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College of Human Ecology | Weill Cornell Medicine | NewYork-Presbyterian

**TITLE:** Positive Affect as a Source of Resilience for Adults in Chronic Pain

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Cornell University – Ithaca.
*Cornell planned the study and will oversee study implementation. A collaborative agreement between WCM and Cornell University has been established.*

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**Confidentiality Statement**

This document is confidential and is to be distributed for review only to investigators, potential investigators, consultants, study staff, and applicable independent ethics committees or institutional review boards. The contents of this document shall not be disclosed to others without written authorization from WCM.

**Weill Cornell Medicine**

**Institution Name**

| **M. Carrington Reid, MD, PhD** | | **June 29, 2021** |
|---|---|---|
| **Principal Investigator's Name** | **Principal Investigator's Signature** | **Date** |

**List of Abbreviations**

| | |
|---|---|
| **AE** | Adverse Event |
| **CFR** | Code of Federal Regulations |
| **COA** | Center on Aging |
| **CRF** | Case Report Form |
| **CTSC** | Clinical Translational Science Center |
| **FDA** | Food and Drug Administration |
| **FMS** | FibroMyalgia Syndrome |
| **GCP** | Good Clinical Practice |
| **HIPAA** | Health Insurance Portability and Accountability Act of 1996 |
| **ICF** | Informed Consent Form |
| **IRB** | Institutional Review Board |
| **LARKSPUR** | Lessons in Affect Regulation to Keep Stress and Pain UndeR control |
| **NYP** | NewYork-Presbyterian |
| **PA** | Positive Affect |
| **PHI** | Protected Health Information |
| **PI** | Principal Investigator |
| **REDCap** | Research Electronic Data Capture |
| **WCM** | Weill Cornell Medicine |

**1. Protocol Summary**

| | |
|---|---|
| **Full Title:** | Positive Affect as a Source of Resilience for Adults in Chronic Pain |
| **Short Title:** | LARKSPUR Study |
| **Principal Investigator:** | M. Carrington Reid, MD, PhD (WCM)<br>Anthony D. Ong, PhD (Cornell) |
| **Study Description:** | Our goal for this study is to evaluate the feasibility, acceptability, and effect size of a previously developed online positive affect (PA) skills intervention—LARKSPUR (Lessons in Affect Regulation to Keep Stress and Pain UndeR control)—in a sample of older adult patients with fibromyalgia syndrome (FMS). |
| **Sample Size:** | N= 150 |
| **Enrollment:** | This study will enroll 150 subjects and screen up to 1,200 subjects |
| **Study Population:** | Older adults 50 years of age or older with a physician confirmed diagnosis of FMS, or a self-report physician diagnosis corroborated by a screening measure, that will be stratified by Hispanic, non-Hispanic Black, or non-Hispanic other (e.g., White, Asian). |
| **Enrollment Period:** | 2 years |
| **Study Design:** | This is a longitudinal, randomized behavioral intervention feasibility study with internet trainings, daily reporting, and surveys using REDCap and BrightOutcome for data collection. |
| **Description of Sites/ Facilities Enrolling Participants:** | We will be enrolling participants only through WCM/NYP and will be recruiting participants through EPIC, physician referral, flyers, letters, social media, and direct recruitment. |
| **Study Duration:** | September 30, 2024 |
| **Participant Duration:** | 4 months |
| **Primary Objective:** | To maximize relevance and acceptability of content and delivery of LARKSPUR intervention among patients with FMS, a chronic pain population with known deficits in PA. This aim will establish the feasibility (recruitment and retention) and acceptability (helpfulness, satisfaction, and impact) of the multicomponent LARKSPUR intervention in patients with FMS. |
| **Secondary Objectives:** | To conduct a randomized pilot trial to estimate the effect size of the LARKSPUR intervention in FMS pain (primary outcome), as well PA, depressive symptoms, physical functioning, and stress appraisals (secondary outcomes), and explore racial/ethnic disparities. We hypothesize that intervention participants will report more frequent PA, decreased depressive symptoms, enhanced physical functioning, improved stress appraisals, and reduced FMS pain (intensity and interference) immediately following the intervention (approximately 8 weeks), and at 1-month post-intervention. |
| **Exploratory Objectives:** | Not Applicable |
| **Secondary Endpoints:** | Not Applicable |

### 1.1 Study Objectives

Our goal for this study is to evaluate the feasibility, acceptability, and effect size of a previously developed online positive affect (PA) skills intervention—LARKSPUR (Lessons in Affect Regulation to Keep Stress and Pain UndeR control)—in a sample of patients with fibromyalgia syndrome (FMS).

