



Communications Strategy Roadmap

Executive Summary

The goal of the GP-write Public Communications Working Group is to get the world as excited about GP-write as they were about getting a human on the moon. The work of this committee will be guided by the principles of transparency, scientific accuracy, clarity, and simplicity. Activities of the working group will include maintaining an online presence for GP-write, regular engagement with the scientific and mainstream news media, and forming partnerships with universities and other institutions to promote and further the field of genome synthesis. Members of the working group will be responsible for producing content about GP-write, responding to media inquiries, and building relationships with supportive constituencies.

I. Communications Working Group	3
i. Purpose	3
ii. Overall Communications Goals	3
iii. Current Membership and Roles	3
II. Communications Framework	4
i. Guiding principles	4
ii. Key Messaging	4
iii. Target audiences	4
iv. Processes and Procedures	4
III. Methodology	5
i. Identification of the target audiences	5
ii. Determination of the message to be conveyed	5
iii. Identification of the communication channels and timing	5
iv. Detailed budgeting	6
v. Monitoring and evaluation	6
IV. Core Activities	6
i. Messaging and visual branding	6

ii. Coordinate media engagement	6
iii. Produce core educational materials for media and lay audiences	7
iv. Outreach to supportive constituencies	7
v. Identification of possible external partnerships	7
vi. Development and updating of core resources	7
vii. Cultivation of additional volunteer human resources	7
V. Program Activities	8
i. Website updates and enhancements	8
ii. Social media	8
iii. Media engagement	8
Timely, newsworthy events	8
Ongoing media engagement	8
iv. Outreach to other GP-write working groups	9
v. Crisis management	9
vi. Collaborations with External Communications Professionals	9
vii. Collaborations with Disease Foundations or Patient Organizations	9
VI. GP-write Public Communications To Date	10
i. Foundational work	10
ii. Scientific Meetings	10
iii. Media	10
iv. Relationships	10
v. Issues and Challenges	11
VII. Communications Roadmap	12

I. Communications Working Group

i. Purpose

The public communications working group is one of nine working groups in the GP-write organization. It is responsible for producing public-facing content and handling press matters for GP-write. The group charter can be found [here](#).

ii. Overall Communications Goals

The overall goal of the communications team is *to get the world as excited about GP-write as they were about getting a human on the moon*. We aim for:

- Highly visible profile of GP-write and the field of genome synthesis and awareness of the global humanitarian problems we are positioned to solve
- International engagement with GP-write among the various stakeholders across multiple communication channels
- Public participation in the conversation about the ethics of genome synthesis, and address public and media skepticism of the organization and its goals
- Credibility, transparency, and accuracy of the Center of Excellence for Engineering Biology as the parent organization of GP-write

The communications roadmap is intended to describe the methodology, action steps, resources, and metrics that will be needed to accomplish this goal. The strategy and aims of the public communications working group will be closely aligned with the broader strategy of the overall GP-write project, as well as the Center of Excellence for Engineering Biology.

iii. Current Membership and Roles

Jeff Bessen - *Moderator* - Broad Institute
Nancy J Kelley - *Executive Committee Representative* - Nancy J Kelley + Associates
Carol Miller - *Strategic Communications Advisor* - Five Heads Strategic Communication
Lynn Blenkhorn - *Media Liaison* - Feinstein Kean Healthcare
Amy Schwartz - Center of Excellence for Engineering Biology
Ariel Conn - Future of Life Institute
Kevin Davies - Mary Ann Liebert, Inc.
Daniel Grushkin - Biodesign Challenge
Liam Holt - New York University
Rodrigo Martinez - Veritas Genetics
Simone Ross - Techonomy (formerly)
Richard Sever - Cold Spring Harbor Press
Marcia Kean - Feinstein Kean Healthcare (formerly) - *Emeritus*
James Pricer - JEPricer Studio - *Emeritus*

II. Communications Framework

i. Guiding principles

The public communications working group will operate by the following principles:

- Maximum transparency about GP-write activities, consistent with the rules of scientific peer-reviewed publishing
- Scientific accuracy
- Clarity and simplicity across multiple target audiences
- Acknowledging the values of our audience

ii. Key Messaging

Typically, besides the dissemination of the news or advances stemming from GP-write, every communication should convey the following core messages:

