YALE VENTURES

STARTING A NEW COMPANY

Key Topics For Faculty Founders to Consider

Yale

Welcome Faculty Founders

Brief Overview for Early-Stage Innovators

For over 25+ years Yale faculty have started their entrepreneurial journey and founded companies based on their research and innovations.

While puzzling at first, the ***mechanics*** of starting a commercial venture are common amongst early-stage startups.

Yale Ventures aims to demystify the creation of commercial ventures and reduce complexity for faculty innovators by helping to define ***what problem*** they're trying to solve, ***what*** they want to build to address it, and ***how*** to attract investors.

How This Deck Is Organized

17 Important Topics To Consider

In the following slides, we address **17 of the most important** topics that every faculty founder will face at the start of their commercial venture.

There is no “one size fits all” set of rules that can be applied to every circumstance since every venture opportunity is unique: different people, technologies, markets, competitors, and investors.

Yet, patterns for success exist.

Yale Ventures can help you identify and address the common challenges early-stage entrepreneurs face and direct you and your co-founders to more specific resources that can help you take informed action and make smarter decisions. **Let’s dig in!**

INTELLECTUAL PROPERTY RIGHTS IMPORTANT REMINDER:

Public Disclosure of Your innovation may impact your intellectual property rights. Please reach out to Yale Ventures to learn more about what you should and should not say to protect your innovation.

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20 Key Topics

1. Validating the Technology

Sharing Your Idea Internally

Yale Ventures is staffed with a variety of experts to support faculty including:

IP and Licensing Professionals who can

- Discuss patent, copyright and trademark protections
- Develop an IP strategy tailored to your innovation
- Search Prior Art
- File for IP protection
- License your technology to a start up or third party

Innovation Training and Education Professionals who can

- Match the innovation team with resources tailored to their needs
- Make important connections within the Yale Innovation

[DISCUSS YOUR INNOVATION]

What is the best approach to protect the innovation? It's important to recognize that public disclosure may preclude you from patent protection.

Knowing what to share and when is key. Working with Yale Ventures to start the process of IP protection should be completed early.

2. Identifying the Market Need

Market Selection and Assessment

Some innovations are created with a specific market and customer in mind.

In this case, the next step is to understand that market, the competition, the sales cycle, product attributes and features, and to map out all stakeholders and understand how the customer buys.

In other cases, the innovation may be a technological advance in need of a market. A product may have more than one path, and it may have more than one market. In this instance, the founders will need to assess all market opportunities and narrow-in on one path to one market to prioritize for launch.

3. Deeper Tech Validation

Pressure-Test Your Idea Internally at a Venture Lab Workshop

Selecting the best path forward for your innovation should include a Venture Lab Workshop. A **Venture Lab Workshop** is a multi-step methodology that gathers Yale Entrepreneurs in Residence (EIRs) who are domain experts and the founding team to confidentially discuss, and stress test their innovation.

Panels of EIRs include entrepreneurial, industry, regulatory, financial and investment experience to evaluate the innovation and advise the faculty on the next best step for commercialization.

Venture Lab Workshops are designed to help faculty inventors pressure test the value of their innovation with a market-based lens and to brainstorm development options and a path forward for their technology.

4. Deeper Market Validation

Using Customer Discovery to Test and Refine Your Product

Talking to your future buyers is an important step in advancing your innovation to the market.

Learn more about how to engage future customers to inform development of your technology or innovation.

Yale Ventures is a member of the **NSF I-Corps Northeast regional hub**. I-Corps is a 4–6-week customer discovery curriculum that allows innovators to get to know their potential customers, learn about their pain points and pivot when necessary to new paths forward. Innovation Teams complete a minimum of 10 in depth interviews with relevant customers.

The National I-Corps program provides a higher intensity curriculum requiring 100 interviews and provides $50K in funding to do so.

5. Applying to Accelerators

The Yale Accelerators: Advancing your idea

Participating in our Accelerators has multiple benefits:

- You will work with Yale Ventures Associates to help you think through your business model and create a lean, impactful pitch deck
- You will learn how to pitch to judges, investors, and VCs to make the case for investment in your innovation.
- **You can win funding to advance your Innovation!**

BLAVATNIK FUND FOR INNOVATION

ROBERTS INNOVATION FUND

THE COLTON CENTER FOR AUTOIMMUNITY AT YALE

6. Creating The Company

Building a Company Takes Time and Perseverance

Given your other responsibilities, both personal and professional, how much time and effort are you prepared to give to the founding and growth of the company?