#### 1.1.1 Objectives

1) To maximize relevance and acceptability of content and delivery of LARKSPUR intervention among patients with FMS, a chronic pain population with known deficits in PA. This aim will establish the feasibility (recruitment and retention) and acceptability (helpfulness, satisfaction, and impact) of the multicomponent LARKSPUR intervention in patients with FMS.

2) To conduct a randomized pilot trial to estimate the effect size of the LARKSPUR intervention in FMS pain (primary outcome), as well PA, depressive symptoms, physical functioning, and stress appraisals (secondary outcomes) and explore racial/ethnic disparities. We hypothesize that intervention participants will report more frequent PA, decreased depressive symptoms, enhanced physical functioning, improved stress appraisals, and reduced FMS pain (intensity and interference) immediately following the intervention (approximately 8 weeks), and at 1-month post-intervention.

#### 1.1.2 Hypotheses / Research Questions

We hypothesize that the intervention will lead to more frequent daily PA, which, in addition to directly affecting depressive symptoms, will also have indirect effects through enhanced physical functioning and improved stress appraisals (*resilience mechanisms*). Decreased depressive symptoms, enhanced physical functioning, and improved stress appraisals, in turn, are hypothesized to lead to reduced FMS pain (*resilience outcomes*).

## 2. Background and Significance

Chronic non-cancer pain affects as many as 100 million Americans and is associated with significant functional limitations and physical disability. Standard behavioral therapies typically focus on minimizing negative thoughts and emotions associated with pain and yield only modest treatment effects. Efforts are therefore needed to develop more effective psychological treatments for chronic pain by identifying new targets for intervention. We propose to pilot test a resilience-based intervention that targets positive affect (PA) in fibromyalgia syndrome (FMS) patients, a chronic pain population with known deficits in PA and an inability to regulate PA in the face of pain. Our goal is to conduct a randomized pilot trial of LARKSPUR (Lessons in Affect Regulation to Keep Stress and Pain UndeR control), an online-delivered PA skills intervention. Our central hypothesis is that our LARKSPUR program will (a) show acceptability and feasibility in engaging and retaining FMS patients and (b) demonstrate greater improvements in PA and FMS-related pain and functional impairment.

This proposal for pilot data collection will lay the foundation for a high-quality randomized trial for people with FMS. The proposed work holds promise as an effective, low cost, scalable, and readily implementable novel non-pharmacologic intervention to help people cope with FMS. By demonstrating the feasibility, acceptability, and preliminary efficacy of the LARKSPUR intervention, we hope to improve quality of life, as well as the options available for care for millions of people who suffer from FMS.

**3. Study Design and Methods**

The LARKSPUR online intervention will be hosted and maintained by a HIPAA compliant application developer (BrightOutcome) via a web-based platform. The order of the skills has been finalized and skills are unlocked by week as follows:

Week 1: Noticing and Savoring Positive Events
Week 2: Strengths and Activation
Week 3: Mindfulness
Week 4: Positive Reappraisal and Gratitude
Week 5: Acts of Kindness
Week 6: Wrap-Up

The following table is the LARKSPUR intervention content.

