

State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

VETERAN MARIJUANA RESEARCH (VMR) GRANT PROGRAM

2022

REQUEST FOR PROPOSALS

VETERAN MARIJUANA RESEARCH
(VMR) GRANT

RESPONSE DOCUMENT

ESTIMATED TIMELINE	
Issue Date	April 1, 2022
Inquiries Due	April 15, 2022
Inquiries Response Posted	May 1, 2022
Proposals Due	June 1, 2022
Anticipated Start Date	July 30, 2022

PART V: INFORMATION REQUIRED FROM APPLICANT(S)

Applicant(s) must submit one proposal. Electronically submitted proposals must have a scanned signature or e-signature and cannot exceed 15 MB.

Applicant(s) must provide responses to each section below. Be as descriptive as possible and answer each question in its entirety; some questions have multiple components. In your responses, provide a straight-forward, concise description of the applicant(s)'s ability to meet the requirements of the RFP. Questions that do not apply should be answered "N/A."

V-A Identification of Organization

State the full name and address of the organization, the organization's federal identification number, the organization's telephone and fax numbers, and what percentage of the organization is located in Michigan.

BEGIN APPLICANT RESPONSE

Agricultural Genomics Foundation
Phone: 812-21909172
EIN: 47-1269342
501(C)3 non-profit established in Colorado

Transcend Growth Ventures (A Michigan Limited Liability Company LLC)
10310 Harvest Park, Dimondale, MI

END APPLICANT RESPONSE

V-B Authorized Negotiator

State the name of one (1) contact person and his/her telephone number, fax number, and electronic mail address. The contact person must be authorized to be the negotiator for the proposed Grant Agreement with the State.

BEGIN APPLICANT RESPONSE

Dr. Daniela Vergara
Phone: 812-219-0172
Email Address: verdaniela@gmail.com

END APPLICANT RESPONSE

V-C Method for Addressing the Problem

State in succinct terms the applicant(s)'s proposed method for addressing the problem presented in Section III-B, Problem Statement. Describe any significant obstacles the applicant(s) has had coordinating and managing clinical trial research.

BEGIN APPLICANT RESPONSE

There is a high prevalence of combat-related Adjustment Disorders (AdjDs) and Post-Traumatic Stress Disorder (PTSD) in active-duty military personnel and veterans [1, 2]. Extracts from *Cannabis sativa* (L.) (henceforth referred to as cannabis) offer tremendous medical promise in treating these illnesses [3-5]. However, few pharmaceutical-grade medicines from the plant have been developed, which is in part due to a lack of rigorously standardized growing conditions, leading to an unacceptable variability in extracts. This proposal, led by the Agricultural Genomics Foundation (AGF) brings together partners that are revolutionizing cannabis production – through automated greenhouse management, state-of-the-art lighting, appropriate partnerships with federal agencies, and education of the general public – for generating a highly consistent crop suitable for testing its potential for treating AdjDs and PTSD.

Cannabis is currently being investigated as a treatment for , multiple medical illnesses, including AdjDs, pain, multiple sclerosis, and nausea [4, 6]. In addition, earlier investigations assessed the efficacy of cannabis extracts for addressing ailments such as type II diabetes and obesity [7]. Clinical research suggested that multiple compounds produced by cannabis can act synergistically to produce specific medical and psychoactive effects. This cumulative impact has been termed ‘the entourage effect’ [8]. While the clinical evidence is limited to directly support such an effect [9, 10], patients who use whole-plant extracts (containing THC and unknown quantities of other compounds) have reported improved medical treatment in comparison to synthetic or THC alone [11]. Additionally, pure synthetic THC in products such as ‘Marinol’ have been reported to produce unpleasant side effects [5, 12]. Whether or not distinct ratios of cannabinoids and terpenes are able to consistently yield different subjective effects or therapeutic outcomes remains a topic of debate [13]. **A critical issue is that the cannabis strains used in these studies are not representative of advanced strains prevalent in today’s state-regulated markets and the growing conditions were highly variable and woefully inadequate** [14, 15].

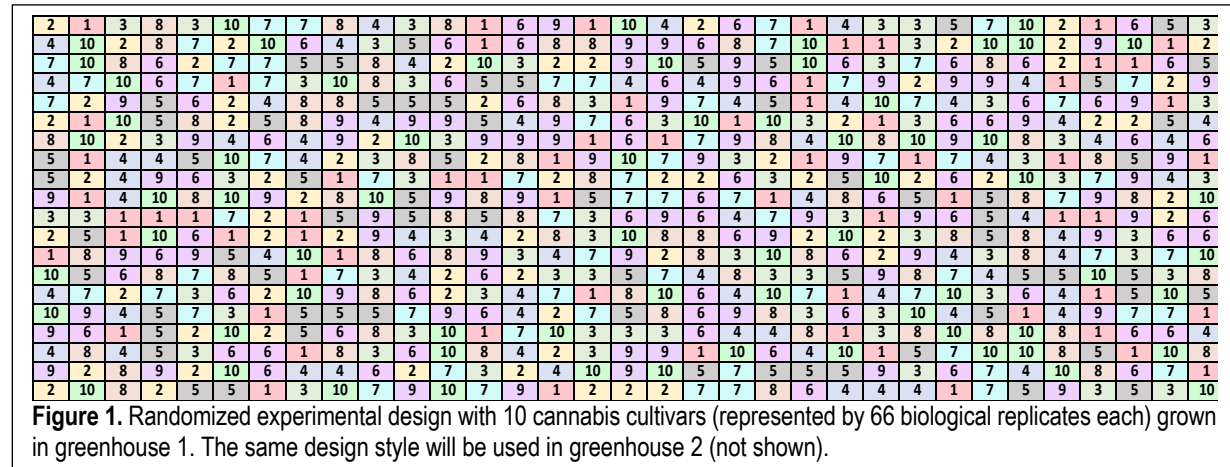
We hypothesize that cannabinoid and terpene content in cannabis can be standardized by using state-of-the-art cultivation practices, thereby providing reliable materials for novel medical treatments. We will grow cannabis for highly consistent cannabinoid and terpenoid production through Fednetix, a consortium consisting of *Agnatix* (lighting company operating on the interface of precision horticulture, data science, and patented LED lighting technology), *Transcend Growth Ventures* (a Michigan Limited Liability Company LLC and plant breeding company), *Fed Grow* (compliance and traceability company currently on the DEA’s schedule I application pathway), the *Agricultural Genomics Foundation* (AGF; non-profit organization with a platform for disseminating scientific information on medical plants to the general public), and *Zelira Therapeutics* (pharmaceutical company conducting clinical trials on cannabinoids).

Although AGF has not yet conducted clinical trials, *Zelira Therapeutics* has ample knowledge on cannabinoid research and is currently undertaking multiple clinical trials on cannabinoids. *Zelira* and *AGF*, are both part of the Fednetix consortium and therefore *AGF* has the opportunity to rely on *Zelira’s* experience on clinical trials with cannabinoids.

Our initial work has three main objectives:

- i. Evaluate light-dependent phytochemical differences across ten cannabis cultivars with medical potential.
- ii. Iterative improvements to cannabis growing practices over multiple independent grow periods.
- iii. Develop standard operating procedures (SOP) for highly consistent cannabis production and build relationships for advancing to clinical trials.

