MULTIPLE MYELOMA Research Foundation

MMRF STRATEGIC PLAN

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Prepared by Kathy Giusti, MMRF

383 Main Avenue, 5th Floor, Norwalk CT, 06851
Phone: (203) 229-0464 Fax: (203) 972-1259 Email: info@themmrf.org

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1. EXECUTIVE SUMMARY

Introduction to MMRF Strategic Plan:

The Multiple Myeloma Research Foundation (MMRF) has developed innovative business models and partner networks to help achieve their overall mission to "relentlessly pursue innovative means that accelerate the development of next-generation multiple myeloma treatments to extend the lives of patients and lead to a cure". To pursue this mission, the MMRF built its Precision Medicine Model to generate data and accelerate breakthroughs through three primary avenues:

- Invested in data and tissue generation activities that resulted in the largest and most comprehensive long-term genomic research study ever conducted in myeloma
- Prioritized open and free sharing of data, providing incentives for academia and industry to share their learnings and contribute to the growing knowledge base
- Built a collaborative world-class network of research institutions and cancer centers which has accelerated research and conducted over 75 clinical trials

Over the past several years, the MMRF has focused its efforts on advancing personalized medicine in multiple myeloma. Historically, research to advance personalized medicine has focused on genomics and proteomics to understand how an individual's genetic profile can influence both disease progression as well as response to treatments. Although research in this space has led to the discovery of novel biomarkers, development of genomic tests, and approval of targeted treatments, **there are several key environmental factors and challenges that call for an evolution of the MMRF's current strategic approach to build on past and current successes:**

1) <u>Emergence of immune science</u>
   - Advances in the understanding of the immune system have led to the development of many immune therapies that have seen clinical success in both solid and liquid tumors. Known opinion leaders in this space believe that immune therapy combinations are the key to finding a cure in many cancers including multiple myeloma.
   - However, this perfusion of activity is extremely inefficient and fragmented. There are over 2,000 immune-oncology agents in development which are being led by over 600 biopharma companies and academic medical centers.
   - The MMRF is uniquely positioned to play a role in focusing research efforts and driving this activity to multiple myeloma to ensure that patients get access to the best new targets and technologies.

2) <u>Intensification of market competition</u>
   - The multiple myeloma drug market has seen 10+ product launches and grown to $10B in value. This tremendous financial growth has increased the appetite for and attention of private venture to accelerate new therapy development through innovative models and investment vehicles.
   - However, this increasingly crowded marketplace causes hesitancy to invest and traditional philanthropy models perpetuate research siloes that drive even greater inefficiency.

Currently, less than 5% of preclinical immune-oncology therapies are being studied in multiple myeloma.

- Through its scientific expertise and assets in the field, the MMRF is poised to sustain research in multiple myeloma through a rational investment strategy that will drive future activity, entice new companies to enter, and distribute risk across a portfolio of assets to increase probability of success.

3) Diffusion of patient care and treatment decision-making
   - Treatment of multiple myeloma used to be concentrated in large academic medical centers, but now about ~60% of patients are treated in non-academic or community facilities. Moreover, the role of the patient has transformed from that of a research subject to an informed decision-maker in their care due to growing access to data and information through social media, digital content, and other patient-friendly portals.
   - However, the diffusion of decision-making regarding patient care and treatment has led to poorer outcomes for patients treated in lower-volume community centers compared to those in academic medical centers. Treatment decision-makers do not always have access to the best data and insights to inform critical care questions for patients.
   - Through its influence and reach, the MMRF seeks to democratize scientific and real-world data and insights through innovative patient registries and data-exchange models to identify novel disease targets and answer the 'must-make' decisions that can improve patient care and outcomes in real-time.

