law for HIV testing, we need to inform you of the following:

1. We are testing you for HIV two (2) times, once on Day 8 and again on Day 26, because there is a lag time of 2 – 3 weeks from the time you are infected with HIV to the time HIV is detected in your blood.
2. You have the right to decline the HIV tests. If you choose not to have the HIV test, then we will remove you from the study immediately.
3. If the result from the HIV test is positive, then you will receive a phone call from Dr. Medici. If Dr. Medici is unable to reach you after three (3) attempts by phone, then a certified letter will be sent to the address you provided. If the result from the HIV test is positive, then you will not complete the study.
4. If the result from the HIV test is positive, there are numerous treatment options available. You will have the opportunity to sit down with Dr. Medici to discuss the positive result further, including providing you with referrals and various resources for treatment.
5. If the result from the HIV test is positive, Dr. Medici is required by California state law to report by name suspected acute HIV infections within one (1) working day (by telephone) and to report cases of HIV infection and AIDS by name within one (1) week to the HIV Surveillance.
6. If the result for the HIV test is negative, then you will receive a phone call from the study coordinator. If the study coordinator is unable to reach you after three (3) attempts by phone, then a letter will be sent to the address you provided. You may continue with the study. You should consult with your healthcare provider about routine testing.

Table 1 on the next page summarizes your activities if you decide to participate in this research study. A detailed day-to-day list of activities you are expected to perform follows the table.

Table 1: Summary of your visits and activities.

		← Washout →			Fiber Intervention Period →											←Washout →			
Days	S*	1	7	8	9	16	25	26	30	32	34	36	37	38	39	43	44	58	65	66
Time Involved (h)	1.0	5.0		6.0		3.5		6.0	2.0				6.0		2.0		0.5	3.5		0.5
Arrive Fasted Overnight	x			x				x					x		x			x		
Consent to Participate	x																			
Stool Collection[1]		2x in 7 days				2x in 10 days		3x in 11 days					2x in 7 days					1x in 8 days		
Stool Shipper Drop-Off				x				x					x				x			x
Stool Shipper Pickup		x				x		x					x					x		
Fiber Pickup				x		x		x					x							
Measurements[2] Blood Draw	x			x				x					x		x			x		
Pregnancy Test				x				x												
HIV Blood Test				x				x												
Sugar Drink				x				x					x							
WHNRC Urine Collection				x				x					x							
Rx Pickup		x																		
Rx Counseling[3]				x					x											
Dietary Recall[4]		3x in 7 days				3x in 10 days												3x in 8 days		
Vaccine Dose									x	x	x	x								

*In-person screening visit day

[1]At home [2] Body weight and temperature

[3] Nurse counseling for lactulose and vaccine to occur prior to first dose [4] Three phone interviews on foods consumed on 3 non-consecutive days

Do not write below this line. For IRB stamp and version date only.

A Day-to-Day Breakdown of Your Activities

Overnight Fasts

You will fast overnight for 12 hours (hr), i.e. 8 pm to 8 am. You may only drink water during the fast.

Stool Collection

You will pick up the stool collection shipper, stool diary, supplies and stool instruction sheet from WHNRC on specified days. In this diary, you will record every bowel movement you have, collected or uncollected, and the stool's consistency. You will duplicate the information on the stool you collect on the stool instruction sheet as well as the stool diary. Subjects will also be prompted by email to respond to a short GI Symptoms Questionnaire administered via Qualtrics. Study staff will give a full demonstration of how to handle the shipper safely and how to drop your stool samples into the shipper. The shipper will be stored at home during the collection week and you will return it with the frozen stool samples, stool instruction sheet, and the stool diary at the end of each collection period (Day 8, 26, 37, 44, 66). Safety information on the shipper is provided below and on the stool collection instruction sheet.

Stool collection shippers are the property of the US Government. We ask that you comply with the check-in/check-out procedures of the shipper at WHNRC and that you return the shipper issued to you upon completion of each stool collection period or termination of the study, whichever comes first. Compensation payment will be withheld until you return the shipper to WHNRC.