Depending on the technology and other co-founders, faculty founders may need to play an important role in the company's formative stages and beyond:

- **How involved do you want to be?** Need to be? Can be?
- **Will your Yale lab be asked to conduct related research?**
- **Can you serve as a scientific advisor to the company?**

7. Finding Co-Founders

Team Building and People Management

Finding the right co-founder is an important step. A co-founder starts and builds the company with you.

Equity is shared among co-founders, so it is important to have conversations about roles, responsibilities, and commitments.

Equity is split by agreement of co-founders and represented on a company's capitalization table.

Startups are very challenging, and having co-founders is an advantage.

- A co-founder helps you move faster.
- Brainstorming improves.
- Important tasks can be shared/delegated.
- Accountability improves. Moral support is crucial.
- Statistically, solo founders are far less likely to succeed.
- Co-founder matching is available through some platforms.

Choose team members enthusiastic about the innovation, believe in the core technology, and are deeply committed to the success of the venture to ease the inherent difficulties of early-stage company building.

- Who is the final decision maker?
- Don't shy away from titles and clear allocation of responsibilities.

8. Identifying the Lead Entrepreneur

Identifying a Leader for the Company's Early Days

While **creating** a new company on paper is easy, successfully **building and running** a new company requires a significant investment in time, effort, capital, and business expertise to run properly.

Whether founders intend to seek outside investment, use personal funds to bootstrap their venture, or seek government grants to support their work, the legal and financial obligations associated with running a corporate entity are always better served when the team can identify a lead entrepreneur.

Lead entrepreneurs can come from anywhere - whether it's a former graduate student or postdoc serving as the interim head of the business, a recruited executive from industry, or (on rare circumstances) the PI on a leave-of-absence.

If you are paired equally with your co-founder in terms of skills and interests and contribution to the invention, then determine who has the capacity to lead or wishes to prioritize running the newco over university obligations. This could be time-bound or stage dependent.

9. The Role of the Faculty Founder

Managing Your Responsibilities to both the Company and to Yale

Often, faculty are asked to take a leadership role in the company temporarily or permanently.

Assuming a leadership role often conflicts with university responsibilities, time commitments and **COI policy**.

Selecting a business operator who is best positioned to lead better positions your company for success.

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9. The Role of the Faculty Founder

Managing Your Responsibilities to both the Company and to Yale

Options for non-operating faculty founders:

- **Faculty as Advisors**
  this allows faculty to continue to influence the direction of their company and their product without the demands of operating the company.

- **Faculty Consultancy**
  this allows faculty to contribute their 'know how' to a domain. Consulting work must be consistent with Yale consulting policy for faculty.

- **Board Membership**
  Faculty may be allowed to serve on the Board of Directors of the company but must be approved by the Provost.

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10. Creating The Legal Entity

Establishing the Company and Governance

1. **Corporate Formation**

   New companies can be set up in five different structures: Partnership, Limited Liability Company (LLC), Sole Proprietorship,
   S Corporation or C Corporation. There are important differences. Hire an experienced attorney to advise you on this important step.

2. **Ownership Structure and Equity must be established**

3. **Corporate Governance Essentials**

   - Board composition
   - Operational Bylaws
   - Conflict of Interest Reporting to Yale

     Important
     must be within 30 days of incorporation

4. **IP Licensing**

   Once established, the IP must be licensed to your new company.

ACTION STEPS:

- *Identify outside counsel*
- *Discuss IP strategy with Yale Ventures*
- *Discuss IP strategy with Yale Ventures*

11. Structuring Company Ownership

The Concept of Equity

The two basic types of financing are **dilutive and non-dilutive capital**: dilutive capital results from selling shares of the company (equity) in exchange for funding, whereas non-dilutive capital does not require giving up equity in return for the capital (e.g. a grant)

Ownership in a company is represented by **shares**. Shares vary by type and function, for example common stock or preferred stock. A company's shareholder agreement establishes the rights and responsibilities of the founders and the board of directors. Equity in a startup context refers to the ownership shares distributed among founders, investors, and employees.

The range in initial equity for Founders is wide. The latest data on equity trends for founders can be found here:

VISIT: Solving the Equity Equation | Osage University Partners (oup.vc)

12. How Equity Vesting Works

Earning A Stake in the Company Over Time

Equity Vesting refers to the process by which founders, advisors or employees earn their equity stake over time, typically tied to continued employment or achievement of certain pre-determined milestones. It is common for a portion of equity to be granted up-front to Founders, with a portion vesting over time.

The common vesting schedule (i.e. timeline over which shares vest) is 4 years, with a one-year cliff (meaning you must be with the company at minimum for one year to receive any equity). Vesting schedules protect the company by ensuring that equity is earned over time, aligning long-term interests between the company and its stakeholders.

