Overview
The Colton Center for Autoimmunity at Yale is requesting research proposals dedicated to advancing innovative and translational research in autoimmune and allergic diseases, including the development of novel diagnostics and the identification of therapeutic targets and therapeutic agents. The Center will support Pilot and Development grants, as described below, with the goal to advance research findings to a stage at which technology transfer to a commercial partner or start-up company is feasible. Projects will be evaluated for funding by the Advisory Committee of the Colton Center, comprised of academic and pharmaceutical industry scientists, as well as life science investors and technology transfer experts, with confidentiality maintained during review and assessment of proposals.

Application Timeline
Application Due Date           December 13, 2021
Announcement of Awards        May 15, 2022
Funding Start Date            July 1, 2022

Applicant Eligibility
All Yale faculty (assistant, associate and full professors, and non-ladder research track) are eligible to submit proposals. Multi-PI applications, including from inter-disciplinary investigators, are acceptable.

Areas of Interest
The Center is devoted to developing new or improved diagnostics, therapeutic targets and/or therapeutics for patients with autoimmune or allergic diseases. Specific areas of interest include, but are not limited to:

1. Identification of potential therapeutic targets and novel approaches for the diagnosis and/or treatment of autoimmune or allergic diseases. The scope of interest is broad and includes, but not limited to:
   • Identifying and understanding pro-inflammatory microenvironments within target tissues.
   • Understanding the fundamental regulation of immune system activation and suppression by co-regulatory molecules and/or regulatory cells.
   • Mechanisms of microbial control and/or induction of regulatory responses.
   • Identification of therapeutically-modifiable activities of the microbiota on autoimmunity or allergy.
   • Elucidating the role of innate immune cells in homeostasis, and autoimmunity or allergy.
   • Elucidating the role of adaptive immunity in autoimmune or allergic diseases.
   • Identifying cell surface receptors and receptor:ligand interactions on immune and/or relevant non-immune cells subtypes that could be therapeutically targeted.
   • Identifying new, repurposed, or novel combinations of therapeutic agents.
• Development of autoimmune or allergic disease models that enable preclinical evaluation of new or repurposed therapeutic strategies.
• Functional genomic approaches to identify therapeutic drug targets.
• Engineered approaches to treat autoimmune or allergic diseases.

2. Selection of patients with autoimmune or allergic disease(s) that are most likely to respond to a given therapy. The scope of this area is also broad and could include:
• Technologies, including tools for biomarkers and/or diagnostics, that enable patient stratification and an improved understanding of how to subset patients in different autoimmune diseases and in allergic illnesses. This would be especially impactful for those diseases for which treatment has been challenging because of clinical heterogeneity.
• Biomarkers that identify responders and non-responders to current therapies.
• Generation of novel patient databases along with a defined implementation pathway toward use of same for development of novel biomarkers or therapies. This would include development of cohorts that could be used for identification of new diagnostic markers or for future early stage clinical trials (support for clinical trials is not allowed).

These suggestions provide examples and are not exclusive. The essential component is that the project must have a goal of delivering a diagnostic or therapeutic for autoimmune or allergic diseases with a plan toward commercialization and clinical development.

If you have any questions, please email the Colton Center for Autoimmunity at Yale at coltoncenter@yale.edu.

**Awards**

**Pilot Grants:** Pilot Grant awards will be for twelve months, typically between $50,000 and $100,000 (direct costs), not exceeding the latter. Pilot Grants are intended to support exploratory projects and proof-of-concept activities with the goal of generating a Development Grant proposal.

**Development Grants:** Development Grants will support more firmly grounded projects at higher amounts, typically $100,000 to $200,000 (direct costs) over a period of up to 2 years. Development Grants might be extensions of successful Pilot Grants, or new projects with great potential. Grants will have the near-term goal of moving a project toward filing of intellectual property, with the longer-term goal for out-licensing and/or partnership with pharmaceutical or biotech industry. Development Grants will include progress review toward the end of the first year of support.

Selected grant applicants may be requested to provide an oral presentation (guidelines for presentation to be provided beforehand) to the Advisory Committee before final funding decisions are made.