Urine Collection

We will collect your urine for 5 hours at WHNRC on Day 8, 26, and 37. On collection day, you will urinate into a urine jug. Initially, the jug will be empty and each time you urinate, you will collect your urine into the same jug for 5 hours. In between collections, the jug will be kept cool in a gel-packed cooler.

Fiber Intervention Period

There are 2 fibers in this study: inulin and maltodextrin (control). You will consume either the inulin or the maltodextrin. The fiber you consume will be chosen by chance, like flipping a coin. Neither you nor the study staff will choose which fiber you get. You will have an equal chance of being assigned to the inulin or maltodextrin group. You will not know which fiber you are getting. The WHNRC Kitchen will prepare Nalgene bottles with 12 grams (1½ tablespoons) of either inulin or maltodextrin. You will add cold or room temperature water to one (1) bottle and consume the entire contents with an evening meal in one sitting from Day 9 to Day 43 at home. You will record your fiber consumption, concerns and/or side effects, and medication history in the provided logbook during this period. If you are experiencing adverse events, call Dr. Lemay, at 530-376-3216 during evenings, weekends or business hours or Ryan Snodgrass, Ph.D. at 530-754-4838 during business hours (Monday – Friday, 8 am – 5 pm). If Drs. Lemay and Snodgrass are unreachable, then Human Studies Manager, Ellen Bonnel, Ph.D., may be contacted at 530-752-4184. For a life-threatening problem, call 911 right away or seek help immediately. Contact the above listed study investigators when the medical emergency is over or as soon as they can. Empty bottles must be returned on your next visit day.

COVID-19 Protocol

WHNRC follows UC Davis COVID-19 policy requirements, including wearing face coverings indoors regardless of vaccination status. You may remove face coverings only when consuming the sugar drink, water, and snack. You are required to adhere to the most current UC Davis campus COVID-19 guidelines.

Day 1 – 7

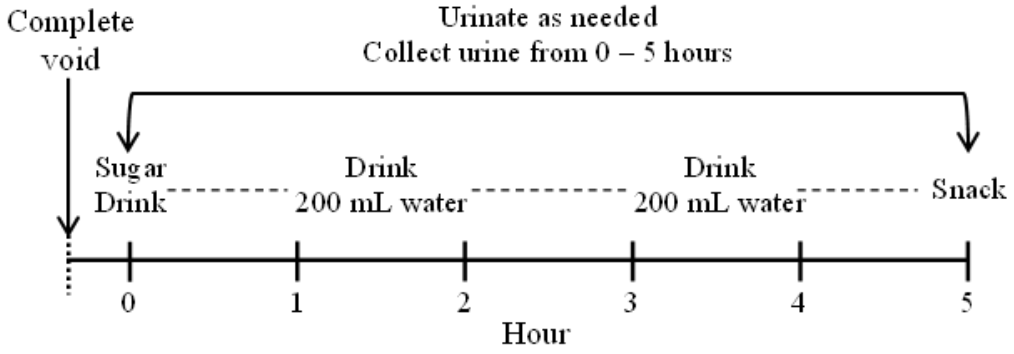
You will already have picked up the shipper prior to Day 1. You will collect your stool two (2) times during the course of the week and record stool frequency and consistency in the diary and instruction sheet. You will store the stool samples in the shipper at home. You will return the shipper, stool instruction sheet, and the stool diary to WHNRC at the end of the collection period. During the week, a dietary recall technician from the University of Minnesota Nutrition Coordinating Center (NCC) will contact you by phone three times on non-consecutive days (2 weekdays and 1 weekend) to interview you on the foods consumed the previous day. You will pick up the lactulose and vaccine from Pavilion Pharmacy at the UCDMC prior to Day 8.