Given the emergence of these environmental factors, critical challenges, and the evolving landscape in multiple myeloma research and treatment, the MMRF is looking to build on its previous and current successes through new strategic initiatives that advance its core mission. This strategic planning document outlines the goals, objectives, strategies, and programs that the MMRF can execute to advance towards cure and optimized care for multiple myeloma. A high-level outline of these strategies is included in this executive summary with additional details in the body of the document.

Outline of MMRF Strategic Plan:

As a continuation of its well-established foundation, vision, and mission, the MMRF has defined a single, overarching goal for its new strategic plan:

MMRF's Strategic Goal → *To accelerate a cure and optimize care for patients with multiple myeloma*

In order to achieve this goal, the MMRF has outlined three key objectives that will drive all strategies and associated programs:

1. Advance development and delivery of novel **immune** therapies and supporting infrastructure
2. Engage the multiple myeloma **community** to optimize target identification and care through the MMRF CureCloud
3. Stimulate research by harnessing a **venture** and revenue-generating model through investment and value-added services

However, to meet these objectives, the MMRF assumes several guiding principles lay the foundation to support its overall goal.

The MMRF's new strategic plan must:

1. Focus on addressing patient unmet needs across the entire patient journey (i.e., from MGUS, smoldering, newly diagnosed, relapsed, and refractory disease states)
2. Ensure that research expenses and models are monetized appropriately to drive sustainable reinvestment in research
3. Invest in emerging, disruptive technologies (e.g., blood biopsies / sequencing, MRD, etc.) to ensure flexibility

In order to (1) advance development and delivery of novel immune therapies and supporting infrastructure, three core strategies are recommended:

A. Identify, validate, and standardize IO biomarkers, profiles, assays, and data for the community
    1. Standardize immune testing to create consensus and collaboration for tissue-based studies, trials, and future registries
    2. Conduct data analysis of existing assets including samples from CoMMpass / DTP registry to improve understanding of the immune repertoire of multiple myeloma and drive new discoveries
    3. Develop new Immune Atlas sample collection protocol to supplement immune profiling data and support longitudinal research

B. Accelerate Prevention research applying immune profiling insights to improve risk stratification and determine how and when early stage patients should be treated
    1. Facilitate and execute new PROMISE / PCROWD / DTP registry partnership to enrich understanding of disease trajectory and prognosis for early stage patients
    2. Conduct SMM patient sample data analysis study to improve disease understanding and identify biomarkers for targeted prevention therapies

C. Advance pre-clinical and clinical development of innovative IO therapies using best practices in rational study design or master protocols

1. Launch platform study with biopharma assets (Fraction)
2. Develop an IST funnel to accelerate development of treatment options for multiple myeloma patients
3. Provide funding sources for pre-clinical ACT research to accelerate discovery of next-generation ACT therapies for multiple myeloma
4. Expand IO arm of MyDrug to progress IO therapy within multiple myeloma
5. Execute a MyImmune combination trial to better understand responses to CAR-T and other ACTs

In order to (2) engage the multiple myeloma <u>community</u> to optimize target identification and care through the MMRF CureCloud, four core strategies are recommended:

A. Generate comprehensive real-world data registry and platform to answer critical research and care-based questions

1. Launch patient registry to build longitudinal clinical outcomes database (DTP Registry)
2. Build aggregated data infrastructure and platform across assets (CureCloud)

B. Enable data analysis, informatics, and tools to identify new therapy strategies and optimize care for myeloma community stakeholders

1. Develop researcher portal for hypothesis generation and target identification
2. Develop treatment decision support informatics based for oncologists
3. Develop patient support tool to guide treatment decision-making and provide disease context

C. Build an end-to-end evidence engine to establish and validate targets and care recommendations in multiple myeloma

1. Conduct health care system pilot as proof of concept for improved outcomes and shared data model
2. Expand network of health systems and partnership model to build on successful proof-of-concept

In order to (3) stimulate research by harnessing a <u>venture</u> and revenue-generating model through investment and value-added services, two core strategies are recommended:

A. Establish venture fund to progress development of early stage / emerging biopharma and diagnostic assets

1. Establish venture philanthropy fund operating model, governance, and infrastructure

B. Provide value-added services as a complement to Myeloma Investment Fund

1. Develop service model to support Myeloma Investment Fund awardees

2. INTRODUCTION

Background on the MMRF:

The Multiple Myeloma Research Foundation (MMRF) was founded in 1998 by Kathy Giusti, a multiple myeloma patient, and her twin sister, Karen Andrews. Recognizing incentive gaps in the market that discouraged the research of treatments for orphan diseases such as myeloma, Kathy used her business background to begin fundraising, develop an initial business plan, and establish scientific and technology advisory boards as the foundation of the MMRF's early structure.

The mission of the MMRF is to "relentlessly pursue innovative means that accelerate the development of next-generation multiple myeloma treatments to extend the lives of patients and lead to a cure". To support its mission, the MMRF launched its Precision Medicine Model to combine areas of science, technology, and patient data to accelerate breakthroughs. To realize this vision, the model branches out to three primary components:

- Investing in data and tissue generation activities (The Data Bank)
- Prioritizing open and free sharing of data (The Learning Network)
- Building a world-class network of research institutions and cancer centers (The Clinic)

In order to fuel its entire precision-medicine model, The Data Bank focuses on the collection of high-quality tissue and data to drive important research that will find the keys to the cure within each patient. Through these efforts, the MMRF was the first to develop a multi-center tissue bank in myeloma with over 4,000 samples, first to sequence the myeloma genome, and first to build the largest oncology genomic data set, CoMMpass, in the public domain.

Focusing heavily on collaboration, The Learning Network provides research incentives to industry and academia to grow the knowledge base of multiple myeloma. The MMRF makes it a priority to openly and freely share its data to bring the scientific community to work towards a cure together. For example, in 2017, the MMRF launched the Prevention Initiative, a cross-collaboration between six leading cancer centers, to identify and validate novel targets and biomarkers for disease progression.

Lastly, discoveries generated from its many research programs are moved to The Clinic to deliver new therapies to the patients who need them. In order to accomplish this, the MMRF was the first to develop a clinical network called the Multiple Myeloma Research Consortium (MMRC), to unite distinguished researchers and academic institutions in myeloma. To date, the MMRC has conducted over 75 clinical trials, of which nearly a third are still ongoing.

Rationale for Strategic Plan:

Although the MMRF is seen as a leader in applying innovative business models and approaches to research and has had numerous successes in advancing critical scientific and clinical questions for multiple myeloma patients, there is still work to be done. The availability of novel therapies and combination approaches in recent years has improved overall survival rates and patients' outcomes, but the median 5-year survival rate is still only ~50% for newly diagnosed patients. Moreover, about

one-third of patients do not respond to initial treatment and all patients will relapse even after successful response to treatment. Patients still have many unmet needs and would clearly benefit from more novel and personalized treatments approaches to improve outcomes.

Over the past several years, the MMRF has focused its efforts on advancing personalized medicine in multiple myeloma. In other words, matching the right treatment to the right patients to drive optimal clinical decision-making and improved outcomes. Historically, research to advance personalized medicine has focused on genomics and proteomics to understand how an individual's genetic profile can influence both disease progression as well as response to treatments. Although research in this space has led to the discovery of novel biomarkers, development of genomic tests, and approval of targeted treatments, **there are several key environmental factors and challenges that call for an evolution of the MMRF's current strategic approach to build on past and current successes:**

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   - Through its scientific expertise and assets in the field, the MMRF is poised to sustain research in multiple myeloma through a rational investment strategy that will drive future activity, entice new companies to enter, and distribute risk across a portfolio of assets to increase probability of success.

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in academic medical centers. Treatment decision-makers do not always have access to the best data and insights to inform critical care questions for patients.