Objective i. Evaluate light-dependent phytochemical differences across ten cannabis cultivars with medical potential. *Agnenix* has had phenomenal success with its Zenith® liquid-cooled, multi-sensor and imaging lighting system, featuring an Infrared Remote Leaf Temperature Sensor, Environmental Sensor (providing critical temperature, humidity, and Vapor Pressure Deficit data), Reflected Canopy Light Intensity & Color Sensor (facilitating precision lighting adjustments), a Canopy Distance & Growth Sensor (tracking progress and growth rates of plants), and Green LED Inspection Lights (illuminating the grow room for “night” inspections). As part of **Objective i**, we will compare two different Zenith® system configurations, one delivering a typical greenhouse spectrum (mainly red and blue) and the other enabling close-proximity 100% photosynthetically active radiation (PAR) with a luminaire wattage of 375 and dimmable photosynthetic photon efficacy (PPE) of up to 3.61 μmol/J, for supporting the most consistent grow, while maintaining desirable phytochemical profiles. These experiments will be performed of *Transcend Growth Ventures* facilities, which has available 3,600 sq ft in two side-by-side greenhouses to accommodate growing cannabis under the different types of light sources. We selected ten commercially successful cannabis cultivars (Royal Gorilla, Orange Kush Mints, Sugar Cane, GG4, Cookies & Cream, Ultra White Amnesia, Citral Glue, Mimosa, Vanilla Frosting, and Grand Daddy Purps) that represent a broad range of morphological traits and phytochemical diversity. These will be distributed across each greenhouse based on a completely randomized design (10 cultivars, 66 biological replicates, 2 light systems, for a total of 10 x 66 x 2 = 1,320 plants; Figure 1).



We recognize that this design is highly complex, but it will be the most informative, and our confidence in a successful implementation stems from years of experience with automation and standardization. Plants will be maintained for about two weeks under vegetative plant growth conditions, followed by approximately eight weeks under flower development conditions (44). Throughout the grow we will acquire data on soil temperature, environmental temperature, leaf temperature, soil moisture, air humidity, vapor pressure, plant growth rate, atmospheric CO₂ concentration, canopy reflectance, and tens of other parameters at high spatial resolution (enabled by technology from *Agnenix* and The Meter Group). In addition, we will monitor phytochemicals using *Transcend Growth Ventures'* expansive analytical platform (absolute quantification of 12 cannabinoids (by High Performance Liquid Chromatography or HPLC) and 150 terpenes (by Gas Chromatography – Mass Spectrometry or GC-MS)) and record differences in morphology.

Furthermore, female flower material will be collected at the end of the growing period, cured using protocols routinely employed at *Transcend Growth Ventures*, and the cannabinoid and terpene contents determined as above.

Anticipated Outcomes/Impact: Our experimental design will allow us to compare the reproducibility of cannabinoid and terpene profiles across 66 biological replicates for each of the ten cultivars. We will also be able to assess the suitability of the adjustments using AI-controlled software during the grow (based on on-the-fly measurements of tens of parameters at a temporal resolution in the minute range across an entire grow of twelve weeks) achieving consistent cannabinoid and terpene levels in the final cured product. Finally, we will be able to evaluate which *Agnētix* lighting system ensured better product consistency and desirable cannabinoid/terpene levels.

Table 1. Characteristics of cannabis cultivars selected for a multi grow-cycle analysis based on diversity in growth habitus, terpene profile, and cannabinoid content.

Cultivar	Growth Characteristics	Dominant Terpenes (in order of abundance)	Cannabinoid Potency (THC) [% of dry weight] (average and strd. dev. of three independent grows)
Royal Gorilla	Vigorous Growth. Wide, menorah-like branching pattern.	L-Limonene α -Pinene β -Caryophyllene	29 \pm 1
Orange Kush Mints	Short and vine-like. Wide branching pattern enabling strong lateral	β -Myrcene α -Pinene β -Pinene	22 \pm 2
Sugar Cane	Vigorous staff-like growth. Moderate side branding. Ideal for high density Confirmed powdery mildew resistance.	β -Caryophyllene L-Limonene β -Myrcene	27 \pm 1

Objective ii. Iterative improvements to cannabis growing practices over multiple independent grow periods. We will advance three cultivars with different morphology, cannabinoid, and terpene profiles to a multi grow-cycle analysis. To outlining our activities, we selected Royal Gorilla, Orange Kush Mints and Sugar Cane; however, should the experiments under **Objective i** suggest alternative cultivars, we will make a data-driven decision. Please note that **Objective ii** is informed by the outcomes of the experiments described under **Objective i**, but these aims are not dependent on each other. The emphasis of **Objective ii** is to use an iterative process of experiments, data analysis, and adjustments to further standardize growth conditions for cannabis. As part of the proposed activities under this objective, we will continue to monitor the same parameters as listed above to continue to improve the AI-controlled soil and atmospheric variables for ultimate consistency of terpene and cannabinoid contents. Data from prior experiments specifying the process can be provided upon request.

Expected Outcomes: We anticipate being able to complete a total of five grow periods (in addition to the first grow under Objective i). Based on our experience with standardizing growing conditions for commercial consistency, we predict that the last three grow cycles will yield essentially identical cannabinoid and terpene levels for all three cultivars (Relative Standard Deviation (RSD) of 2 % for THC concentration and 5 % for terpene profile).

Objective iii. Develop standard operating procedures and educational materials for highly consistent cannabis production and build relationships to advance to clinical trials. Based on the outcomes of the

activities described under **Objectives i and ii**, we will write SOPs, describing step-by-step protocols to replicate the highly consistent production of cannabis and provide first-class specifications for the medical cannabis industry. These SOPs will remain living documents until we achieve the exceptional reproducibility scores mentioned under **Objective ii**. AGF is committed to establish educational courses in both Spanish and English with the data produced from this proposal, as material with detailed information on the best indoor agricultural practices for Cannabis are desperately needed by the industry. With these educational materials the FedNetix consortium will assure that indoor grows will remain compliant, will maximize production with low costs, and will produce high-quality medical-grade cannabis. To this end, AGF has partnered with other cannabis associations in Latin America who will use AGF's educational material, including Laiha (Latin American Hemp Association), Universidad del Rosario in Bogotá Colombia, and CannabiSalúd (Medical Cannabis Symposium in México). Our methodologies will be replicated in multiple cannabis cultivation locations across the US, including grows in California, New Mexico, and New York. Using different locations allows us to finetune our procedures to produce the highest-quality cannabis for pharmaceutical-grade applications. The support for replicating these methodologies will come from multiple sources, including tax-exempt donations through AGF and investor funding for the multiple companies.

Future directions:

Our proposed project is the first necessary step for the exploration of all the untapped medical possibilities offered by the cannabinoid and terpenoid compounds produced by the plant. By maximizing and standardizing the production of these compounds, we assure the consistency of the subsequent production of pharmaceutical-grade medicine.

In the near term (1-2 years) we will produce the SOPs on the standardized controlled environment, scientific publications and white papers, bi-lingual educational material, and patents on our methodologies. During these first 1-2 years we also plan to grow our strategic alliances with multiple companies that will join or collaborate with the FedNetix consortium including *Bright Green Corporation* (subject to approval from DEA for such collaboration), one of the five organizations who have entered into a Memorandum of Agreement ("MOA") with the United States Drug Enforcement Administration ("DEA") to grow and process federally-authorized cannabis and cannabis extracts in the United States, Ananda Scientific currently conducting clinical trials with cannabinoid compounds, the renown biopharmaceutical company *Zelira Therapeutics* who will direct us on future clinical trials, the extraction and manufacturing company *Gold Process* that holds multiple proprietary extraction methodologies, and the traceability company *Live Labels*. *Zelira Therapeutics* already owns a portfolio of proprietary and clinically validated cannabinoid medicines and a pipeline of candidates undergoing clinical development that are positioned to enter global markets. The Company is focused on developing cannabinoid-based medicines to treat a variety of medical conditions including insomnia, autism and chronic non-cancer pain which are illnesses that greatly affect the military and veteran population. Since *Gold Process* is vertically integrated, they provide a comprehensive understanding of necessary product quality in subsequent processes, as well as reliably reproduce the plant quality and consistency and will continue with the trustworthy standards that will be developed by FedNetix through this proposal. *Live Labels* provides safety tags for medical consumer packaging and will track user input and associate it to the compounds in the product, which will help us understand specific cannabinoid and terpenoid combinations useful for particular conditions. Finally, upon successful completion of Objectives I, ii and iii, FedNetix will consult with *Bright Green Corporation* on these best practices which are developed to establish a federally-legal source for the cannabis flower, extracts and medicinal preparations. These federally-legal cannabis products will be immediately available, pending DEA approval, to researchers and clinicians for the investigation and treatment of target indications.