Day 8

You will arrive at WHNRC in the morning after a 12 hr fast. You will return the stool shipper containing the stool samples, stool instruction sheet, and stool diary. You will be asked about nonsteroidal anti-inflammatory drugs (NSAID), such as ibuprofen (Advil, Motrin), naproxen (Aleve, Naprosyn), celecoxib (Celebrex), and aspirin (Bayer, Bufferin) use over the previous 48 hours and the use of supplements and other medications; you will be re-scheduled if you are non-compliant. We will take your weight and body temperature and a licensed phlebotomist will draw your fasted blood. If you are female, then you will take a urine pregnancy test. All participants will take an HIV AB/AG combo screen blood test. If applicable, you will be asked whether you are currently menstruating. We will also ask whether you are menopausal or perimenopausal. A registered nurse will counsel you by Zoom, Skype, phone call, or in person, on how to take the lactulose and discuss its potential side effects. Then, you will completely void your bladder then consume 2 sugars within 10 min: a lactulose solution containing 10 grams (1 tablespoon) of lactulose in 15 mL (1 tablespoon) of water provided in the dose cup and 5 grams (½ tablespoon) of D-mannitol dissolved in 200 mL (7 fl oz) water. You will continue to fast for the next 5 hr. **Figure 1** depicts the timeline for the urine collection. A minimum of 200 mL of water will be consumed in the next hour to 2 hours. You will be assigned to a private bedroom in the Metabolic Research Unit (MRU) with a private bathroom. You will urinate as needed and the urine will be collected. You will again drink a minimum of 200 mL of water and urine will be collected until 5 hr post-sugar consumption. The urine collected from 0 – 5 hr will be used to assess how much of the sugars go through the lining of the small intestine.

The total time at WHNRC is approximately 6 hr. In consideration of your 17 hr fast, if you desire, you may choose to eat a granola bar and/or crackers, juice, coffee, and/or tea provided by the Metabolic Kitchen at the end of the urine collection period. You will leave WHNRC with a 1-week supply of either the inulin or maltodextrin intervention bottles to take home.

Figure 1: Timeline of sugar drink consumption and urine collection



Day 9

You will consume the first fiber dose on this day. You will consume 1 fiber bottle mixed with cold or room temperature water with your evening meal in one sitting per day until the next fiber pickup on Day 16.

Day 16

You will pick up a 10-day supply of either the inulin or maltodextrin intervention bottles, the stool shipper, stool instruction sheet, and stool diary from the WHNRC. Consume one dose per day until the next fiber pickup on Day 26.

Day 16 – 25

Similar to Day 1 – 7, you will collect stool two (2) times and record stool frequency and consistency. You will also recall your diet on three (3) non-consecutive days.

Day 26

This 6 hr procedure day is the same as Day 8. Briefly, you will arrive at WHNRC in the morning after a 12 hr fast. You will return the stool shipper containing the stool samples, stool instruction sheet, and stool diary. You will be asked about NSAID use over the previous 48 hours and the use of supplements and other medications; you will be re-scheduled if you are non-compliant. We will take your weight and body temperature and a licensed phlebotomist will draw your fasted blood. If you are female, then you will take a urine pregnancy test. All participants will take an HIV AB/AG combo screen blood test. Then, you will consume the dual sugar drink. You will follow the timeline depicted in **Figure 1**. If you desire, you may choose to eat a granola bar and/or crackers, juice, coffee, and/or tea provided by the Metabolic Kitchen at the end of your visit. You will leave WHNRC with either the inulin or maltodextrin intervention bottles to take home. You will also bring home the stool shipper, stool instruction sheet, and a stool diary to be used for the next stool collection period.

Day 26 – 36

You will collect stool three (3) times during this 11-day period. Consume one dose of either inulin or maltodextrin per day until the next fiber pickup on Day 37.

Day 30

A registered nurse will counsel you by Zoom, Skype, phone call, or in person, on how to take the Vivotif® vaccine and its potential side effects. In the evening, you will swallow one capsule of Vivotif® one hr before a meal with cool or lukewarm water not to exceed 98.6 ^{O}F (37 ^{O}C) at home. This is the 1st of 4 doses. Call or text the study coordinator when this has been completed.

Day 32

In the evening, you will swallow one capsule of Vivotif® one hr before a meal with cool or lukewarm water not to exceed 98.6 ^{O}F (37 ^{O}C) at home. This is the 2nd of 4 doses. Call or text the study coordinator when this has been completed.