- Through its influence and reach, the MMRF seeks to democratize scientific and real-world data and insights through innovative patient registries and data-exchange models to identify novel disease targets and answer the 'must-make' decisions that can improve patient care and outcomes in real-time.

Given the emergence of these environmental factors, critical challenges, and the evolving landscape in multiple myeloma research and treatment, the MMRF is looking to build on its previous success in early phase clinical research through new strategic initiatives that advance their core mission to "relentlessly pursue innovative means that accelerate the development of next-generation multiple myeloma treatments to extend the lives of patients and lead to a cure."

Purpose of Strategic Plan:

This strategic planning document was developed to serve the following purposes, including:

1) Identify the MMRF's goals for advancing the multiple myeloma community towards a cure and optimized care for all patients
2) Articulate specific objectives, strategies, and associated programs to achieve the goals outlined by the MMRF and its strategic vision
3) Define an actionable plan that the MMRF leadership team can use to implement and operationalize their strategy
4) Build and prioritize critical partnerships and relationship to execute MMRF's goals and objectives

Although this strategic planning document outlines the goals, objectives, strategies, and programs that the MMRF can execute to advance towards cure and optimized care, additional planning meetings and roundtable discussions with external stakeholders will be required to charter these initiatives. In other words, there is an expectation that further planning and guidance will be necessary to add another level of specificity to the plan in order to create more granular success metrics, timelines, and funding requirements. This document will serve as the starting point for more detailed program and operating plans needed to launch these initiatives.

Approach to Strategic Plan Development:

In order to develop this strategic plan, the MMRF leadership team executed the following steps:

1. **Reviewed Existing Strategy & Assessed Landscape**
   - Reviewed existing vision, legacy initiatives, and current strategy with MMRF leadership team through iterative working sessions
   - Assessed the current immuno-oncology, technology, data, and venture landscapes by leveraging internal subject matter experts and secondary literature review

2. **Identified Unmet Needs & Future Requirements**
   - Conducted over 50 exploratory interviews with key opinion leaders and subject matter experts within immuno-oncology, data/technology, patient engagement, and venture

3. **Developed To-be Vision & Strategic Pillars**
   - Facilitated off-site working session with internal MMRF and external stakeholders to define strategic strawman and three core strategic pillars for board presentation

4. **Built Detailed Strategic Initiatives & Plan**
   - Iterated strategic plan outline with MMRF leadership team through weekly working sessions to align on areas of focus and critical path items
   - Developed detailed strategic initiatives within each of the three pillars and formal planning document with critical partners including MMRC and biopharma

After developing this strategic plan, the next step will be to conduct a series of strategic and operational planning meetings in Q1 2019 to further define and charter the specific initiatives that will support the overall strategy outlined in this document.

Framework for Strategic Plan:

In order to provide a common structure and terminology to develop the strategic plan, the MMRF created a high-level framework that outlines the key components of the strategies it will execute. This structure will ensure that:

- Each strategy and initiative is aligned to the MMRF's vision and goals
- All programs can be translated into actionable activities and recommendations
- Socialization of the strategic plan will promote internal alignment among the leadership team
- Changes to the strategic objectives or priorities of the organization can be easily updated

The following framework defines each of the core components of the plan:

As the MMRF begins to transition in to the implementation phase of this effort, a detailed operating plan will be designed to ensure successful execution of each objective, and corresponding programs and activities.

3. MMRF GOAL & OBJECTIVES

Goal & Objectives:

As a continuation of its well-established foundation, vision, and mission, the MMRF has defined a single, overarching goal for its new strategic plan:

MMRF's Strategic Goal → *To accelerate a cure and optimize care for patients with multiple myeloma*

In order to achieve this goal, the MMRF has outlined three key objectives that will drive all strategies and associated programs:

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However, to meet these objectives, the MMRF assumes several guiding principles lay the foundation to support its overall goal.