There are different tax implications to consider when issuing stock, so it is most advantageous for founders to agree on equity before a financing event occurs.

13. Financing The Company

Non-Dilutive Sources of Capital

Non-dilutive funding is capital that does not involve selling company shares, thus not diluting ownership. Examples include grants, awards, loans and/or debt financing that does not convert to equity. Perhaps the most desirable form of non-dilutive equity is revenues from sales.

Non-dilutive funding has many benefits, namely preventing dilution and allowing founders to retain full control and ownership while still accessing funds to advance their startup.

Dilutive Sources of Capital

Dilutive capital is money raised through the sale of equity (shares) in the company, which dilutes existing shareholders' ownership percentages. The most common sources of dilutive capital are venture capital and angel investments.

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13. Financing The Company

Non-Dilutive Sources of Capital

At Yale Ventures, we mainly refer to grants and awards when we say “non-dilutive funding”, as debt has many obligations and considerations. The Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program are two great sources of funding. **We encourage faculty founders to pursue SBIR/STTR funds before raising dilutive capital.**

Small Business Innovation Research (SBIR)

SBIR is a U.S. government program that provides funding to small businesses to engage in research and development with the potential for commercialization.

Funded by multiple federal agencies, the program aims to stimulate technological innovation and increase private sector commercialization of innovations derived from federal R&D.

Small Business Technology Transfer (STTR)

STTR focuses on cooperative R&D between small businesses and non-profit research institutions fostering a transfer of technology and knowledge between the two entities with the aim of translating high-tech innovation and research discoveries into commercial products and services.

SBIR grants have tax implications for founders. Contact Yale Ventures for clarity on the latest changes to tax law impacting this form of non-dilutive funding

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14. Financing The Company

Dilutive Sources of Capital

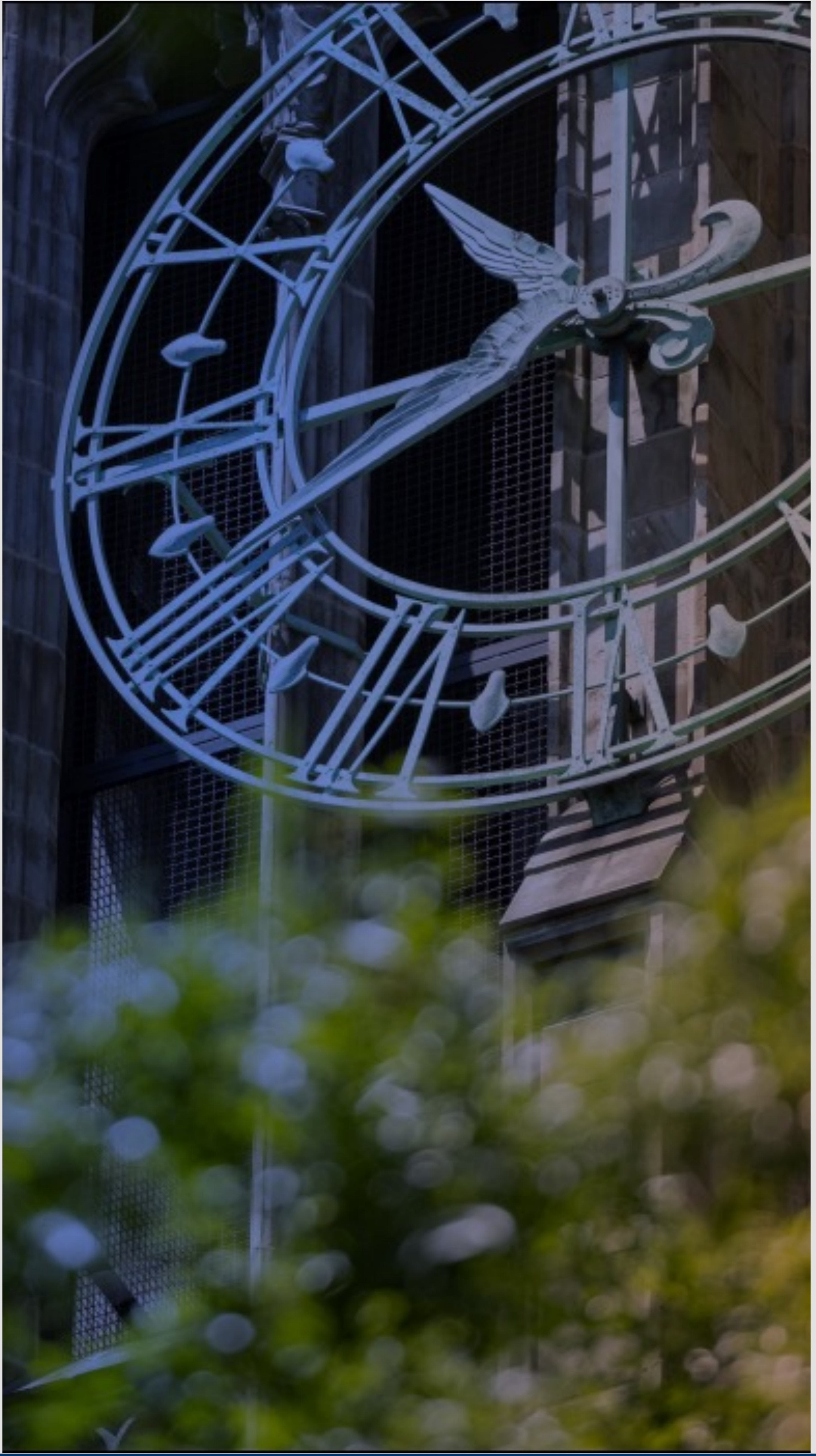
Typically, venture capital provides more money than non-dilutive capital