Day 34

In the evening, you will swallow one capsule of Vivotif® one hr before a meal with cool or lukewarm water not to exceed 98.6 ^{O}F (37 ^{O}C) at home. This is the 3rd of 4 doses. Call or text the study coordinator when this has been completed.

Day 36

In the evening, you will swallow one capsule of Vivotif® one hr before a meal with cool or lukewarm water not to exceed 98.6 ^{O}F (37 ^{O}C) at home. This is the 4th of 4 doses. You will fast overnight for 12 hr. Call or text the study coordinator when this has been completed.

Day 37

This 6 hr procedure day is the same as Day 26 but without the pregnancy and HIV tests.

Day 37 – 43

You will collect stool two (2) times during this 7-day period. Day 43 marks the end of the fiber intervention period.

Day 39

You will arrive at WHNRC in the morning fasted. You will give body measurements and provide a fasting blood sample. You will be asked about NSAID use over the previous 48 hours; any use will be recorded.

Day 44

You will drop off the stool shipper, stool instruction sheet, and stool diary at WHNRC.

Day 58

You will arrive at WHNRC in the morning fasted. You will give body measurements and provide a fasting blood sample. You will be asked about NSAID use over the previous 48 hours; any use will be recorded. You will leave WHNRC with a stool shipper, stool instruction sheet, and stool diary.

Day 58 – 65

For the next 8 days, you will collect stool one (1) time and recall your diet on 3 non-consecutive days.

Day 66

You will drop off the stool shipper, stool instruction sheet, and stool diary at WHNRC.

What We Will Do with Your Urine

Your urine will be analyzed for the artificial sugars (lactulose, D-mannitol) that you consumed in the sugar drink. The presence of these sugars in your urine will tell us about your gut leakiness in response to the vaccine.

What We Will Do with Your Stool

Your stool will be analyzed for the composition and function of your gut microbiome. This analysis will be conducted by WHRNC.

What We Will Do with Your Blood

Table 2 depicts the volume of blood drawn from you and the analyses performed for each procedure visit day. A licensed phlebotomist will draw blood 5 times for a total of 301 mL (63 tsp or 11 fl oz) during this 66-day study. Blood will be used for 1) a complete blood count (CBC) + differential at every visit and HIV test on Day 8 and Day 26, analyzed by the UC Davis Health, Department of Pathology and Laboratory Medicine, to assess overall health status, 2) the analysis of plasma markers of inflammation by WHNRC to assess systemic inflammation in response to the ingestion of the vaccine, and 3) the analysis of vaccine response by the research team to assess your immune response to Vivotif®.

Table 2: The amount of blood that will be drawn on procedure visit days.

Analysis	**Visit Day**					
	Screening	**8**	**26**	**37**	**39**	**58**
Complete Blood Count	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL
Metabolic Panel	5 mL					
HIV AB/AG Combo Screen		4 mL	4 mL			
Markers of Inflammation		30 mL	30 mL	30 mL	30 mL	30 mL
Vaccine Response		5 mL	20 mL	20 mL	20 mL	25 mL
Monocyte Subsets		10 mL	10 mL	10 mL		
Total Volume Per Day	**8 mL**	**52 mL**	**67 mL**	**63 mL**	**53 mL**	**58 mL**
Total Volume for Study		**301 mL**				

How is being in this study different from my regular health care?

This study is not part of your regular health care.

What are my responsibilities if I take part in this research?

If you take part in this study, you will be responsible for:

1. Fasting (no food, only water) for 12 hours the night before a procedure/blood draw visit day.
2. Fasting for 17 hours on 3 separate visits (12 hours fasting and 5 hours urine collection).
3. Visiting WHNRC 9 times for fiber bottle and stool shipper pickups, procedure visits, and stool shipper drop-offs.
4. Visiting the Pavilion Pharmacy, UCD Medical Center in Sacramento, to pick up the lactulose and Vivotif®.
5. Arriving at WHNRC on visit days on time.
6. Consuming the sugar drinks and vaccine doses at the specified times.
7. Understanding the stool collection instructions.
8. Collecting stool off-site at specified times.
9. For female subjects, notifying the research team of a suspected or confirmed pregnancy during the study.
10. Notifying the research team of any health changes, consumption of prebiotic, probiotic, or other supplements (except over-the-countervitamin and mineral supplements), and consumption of NSAID, i.e. ibuprofen, aspirin, and/or plans to withdraw from the study.

