A Brief Note on Purpose
The law is a challenging and complex beast that is worth conquering, if only for that one of its subsects, that being intellectual property law, has been called the "oil of the 21st century".\(^1\)

That aside, the modern scientific realm depends on the law for its existence. The law marks out the metes and bounds of what society thinks permissible insofar as research areas, but also the limits on the use of that discovery through the intellectual property system.\(^2\) The law may also choose to grant proprietary rights over inventions to the inventor (or their employer), and thus has provided the basis for one part of the current scientific funding scheme underpinning research in Australia, particularly given the prevalence of 'commercialisation offices' in major research institutions.\(^3\)

However, the voices of scientists are often marginalised in the process of creating these public policies, which have such impact on their work. Policy submissions to government are one way to remedy this deficiency. There is clear precedent in Australia for submissions to be open to government on the proposal of a new law, or on review of an old law – but a minute proportion of submissions comes from actual scientists themselves.\(^4\) The UNSW iGEM team aims to aid Australian researchers by providing a guide to writing such a submission, and below lays out one way of structuring a submission. This guide is supplemented by an example policy submission drafted by one of the team members. Finally, as is obvious, there are many ways of structuring a submission, with no one method being right or wrong.

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Summary Flowchart

IDENTIFY

What problem do you have?
Is it something government or regulation might be able to do something about?

REFINE

Refine your topic area and problem - what exactly are you going to talk about?
Pick an audience and opportunity

RESEARCH

What current piece of legislation, regulation or policy does your problem come under?
Where are you going to find it?

WRITE

Write, write and write it again!
Choose a structure

OUTREACH

Has your government identified your issue as a problem they want to address?
Are organisations within your field currently talking to government about this issue? Do they have the same experience as you?
Do your colleagues also see this as an issue? What are they concerned about?

CONSULT

Email organisations who work in the same field as you do, and those which

SUBMIT

Send to Local, State and Federal MPs
Send it to the Office of the Chief Scientist
Send it to specific policy submission opportunities in Parliament
Identify the Problem

With which current scientific reality do I have a problem?

This is the very first question to consider when you start thinking about writing a policy submission – what problem do you have? It doesn’t need to have a complicated answer, all it needs to do is define the scope of the problem. One example might be; ‘current patenting arrangements are too complex for scientists to easily understand’. You’ll probably have already thought about this if you’ve made your way to this guide!

TIP: make sure that the problem has a broader application than just your specific situation – lots of people are affected by laws, and something really bad for you might be good for a bunch of others.

Because the problem will define the preliminary scope of your submission, it is essential to do this early so that you cut down on the research work needed. Too often, it is easy to wander away from the heart of the real problem that you have, and you may end up doing unnecessary work. In the above example, this might be focusing on how copyright arrangements are too complex – whilst it is a valid issue, it completely misses the core of the problem you actually have.

TIP: If you are finding it hard to identify your problem, try writing a mind-map of all of the consequences of the as-yet undefined problem and work backwards

It is also important to consider whether the issue you have intersects with the spheres of government in any way. If it does not, it is highly unlikely that it will be a problem which could be helped by writing a policy submission. Common pitfalls include making the problem too much about factors unique to your personal situation, and having the problem fall outside of matters which the government conceivably has influence over.

TIP: Use your experience as a springboard to help you work out what your problem is – but the problem you end up with is usually going to need to be more general than just your experience!

This step is iterative, not static. Once you have your answer to the question, write it down, and reflect on its formulation. Does it address the problem you have? Is it something which could be addressed by the government? Is the scope of your problem appropriate?
Research the Current Situation
Research skills are a scientist’s bread and butter, and every researcher is familiar with the resources relevant to their research. Below is an introduction to some of the major law and policy resources, and a research methodology.

ONE: Pick Out Key Terms
Choose broad key terms from your identified problem to guide your research. With the example problem above, ‘current patenting arrangements are too complex for scientists to easily understand’, the key term I would choose might be ‘patenting arrangements’. Boolean operators may also be useful at this point.