- GP-write is a grand challenge to understand the fundamental building blocks of life by building genomes from its constituent parts, with the goal of producing discoveries and inventions that benefit human health and wellbeing.
- GP-write is committed to total transparency and responsibility, and welcomes a sustained, meaningful dialog with the public about the ethics of genome synthesis.
- GP-write is an open, international consortium including academic scientists, federal funding agencies, and industry partners.

iii. Target audiences

As detailed in the charter, the public communications working group plans to first prioritize the scientifically-engaged public (e.g. Scientific American and Futurism audiences) and the science news media as its primary audiences. Improved visibility, stemming from successful engagement of these two key groups, will catalyze broader efforts to reach other key constituencies, including the general public, the broader scientific community, potential funders, commercial partners, etc.

iv. Processes and Procedures

The working group chair will coordinate all activities of the working group and report to Nancy J Kelley. Press relations will be handled by Carol Miller, strategic communications advisor, in conjunction with Lynn Blenkhorn, media liaison, and report to Nancy J Kelley.

The process for approving public-facing content is as follows: communications committee review (including review by media liaison and strategic communications advisor); education committee review; scientific executive committee review (when appropriate, e.g. for content

addressing technical matters); ELSI committee review (when appropriate, e.g. for content addressing ethical or legal matters); and final approval by the executive leadership committee. Depending on the circumstances and deadline, the content may also be widely circulated among working group members for review.

III. Methodology

The Communication Strategy Roadmap will employ the following methodology to guide its activities:

1. Identification of the target audiences
2. Determination of the message to be conveyed
3. Identification of the communication channels and timing
4. Detailed budgeting
5. Monitoring and evaluation

i. Identification of the target audiences

The choice of audience is the first factor in executing the communication strategy. Possible audiences could include the scientifically-literate public, the general public, the scientific community, funders, commercial interests, etc.

ii. Determination of the message to be conveyed

The working group will produce clear, concise, and scientifically accurate content to support the GP-write project. Language must be geared towards the target audience. Messaging should be simple, robust, and flexible, in order to remain effective given the great potential for projects to change as GP-write grows and develops.

iii. Identification of the communication channels and timing

The main methods for information dissemination currently include press releases, interviews with the science news media, blog posts, emails to supporters, and limited social media engagement. We plan to continue these activities in addition to developing capabilities to produce graphics, short educational videos, longer articles, social media content across multiple popular platforms, newsletters circulated to all stakeholders, and any additional channels that the committee deems effective. *When to communicate* should be carefully considered to maximize the effectiveness and impact of the message and to coordinate with the activities of the other GP-write working groups and scientists.

iv. Detailed budgeting

As fundraising is ongoing, future communications efforts will need to operate under the budgetary constraints in place at that time. Budget proposals should be incorporated into grants or other development efforts in order to earmark funds for public communications.

v. Monitoring and evaluation

Every communications effort should include mechanisms for receiving feedback before and after engagement. Possible metrics for evaluating success could include presence in the news media or on social media, online views for articles, formal or informal focus groups involve stakeholders. Social media metrics will be measured monthly. An event, new project launch, other key announcement, or PR crisis may require special reporting periods. Media placements are updated as they occur on the GP-write website media tab, and measured as needed.

IV. Core Activities

i. Messaging and visual branding

The working group will be responsible for creating the messaging for all communications efforts, and advising on the messaging of its sister working groups. The working group will also establish a style guide to unify the content and visual appearance of all GP-write communications.

ii. Coordinate media engagement

The communications working group, and especially the media liaison and strategic communications advisor, should be notified of any inquiries from or outreach to the news media regarding GP-write. Coordination will serve the purpose of distributing talking points and messaging, facilitating connections between the media and other appropriate parties within or outside of GP-write, and identification of emerging themes or upcoming potentially negative trends in GP-write news coverage. Media interactions, including relationships with reporters and news organizations, should be tracked over time, and resulting stories should be posted to the GP-write website.

iii. Produce core educational materials for media and lay audiences

In collaboration with the Education working group, the group will produce content -- such as infographics, short prose, or educational videos -- to explain key concepts in synthetic biology and genome synthesis. The ultimate goal of producing these materials is to equip stakeholders with the base of knowledge to be able to engage with the advances coming from GP-write.