Do I have to be in this study? What if I say "yes" now and change my mind later?

No, you do not have to be in this study. Taking part in research is voluntary. You can choose to be in the study or not be in the study. If you decide to be in the study, you can choose to leave the study at any time.

If you decide not to take part in the study, or if you choose to leave the study at any time, your choice will not affect any treatment relationship you have with your healthcare providers or any services you receive from them. No matter what you decide, and even if your decision changes, there will be no penalty to you. You will not lose medical care or any legal rights.

Please let the staff know if you choose to leave the study. If you choose to leave the study at any time during the vaccine dosing period, you may not have full protection from typhoid fever.

We will remove identifiable information (de-identify) from the data we collect about you; data and specimens collected up to the point of withdrawal will be de-identified.

After we remove all of the identifiers, we will place a code on the information. The code will be linked to your identity but the link will be stored in locked file cabinets in a locked office in the WHNRC that has controlled access (by card key) only to approved WHNRC employees working on human studies. We will maintain your de-identified data on encrypted computers and managed and stored in a password protected, web-based data management application, REDCap. Access to the de-identified data will be limited to only members of the research team who need the access to properly conduct the study. The members of the research team will not know who the data came from. De-identified specimens will be stored in a dedicated -70ºC freezer at the WHNRC.

However, the Qualtrics online survey you took to determine study eligibility is not part of the study data and is not de-identified. The responses to your medical history, medical conditions, medications, and fiber and inulin consumption and your contact information, including email, phone numbers, and home address, will be stored by UC Davis Cloud Services. Responses will not be used as study data and will not be analyzed.

What are my other choices if I do not take part in this study?

There are no alternatives. You do not have to participate in this research study.

Can I be removed from the research without my OK?

The study team may take you out of the study, even if you want to continue, if:

- you are female and you become pregnant;
- you develop a fever, as assessed during your visit;
- you do not follow the study requirements or you no longer meet the requirements to be in the study;
- you test positive for HIV

Is there anyway being in this study could be bad for me?

For a life-threatening problem, call 911 right away or seek help immediately. Contact the study investigators listed when the medical emergency is over or as soon as you can. Please contact Dr. Lemay, at 530-376-3216 during evenings, weekends and business hours or Ryan Snodgrass, Ph.D. at 530-754-4838 during business hours (Monday – Friday, 8 am – 5 pm). If Drs. Lemay and Snodgrass are unreachable, then Human Studies Manager, Ellen Bonnel, Ph.D., may be contacted at 530-752-4184. Please contact the above listed for all other problems which occur as a direct result of taking part in this study. If appropriate, the study investigators will make recommendations and/or appropriate referrals for treatment.

The study team will monitor you to see if you are experiencing any harm related to your participation in the study. If you experience any pain or discomfort, you must inform the study team as soon as possible.

There may be physical risks to participating in this research.

- You may experience bruising and minor swelling around the site of the blood draw. This is considered normal. The risk of catching an infectious disease from a blood draw is very rare.
- You may experience abdominal pain, nausea, headache, fever, diarrhea, vomiting, skin rash, or anaphylaxis (a serious and life-threatening allergic reaction) from the Vivotif®. More than 150 million doses of the Vivotif® vaccine have been administered worldwide. Adverse reactions to the vaccine have been reported by the manufacturer to be infrequent and mild.
- You may experience diarrhea, intestinal gas and bloating, belching, flatulence, abdominal cramping/discomfort, dehydration, and possible alteration of electrolytes such as decreased potassium and increased sodium levels from the ingestion of the sugar drinks.

