Interview schedule template: 3D Bioprinting version 1.3

1) **Interviewee and team overview**

* Can you tell me a bit about your professional background?

E.g. Where did you train as a researcher and in what discipline?

* Roughly how long have you been working on 3D Bioprinting (hereafter 3DP)?
* Approximately how many people work in your laboratory (on your research) and what sorts of backgrounds and training or skill sets do they have? (e.g. molecular biology, materials science, clinical expertise)
* Do you find that doing 3DP research has required people in the team to develop new skills?

2) **Overview of the field**

* Are some diseases, conditions or damaged tissues more suitable for 3DP than others?
  + If so, which ones and why?
  + Which diseases/conditions, if any, should be priority targets? Why?
* Are there, in your experience, areas that are of academic interest but that are of limited interest to the commercial sector?
* Who are the leaders in the field?
* How do you see the UK’s position in relation to the wider global work on 3DP?
* Do you see the UK as a leader in any particular aspect of 3DP research or alternatively is the UK particularly weak in any area of 3DP research?

3) **Current scientific work**

* Is there a particular project or clinical application that you are currently working on?
* What are the key techniques (e.g. inkjet or laser-assisted bioprinting) and materials (bio-inks, cells, scaffolds or bio-compatible polymers) that you use (NB we do not need brand names or proprietary details of unpublished work, just general details)?
* What are the main reasons for using this approach?
  + E.g. Time/ Expense / Available skill set in lab group / specific material properties / ethical or legal restrictions
* How do you procure these materials? (again we don’t need details of specific suppliers, but for example whether you buy commercial materials or make them in house, or obtain form from a biobank or similar source)
* Are there any approaches that you explicitly do not use and if so, why not?
* Are there other groups addressing similar scientific/clinical problems using different techniques?
* What aspects of your work are established and routine and what is still experimental?
* What are the possible clinical translations of this work?
* If no, what future uses do you envisage for your work?
* If yes, How do you envisage this being applied as a therapy?
  + - What are the obstacles to translation?
    - Have you started clinical trials?
    - If so are there, in your experience, any special challenges of doing clinical trials of 3DP?
* Do you see 3DP as something that could one day become a routine clinical procedure?
* Do you use animal models in your everyday work? (Y/N)
  + - If so what sort of animal models do you mainly use?
    - Do you envisage a translational stage that will involve larger animals? (Y/N)
    - Have you had any difficulty getting a licence to do animal work?

4) **Network and resources**

* What, if any, types of organisations do you collaborate with (e.g. companies, hospitals)
* Do you provide services to any groups within your organisation or outside it?
* Do you outsource any tasks to other groups?
  + - If so could you explain which tasks and why you outsource them?
* Do you draw on any external resources to conduct your research e.g. do you buy in, or contract out to a third party any of the following tasks:
  + Bioinformatics?
  + Sequencing/Genotyping?
  + Obtaining cell or tissue samples?
  + Making bioinks/hydrogels?
  + Bioprinting machines?
  + Software / CAD tools for bioprinting?
* Do you have any interactions with patient organisations?
* If so, where are these based –e.g. mainly UK, EU, USA, elsewhere?
* Do you have, or have you had, any commercial funding?

5) **Regulation**

* Have there been any instances where regulations affect your research? For example where you have been prevented from doing something you wanted to do, or where you have had to do things a certain way to meet regulatory requirements?
* Do you think the existing regulatory frameworks work for bioprinting or are there things you would like to see changed?
* Have you had to licence any IP in order to do your research?
* Are there likely to be any IP claims resulting from your work?
  + If so, who will own this IP?
  + Is there the possibility of commercialising your work?
  + If yes, have you, or would you consider forming a spin-out company to commercialise your research?

6) **Future** **Perspective:**

How do you see the3D bioprinting field evolving over the next 10 years? What would be an important breakthrough for the field that you would hope to see?

Thank you for your time and your participation. You are free to withdraw your consent for us to the answers provided in this questionnaire at any point until 1st December 2019 at which point anonymised data will be prepared for submission to the UK Research Data Service.