**Table 1. Intervention Content**

| | | |
|---|---|---|
| **Week 1** | **Noticing and Savoring Positive Events** | Recognizing cognitive biases that can lead to discounting or failing to remember positive events.<br>Skills for scheduling pleasant events according to level of pain |
| | Exercises | Daily positive events journal |
| **Week 2** | **Strengths and Activation** | Support for acknowledging strengths even in the presence of pain-related limitations.<br>Emphasis on setting small, attainable goals and working up to challenging goals gradually.<br>How to select goals that will provide pleasure or mastery experiences. |
| | Exercises | Daily strengths journal (record ways a personal strength or talent was used)<br>Activity journal |
| **Week 3** | **Mindfulness** | Using present-focused awareness to combat rumination about chronicity of pain and pain-related limitations<br>Using acceptance to tolerate unpleasant situations with less negative emotion |
| | Exercises | Select an everyday activity to do mindfully<br>Mindful breathing recorded meditation (10 minutes) |
| **Week 4** | **Positive Reappraisal and Gratitude** | Role of negative cognitions in causing or maintaining stress and contributing to pain |
| | Exercises | Daily reappraisal journal<br>Daily gratitude journal |
| **Week 5** | **Acts of Kindness** | Include benefits of compassion toward self and others (e.g., decreased stress and pain; improved relationships)<br>Small prosocial acts that can be performed even if one is relatively socially isolated or has limited mobility |
| | Exercises | Do something nice for someone else each day and record it in a daily kindness journal |
| **Week 6** | **Wrap-Up** | Review the LARKSPUR course, reflect on skills learned, and make a plan for continued practice. |

**Randomization.** Once participants complete consent and baseline questionnaire, participants will be randomized 1:1 to LARKSPUR (n = 75) or an emotion reporting only attention control condition (n = 75) stratified by race/ethnicity. The random number sequence will be generated and uploaded into REDCap by a non-data collecting co-investigator under the guidance of the study statistician and REDCap/CTSC personnel. All participants will know their intervention/attention control status.

**LARKSPUR intervention (n = 75).** The LARKSPUR intervention will be based on our current online positive affect intervention which consists of skills for increasing the frequency of positive emotions, beginning

with basic skills for recognizing and savoring positive events and progressing to more complex skills such as goal-setting and acts of kindness.

A week will consist of 1-2 days of didactic material and 5-6 days of real-life skills practice and reporting. Participants cannot skip ahead and can only progress to the next lesson if they have completed the current one, but they can return to old lessons or exercises if they choose. As part of the daily home practice, intervention participants will be asked to complete the daily emotion check-in that comprises the attention control condition (which takes about 5 minutes to complete). Based on past studies, we estimate the time to read through a skill to be about 15 minutes per skill. We also encourage daily interaction with the website (home practice, reporting emotions) and estimate the time involved to be an additional about 10 minutes. Both the LARKSPUR intervention and emotion-reporting attention control conditions, including all home practice and assessments, will be done over the internet from the participant's home, or any other location of their choice. The intervention content, emotion check-in, and are all mobile-enabled so can be completed on desktop, laptop, tablet, or smartphone with web browser access.

**Attention Control Condition (n = 75).** We sought an attention control condition that provided something to engage participants, but was not expensive or burdensome. In past research we have established that emotion reporting is acceptable as an attention control condition (retention rates of ~80%, similar to or higher than for the intervention), and that participants perceive it as being beneficial, providing some of the features of a placebo control. In this daily emotion-reporting attention control condition, participants will be asked to report how they are feeling daily for 6-8 weeks which will be emailed to control participants.