END APPLICANT RESPONSE

V-D Management Summary

- (1) Describe management procedures that will be used by the organization to complete the proposed project.
- (2) Describe the organization's quality control measures, including measures for ensuring compliance as well as eligibility determination. In your description, include information regarding separation of duties.
- (3) Selected applicant(s) must provide fiscal control and financial accounting procedures that will assure that grant funds will be accounted for and properly dispersed in a way that will allow the Issuing Office to clearly review and verify all grant related expenditures. Describe the organization's internal control policy:
 - Identify the type of accounting system/software the organization will use to account for grant funds,
 - Identify how duties will be separated,
 - Describe how the organization will account for grant funds, i.e., will grant funds be placed in a separate bank account, will the grant funds be assigned a unique code(s) within the organization's overall accounting system. Ensure funds are maintained in a non-interest-bearing account.
 - Indicate whether internal and external audits of the organization's operations are performed on an annual basis. Selected applicant(s) must provide a copy of the organization's most recent audited financial statement as well as a copy of the organization's most recent single audit as required by OMB Circular 200.36
- (4) Describe your agency's data security plan.

BEGIN APPLICANT RESPONSE

Management Procedures

The *Agricultural Genomics Foundation (AGF)*, a 501(C)3 non-profit organization that does scientific outreach and public education in cannabis using scientific-based peer-reviewed information, is one of the members of the Fednetix consortium. *AGF* plans on becoming a cannabis genomic repository (library of genomes) for future research and education programs. *AGF* performs scientific outreach in both Spanish and English for a broad public and has developed cannabis courses taught at the University of Colorado in Boulder. *AGF* has made a great effort in reducing misinformation in the cannabis industry assuring all education material comes from scientific sources. Therefore, to ensure that the Standard Operational Procedures (SOPs) with

consistent growing conditions reach a broad public worldwide, *AGF* will translate all information into Spanish, and will establish education components based on the data collected through this proposal

Quality Control Measures

Fed Grow, serving as lead organization of the FedNetix consortium, has established a rigorous qualification program with a pending DEA schedule I license application. FedNetix consists of two divisions one for state research, and the other one for international global research which requires a DEA schedule I which will be exclusively handled through Bright Green Corporation with whom FedNetix is currently collaborating. The Bright Green Corporation is one of the five organizations who have entered into a Memorandum of Agreement (“MOA”) with the United States Drug Enforcement Administration (“DEA”) to grow and process federally-authorized cannabis and cannabis extracts. Through this collaboration with Bright Green Corporation, Fed Grow has the ability, as needed, to engage in research on cannabis cultivation and extraction techniques in a federally-authorized, Schedule I cannabis facility; subject to prior DEA approval of such. Fed Grow has established multiple international relationships with renowned pharmaceutical companies and entities that track and trace the full lifecycle of cannabis plants. *Fed Grow* has always operated under the medical legislation has never entered the retail market, and their primary focus is to develop natural compound medication to help the military and veteran population. Additionally, *AGF* and *Fed Grow* will continue fortifying relationships and growing the FedNetix consortium which, at the same time, will assure that the information gathered through this project will be disseminated to growers, breeders, and industry members that will benefit from the results, and that better and consistent medical-grade cannabis will be produced.

Eligibility Determination

The Agricultural Genomics Foundation (*AGF*) is a 501(C)3 non-profit organization committed to communicate Cannabis scientific findings in both Spanish and English and has successfully done it in England, the US, Colombia, Mexico, and Uruguay. All content produced through this proposal will be translated to reach a broad audience.

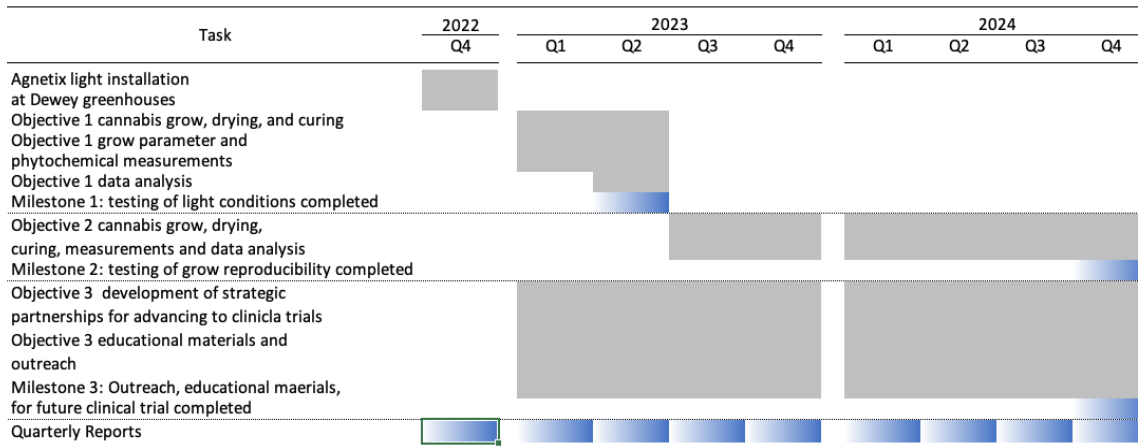
In addition to partnering with multiple cannabis associations in Latin America, *AGF* has produced multiple educational courses and produces a widely-listened podcast to assure evidence-based Cannabis education. Through this proposal, *AGF* will ensure that all SOPs produced, which will be crucial for appropriate clinical trials, will be available for the military personnel and for other interested researchers and users worldwide.

AGF has established collaborations with academic, non-profit, and private companies within the hemp and marijuana industries, including the biotech company Front Range Biosciences, the testing labs Steep Hill Inc. and DigiPath labs, the breeding company Centennial Seeds, and the producing company Fat Pig Society. *AGF* has partnerships with academic institutions including the University of Colorado in Boulder and CSU Pueblo

To this end, *AGF* is more than capable, with their personnel and as part of the Fednetix consortium, to manage, collect, analyze, and publish all data collected through this proposal.

Fed Grow, currently under a DEA schedule I pathway and operating a DEA schedule I license, will provide the compliance specifications as well as the legal and accounting support for all operations.

Timeline and Separation of Duties



Financial Accounting

Currently, AGF’s accounting is done using the program Quick Books by a Certified Public Accountant specialized in the non-profit sector. However, as previously stated, since AGF entered the Fednetix consortium the company *Fed Grow* will provide the accounting support for all operations under this proposal.

Fed Grow will assure that the funds from this grant will be properly dispersed and will continue to use Cherry Bekaert to trace funds and assure appropriate accounting. Cherry Bekaert offers accountant reporting, and financial verification. If this grant is awarded, Fed Grow will open a new bank account in a Michigan based entity to ensure that these funds will only be used for the proposed project. Both Fed Grow and AGF perform audits and accounting on an annual basis., and, since AGF has a 501(C)3 status, law requires to disclose all income to remain compliant.

Data Security Plan

All data will be backed in a server, which we will obtain through the funding from this proposal. In this server we will store all data obtained from this project and properly analyze the results. The traceability company Live Labels will provide safety packaging tags with the product information to protect consumers.

Finally, to protect the data, we will use blockchain security technology as the backbone compliant security measure. Blockchain assures a detailed transaction enabling decentralization of the data making it secure and difficult to interfere or corrupt the gathered data. Fed Grow has been using Blockchain technology with positive results.