The MMRF's new strategic plan must:

1. Focus on addressing patient unmet needs across the entire patient journey (i.e., from MGUS, smoldering, newly diagnosed, relapsed, and refractory disease states)
2. Ensure that research expenses and models are monetized appropriately to drive sustainable reinvestment in research
3. Invest in emerging, disruptive technologies (e.g., blood biopsies / sequencing, MRD, etc.) to ensure flexibility

4. NEW STRATEGIC INITIATIVES

To achieve the MMRF's goal, this strategic plan outlines several new strategies and underlying programs to achieve the following three objectives.

1. Advance development and delivery of novel **immune** therapies and supporting infrastructure
2. Engage the multiple myeloma **community** to optimize target identification and care through CureCloud
3. Sustain research by harnessing a **venture** and revenue-generating model through investment and value-added services

Objective 1: Advance development and delivery of novel immune therapies and supporting infrastructure

Description:

- Recent improvements in our understanding of immune suppression in multiple myeloma and promising early stage efficacy with immune therapies indicate that the MMRF should support initiatives to develop innovative IO therapies and advance biomarker tests and uses in multiple myeloma
- Critical strategies to achieve this objective are to develop and standardize immune assays and data for clinical use, accelerate delivery of innovative therapies and diagnostics to patients, and support disruptive technologies (e.g., ACTs) through infrastructure investments and other activities to support patient access

Rationale:

- Immunotherapy approaches have demonstrated early successes in both solid and liquid tumors
- Momentum is building to progress IO therapies in multiple myeloma with significant investment in next generation checkpoint inhibitors, vaccines, bispecifics, and adoptive cell therapies including CAR-T therapies
- The MMRF can play an important role in supporting the development and application of novel therapies and diagnostics for multiple myeloma as a trusted third party, research foundation and network
- More specifically:
    - The data landscape in IO, and specifically myeloma, is fragmented with a lack of clear guidance on immune biomarkers, profiles, types of assays to use, and how data should be collected and stored
    - Clinical studies that efficiently test multiple arms, combinations, and/or patient types are hard to design, difficult to conduct, and costly to run as the field advances rapidly
    - There is a severe lack of infrastructure among academic institutions in cell therapy discovery, processing, and delivery that creates a bottleneck for ACT discovery, research, and treatment for patients

To achieve objective 1, three core strategies are recommended:

A. Identify, validate, and standardize IO biomarkers, profiles, assays, and data for the community
B. Accelerate Prevention research applying immune profiling insights to improve risk stratification and determine how and when early stage patients should be treated
C. Advance pre-clinical and clinical development of innovative IO therapies using best practices in rational study design or master protocols

Vision of Success:

- Develop a standardized set of immune assays to be utilized throughout the MMRF and MMRC affiliates to better understand drivers of disease progression and optimize treatment response
- Develop a leading repository of SMM patient data to enable insights to support standard clinical approaches for treating early stage patients
- Establish the MMRF as a leading partner for biopharma and AMCs in conducting innovative clinical trials and developing breakthrough therapies and drug combinations

Strategy A: Identify, validate, and standardize IO biomarkers, profiles, assays, and data for the community

Description:

- Support research to identify the most robust and informative IO biomarkers, panels and profiles to advance therapies through research and to improve patient benefit
- Development of centers of excellence within MMRC translational research labs to centralize immune testing across IO trials in order to accelerate high quality data generation and robust correlative analyses
- Support the generation and distribution of test standards, concordance programs and protocol adoption to generate new IO data from existing MMRF tissue bank and new research / patient registries (e.g., DTP registry / CureCloud)

Rationale:

- Fragmented research and data landscape, particularly in multiple myeloma, which lacks clear guidance on immune profile development, assay testing, and data structure
- Biomarker discovery in academic translational research will identify the most promising candidate biomarkers and panels
- Standardization of immune testing in central research labs is a well-established approach to improve performance and consistency of complex patient lab testing
- Test standardization also requires available test protocols and supporting concordance programs to generate new IO data