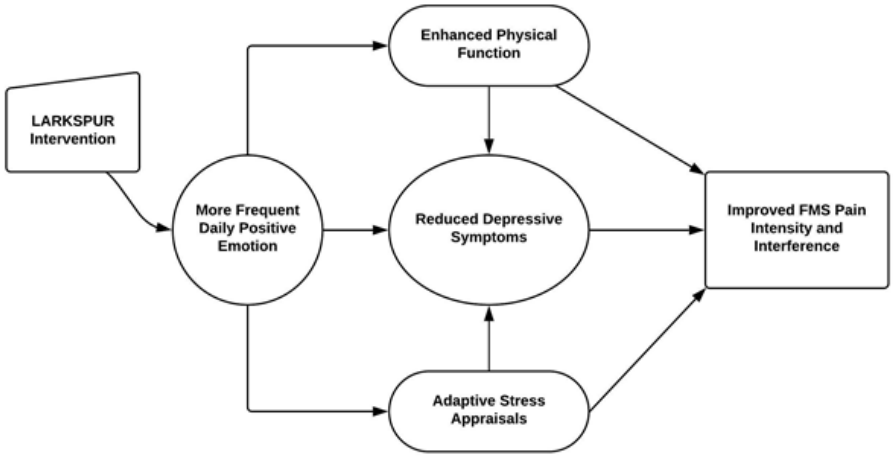
Participants in the attention control condition will be prompted to report on positive and negative emotions experienced in the past day and pain level in the past day, going back a maximum of 24 hours. Based on past studies, we expect that this reporting will require approximately 5 minutes per day. Note that participants in the LARKSPUR intervention condition will also be completing the daily reporting of emotions as part of their home practice. The control group will be completing the same number of assessments as the intervention condition at the same time points (baseline, post-intervention, 1-month follow-up).

**Data collection, transfer, security, and management.** Data for the study will come from self-report through online. Self-report data will be collected via online assessment (REDCap) at baseline, during the 6-8-week intervention/control (BrightOutcome), immediate post intervention/control, and at 1-month follow-up. In addition, one week of daily stress and emotion surveys coinciding with each of the three assessments, for a total of 21 days outside the intervention/control period, will be collected via REDCap. The baseline, post-intervention/control, and 1-month follow-up surveys will last 60 and no more than 75 minutes, and may also be done by phone or videoconference in cases of preference, or due to retention follow-up. With participant permission, phone and/or videoconference calls may be recorded for the purpose of accurate data collection. The recordings will be deleted after the study is completed and participation is **not** contingent on the participant's agreement to be recorded. Participants will choose whether or not to authorize recordings when completing their informed consent process.
Data from the online intervention platform will be securely stored on Weill Cornell Medicine and BrightOutcome servers, accessible only to IRB-approved co-investigators and BrightOutcome staff. These data include number of log-ins, completed home exercises, number of skills completed, and data from the daily emotion reporting surveys. All data used for analysis will be de-identified, and no identifiable data will ever be stored locally on staff computers and no data are stored locally on participants' devices.

**Measures**. All participants will complete self-report questionnaire measures at baseline, post-intervention, and 1-month follow-up on-line via REDCap or by phone. Participants will complete one week of daily 5-10-minute surveys upon completion of each the three assessments, for a total of 21 days. They will also complete 5-minute daily check-in surveys during the intervention/control period of 6-8 weeks as outlined below in schedule of assessments.

Our selection of measures is guided by the theoretical model in Figure 1.

**Figure 1. Theoretical Model**




Specifically, we hypothesize that the intervention will lead to more frequent daily PA, which, in addition to directly affecting depressive symptoms, will also have indirect effects through enhanced physical functioning and improved stress appraisals (*resilience mechanisms*). Decreased depressive symptoms, enhanced physical functioning, and improved stress appraisals, in turn, are hypothesized to lead to reduced FMS pain (*resilience outcomes*). The proposed pilot will lay the foundation for a future high-quality, adequately powered trial that will explore theoretical moderators, thereby identifying individuals most likely to benefit from the LARKSPUR intervention (*resilience resources*). Finally, it is anticipated that the proposed project will foster cross-campus collaborations (i.e., Weill Medical College, Cornell University) that will advance research on rheumatic and autoimmune diseases (including FMS), and culminate in the development of a novel non-pharmacologic therapeutic approach that is effective, low cost, and easily disseminated.

## 4. Study Design

### 4.1 Study Population

Participants 50 years of age or older with a fibromyalgia diagnosis that will be stratified by race/ethnicity; non-Hispanic Black, Hispanic, or non-Hispanic other (e.g., White, Asian).