END APPLICANT RESPONSE

V-E Work Plan

Provide clear and concise work plans for meeting the following components, with detailed explanation:

- 1) Provide for the coordination and overseeing of clinical trial(s) to determine the efficacy of marijuana in treating the medical conditions of U.S. armed services veterans and preventing veteran suicide.
- 2) Recruit and evaluate researchers to accomplish the goals of this grant.
- 3) Demonstrate the ability to work with researchers who can garner the United States Food and Drug Administration approval for the clinical trials.
- 4) Ensure the maximum amount of grant dollars are used to coordinate and oversee clinical trials with a minimal amount of grant dollars used for administrative costs.
- 5) Work with organizations closely tied to veterans and veterans' programs.
- 6) Provide the Grant Administrator with a grant budget to which monitoring and reporting will be tied. Please see attachment A for the budget template to be used.
- 7) Establish research goals, approve projects, exercise financial and management oversight, and document and review results.
- 8) Publish the results of the clinical trials.

BEGIN APPLICANT RESPONSE

Our team includes researchers that will coordinate and accomplish all the proposed goals. Additionally, with the guidance by *Zelira Therapeutics* we count with support in future clinical trials.

We hypothesize that cannabinoid and terpene content in cannabis can be standardized by using state-of-the-art cultivation practices, thereby providing reliable materials for novel medical treatments. We will grow cannabis for highly consistent cannabinoid and terpenoid production through Fednetix, a consortium consisting of *Agnenix* (lighting company operating on the interface of precision horticulture, data science, and patented LED lighting technology), *Transcend Growth Ventures* (industry-leading plant breeding and growing company), *Fed Grow* (compliance and traceability company currently on the DEA's schedule I application pathway), and the *Agricultural Genomics Foundation* (non-profit organization with a platform for disseminating scientific information on medical plants to the general public).

Agnenix is a developer of advanced liquid-cooled Light Emitting Diode (LED) technology, with light spectra, intensity, and wavelengths being monitored and adjusted continuously using Artificial Intelligence (AI). The light fixtures also capture critical environmental data such as leaf temperature, photosynthetic active radiation, photosynthetic active flux, photon efficiency, power, voltage, reflected light, leaf temperature, plant height, environmental temperature, humidity, and vapor pressure deficit, thus enabling on-the-fly adjustments to optimize growing conditions. *Transcend Growth Ventures* is a biotechnology company focused on the genetic improvement of cannabis that operates state-of-the-art environmentally controlled greenhouses. Taken together, *Agnenix* and *Transcend Growth Ventures* have refined complementary technologies to address every aspect of the grow at the soil, plant and atmospheric level, thereby achieving exceptional consistency while decreasing cost. More details will be included in the Technical Approach below. As

mentioned before, ***we are confident that our unique capabilities and expertise will allow us to achieve a step change in highly standardized cannabis production, a prerequisite for meaningful clinical trials to address AdjDs, PTSD and depression in active military personnel and veterans.***

The **objectives** for the proposed project include:

- iv. Evaluate light-dependent phytochemical differences across ten cannabis cultivars with medical potential.
- v. Iterative improvements to cannabis growing practices over multiple independent grow periods.
- vi. Develop standard operating procedures for highly consistent cannabis production and build relationships for advancing to clinical trials.

Objective i

- 1. Experimental setup, seed germination, cloning, light placement.
- 2. Seed and clone transplanting into vegetative and flowering phases (10 weeks).
- 3. Drying, curing, trimming, and cannabinoid/terpene measurements (9 weeks).
- 4. Data acquisition (soil, environmental, and leaf temperature, soil moisture, air humidity, vapor pressure, plant growth rate, atmospheric CO₂ concentration, canopy reflectance, phytochemicals (12 cannabinoids and 150 terpenes; 20 weeks).
- 5. Data analysis (4 weeks) to assess which light source is the most appropriate to obtain consistent cannabinoid and terpene levels across 10 different cannabis cultivars.

Objective ii

- 6. Improve grow consistency with measurements of tens of parameters and on-the-fly AI-based adjustments (July 2023-December 2024).
- 7. Finetune grow conditions to achieve highly consistent cannabinoid and terpene profiles (Relative Standard Deviation (RSD) of 2 % for THC concentration and 5 % for terpene profile) (July 2023-December 2024).
- 8. Data analysis (4 weeks) to perform extensive statistical analyses documenting unprecedented consistency across five independent grows with three selected cannabis cultivars.

Objective iii

- 9. Development of Standard Operating Procedures (January 2023-December 2024).
- 10. Development of education material in both Spanish and English (January 2023-December 2024).
- 11. Advance and fortify the strategic alliances for development of pharmaceutical-grade products and for near-future clinical trials (January 2023-December 2024).
- 12. Publish white papers on methodologies and results and on peer-reviewed scientific journals.

Achieving the objectives listed above, requires implementing and streamlining various methodologies and approaches. Our partnership is exceptionally well prepared to tackle the critical shortcoming of inconsistent cannabinoid and terpene levels head on.

- 1. Seeds will be germinated in rooting cubes, which allow plants to grow until a seedling stage. Once rooted, these plants will be placed in 4-gallon containers. The varieties grown by seed will be cloned from mother plants that are already available at *Transcend Growth Ventures*. These clones will also be placed in rooting cubes and once rooted will also be transplanted to 4-gallon containers. At the same time, *Agnētix* will install the lights by hanging them at an already determined distance to avoid splotchy lighting in the plants. These calculations have already been established using inverse square law that allows the lights to cover four times the area. *Agnētix*'s personnel will also define

where to properly place the water-cooling system for the light array, that will allow to cool or warm the greenhouses depending on the season.

The seedlings will be established in tables in the greenhouse to start the vegetative phase which will last two weeks. During these two weeks, the plants will be under 18 hours of light and 6 hours of dark with two different light treatments in two different greenhouses. The first light treatment consists of light fixtures rich in blue and red regions, and the second light treatment will have a different PAR spectrum of 400-700nm. For these experiments we will have ten cannabis varieties, 250 (25 plants per variety) in each of the light treatments for a total of 500 plants.

Although the light treatments will remain the same, the number of hours will change for the flowering period to 12 hours of light and 12 hours of darkness during eight weeks until full maturity.

For three weeks, the plants will be trimmed and cut and hanged dried at *Transcend Growth Ventures* facilities. These facilities are aerated, temperature and humidity controlled to avoid mold contamination.

Once dried and cured, during the following six weeks the plants will be tested for cannabinoid and terpene production and yield using the HPLC and GC-MS equipment at *Transcend Growth Ventures*. The trichome number and size will also be measured using a stereomicroscope also at *Transcend Growth Ventures* facilities.

2. The above methodologies will be repeated five more times considering three specific varieties (Happy Trails, Flora d'Explora and White Sky) that have very different phenotypes to finetune and improve the growing procedures and standardize the environmental conditions (objective ii; July 2023-December 2024)
3. At the same time, we will continue growing our strategic alliances, partnering with companies in the cannabis and pharmaceutical industry that will allow for the development of pharmaceutical drugs and for the establishment of clinical trials. These companies include *Gold Process*, that produces extractions through different methodologies such as hydrocarbon. The pharmaceutical companies we will collaborate with include *Ananda Scientific* and *Zelira Therapeutics* that are already conducting clinical trials with cannabis-based drugs for conditions such as pain, insomnia, and opioid replacement and withdrawal. *Zelira Therapeutics* will be the partner that will guide us in all of the clinical trial process as they have ample clinical research with cannabinoids.
4. During these last 18 months (July 2023-December 2024) we will publish white papers and scientific publications that will be submitted to peer-reviewed journals, to attest the credibility and scientific rigor of our methods and obtained results.

We will also develop scientific outreach material and evidence-based educational courses in both Spanish and English for the military and veteran population, industry stakeholders, caregivers, and medical consumers. With these materials we aim to disseminate our findings and make them available worldwide for future development of cannabis-based medicine, and for the improvement of indoor grows using environmentally friendly and cost-effective practices.