- You may experience abdominal discomfort from the inulin or maltodextrin. Negligible amount of weight gain may occur with the consumption of maltodextrin.
- You may experience lightheadedness, headache, or weakness during the 17 hour fasting conditions (12 hour overnight fasting and 5 hour post-sugar drink dosing) because of not enough sugar in the blood.
- There are physical risks associated with the use of a stool shipper. The shipper:
    1. weighs approximately 30 pounds. Poor body mechanics while lifting and carrying the shipper may cause injury to your back or legs. Ask for assistance if you cannot lift or carry it alone.
    2. must be properly secured in your vehicle during transport. Failure to secure the shipper in your vehicle may result in a hazard causing bodily injury and/or damage your vehicle.
    3. contents and inside surfaces are at cryogenic temperatures (less than -280^{o}F), meaning that it is extremely cold. Unprotected skin can stick to the metal or non-metallic surfaces inside of the shipper. The skin can tear when pulled away causing injury. Skin contact with cold surfaces can also result in frostbite and cause injury.
    4. will release vapor or "fog" when you open the lid. Do not inhale the vapor.
- Three stool sample collection containers have liquid called RNA*later* which contains 40% ammonium sulfate and water. It is used to preserve the stool. It is non-toxic; however, all chemicals should be handled with caution. If contact with skin or eyes, flush with water for several minutes. If swallowed, rinse mouth with water for several minutes. If you feel unwell, call POISON CONTROL CENTER (800) 222-1222 or call 911 for a life-threatening problem.

We do not anticipate any psychological risk; however, collecting your urine or stool may be unpleasant or embarrassing. There is the potential for emotional distress if you test positive for HIV.

In addition to these risks, this research may hurt you in ways that are unknown. These may be a minor inconvenience or may be so severe as to cause death.

The Vivotif® vaccine and lactulose in this research may hurt a pregnancy or fetus in ways that are unknown. You should not be or become pregnant while on this research study. Details follow on the next page.

As with all research, there is a chance that confidentiality could be compromised. To minimize the risks of breach of confidentiality, we will not include any information that directly identifies you on the specimens and information we collect, and on the data resulting from the research. Instead, we will record a code on the biospecimen and information, and we will keep a link between the code and your identity in a different location.

Researchers will not use your specimens for genetic or genomic testing.

There is a risk that your information could become known to someone not involved in this study.

For female subjects: What about birth control?

You may not want to participate in this study if you are planning a pregnancy during the time of the study or you refuse to take measures to avoid becoming pregnant during the time of the study.

This study uses Vivotif®, a typhoid fever vaccine. Animal reproduction studies have not been conducted and it is not known whether it can cause fetal harm when administered to pregnant women. It is not known whether the vaccine causes harm to a breastfeeding baby.

This study uses lactulose, an artificial sugar used to treat constipation. Animal reproduction studies in mice, rats, and rabbits have been performed and revealed no evidence of harm to the fetus. Since there have been no adequate studies performed in pregnant women, it is not known whether lactulose causes harm to the human fetus. It is not known whether lactulose causes harm to a breastfeeding baby.

You must not get pregnant or breastfeed while you are in this study. If you are pregnant or breastfeeding, you cannot take part in this study. If you are able to become pregnant, you must have a pregnancy test on specified days.

If you are a woman who can become pregnant, you must take measures to avoid becoming pregnant while you are in this study. The following are acceptable measures to avoid becoming pregnant:

One of the following forms of birth control should be used 1 week before the consumption of the vaccine, 1 week during the vaccine, and 1 week after the vaccine:

- Abstinence (not having sexual relations with a person of the opposite sex)
- Implantable hormone (e.g. Nexplanon®)
- Intrauterine device
- Intravaginal ring (e.g. NuvaRing®)
- Male partner must have a vasectomy
- Female sterilization
- Hormonal injection
- Oral contraceptives

Will being in this study help me in any way?

No.

Will being in this study cost me anything?

There will be no cost to you for you to participate in this study.

You will have to pay for basic expenses like childcare, food, or travel expenses related to study activities, including visits to the WHNRC and Pavilion Pharmacy (UCD Medical Center). We will provide complimentary parking at the WHNRC; however, you will be required to cover the cost to park at the UCD Medical Center.