### 4.2 Inclusion Criteria

1. Access to daily internet
2. Male or female 50 years of age or older
3. Fluent in English and able to read and write in English
4. Physician diagnosis of FMS AND/OR Score ≥13 on the 6-item, self-report fibromyalgia screening tool
5. Report having pain for at least the last three months

### 4.3 Exclusion Criteria

1. Cognitive impairment
2. Current behavioral treatment for pain
3. Enrolled in another pain study

### 4.4 Strategies for Recruitment and Retention

We will recruit fibromyalgia patients from offices at Weill Cornell Medicine/NewYork-Presbyterian (e.g., the Center on Aging (COA), the Cornell Internal Medicine Associates (CIMA), and the Iris Cantor Health Center). Co-PI Dr. Cary Reid, PI of the Cornell Roybal Center, has established a successful track record recruiting chronic pain patients for Roybal-supported research studies at Weill Cornell Medicine/NewYork-Presbyterian.

A total of 150 fibromyalgia patients will be recruited across Aims 1-2 once they have been identified by research and referring physicians confirmed to meet eligibility criteria. Based on prior recruitment at WCM/NYP we anticipate recruiting double the number of females than males, and will target enrollment to an equal number of non-Hispanic Black, Hispanic, or non-Hispanic other (e.g., White, Asian) equally between males and females. Participants will open-endedly self-report their race and ethnicity; the research team will ensure that the randomization process is stratified by Hispanic, non-Hispanic Black, and non-Hispanic other (e.g., White, Asian).

Normal patient participants will be recruited via physician-referred agree to contact sheets (paper or REDCap survey), flyers, and/or in-person recruitment. Physicians will utilize an Agree to Contact sheet that potential participants fill out with their contact information (phone, email, and/or mailing address) and sign agreeing to be contacted directly for the study by any of these methods.

Flyers will be distributed throughout WCM/NYP locations (including the Center on Aging), and distributed at senior centers, community centers, and community events. Additionally, co-investigators may approach potential participants in WCM/NYP offices (e.g. the Center on Aging), and ask if they would be interested in the study, when it is safe to do so under COVID-19 considerations. Trained co-investigators may either screen the participants at recruitment sites and/or ask for their contact information via the Agree to Contact sheet to be followed up at a time convenient for the potential participant.

Research staff will ask physicians at WCM/NYP, to review their patient lists and identify potential participants based on eligibility criteria both directly (e.g. email) and at department meetings. Research staff may also request EPIC provider reports based on eligibility requirements to reach out

to WCM/NYP physicians for permission to contact potential patient participants. Research staff will set EPIC search criteria to draw names from all networked EPIC databases accessible to Weill Cornell Medicine staff. Identified potential participants will be contacted via recruitment letter, email, or Weill/EPIC Connect. Recruitment letters may also be sent to potential participants via EPIC pool of WCM/NYP Consent to be Contacted for Research (CCR) patients and chart review to determine potential eligibility. Potential subjects will besent a letter informing them of the study and that they will be contacted by a co-investigator who will assess interest in participating in the study. The letter will also provide a contact phone or email address that these patients can reach out to express their interest/disinterest for participation in thestudy.

Additional efforts will rely on making study information available on online platforms. Online platforms may include, but are not limited to: FMS interest pages on Facebook, participant registries, online bulletin boards, mobile apps and websites, etc. Methods include, but are not limited to: posting flyers, posting messages describing the project and inviting interested participants to contact study members (see "Social Media Posting" document), including study information in e-newsletters, etc. Permission from group administrators will be received prior to posting on any social media group platform. In addition, online research match databases including but not limited to ResearchMatch.org and the Institute for Translational Health Sciences will be added as a recruitment method.

Eligible participants will be compensated up to $142 for completing the study. Participants will receive $25 for each of the three study assessments (baseline, post-intervention, and 1-month follow up), up to $42 ($2 per survey) for the daily 5-10-minute surveys following the study assessments, and $25 for the feedback survey. Activities completed during the 6-8 weeks of interaction on BrightOutcome will not be compensated.

Additionally, the following measures will be taken to improve retention. First, follow up emails, calls, or texts (depending on participant preference) to participants will be utilized to remind patients of upcoming study activity (online assessments, etc.). Text message reminders will be administered using the Twilio service, embedded via the CTSC in REDCap. Second, throughout the study period, accrual and retention rates will be monitored at weekly study meetings through reporting reasons for missed approaches, study refusal, and loss to follow up. This will allow the PI and study team members to notice quickly issues in accrual and/or retention and the potential reasons for it so that proper action can be taken to resolve the issue. Finally, all attempts have been made to keep assessments brief and flexible in order to reduce burden on the patients.