END APPLICANT RESPONSE

V-F Current and Prior Experience and Funding Disclosure

Current and prior experience in administering clinical trials is important to the selection process. Each applicant(s) must provide a copy of the organization's most

recent audited financial statement and single audit (if applicable). The audited financial statement and single audit must be sent under separate cover.

Proposals submitted by applicant(s) should include:

- (1) A description of the organization's experience in conducting the type of work proposed. Include current activities and activities for the previous ten years. Include project results.
- (2) If applicant(s) received a similar grant award from the State of Michigan in prior years for the type of project proposed, provide a summary of project accomplishments. Include a plan for addressing and resolving past problems.
- (3) Current funding source(s) and the level of funding for the current year and the previous ten years.

BEGIN APPLICANT RESPONSE

The Agricultural Genomics Foundation (AGF) is a 501(C)3 non-profit organization established in Colorado in 2014. Thus far with donations, AGF has become a successful non-profit organization that funds undergraduate, graduate students, and postdoctoral researchers. AGF is dedicated to educating the public on scientific research findings in the cannabis industry. The organization is committed to infusing accurate, scientific-based research into the mainstream cannabis industry as well as facilitating discussion between academic researchers, business leaders, and government policymakers across the world. Currently, AGF has six board members from different disciplines but all related to the Cannabis industry, and contracts with multiple people. These contractors include scientists who are researching the Cannabis plant and educators who are developing courses for the foundation. AGF has strong partnerships with academic institutions such as CU Boulder and CSU Pueblo, but also with private companies such as the Cannabis biotech business Front Range Biosciences. These institutions hold the necessary equipment and knowledgeable personnel to carry out the proposed scientific research. AGF, which has always been in good standing with the Colorado Secretary of state, has a strong presence in Colorado and is currently creating relationships with multiple farmers to disseminate accurate Cannabis science.

The members of the Fednetix consortium have ample experience in conducting clinical trials with cannabinoids. *Zelira Therapeutics*, one of the industry leaders in cannabis, has clinically validated cannabinoid-based medicines pharmaceuticals. Insomnia is one of the biggest illnesses suffered by military personnel, and *Zelira Therapeutics* formulation for this illness is a safe and effective alternative. This is a proprietary pharmaceutical grade product with supporting clinical data for chronic insomnia. The results of the successful, world-first medicinal cannabis clinical trial targeting chronic insomnia were published in the prestigious 'Sleep' Journal.

Another illness that greatly affects military personnel is chronic pain. *Zelira Therapeutics* partnered with renowned hospitals and clinics to study the effect of cannabinoid medications on people who are dependent on high doses of opioids to manage their chronic pain. The

successful results of the Phase 1 clinical trial found that treatment with cannabinoid-based medicine was well tolerated with no serious adverse effects. Additionally, there was a dose-responsive improvement in subjective measures of pain, stress, anxiety, and depression.

END APPLICANT RESPONSE

V-G Personnel

Selected applicant(s) must be able to staff a project team that clearly possesses skill and experience in coordinating clinical trials. In the narrative, identify the authorized contact person and key personnel to be involved with this project by name and title and provide a brief summary of their experience, qualifications, and the work to be performed.

If other organizations will be playing a role in the proposed project, provide sufficient background information that will give the Issuing Office a reasonable understanding of each organization's qualifications.

Include a detailed organizational chart including names, titles, and geographic location of all individuals that will contribute to the project.

Attach a copy of your confidentiality agreement and provide a list of personnel and the date that the confidentiality agreement was signed.

BEGIN APPLICANT RESPONSE

Agricultural Genomics Foundation:

Dr. Daniela Vergara: Board Member, cannabis scientist and educator, will oversee the grow, perform statistical analyses, manuscript preparation, New York State; Dr. Anna Schwabe: Board Member, will oversee development of educational resources, New Jersey; Ms. Emily Fata: Board Member will oversee development of educational resources including the podcast 'Cannabis Science Today', and will make all material available in Mexico, Mexico City.

Fed Grow: Mr. Alejo Moreno: CEO, will oversee accounting, project completion, Washington State; Ms. Michelle Moreno: will oversee legal aspects Washington State; Mr. Bryan Wilson: will oversee legal funding Tennessee.

Zelira Therapeutics: Dr. Oludare Odumosu: CEO, director of clinical trials, Pennsylvania.

Agnetix: Dr. Sanaz Jarolmasjed: Director of Biological and Machine Vision Systems, will oversee light placement, wavelengths etc., California; Mr. Jordan Miles: CEO, will oversee finances, project management, California.

Transcend Growth Ventures: Mr. Edward Merriman: business strategy and technology will oversee growing operations, Michigan

END APPLICANT RESPONSE

V-H Budget

To enable the Issuing Office to evaluate all project costs, **applicant(s) will submit a proposed budget and corresponding budget narrative.** Please see attachment

A for the required budget format. The budget and narrative must include only VMR grant funds in the budget; do not include matching, leveraged, cost share or any other type of supplemental funds. The budget narrative must identify the budget line item and number, provide a detailed description for each line, and include individual unit prices.

Selected applicant(s) will be required to provide supporting documentation for all grant expenditures incurred during the term of the grant. Accounting records must be supported by source documentation including, but not limited to, general ledgers, time sheets, payroll registers, invoices, check copies and bank statements, or cancelled checks. Expenses will be verified based on actual expenditures incurred within the grant period that are supported by source documentation, not budgeted amounts.

- (1) **Budget Changes** – Any changes to the budget must be pre-approved by the Grant Administrator. Changes in the budget of less than 5% of the total line item amount do not require a formal amendment; however, a revised budget should be submitted to the Grant Administrator for approval. The allowable transfer should be calculated as less than 5% of the total line item that the funds are being transferred from.

Cumulative changes in the budget equal to or greater than 5% of the total line item amount may be permitted only upon prior review and written approval by the Grant Administrator. A formal grant amendment must be signed by both the grantor and grantee.

- (2) **Disallowed Costs** – Disallowed costs include but are not limited to the following: sick pay, vacation pay, holiday pay, bonuses, overtime, tuition reimbursement/remission, vehicle allowance, seminars, conferences, meetings, subscriptions, dues, and memberships.
- (3) **Administrative Costs** – Administrative costs cover expenses related to general administrative functions and coordination of functions and oversight related to VMR administrative functions. Administrative costs should include costs of goods and services required for administrative functions of the program; travel costs incurred for official business in carrying out administrative activities or the overall management of the VMR; costs of information systems related to administrative functions; and contractual services related to sub-recipients or vendors that are solely for the performance of administrative functions. **Total administrative and indirect costs must be identified, labeled clearly, and may not exceed 10% of the overall grant.**
- (4) **Budget Requirements** – the proposed budget will display three (3) headings identified as the: Line Item, Budget Category, and Total. The budget line items that need to be included, at a minimum, are listed below. The budget should reflect the best estimate of actual costs using whole numbers. Please refrain from using decimals or formulas. Refer to the budget example provided in Attachment D.

- **Personnel** – In the budget, include the name, job title, and salary for each staff position to be paid for by the grant. Time sheets and payroll registers must be submitted for each staff position, and hours worked must be grant related. Fringe benefits may not exceed 35% of each employee’s salary. Fringe benefits will be reimbursed based on actual expenditures per employee up to 35%, not on budgeted amounts. Allowable benefits include: health, dental, and optical insurance, employer-paid Social Security and Medicare tax, Michigan and Federal unemployment tax, and other miscellaneous fringe benefits (life insurance, long- and short-term disability insurance, worker’s compensation, and retirement program contributions up to 4%). Applicant(s) must provide details on the organization’s method of calculating fringe benefit expenses that will be charged to the grant including whether fringe benefits are calculated on an annualized basis or based on the length of the grant term.