iv. Outreach to supportive constituencies

The committee will cultivate relationships with key stakeholders, such as the scientifically literate public, the science news media, and the synthetic biology community. Supportive constituencies and early adopters will be important for raising the profile of GP-write and building grassroots enthusiasm among the public. Activities could include social media engagement, a quarterly newsletter of GP-write or synthetic biology news, creation of a 'Friends of GP-write' society to provide an outlet for supporters to donate or join in the conversation, etc.

v. Identification of possible external partnerships

Collaborations with partners in the scientific community, as well as in local communities, have the potential to amplify the outreach efforts of this committee. Partners could include synthetic biology-focused websites, commercial partners, community science organizations, science museums, etc. The working group may also establish partnered special events, such as seminars or live-streams, to draw in the partner's constituencies.

vi. Development and updating of core resources

Key resources should be expanded and updated as the project develops. Resources might include media lists, upcoming events, publications affiliated with or relevant to GP-write and its objectives, articles about the project, and educational graphics and slides. Access to these resources should be widely publicized among working groups, and resources from the other working groups should be periodically solicited.

vii. Cultivation of additional volunteer human resources

A key activity for the communications leaders is appropriate resourcing of the public outreach efforts. Possible sources of volunteers could include journalism or science journalism students, or graduate science publications such as [Science in the News](#).

V. Program Activities

i. Website updates and enhancements

The GP-write web presence should serve as the top source for information about genome synthesis and synthetic biology. It should be updated continually with internal and external content. Additionally, an easily navigable 'beginner's guide to GP-write' should be featured on the website.

ii. Social media

GP-write will expand and enhance its social media presence with the goal of fostering engagement with and conversations about the project. The group should produce and disseminate social media-specific content, and respond to feedback and inquiries on multiple social media channels, including Facebook, Twitter, Reddit, and Instagram.

Currently, Jeff Bessen is directing the social media accounts (Facebook, Twitter, LinkedIn) for GP-write. The webmaster, Bhakti Kulmala, oversees long-term maintenance of the accounts. Proposed content must first be approved by Nancy J Kelley.

iii. Media engagement

a. Timely, newsworthy events

The media liaison and strategic communications advisor will be responsible for producing press materials and coordinating media relations for highly timely events such as GP-write meetings or scientific publications. Activities may include producing press briefings, press releases, media fact sheets, graphic resources, etc.

b. Ongoing media engagement

The media liaison and strategic communications advisor will maintain strategic relationships with the press, respond to media inquiries in coordination with Nancy J Kelley, and coordinate engagement for features, editorials, etc. Activities will include producing and disseminating talking points for interview subjects.

Media developments and interview requests will be monitored by and subsequently shared between the working group chair, media liaison, strategic communications advisor, and Nancy J Kelley, representing the executive leadership. The media liaison and strategic communications advisor will be responsible for follow-up on any further media engagement. The developments will be disseminated to interested parties by the working group chair, and posted to the GP-write website in a timely fashion.

iv. Outreach to other GP-write working groups

The working group moderator will be responsible for maintaining quarterly contact with the other working group moderators and soliciting newsworthy updates to be incorporated into publicity materials such as blog or social media posts, feature article subjects, etc.

v. Crisis management

The working group will monitor the press and respond proactively to any anticipated controversies regarding GP-write or closely related groups. The group will also produce

materials and protocols so that GP-write is prepared to respond to unexpected instances of negative media attention.

In a crisis scenario, core responsibilities will be shared between the working group chair, media liaison, strategic communications advisor, and Nancy J Kelley, representing the executive leadership. The media liaison and strategic communications advisor will be responsible for follow-up on any further media engagement. Appropriate parties will be invited into the crisis management team as necessary.

vi. Collaborations with External Communications Professionals

The working group will cultivate relationships with communications professionals at partner organizations, such as the communications offices at the institutions of key GP-write scientists. By sharing and promoting each other's content and signal-boosting, such collaborations can spread the workload and increase the impact of mutually beneficial communications efforts. Aside from academic partners, it may be appropriate to coordinate with commercial or funding partners.

vii. Collaborations with Disease Foundations or Patient Organizations

Foundations representing patients that could benefit from the advances of GP-write could be powerful allies in promoting the project. These groups could provide funding, content, volunteers, help with increasing publicity, improving the public image of GP-write, etc.