## 5. Registration Procedures

### 5.1 Subject Registration (WCM only)

Subjects will be registered within the WRG-CT as per the standard operating procedure for Subject Registration.

### 5.2 Subject Registration (Sub-sites)

Not applicable.

## 6. Study Procedures

### 6.1 Schedule of Assessments

Table 2. Schedule of trial events

| Table 2: Type and Timing of Measures | PS | B | DS | PI | M1 |
|---|---|---|---|---|---|
| **Screening** | | | | | |
| Age ≥ 50, read and understand English, FMS diagnosis, 6-item self-report FMS screening tool, cognitive functioning, no other behavioral treatment for pain, internet access, race/ethnicity | • | | | | |
| **Demographic and Clinical Characteristics** | | | | | |
| Age, race/ethnicity, sex, income, education, employment, marital status<br>Charlson Comorbidity Index | | •<br>• | | | |
| **Pain** | | | | | |
| Standardized Pain Measures<br>Daily report of pain and fatigue | | • | <br>• | • | • |
| **Physical Function** | | | | | |
| Body Mass Index (BMI)<br>PROMIS Physical Function Short Form 10a<br>PROMIS Fatigue Short Form 6a<br>Exercise in the last 24 hrs | | •<br>•<br>•<br>• | <br><br><br>• | •<br>•<br>• | •<br>•<br>• |
| **Psychosocial Factors** | | | | | |
| Standardized Psychosocial Factor Measures<br>Daily stressors (DISE)<br>Daily positive and negative affect<br>Daily positive events | | • | <br>•<br>•<br>• | • | • |
| **Feedback and Care Updates** | | | | | |
| Feedback Survey<br>Self-Enrolled Therapy Update | | | | • | <br>• |

PS = pre-study; B = baseline; DS = daily survey; PI = post-intervention; M1 = 1-month follow-up

## 7. Data Reporting / Regulatory Considerations

### 7.1 Data Collection

The data collection plan for this study is to utilize REDCap to capture all data for all enrolled subjects.

#### 7.1.1 REDCap

REDCap (Research Electronic Data Capture) is a free data management software system that is fully supported by the Weill-Cornell Medical Center CTSC. It is a tool for the creation of customized, secure data management systems that include Web-based data-entry forms, reporting tools, and a full array of security features including user and group-based privileges, authentication using institution LDAP system, with a full audit trail of data manipulation and export procedures. REDCap is maintained on CTSC-owned servers that are backed up nightly and support encrypted (SSL-based) connections. Nationally, the software is developed, enhanced and supported through a multi-institutional consortium led by the Vanderbilt University CTSA.

### 7.2 Regulatory Considerations

#### 7.2.1 Institutional Review Board/Ethics Committee Approval

As required by local regulations, the Investigator will ensure all legal aspects are covered, and approval of the appropriate regulatory bodies obtained, before study initiation.

Before initiation of the study at each study center, the protocol, the ICF, other written material given to the patients, and any other relevant study documentation will be submitted to the appropriate Ethics Committee. Written approval of the study and all relevant study information must be obtained before the study center can be initiated or the IP is released to the Investigator. Any necessary extensions or renewals of IEC/IRB approval must be obtained for changes to the study, such as amendments to the protocol, the ICF, or other study documentation. The written approval of the IEC/IRB together with the approved ICF must be filed in the study files.

The Investigator will report promptly to the IEC/IRB any new information that may adversely affect the safety of the subjects or the conduct of the study. The Investigator will submit written summaries of the study status to the IEC/IRB as required. On completion of the study, the IEC/IRB will be notified that the study has ended.