TWO: Research the Law
There are several different pieces of law and policy which may have implications relevant to your problem. Not only will finding these allow you to fully and accurately explain the current situation in your submission, but they will help you to propose realistic solutions.

The first place to look is current legislation – the Acts and Regulations of Parliament for your jurisdiction. Taking Sydney as an example, you would need to look at current State and Federal legislation (New South Wales and Australia). You may already have identified the relevant laws, but if not, https://www.legislation.nsw.gov.au/#/search (for NSW State legislation) and https://www.legislation.gov.au/AdvancedSearch (for Federal legislation) are government websites with all the Acts and Regulations in one place. You may need to select particular parameters; for example, Acts which are ‘in force’. Appendix 1 has an example of the parameters you might choose when finding Federal Acts and Regulations.

The second place is statements of government policy. Here, you might look at Papers and Reports tabled in Parliament. In Australia, these can be found on the Hansard database within the ‘Tabled Papers’ section, with reports often being the ‘Government Response to ...’ issues raised in Parliament. The actual reports to which the Government is responding can also be useful, as well as the second reading speech of relevant Acts – which in Australia can also be found on the Hansard database with the matching Act and Explanatory Memorandum.

Thirdly, international declarations and treaties may have an impact on the boundaries of potential reform. This is a much more complicated area of the law! However, some of the more important treaties may be useful to look at; these include the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which is a widely enforced international treaty. There are often country-specific treaties as well, such as the Australia United States Free Trade Agreement (AUSFTA) between the eponymous countries.

All of this research can, of course, be supplemented by theoretical papers and previous decisions of the courts. These can be found through databases like WORLDLII, GoogleScholar and HeinOnline. Obviously, some decisions are more important than others, and given the narrow focus of these writings, they will only be relevant in very specific areas.
THREE: Research the Current Lobbyists

The organisations who are currently talking to government about your particular issue (or related issues) can be one of the most helpful resources out there. Not only can they provide you with information on your problem and current government strategies, but they could also be writing submissions to government to which you can contribute.

You will likely already be familiar with these organisations – often they are some of the largest professional groups within your particular field. In Australia, for example, that might by SynBio Australia for synthetic biology. They can also be identified through your research process, as often they have written submissions tabled in Parliament previously. You could also look at the list of contributors to influential past submissions and reports in your area of interest.
Outreach

The government often has inquiries and submissions open to which anyone can submit their opinions. Searching for open inquiries on Google (or equivalent search engine) is usually the easiest way to find these. In Australia, Senate and House inquiries will be the first port of call for research, but this will vary by jurisdiction. The terms for these inquiries are set by Parliament, and will usually be easily identifiable by the public. One example is the Australian Federal Parliament’s inquiry into the ‘Obesity Epidemic in Australia’, with its scope of reference including:

a. “The prevalence of overweight and obesity among children in Australia and changes in these rates over time;
b. The causes of the rise in overweight and obesity in Australia;
c. The short and long-term harm to health associated with obesity, particularly in children in Australia;
d. The short and long-term economic burden of obesity, particularly related to obesity in children in Australia;
e. The effectiveness of existing policies and programs introduced by Australian governments to improve diets and prevent childhood obesity;
f. Evidence-based measures and interventions to prevent and reverse childhood obesity, including experiences from overseas jurisdictions;
g. The role of the food industry in contributing to poor diets and childhood obesity in Australia; and
h. any other related matters.”

At this point, it is also valuable to get input from your colleagues. Do they see your identified problem as an issue? Why – or why not? This is particularly important if your problem doesn’t fall directly into one of the inquiries, or into the ‘related matters’ category.

NOTE: the absence of a defined government inquiry does not prevent you from writing a submission, and submitting it to the relevant member of Parliament. Although you are more likely to get governmental action within the frame of an inquiry, its absence doesn’t preclude action.

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Refine – Write - Consult

The next three ‘steps’ of the process are closely interwoven and iterative, and thus will be addressed together. They are also familiar to publishing scientists and academics, and thus will only be discussed briefly, as they centre around the actual writing and editing process.