The budget narrative must include the number of weeks the individual will work on the grant; number of hours per week a full time employee of the organization is expected to work; a description of the work to be performed by each individual; the estimated hours to be worked; actual pay rate; the fringe benefit percentage being charged to the grant for each employee; the percentage of the employee’s time allocated to the grant; whether each employee is salaried-exempt, salaried-non- exempt or hourly; and any other applicable information related to the individual’s duties and responsibilities in connection with this grant.

Individuals that are not on selected applicant(s)’s payroll, e.g., independent contractors, individuals receiving a Form 1099, temporary workers, etc., must be placed under the Contractual Services budget category. Only employees on the selected applicant(s)’s payroll should be included in the Personnel budget category.

- **Supplies, Materials, & Equipment:** specify item(s) and cost. The budget narrative should include the anticipated cost of each item, a detailed explanation of the item’s purpose, and how it relates to the project being funded. Be as detailed as possible.
- **Contractual Services:** these services must be competitively bid. Individuals that are not on selected applicant(s)’s payroll, e.g., independent contractors, individuals receiving a Form 1099, temporary workers, etc., must be placed under **Contractual Services**. When competitive selection is not feasible or practical, the selected applicant(s) agrees to obtain the written approval of the Grant Administrator before making a sole source selection. Selected applicant(s) must provide a copy of contracts, memoranda of understanding or agreements signed by selected applicant(s) and contractors.

Selected applicant(s) assumes responsibility to select subcontractors on a competitive basis. A minimum of three (3) bids must be solicited and proposals must include, at a minimum:

(1) name of selected applicant(s), grant number, and grant period; and (2) the type, number, and description of projects as described in the proposal.

Selected applicant(s) must provide the Grant Administrator with the solicitation, list of vendor responses (including amounts), and name of the selected vendor. Selected applicant(s) must maintain bids on file at their place of business according to Section II-B, Records Maintenance, Inspection, Examination, Audit and Monitoring. The Grant Administrator will reserve the right to request a copy of all bids for services that are competitively bid.

Selected applicant(s) must award the project to the lowest bid unless the Grant Administrator has given prior written approval for selection of a higher bid. Selected applicant(s) must provide a written justification for the selection of a higher bid. When awarding subcontracts, the selected applicant(s) must ensure that preference is given to products manufactured in or services offered by Michigan-based firms.

- **Travel:** in the budget include the name, job title and official workstation for each staff member that will be traveling. Selected applicant(s) must follow the State of Michigan Standardized Travel Regulations (www.michigan.gov/dtmb/0,5552,7-150-9141_13132-__00.html). The State will reimburse for mileage, lodging, and meals, refer to the current State travel rates. Meals and lodging must be supported by itemized, legible receipts and reasons for travel. Itemized meal receipts must include a list of each item purchased; receipts for payments made by credit card that are not itemized will not be accepted.

Mileage must be supported by travel log(s) with beginning and ending addresses, mileage total, and reason for travel. Grantees will be provided a travel log example. Out-of-state travel must be directly related to the grant project and approved by the Grant Administrator prior to travel. Travel expenses listed in the travel budget category are strictly for individuals listed on the budget under Personnel. Per Diem payments and alcoholic beverage reimbursements are not allowed.

- **Other Expenses:** This category is solely for use by organizations charging a per-case fee for work performed by subunits or internal agencies within the organization that do not require a competitive bid, i.e. contract, memorandum of understanding or any other type of signed agreement.
- **Indirect Costs:** Indirect costs are costs not directly or specifically related to the grant program. Indirect costs are costs of administering the organization and must be spread over a number of products, services, or grant programs proportionately. Examples include office supplies and

equipment, utilities, rent, maintenance and repair, insurance, accounting and bookkeeping services, and legal services. Non-cash expenses like depreciation, amortization, and depletion are not allowable indirect costs under this grant. **Total administrative and indirect costs must be identified, labeled clearly, and may not exceed 10% of the overall grant.**

Selected applicant(s) will be reimbursed for its proportional share of indirect costs. This means the MRA should be allocated a portion of the selected applicant(s)'s indirect costs and not 100% of the organization's total indirect cost.

Indirect costs should be displayed on the face of the budget on a single line item and the indirect rate should be rounded to six (6) decimal places. The budget narrative should contain a list of indirect costs, how the selected applicant(s) determined its indirect costs, and the percentage rate calculation for reimbursable indirect costs. Selected applicant(s) is not required to provide documentation supporting indirect costs; however, documentation verifying the costs must be retained by the selected applicant(s).

- (5) To ensure efficient review and approval of grant expenditures, selected applicant(s) will be provided additional guidelines to assist with calculating and determining accurate and appropriate grant expenditures.
- (6) Each budget category should have a subtotal displaying the total anticipated amount to be expended, and the budget should include a subtotal for total direct project costs and a sum of total project costs.
- (7) After grants are approved by the MRA, modifications of proposals and budgets may be necessary. If the MRA does not approve the total amount requested in the original proposal, selected applicant(s) will be required to submit a revised proposal, budget and budget narrative for the purpose of entering into a Grant Agreement. New line items to the revised budget are not allowed.
- (8) Selected applicant(s) assumes the responsibility of ensuring all unexpended grant funds are returned to the State of Michigan at the end of the grant period. Failure to do so may render selected applicant(s) ineligible for future grant awards and/or subject to legal action.
- (9) Selected applicant(s) may not commingle grant award funds with current or future grant awards. All funding sources must be managed and accounted for separately.

BEGIN APPLICANT RESPONSE

Line Item	Budget Category	TOTAL
1	Administrative Expenses	

2	Administrative Personnel (Grant Administration Staff)	
3	<i>Salary</i>	
4	Daniela Vergara (Data analyst and Board member)	\$80,000
5	Emily Fata (Financial analyst, content creator, Board Member)	\$80,000
6	Anna Schwabe (Educator, content creator, Board Member)	\$80,000
7	Alejo Moreno (Manager)	\$80,000
8	Michelle Moreno (Attorney, legal counsel)	\$80,000
9	Bryan Wilson (Financial officer)	\$80,000
10		
	Total Salary	\$480,000
11	<i>Fringe Benefits (15%)</i>	
12	Daniela Vergara (Data analyst and Board member)	\$12,000
13	Emily Fata (Financial analyst, content creator, Board Member)	\$12,000
14	Anna Schwabe (Educator, content creator, Board Member)	\$12,000
15	Alejo Moreno (CEO, Fed Grow, Cannabis compliance)	\$12,000
16	Michelle Moreno (Attorney, legal counsel)	\$12,000
17	Bryan Wilson (CFO, Fed Grow, Cannabis compliance)	\$12,000
18		
	Total Fringe Benefits	\$72,000
19	Total Administrative Personnel	\$552,000
20	Administrative Supplies, Materials, and Equipment	
21	General Office and growing Supplies	\$1,000
22	Server	\$42,986
23	Computers	\$3,000
24		
	Total Administrative Supplies, Materials, & Equipment	\$46,986
25	Administrative Travel (Grant Administration Staff)	
26	Mileage (Flights)	\$20,000
27	Meals	\$12,000
28	Lodging	\$12,000
29		
	Total Administrative Travel	\$44,000
30	Total Administrative Expenses	\$90,986
31	VMR Program Expenses	
32	VMR Program Staff	
33	<i>Salary</i>	
34	Oludare Odumosu (Medical doctor, clinical researcher)	\$40,000
35	Clinical Researcher (TBD)	\$200,000
36		
	Total Salary	\$240,000
37	<i>Fringe Benefits</i>	
38	Oludare Odumosu (Medical doctor, clinical researcher)	\$6,000
39	Clinical Researcher (TBD)	\$30,000
40		
	Total Fringe Benefits	\$36,000
41	Total VMR Program Staff	\$276,000