Vision of Success:

- Adoption of a centralized lab and/or standardized suite of translational assays within the MMRC to support immune testing across MMRF and MMRC trials and research initiatives in IO
- Expanded use of standardized tests and technologies through accepted methods in collaboration with industry and academic partners
- Generate high value immune data from existing MMRF tissue bank samples and new research / patient registries

Program 1: Standardize immune testing to create consensus and collaboration for tissue-based studies, trials, and future registries

Program Description	• Standardize immune assays, testing, and data analysis across MMRC centers, programs, and trials • Establish centralized testing through a small number of specialized labs across the MMRC • Accelerate ongoing work through immune-correlatives working groups and immune networks of excellence to generate new standardized IO data
Rationale	• Centralized testing is a well-established approach to improve the utility of complex patient lab testing • Central lab capabilities allow for consistent reporting of data across research sites

	• Project would take advantage of translational clinical labs that have been built at a few leading AMCs • Structure immune data is highly valuable to multiple myeloma community and can be used to generate new biomarker and target discoveries
Process	Asset Mapping 1. Develop asset list 2. Finalize priority questions 3. Map existing assets and identify gaps Assay Standardization 4. Define pilot design 5. Finalize contracts 6. Run pilot and align on analytical strategy
MMRF Owner	• Chief Science Officer
Potential Partners	• MMRC leadership and members with immune testing capabilities • Other research labs / partners with immune testing capabilities • Biopharma partners with interest in Immune Atlas development
Funding	• $
Timeline	• Short term; <1 year to develop and execute pilots
Resources Needed	• MMRF project manager • MMRF sample coordinator • MMRF legal counsel • Pilot study site leads / vendors • Oversight from MMRF scientific and medical leadership

Vision of Success	• Standardized protocols established for immune sample collection, processing and analysis, to be employed across immunotherapy research and clinical trials
	  • Standardized assays implemented across ongoing research programs and trials (e.g., MyDrug), as well as new initiatives
	  • MMRC members committed and engaged to utilize new standards and protocols

	• Future studies and new registries using immune tissue employ standardized approach to generate high quality immune data that can be integrated across the community
Risks	• Ensuring commitment and buy-in to the centralized testing centers / suite of assays • AMCs may be unwilling to use centralized assays as they prefer their own in addition to other pan-cancer standardization initiatives • MMRF tissue bank samples may have limited viability due to length of sample storage and limited sample volume • MMRF tissue bank immune samples, may have variations between physical and expected inventory • Possibility of high inter-site variation in results and requirement to do additional rounds of pilot studies

Program 2: Conduct data analysis of existing assets including samples from CoMMpass / DTP registry to improve understanding of the immune repertoire of multiple myeloma and drive new discoveries

Program Description	• Expansion of current CoMMpass registry through deep immune profiling of existing longitudinal patient samples in tissue bank • Development of immune landscape at baseline in newly diagnosed multiple myeloma • Build understanding of how immune repertoire changes over time and which antigens and clones are most immunogenic
Rationale	• Reflects significant demand for deep immune profiling data matched to genomic and clinical outcomes data (from AMCs and biopharma partners) • Enables ability to answer strategic questions about immune landscape, how it changes over time, and which immune antigens can be targeted to mediate antitumor effects • Extends value of CoMMpass data set and provides additional revenue potential to MMRF to support additional research
Process	1. Align on approach and analysis 2. Design and launch Immune CureCloud 3. Continue to generate and store data in CureCloud 4. Conduct analyses

MMRF Owner	• Chief Science Officer
Potential Partners	• Existing clinical site leads • MMRC Members / Immune Steering Committee

Funding	• $$$
	  • Pilot programs (3 total)
	  • Sample analysis
	  • Funding for DTP sample analysis

Timeline	• Medium term; 1 – 2 years to conduct analyses
Resources Needed	• MMRF project manager from scientific and medical leadership • MMRF legal counsel • MMRF informatics • Site leads clinical ops manager and support staff