For more information about possible costs, please contact the research team. The research team can follow UC Davis Uninsured Non-Emergency Estimate Policy (Policy ID 1883) to work with their department and Decision Support Services to get you a cost estimate.

Will I be paid or receive anything for being in this study?

If you agree to take part in this research study, we will compensate you $560 for completing all the study visits and activities. If you choose to withdraw from the study or we take you off the study before you complete the study, you will receive a pro-rated payment to reflect the time you contributed as shown in **Table 3**. The compensation amount is based on the hourly wage of $16/hour. Compensation payment will be withheld until you return the shippers to WHNRC. You may be asked for your social security number, banking information, mailing address and other information for payment purposes. It will not be used for any other purpose without your permission. Payment will be provided after the end of your participation in the study in the form of a check or electronic funds transfer. The WHNRC may utilize a contractor to facilitate payment processing.

Table 3: Compensation calculation for visit days.

	Washout		Fiber Intervention Period					Washout			
Days	**1-7**	**8**	**16-25**	**26**	**26-36**	**37**	**37-43**	**44**	**58-65**	**66**	**Total**
Time Involved (h)	5.0	6.0	3.5	6.0	2.0	6.0	2.0	0.5	3.5	0.5	**35 hours**
Arrive Fasted Overnight		x		x		x	x		x		
Consent to Participate											
Stool Collection	x		x		x		x		x		
Stool Shipper Drop-Off		x		x		x		x		x	
Stool Shipper Pickup	x		x	x		x			x		
Fiber Pickup		x	x	x		x					
Blood Draw		x		x		x	x		x		
Pregnancy Test		x		x							
HIV Blood Test		x		x							
Sugar Drink		x		x		x					
Urine Collection		x		x		x					
Rx Pickup	x										
Rx Counseling		x			x						
Dietary Recall	x		x						x		
Vaccine Dose					x						
Daily Compensation	$80.00	$96.00	$56.00	$96.00	$32.00	$96.00	$32.00	$8.00	$56.00	$8.00	
Pro-Rated Amount	$80.00	$176.00	$232.00	$328.00	$360.00	$456.00	$488.00	$496.00	$552.00	$560.00	**$560.00**

If you receive $600 or more during a calendar year from USDA for participating in research, you may receive a Form 1099 for tax reporting purposes. Reimbursements for travel and other expenses are not included in this amount.

Biospecimens (such as blood, urine, stool) collected from you for this study and/or information obtained from your biospecimens may be used in this research or other research and shared with other organizations. You will not share in any commercial value or profit derived from the use of your biospecimens and/or information obtained from them.

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Protocol	Approved
1615934	March 10, 2025

What happens if I am injured or get sick because of this study?

If you are injured or get sick because of this study, medical care is available to you through UC Davis Health, your local provider, or emergency services.

- If it is an emergency, call 911 right away or go to the emergency room.
- For non-emergency issues, you can call the UC Davis Health Hospital Operator (916-734-2011), tell the Operator you are participating in a research study, and you wish to talk to the Internal Medicine Resident on-call.

If you are injured as a result of being in this study, the University of California will provide the necessary medical treatment. Depending on the circumstances, the costs of the treatment may be covered by the University or the study sponsor or may be billed to your insurance company just like other medical costs. The University and the study sponsor do not normally provide any other form of compensation for injury. For more information about compensation, you may contact the IRB Administration at (916) 703-9151 or HS-IRBAdmin@ucdavis.edu.

What happens to the information collected for the research?

We will do our best to limit the use or disclosure of your personal information, including information from this study to people who have a need to review this information. We cannot promise complete confidentiality. Some organizations may be required to inspect and copy your information including the IRB and other University of California representatives responsible for the management or oversight of this study.

We have strict rules to protect your personal information and protected health information (PHI). We will limit who has access to your name, address, phone number, and other information that can identify you.