All agreed protocol amendments will be clearly recorded on a protocol amendment form and will be signed and dated by the original protocol approving signatories. All protocol amendments will be submitted to the relevant institutional IEC/IRB for approval before implementation, as required by local regulations. The only exception will be when the amendment is necessary to eliminate an immediate hazard to the trial participants. In this case, the necessary action will be taken first, with the relevant protocol amendment following shortly thereafter.

Once protocol amendments or consent form modifications are implemented at the lead site, Weill Cornell Medicine, updated documents will be provided to participating sites. Weill Cornell Medicine must approve all consent form changes prior to local IRB submission.

Relevant study documentation will be submitted to the regulatory authorities of the participating countries, according to local/national requirements, for review and approval before the beginning of the study. On completion of the study, the regulatory authorities will be notified that the study has ended.

**7.2.2 Ethical Conduct of the Study**

The Investigators and all parties involved should conduct this study in adherence to the ethical principles based on the Declaration of Helsinki, GCP, ICH guidelines and the applicable national and local laws and regulatory requirements.

This study will be conducted under a protocol reviewed and approved by the applicable ethics committees and investigations will be undertaken by scientifically and medically qualified persons, where the benefits of the study are in proportion to the risks.

**7.2.3 Informed Consent**

The investigator or qualified designee must obtain documented consent according to ICH-GCP and local regulations, as applicable, from each potential subject or each subject's legally authorized representative prior to participating in the research study. Subjects who agree to participate will receive an oral consent document prior to speaking to a co-investigator.

Informed Consent and HIPAA authorization for participants will occur just prior to their baseline interview, by oral consent for participants until virtual consent methods are approved by the WCM IRB. For oral consent, a member of the study team will review the ICF and HIPAA Authorization document in-full (see *Oral Consent Script* attachment) by phone or videoconference, allowing for questions and reminding the potential subject that participation is voluntary. The subject and researcher will each recite their statements. Upon completion, oral confirmation of consent to participate will be documented by the study team member.

Once virtual consent processes are established with the JCTO, we will submit an amendment with the IRB to conform to these new policies. We feel that with our older adult population, at a higher risk to COVID-19, that this is best practices in human subjects for participants not to leave their home in order to participate in this study.

The initial ICF, any subsequent revised written ICF and any written information provided to the subject must approved by IRB prior to use. The ICF will adhere to IRB/IEC requirements, applicable laws and regulations.

**7.2.4 Compliance with Trial Registration and Results Posting Requirements**

Under the terms of the Food and Drug Administration Modernization Act (FDAMA) and the Food and Drug Administration Amendments Act (FDAAA), the Sponsor-Investigator of the trial is solely responsible for determining whether the trial and its results are subject to the requirements for submission to **http://www.clinicaltrials.gov**. Information posted will allow subjects to identify potentially appropriate trials for their disease conditions and pursue participation by calling a central contact number for further information on appropriate trial locations and trial site contact information.

**7.2.5 Record Retention**

Essential documents are those documents that individually and collectively permit evaluation of the study and quality of the data produced. After completion of the study, all documents and data relating to the study will be kept in an orderly manner by the Investigator in a secure study file. Essential documents should be retained for 2 years after the final marketing approval in an ICH region or for at least 2 years since the discontinuation of clinical development of the IP. In addition, all subject medical records and other source documentation will be kept for the maximum time permitted by the hospital, institution, or medical practice.

## 8. Statistical Considerations

**Aim 1.** Feasibility and acceptability will be examined by conducting frequency and descriptive statistics (i.e., mean, median, standard deviation, range) for enrollment rates, number of sessions completed, number of weeks required to complete the intervention, and Likert-scale items assessing satisfaction with the intervention and perceived helpfulness. **Aim 2.** Aim 2 will be addressed using a pre-post design. To determine the degree to which the LARKSPUR intervention is likely to improve patient outcomes, a post-versus-pre- difference will be sought to estimate the change in patients' outcomes (e.g., pain self-management). This is a small feasibility trial to explore the acceptability and feasibility of the intervention among racially and ethnically diverse older adults with fibromyalgia. The trial is not powered to estimate statistically reliable differences in outcomes. **Missing data.** All missing data will be assessed for missingness (e.g., random or non-random) and appropriate imputation methods will be used.