Vision of Success	• Generate industry-leading immune data set for multiple myeloma, linked to genomic and outcomes data
	  • Pilot programs developed and executed which sequence existing or incoming samples / run standardized assays across sites
	  • New contracts with existing PCC and new biopharma partners executed to generate revenue
	  • Data produced and shared seamlessly across clinical sites
	  • Data aggregated via immune partition of CureCloud
	  • Developed and published POV on immune data standards guidelines

Risks	• High potential cost of sample analysis • Difficulty maintaining standards across sites • Low utility of existing samples identified by pilot study

Program 3: Develop new Immune Atlas sample collection protocol to supplement immune profiling data and support longitudinal research

Program Description	• Design clinical protocol for sample collections to fill the gaps in existing samples identified in Program 2

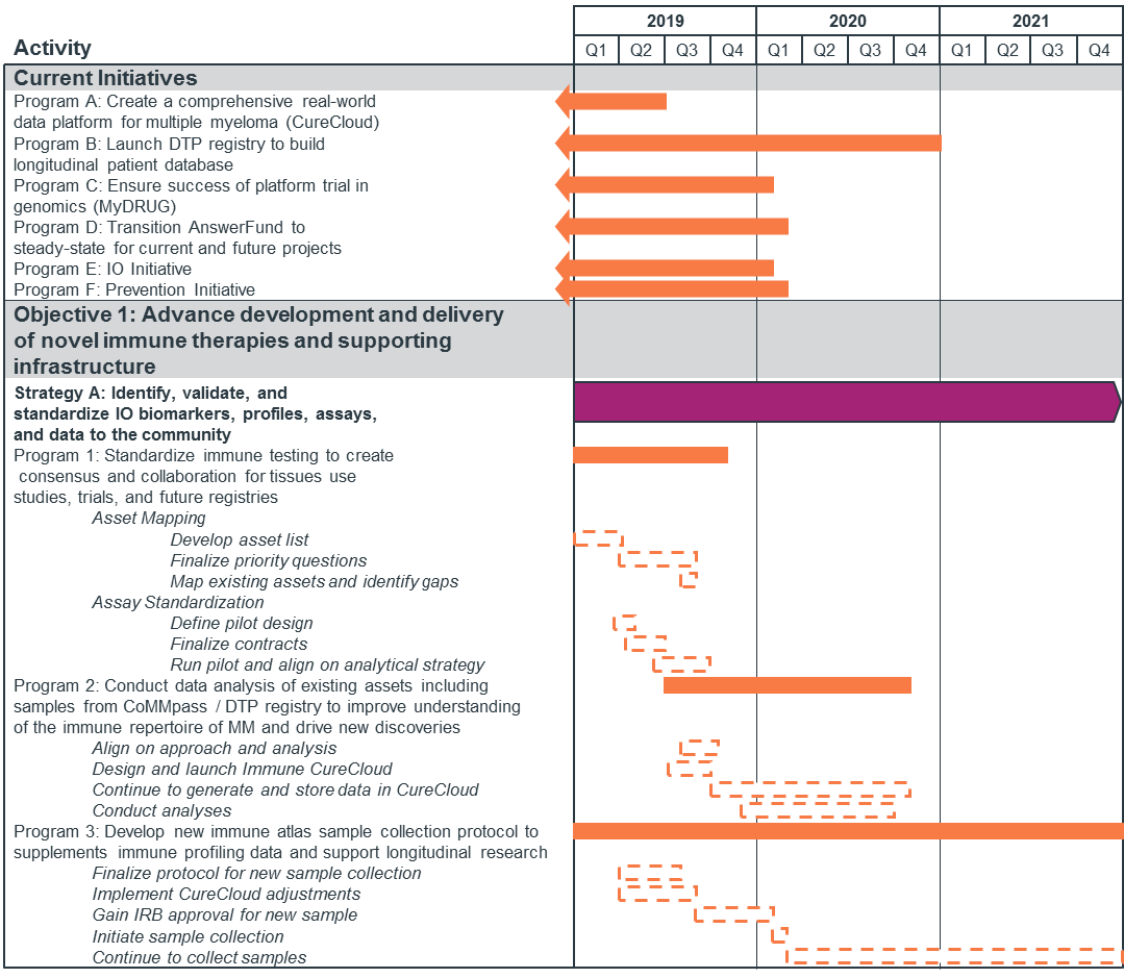
	• Understanding of how immune repertoire changes in response to modern treatments not captured within CoMMpass samples
Rationale	• CoMMpass data set does not cover the full spectrum of patient subgroups needed to develop a complete Immune Atlas • DTP registry may require time to cover any gaps in existing sample analysis and may be difficult to design to target specific patient groups • Application of the new protocol will further encourage use of the standardized immune assays
Process	1. Finalize protocol for new sample collection 2. Implement CureCloud adjustments 3. Gain IRB approval for new sample 4. Initiate sample collection 5. Continue to collect samples
MMRF Owner	• Chief Science Officer
Potential Partners	• MMRC leadership and members with immune testing capabilities • Other research labs / partners with immune testing capabilities • Biopharma partners with interest in Immune Atlas development