We will obtain information about you. We will also collect biological specimens from you such as blood, stool, and urine. Both the data and specimens will become property of USDA. We will remove identifiable (de-identify) information from the data and specimens we collect about you. After we remove all of the identifiers, we will place a code on the information. The code will be linked to your identity but the link to your identity will be kept in a location that is separate from your study data. The link will be stored in locked file cabinets in a locked office in the WHNRC that has controlled access (by card key) only to approved WHNRC employees working on human studies. We will maintain your de-identified study data on encrypted computers and managed and stored in a password protected, web-based data management application, REDCap. Access to this information will be limited to only members of the research team who need the access to properly conduct the study. The members of the research team will not know who the data came from. De-identified specimens will be stored in a dedicated -70^{o}C freezer at the WHNRC. We will destroy the de-identified specimens one year after the final publication of the study results.

We will provide the subject numerical identification code, subject first name and last initial and phone numbers to the University of Minnesota NCC for dietary recall collection.

We will keep the de-identified data we collect about you for an indefinite period of time.

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1615934	March 10, 2025

The Qualtrics online survey used at screening to determine study eligibility WILL NOT be de-identified. Responses to medical history, medical conditions, medications, and fiber and inulin consumption and contact information, including email, phone numbers, and home address, will be stored by UC Davis Cloud Services. Responses will not be used as study data.

While this study does not involve banking the data and/or specimens we collect with your identifiable information (e.g., your name, medical record number, or date of birth) for future use, we may still use your data or specimens to answer additional research questions or share them with other investigators for additional research. If we do so, we will remove all identifiable information before use or sharing. Once identifiers have been removed, we will not ask your consent for the use of sharing of your data or specimens in additional research.

However, we cannot promise complete confidentiality. If you agree to be in this study, Federal or state laws may permit or require us to show information to university or government officials responsible for monitoring this study. The following is a list of individuals who may access your records:

- Members of the research team
- Offices and committees responsible for the oversight of research
- U.S. Office for Human Research Protections

If you agree to participate in this research study, a signed copy of this consent document will be filed in your electronic medical record (EMR) to ensure people caring for you at UC Davis Health will have the information they need about this research study when they provide care for you.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

Will I receive any results from this research?

No, you will not receive any results from this research. We will only provide the results of the HIV blood tests.

Will information or leftover specimens be used for other research?

During this research, the study team will obtain information about you. They will also collect biological specimens from you such as blood, urine, and stool. The information and specimens will be used for this research and may also be used for other research studies here at UC Davis. We may also share the information and specimens with other institutions, including other USDA locations, for research. Before using the information and specimens for other research, the study team will remove information that identifies you so the individuals performing the research will not know who the information and specimens came from. We will not ask for additional consent from you to use your information and specimens for the additional research.

Are there any optional parts of the study?

There are no optional parts of the study.

May we contact you by e-mail?

We are requesting your email address so we can contact you for this study. Email is generally not a secure way to communicate about your health, as there are many ways for unauthorized users to access email. You should avoid sending sensitive, detailed personal information by email. Email should also not be used to convey information of an urgent nature. If you need to talk to someone immediately, please contact Dr. Lemay, at 530-376-3216 during evenings, weekends, or business hours or Ryan Snodgrass, Ph.D. at 530-754-4838 during business hours (Monday – Friday, 8 am – 5 pm). If Drs. Lemay and Snodgrass are unreachable, then Human Studies Manager, Ellen Bonnel, Ph.D., may be contacted at 530-752-4184. You do not have to provide your email address to participate in this study. Please initial one of the lines below.

____Yes, you may use email to contact me for this study. My email address is: _____

____No, I do not want to be contacted by email.

Are there other research opportunities?

Yes, there are other research opportunities at WHNRC that may or may not be related to this research study.

If you are interested in being contacted for future research, please provide your phone number and/or email.

<u>This is completely optional.</u>

_____(initials) Yes, I am willing to be contacted for future research opportunities.

My phone number and/or email is: _____.

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Signature Block for Capable Adult

Your signature documents your permission to take part in this research.

Signature of subject	Date
Printed name of subject	
Signature of person obtaining consent	Date
Printed name of person obtaining consent	

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