Refine

Your initial research began with an identified problem, but in light of your research, this may now be too broad to be clearly and concisely addressed. As a result, you may need to refine the question, by narrowing the scope to one facet of the identified issue. This should be made easier by your new knowledge, as it will give you a better grasp of what exactly you would like to focus on.

TIP: Think of it like a funnel – from your broader problem to a more specific issue.

Remember to adjust your question for your audience; whether it is a science-specific government body, your local Minister, or the jurisdictional Minister for Science will have a large impact on the tone and level of complexity of your submission’s thesis. Now is also probably a good time to decide which of these audiences you wish to write to, as open-submissions processes or inquires may have particular requirements.

Write

The writing process is not normally one of a single draft; multiple edits are needed. A clear, concise style will serve you best, with clearly defined terms introduced early on.

You will also need to elect a structure for your submission at this point. There are many possible structures, but your ultimate decision will likely come down to three main factors; the audience to whom you are writing, the depth of your arguments, and the amount of content you wish to explain.

A shorter, more informal piece may take the shape of a letter which clearly outlines a particular problem and solution. A mid-length piece (up to about 2000 words) may take the form of an essay, with an introduction to the current situation followed by your problem and three potential solutions. It is good practice for one of these solutions to be maintaining the status quo. A longer piece may be organised thematically, with opening sections addressing the current reality and problem, before the solutions are sectioned off.

Consult

The process of writing a submission may seem daunting, but you are not alone. Remember to seek out the advice and opinions of others, particularly as the government may be more interested in arguments and issues that span more than just one highly-specialised field.

Ways to do this include:

1. Contact organisations and public groups within your field, and ask if they have encountered the same problem you have identified – and what their opinion is.
   a. Example: SynBio Australia for synthetic biology issues
2. Speak with colleagues across different areas
   a. Ask them to read your draft submission and make comments. Do they agree with your arguments? Did you sufficiently address relevant counterarguments?
   b. Example: colleagues working in the same lab or same institution as you
Submit

Congratulations! Your opinions are refined and well researched, the paper you have written is clear and concise, and you are ready to send it off for consideration. After submission, you may even find this the natural ending point with regards to further writing further.

However; there is first the issue of actually submitting the paper. There are several potential avenues to pursue, depending on whether you were writing to address a specific inquiry of a particular governmental (or government-associated) body.

The first avenue would be submission to the particular inquiry, if you are writing for one. See above [page 6] for more details on finding such inquiries.

The second avenue would be submission to your government representatives. In Australia, you will have local, State and Federal representatives – in my personal opinion, given the limited remit of local government in scientific affairs, I would address letters to your State and Federal Ministers. Not only could you send it to your particular seat’s representative, but also to the Minister for the relevant portfolio. For the ‘human body parts’ question above, in the state of New South Wales, that would be Minister for Health and Medical Research in the State Government,\(^6\) and the Minister in charge of the Jobs and Innovation portfolio federally.\(^7\)

The third avenue would be submission to particular science-based government bodies in your jurisdiction. These are not uniform, but in the state of New South Wales and Commonwealth federal jurisdiction, there is an Office of the Chief Scientist and Engineer who also receives policy submissions. Depending on the nature of the submission and the jurisdiction, there may also be recourse to an Ombudsman.

You may receive a direct response from the Ministers responsible (as required in some Australian jurisdictions), or may have your critiques and suggestions addressed in the body of a paper written by the inquiring body. Further steps of course may be taken; but they are beyond the scope of this guide.

Thanks

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\(^7\) Senator Michaelia Cash is the Minister for the Jobs and Innovation portfolio, with Senator Zed Seselja as Assistant Minister for Science, Jobs and Innovation circa September 2018.
Figure 1: Example Search Parameters within the Federal Register of Legislation (Australia) search tool. These will limit the types of resources recovered from the search to those currently relevant for people living in within the States of Australia, Australian Capital Territory and Northern Territory.