While dilutive capital can fuel rapid growth and bring valuable expertise when partnered with the right investors, it reduces founder ownership and control and comes with responsibilities.

Founders need to weigh the long-term implications and trade-offs of equity financing and strategically plan equity dilution to avoid losing control or selling too much value in their company early on.

The most used financial instruments in venture capital are:

- Direct Equity
- Simple Agreement for Future Equity (SAFEs)
- Convertible Notes
- Preferred Stock



15. The Staging of Capital by Investors

De-risking New Ventures is a Multi-step Process

Investors typically provide capital in stages based on achieving specific technological and business milestones to manage their risk. This can be achieved in different rounds of capital, or in tranches of capital within an existing round.

A successful venture-backed startup typically progresses through multiple rounds of funding, starting from seed funding to various Series rounds (A, B, C, D and beyond), each with different expectations and valuation implications.

Each funding stage is contingent on the startup reaching certain milestones and influenced by market conditions, impacting the company's valuation at each stage. Founders must understand the valuation dynamics and investor expectations at each stage to effectively negotiate terms and maintain strategic direction.

16. Keeping Track of Ownership

Understanding the Cap Table as the Company Progresses

A capitalization table (cap table) shows the equity ownership for a startup. The breakdown of equity ownership by shareholder, including types of shares and options will be shown in the cap table.

Understanding your cap table is crucial to understanding who has ownership and control of the startup and how that changes over time. Strategically managing your cap table is always a key responsibility for founders, but especially during funding rounds. Use your cap table to determine the economic effects of new investments (i.e., dilution) and to negotiate with new investors.

The cap table must be meticulously updated following any transaction affecting the equity structure, such as issuing new shares to investors or employees, transfers, or exits. Software and service providers can help with this.

17. The Scientific Advisory Board

Being an SAB Member

Scientific Advisory Boards are integral to startups.

They provide strategic advice, lend credibility, and offer expert opinions on scientific research and development efforts.

SAB Members may receive compensation in the form of honoraria, consulting fees, or equity in the company, depending on the agreement.

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17. The Scientific Advisory Board

Being an SAB Member

SAB GUIDANCE

Hire an attorney to negotiate your SAB Agreement!

Understand the Commitment

Recognize the time and effort required to serve effectively on an SAB, including preparing for meetings, maintaining confidentiality, and staying updated on the company's research and development activities.

Clarify Roles and Expectations

Ensure a clear understanding of your role and what the company expects from you as an SAB member.

Stay Informed

Keep abreast of the latest developments in your field and related disciplines

Focus on Strategic Advice

Limit deep dives into operational details.

Prepare for Meetings

Dedicate time to come prepared with insights and questions.

Be a Mentor

Offer guidance and mentorship to the scientific team to foster their professional growth.

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17. The Scientific Advisory Board

Being an SAB Chair

Additional Responsibilities include:

1. Setting the Agenda
2. Facilitating Meetings
3. Liaising with Company Management
4. Leading Strategic Initiatives
5. Mentoring
6. Conflict Resolution
7. Succession Planning

Recommendations:

- Cultivate a Collaborative Environment
- Be an Effective Communicator
- Stay Informed and Impartial
- Lead by Example
- Embrace Strategic Thinking

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THANK YOU!

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[Faculty Innovation Library]

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Questions?

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