Funding	• $$$($)
	  • Conduct 2 pilot sites
	  • Ongoing sample collection from AMCs
	  • Ongoing sample collection from clinical trials
	  • Data infrastructure build and maintenance

Timeline	• Medium term; 1 – 2 years to program launch
Resources Needed	• MMRF project manager • MMRF legal counsel • MMRF informatics • Oversight from MMRF scientific and medical leadership
Vision of Success	• Enriched dataset linked with genomic data that enables researchers to answer strategic questions and build an understanding of how immune repertoire changes over time • New contracts executed with existing PCC and new biopharma partners to generate revenue

	• Rich immune data developed set and link to genomic and outcomes data in CoMMpass within two years (building off Program 2) • Hypotheses on novel immune biomarkers generated indicative of patient prognosis and/or treatment response
Risks	• MMRF tissue bank samples may have limited viability due to length of sample storage and limited sample volume • Existing biopharma partners within PCC may not want to agree to new contract terms / costs • Immune profiling data may be too limited to be useful to additional biopharma partners outside of PCC • Access to clinical trial samples is limited by legal / IP concerns • High cost of sample collection and analysis, esp. if gaps identified in Workstream 1 are large • Challenges evolving protocol to reflect improvements in technology

5. TIMELINE


2019
2020
2021
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Activity
Current Initiatives
Program A: Create a comprehensive real-world data platform for multiple myeloma (CureCloud)
Program B: Launch DTP registry to build longitudinal patient database
Program C: Ensure success of platform trial in genomics (MyDRUG)
Program D: Transition AnswerFund to steady-state for current and future projects
Program E: IO Initiative
Program F: Prevention Initiative
Objective 1: Advance development and delivery of novel immune therapies and supporting infrastructure
Strategy A: Identify, validate, and standardize IO biomarkers, profiles, assays, and data to the community
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Finalize priority questions
Map existing assets and identify gaps
Assay Standardization
Define pilot design
Finalize contracts
Run pilot and align on analytical strategy
Program 2: Conduct data analysis of existing assets including samples from CoMMpass / DTP registry to improve understanding of the immune repertoire of MM and drive new discoveries
Align on approach and analysis
Design and launch Immune CureCloud
Continue to generate and store data in CureCloud
Conduct analyses
Program 3: Develop new immune atlas sample collection protocol to supplements immune profiling data and support longitudinal research
Finalize protocol for new sample collection
Implement CureCloud adjustments
Gain IRB approval for new sample
Initiate sample collection
Continue to collect samples