42	VMR Contractual Services	
43	Vendor (Agnetix)	\$236,576
44	Vendor (Transcend Growth Ventures)	\$511,696
45	Contractor Edward Merriman	\$80,000
46	Contractor Grower (TBD)	\$80,000
47	Contractor IT (TBD)	\$100,000
48	Contractor Jordan Miles	\$80,000
49	Contractor Sanaz Jarolmasjed	\$80,000
50	Contractor Data collector and analyst (TBD)	\$200,000
51		Total VMR Contractual Services
		\$1,368,272
52		Total VMR Program Expenses
		\$2,287,258
53		TOTAL PROJECT COST
		\$3,655,530

The above costs show the amounts needed to complete our two-year project. The Agricultural Genomics Foundation requires \$552,000 in personnel costs. Each of AGF's employees will dedicate half of their time (~20 hrs/week) for two years to the development of this project, plant production, data analysis, the creation of education materials in both Spanish and English, and the further development of clinical trials. Each of the current hourly employees will be compensated at a flat rate of \$40,000/year. Ms. Emily Fata, one of AGF's board members oversees developing market research for all the products developed by the foundation, and she leads a widely listened podcast explaining cannabis to a broad public. Dr. Anna Schwabe, also AGF's board member, has dedicated her time to develop educational material for multiple outlets and established best indoor cultivation practices. Dr. Daniela Vergara, AGF's president, will analyze all data collected and perform statistical evaluations in addition to developing education material and performing scientific outreach in both Spanish and English.

Although Mr. Alejo Moreno, Mr. Bryan Wilson, and Ms. Michelle Moreno are part of the company Fed Grow, they will be compensated hourly for this project at the same flat rate of \$40,000. Mr. Moreno will manage the project, the finances, and will assure compliance. Ms. Michelle Moreno will administer the legal aspect of the project. Finally, Mr. Bryan Wilson will oversee the financial aspect along with Mr. Moreno.

During these two years, we estimate that internet costs, office supply costs un upkeep will add up to \$1,000. All employees need computers, which add up to approximately \$10,000 but we are only requesting a fraction of this cost, \$3,000 through this VMR grant. To analyze and store the data that would be produced in this project and for all employees and researchers to be able to access all programs, we are requesting a computer server that will have 64 cores, 28 TB of space, 256 GB of ram, a mouse, and a screen. This server will be purchased during the second year of this project and will cost \$42,986. Therefore, the supplies, materials, and equipment will total \$46,968.

Our team is found in many places throughout the US and internationally, and therefore we estimate multiple 5-day trips during these two years, approximately 4 times/year for each person. Therefore, we kindly ask for will \$20,000 in airfare expenses, \$12,000 in meals (taking into account the per diem rates of the US General Service Administration that for Michigan estimates approximately \$120/day, and lodging for five days for six people. Therefore, travel adds to \$44,000 for the two years.

platform generation and website upkeep, \$2,725 for administrative expenses, \$10,000 for the podcast and blog posts, which comes out to a total of \$84,525.

Dr. Oludare Odumosu, CEO of the pharmaceutical company *Zelira Therapeutics*, will oversee the development of clinical trials with the *Cannabis* grown at *Transcend Growth Ventures*. Dr. Odumosu will dedicate approximately 10 hours a week of his time to this project, compensated at a flat rate of \$20,000/year (\$40,000 for two years). He will direct a clinical trial researcher (TBD) that will dedicate 100% of their time to this project compensated at \$100,000/year, which for two years adds up to \$200,000.

Transcend Growth Ventures, who own and manage the greenhouses whose value is estimated at \$91,840, will supervise the grow process, cloning, plant transplanting and care, which costs \$207,056. *Transcend Growth Ventures* required fixed costs amount to \$212,800, which add up to \$511,696. Mr. Edward Merriman will oversee all grow operations, compensated at a flat rate of \$40,000/year which adds to \$80,000 for two years, and a part time grower compensated at the same amount of \$80,000. *Transcend Growth Ventures* looks forward to partnering with AFG to provide a licensed in-state source of cannabis for their proposed research in accordance with applicable state laws and administrative rules.

Agnenix, also part of the FedNetix consortium, requires \$236,576 in materials, which includes the multi-sensor imaging lighting system, liquid-cooling system components, case-specific software modification, and computer system hardware expenses. The qualified personnel needed by *Agnenix* to install the lights, take care of the data acquisition, and maintain the sensor system costs \$100,000. The scientist that will analyze and oversee the data collection with the lights, Dr. Sanaz Jarolmasjed, will be compensated at a flat rate of \$40,000/year, along with Mr. Jordan Miles, CEO, who will also be compensated at a flat rate of \$40,000 and will direct all of *Agnenix* operations. Therefore, the total contractual services for the proposed project adds to \$1,368,272.

The total cost of this two-year project is \$3,655,530.

END APPLICANT RESPONSE

V-I Additional Information and Comments

Include in this section any other information that is believed to be pertinent but not specifically requested elsewhere in this RFP.

BEGIN APPLICANT RESPONSE

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(use as much space as needed)

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END APPLICANT RESPONSE

V-J Certification of Proposal

Please sign the proposal including the following language:

I certify that all information contained in the proposal is true to the best of my knowledge and belief, and that the organization is in compliance and agreement with all sections of the Request for Proposal.

Failure to comply with grant terms may result in termination.

Certified by: _____
Authorized Signatory and Title Date
Name of Organization

ATTACHMENT A: SAMPLE VMR BUDGET

Submission Date: _____

Selected Applicant's Grant Number: _____

Below is a sample budget in the required format for this RFP and the resulting grant agreement(s). All numbers are fictitious and must be removed and replaced with actual proposed budget amounts prior to submission of the proposal.

Line Item	Budget Category	TOTAL
1	Administrative Expenses	
2	Administrative Personnel (Grant Administration Staff)	
3	<i>Salary</i>	
4	Employee 1 (Job Title)	\$25,552
5	TBD 1 (Job Title)	\$35,879
6	Total Salary	\$61,431
7	<i>Fringe Benefits</i>	
8	Employee 1 (Job Title)	\$8,943
9	TBD 1 (Job Title)	\$12,558
10	Total Fringe Benefits	\$21,501
11	Total Administrative Personnel	\$82,932
12	Administrative Supplies, Materials, and Equipment	
13	General Office Supplies	\$1,000
14	Total Administrative Supplies, Materials, & Equipment	\$1,000
15	Administrative Contractual Services	
16	Does not apply	\$ -
17	Total Administrative Contractual Services	\$ -
18	Administrative Travel (Grant Administration Staff)	
19	Mileage	\$200
20	Meals	\$200
21	Lodging	\$ -
22	Total Administrative Travel	\$400
23	Total Administrative Expenses	\$84,332
24	VMR Program Expenses	
25	VMR Program Staff	
26	<i>Salary</i>	
27	Employee 2 (Job Title)	\$22,563
28	Employee 3 (Job Title)	\$24,522
29	Total Salary	\$47,085
30	<i>Fringe Benefits</i>	

31	Employee 2 (Job Title)	\$7,897
32	Employee 3 (Job Title)	\$8,583
33	Total Fringe Benefits	\$16,480
34	Total VMR Program Staff	\$63,565
35	VMR Personnel Program Staff	
36	<i>Salary</i>	
37	TBD 2 (Job Title)	\$20,155
38	TBD 3 (Job Title)	\$38,643
39	Total Salary	\$58,798
40	<i>Fringe Benefits</i>	
41	TBD 2 (Job Title)	\$7,054
42	TBD 3 (Job Title)	\$13,525
43	Total Fringe Benefits	\$20,579
44	Total VMR Personnel Program Staff	\$79,377
45	VMR Supplies, Materials, & Equipment	
46	Does not apply	\$ -
47	Total VMR Supplies, Materials, & Equipment	\$ -
48	VMR Contractual Services	
49	Vendor 1	\$56,782
50	Vendor 2	\$42,063
51	Independent Contractor 1	\$15,682
52	Independent Contractor 2	\$15,838
53	TBD 4 (Job Title)	\$32,289
54	TBD 5 (Job Title)	\$36,928
55	Total VMR Contractual Services	\$199,582
56	VMR Travel (VMR Staff)	
57	Mileage	\$100
58	Meals	\$50
59	Lodging	\$ -
60	Total EAP Travel	\$150
61	VMR Other	
62	Does not apply	\$ -
63	Total EAP Other	\$ -
68	Total VMR Program Expenses	\$3,742,674
69	Total Direct Cost	\$3,827,006
70	<i>Indirect Cost (0.019083)</i>	\$73,031
71	TOTAL PROJECT COST	\$3,900,037

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May 31, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Cannabis Regulatory Agency

Dear VMR Panel,

Transcend Growth Ventures, a licensed cannabis cultivation company, has one of the most modern growing facilities in Michigan with highly advanced technologies in their green houses. Transcend Growth Ventures is founded by accomplished entrepreneurs and technology executives with expertise in aligning business, technology organizations, and scientific research. We therefore understand the importance of conducting cannabis production research for the development of pharmaceutical grade products.