VI. GP-write Public Communications To Date

i. Foundational work

Feinstein Kean Health (FKH) created the initial materials for the Center for Excellence, including fact sheets and descriptive content, in preparation for the launch of the website in 2015.

ii. Scientific Meetings

FKH created the executive summary of the 2015 meeting (April 17, 2015) entitled "Engineering Biology for Science & Industry: Accelerating Progress", designed to plan "how to organize the community in order to engage the current and next administrations as well as garner financial resources for future growth and development." At that meeting, Marcia Kean served on a panel on Content, Community and Public Engagement.

On October 31, 2015, FKH helped with the scientific meeting at the Langone Center on "HGP2: The Human Genome Synthesis Project," assisting with the preparation of materials, and conducted video interviews of the key scientists for use at the website.

For the organizing meeting entitled "HGP: Testing Large Genomes in Cells" on May 10, 2016, FKH handled the creation of the press release about the *Science* article, as well as press outreach. As part of that work, we coordinated with AAAS press office, and chaired a Communications Committee made up of the communication teams of NYU, Harvard, Autodesk, and the Wyss. Lynn Blenkhorn was responsible for the media outreach.

For the "GP-write: A Grand Challenge Using DNA Synthesis, Gene Editing and Other Technologies to Understand, Engineer and Test Living Systems" meeting on May 9-10, 2017 at the New York Genome Center, FKH prepared the press materials, and planned on-site the media briefing that was attended by leading scientific and daily press. FKH also handled social media during the meeting, and coordinated all press inquiries.

iii. Media

FKH previously handled all media inquiries coming into the firm, coordinated interviews with Nancy J Kelley, and maintained the press lists.

iv. Relationships

In addition to coordinating with the media departments of the organizers (Harvard, NYU), Macia Kean also coordinated with Chris Williams of Columbia University on engineering biology projects underway by their scientists.

v. Issues and Challenges

Issues and challenges encountered to date have included:

At the outset, the GP-write concept evolved, changed its name, and was subject to controversy and disagreements among the scientists. This made communications difficult in the early days until nomenclature and language were locked down.

Because the organizing scientists are such busy individuals, it was difficult to get review/ approval in a timely way. Organizers were often up against deadlines that became unrealistic.

At the time of the *Science* editorial, organizers confronted an interesting dilemma: on the one hand, they sought to be totally transparent and 'open'; but, with the mandatory embargo imposed by *Science*, they were not able to release it or speak about it publicly at the time of the meeting. That timing and protocol challenge led to a loss of credibility, and to accusations of 'hiding something'. Also, some of the scientists who were opposed to the project elected to criticize it publicly in misleading ways, leading to further media challenges. Moving forward, such issues may not arise, but there is a 'morgue' full of stories that imply or state directly that GP-write conducted meetings in secret.

To date, the scientific 'discovery' news has primarily emerged from institutions and individual scientists, rather from GP-write itself. GP-write does not originate or control such news, so such progress cannot be directly claimed. News for the Center itself has been limited.

Lack of funding to date for communications efforts has made this committee reliant on volunteer or pro bono work; FKH has calculated that the services it provided are valued at tens of thousands of dollars.

VII. Communications Roadmap

Task	Responsible Party	Budget (annual)	Milestones (Effective Date)	Metrics
Maintain GP-write online and social media presence	Web coordinator, reporting to working group chair and Nancy J Kelley	\$0	<ul style="list-style-type: none"> Post to Twitter, Facebook and LinkedIn 15 times per month (ongoing) Post 5 blog entries/yr to website (2018) Produce quarterly newsletter for subscribers (2019) 	<ul style="list-style-type: none"> Track social media engagement Quarterly review of effectiveness, dissemination, and quality
Continual media engagement	Media liaison, strategic communications advisor	\$125,000	<ul style="list-style-type: none"> Proactive engagement with media ahead of scientific meetings (ongoing) Generate 2 media features/yr covering GP-write or affiliated scientists (2018) Produce regular press releases about notable project advances and real-world impact (2019) 	<ul style="list-style-type: none"> Track media engagement and outcomes Quarterly review of effectiveness, visibility, and strategic outlook
Continual institutional engagement	Distributed among working group members	\$50,000	<ul style="list-style-type: none"> Maintain network of communications professional at affiliated institutions (e.g. university press offices, disease foundations) (current) Convene 1-3 events/yr with institutional partner (e.g. museum, university) geared towards general public (2020) 	<ul style="list-style-type: none"> Joint assessments with partner institutions (semi-annual) Quarterly review of effectiveness, visibility, and strategic outlook