The Advisory Committee may adjust requested funding levels and duration of grants.
Guidelines for Proposals

1. Each investigator may submit only one proposal in each category per grant cycle.
2. A separate proposal is required for each type of grant application.
3. The proposal should include:
   a. Cover page with Name, Faculty Title, Department (Section or Division, if applicable),
      Title of Proposal, Type of Grant, and a non-confidential Description of the Project (limit to 3 lines)
   b. Specific Aims
   c. Background and Relevance to Autoimmune or Allergic Disease(s)
   d. Innovation
   e. Research Strategy
   f. Milestones
   g. Plan for Translational Development
   h. Items b-g should be limited to 2 pages, inclusive (single spaced, 11-point font, 0.5-inch margins)
      i. Figures (limit to one page, with margins as in h above, not included in page limit)
      j. References (not included in page limit)
4. On a separate page, please provide a budget, including allocation for salaries, supplies, and other necessary items, with budget justification. PI salaries are restricted to 5% of total costs requested. Salaries for other personnel are permitted.
5. Append NIH biosketch (5-page) of PI and other key personnel.
6. Prepare as one (1).pdf document containing 3-5 above.

Terms and Conditions

Grant Term: July 1 – June 30

Time and Effort: All personnel must commit time and effort appropriate to their roles on the project. Funding will not be subject to Yale indirect expense charges. Funding may only be used for research approved by the Colton Center and may not be used for any other purpose. Budget items may not include equipment, computers, or travel, with PI salary limited to 5% effort at NIH cap.

Research Plan and Milestones: Colton Center awards are made upon approval of research plan and research milestones. The achievement of milestones will be important in assessment of progress, and continuation of funding, if requested. Projects may be terminated if agreed upon research goals and milestones are not met. It may be possible to revise the research plan and/or budget upon request during the project period, subject to approval from the Colton Center.

Research Compliance: Colton Center grants are internal funding and will not require approval of Yale Office of Sponsored Projects (OSP). The PI and department are responsible for meeting all compliance requirements with the award, including approval for animal and/or human subjects research, if applicable.

Overlapping Funding: Awardees must inform the Colton Center if internal or external funding is obtained to support any of the specific aims of the Colton Center proposal. Overlapping funds
provided by the Center may be reallocated provided those activities are directly related to the funded project and approved in writing by the Center.

**Expenditure of Funds:** All funds are expected to be expended within the grant term of the current award. If a carry-over of funding is needed (see below) the total amount shall not be more than 25% of the grant and the timeline shall not be longer than one year (maximum) of the original grant term.

**Carry-Over:** To request a carry-over of unexpended funds, the PI should complete the carry-over form and forward to the Colton Center at for review at least 30 days before the grant period ends to allow sufficient time to process the request. The carry-over request should include the current expiration date of the project, the requested termination date, and a brief justification for the request.

**Reporting Requirements:**
- An interim progress report, with expense report, is required every 6 months after initiation of the award date
- A final progress report, with expense report, is required within 30 days of funding completion

**Inventions and Intellectual Property:** There is no requirement for any background or pre-existing inventions, nor any prior intellectual property (IP). However, if there is background intellectual property generated at Yale it is assigned to Yale. All applicants should disclose any relevant background IP of which they are aware, whether or not the IP is owned by Yale, and for Yale IP, if such background IP is subject to any third-party obligations through existing contracts such as a material transfer agreement (MTA), a sponsored research agreements (SRA), licenses, options or foundation awards. Applicants should also disclose if the proposed project will use any proprietary materials that are subject to an MTA from a commercial entity. New inventions that are conceived or implemented as a consequence of Colton Center funding should be disclosed to the Office of Cooperative Research (OCR) at Yale and assigned to Yale or HHMI as appropriate. The PI must report any and all new inventions identified as a consequence of Colton Center support to OCR at least 45 days in advance of any public disclosure (oral presentations [including by students or postdocs], posters, manuscripts, etc.) to allow OCR staff to determine if such public disclosure contains new, potentially patentable subject matter.

Intellectual property developed with Colton Center support will be managed in accordance with Yale’s “Intellectual Property and Ownership” ([https://ocr.yale.edu/intellectual-property-policy-and-ownership](https://ocr.yale.edu/intellectual-property-policy-and-ownership)) and any net royalties received on account of the licensing or other distribution of such intellectual property will be done per that policy.

**Publications:** “The Colton Center for Autoimmunity at Yale” must be acknowledged in all publications resulting from research supported all or in part by the Center, and such publications forwarded to the Colton Center.

**DEADLINE FOR SUBMISSION:** December 13, 2021 by midnight via InfoReady.