On behalf of Transcend Growth Ventures, I am honored to support the Agricultural Genomics Foundation (AFG), part of the Fednetix consortium, in its VMR application to establish the best indoor cannabis cultivation practices. We look forward to partnering with AFG to provide a licensed in-state source of cannabis for their proposed research in accordance with applicable state laws and administrative rules.

Sincerely,

Edward Merriman
Managing Member
Transcend Growth Ventures
2200 Hunt Street
Detroit, Michigan 48207
ed@transcendgrowth.ventures

May 31, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

Dear VMR Panel,

At Fed Grow, a federal compliance platform we are assuring compliance from seed to sale starting at farms, processing facilities, dispensaries, and including all the supply chain in the industry. Therefore, we understand the importance of standardizing *Cannabis* grows.

We are the leading organization of the FedNetix consortium, a group of different companies within the *Cannabis* industry that will assure proper regulations. The Agricultural Genomics Foundation (AGF) is part of this consortium. We are proud to support the AGF in this proposal, which is the starting point of proper growing conditions within the industry.

Fed Grow will provide accounting, legal, tech, and any other support that AGF needs to accomplish the proposed project.

Sincerely,

A handwritten signature in black ink that reads "Alejo Moreno". The signature is fluid and cursive, with a small dot at the end of the last name.

Alejo Moreno
CEO
Fed Grow
<https://fedgrow.org/>
Email:am@fedgrow.org

May 26, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

Dear VMR Panel,

Bright Green Corporation ("BGXX") is a publicly traded company listed on the NASDAQ and one of the five organizations who have entered into a Memorandum of Agreement ("MOA") with the United States Drug Enforcement Administration ("DEA") to grow and process federally-authorized cannabis and cannabis extracts. Bright Green Corporation is a collaborator with Fed Grow and is pleased to extend this collaboration to provide the Agricultural Genomics Foundation ("AGF"), part of the FedNetix consortium, the same consideration.

Equipped with the MOA, BGXX is organized for the manufacture of cannabis and derivatives at unprecedented scale. We possess a compelling competitive advantage over existing U.S. cannabis growers.

- BGXX can ship cannabis and cannabis extracts across state lines and internationally
- BGXX has been granted patents for medical therapies
- BGXX is able to raise capital on the U.S. public markets.

We're in the process of bringing online a 22-acre facility and preparing to construct a state-of-the-art, \$300-million agricultural manufacturing and research facility in New Mexico that will become the nation's largest federally authorized manufacturing and research facility for plant-based therapies, supplying researchers across the United States and internationally with high-quality cannabis and derivatives.

We understand the need of proper scientific research on cannabis cultivation to enable the development of the pharmaceutical-grade cannabis-based medicines which hold such tremendous potential to help our veterans and military personnel.

We are excited to support the development efforts proposed by AGF.

Yours truly,



Edward A. Robinson
Chief Executive Officer
Bright Green Corporation
401 E Las Olas Blvd. #1400
Fort Lauderdale, Florida 33301

Tel. +1 201-370-1140



5110 Campus Drive, Suite 150
Plymouth Meeting,
Pennsylvania 19462 USA

www.zeliratx.com

May 25, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

Dear VMR Panel,

Zelira Therapeutics is a global biopharmaceutical company focused on the development and commercialization of clinically validated cannabis and cannabinoid-based medicines for the treatment of a variety of medical conditions including insomnia, autism, and chronic non-cancer pain. The Company conducts its work in partnership with world-leading researchers and organizations including Children's Hospital of Philadelphia (CHOP), Jefferson Hospital, Curtin University in Perth, Western Australia; the Telethon Kids Institute in Perth; the University of Western Australia, in Perth; St. Vincent's Hospital in Melbourne, Australia.

Zelira is proud to be one of the first pharmaceutical companies with medicines that could be used for military personnel, including a proprietary sleeping product already in the market. Zelira's proprietary and patented Zenivol® - a leading cannabinoid-based medicine for treatment of chronic insomnia has successfully completed the world's first Phase 1b clinical trial for chronic insomnia where it was found to be a safe and effective treatment. We therefore recognize the importance of standard growing techniques to produce consistent cannabis plants for further drug development.

Zelira Therapeutics fully support the Agricultural Genomics Foundations part of the FedNetix consortium in this proposed project and look forward to collaborating in the development of medicines for the military personnel.

Sincerely,

A handwritten signature in blue ink, appearing to read "Oludare Odumosu", is written over a light blue rectangular background.

Oludare Odumosu, MPH PHD

Global CEO/ MD

Zelira Therapeutics

oodumosu@zeliratx.com

May 26, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

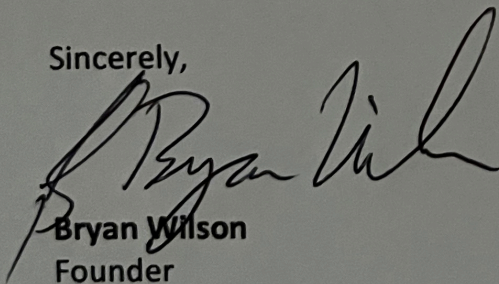
Dear VMR Panel,

Ananda Scientific is one of the first pharmaceutical companies to develop cannabis-based medicine and to establish clinical trials for their use. We understand that to properly produce pharmaceutical grade-products the consistency of the compounds is crucial.

Therefore, we see the need for the standardization of indoor cannabis grows, which will be achieved through this proposal.

We at Ananda Scientific are committed to support the Agricultural Genomics Foundation part of the FedNetix consortium in this and any future project. We will use their plant material for the development of cannabis-based medicines, which will be extremely useful for the veteran and military personnel.

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan Wilson". The signature is fluid and cursive, with a large initial "B" and "W".

Bryan Wilson
Founder

Ananda Scientific

sbwilson007@yahoo.com



May 25, 2022

VETERAN MARIJUANA RESEARCH (VMR)
GRANT PROGRAM
State of Michigan
Department of Licensing and Regulatory Affairs
Marijuana Regulatory Agency

Dear VMR Panel,

At Agetix, we are immensely proud of our lighting technology which is environmentally friendly and operates at the lowest carbon density of any indoor cultivation platform available worldwide. Because of the great promise that *Cannabis* products offers to the pharmaceutical industry, and due to the lack of scientific-based standards for indoor growing conditions, we believe that this proposal application from the Agricultural Genomics Foundation (AGF), part of the Fedetix consortium is necessary to take *Cannabis* indoor cultivation to a higher, more efficient, and predictable level.

It is with great gratification that we at Agetix support AGF's VMR application to set the best indoor standards for *Cannabis* indoor cultivation practices for future use in pharmaceutical products.

We commit the use of our advanced light technology, and we will provide the necessary lights for this project.

Sincerely,

Jordan Miles
CEO
Agetix
jordan@agnetix.com