

# Evaluation of BBSRC ‘genomics’ research

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# Appendix 1

## Review Panel membership

**Professor Peter Fryer FREng FIChemE FIFST (Chair)**  
Centre for Formulation Engineering, University of Birmingham

**Dr Steve Barnes**  
SESVanderHave

**Dr Elaine Bignell**  
Division of Investigative Science, Imperial College London

**Dr Barbara Blacklaws**  
Department of Veterinary Medicine, University of Cambridge

**Dr Glenn Bryan**  
Scottish Crop Research Institute

**Professor Dolores Cahill**  
Conway Institute of Biomedical and Biomolecular Science, University College Dublin

**Professor Brendan Davies**  
Centre for Plant Sciences, University of Leeds

**Dr Jens Freitag**  
Genius Büro Berlin

**Dr Martien Groenen**  
Animal Breeding and Genomics Centre, Wageningen University

**Dr David Ish-Horowicz FRS**  
Developmental Genetics Laboratory, London Research Institute

**Professor Penny Jeggo**  
Genome Centre, University of Sussex

**Dr Dawn Mazzatti**  
Cell and Molecular Biology & Genomics, Unilever R&D

**Dr Stephen Smerdon**  
Division of Molecular Structure, National Institute for Medical Research

**Dr Jason Snape**  
Brixham Environmental Laboratory, AstraZeneca

# Appendix 2

## Questionnaires

# Evaluation of the Investigating Gene Function (IGF) initiative

## Grantholder survey

Thank you for participating in the BBSRC evaluation of the IGF initiative. In parallel with this evaluation we are conducting an evaluation of genomics research funded through responsive mode, to gain information on the contribution that the IGF initiative made to the wider research community and whether initiatives are good models for disseminating other new technologies and approaches.

Please complete as many questions as possible and return to Carol Milner, preferably by email, by 7 September. An electronic version of this questionnaire will be sent to you in the next few days. If completing by hand, please feel free to continue your answers on a separate sheet.

### **YOUR DETAILS**

Name:

Institution:

Grant No:

Title:

### **Please note:**

The information you provide on the project's outputs and outcomes will be used to update your grant final report. All other responses will be made non-attributable

We would appreciate your written comments wherever possible

We are particularly interested to learn about the wider impacts of your research (both directly from this grant and in the context of your wider research programme)

## PRIOR AND FURTHER FUNDING

**1. At the time of your application for an IGF grant, had you previously received funding for genomics research?**

Yes	
No	

If Yes, please indicate how long you had been working in this area and provide details of the funding agency(s) who supported the research.

<5 years	5-10 years	>10 years	Funding Agency(s)

**2. All BBSRC grants that you have received since your IGF grant started are listed in the Annex. Please indicate which of these grants, if any, was awarded to take forward the research funded through the IGF grant.**

**3. Have you received further funding from any other funding agency to continue or develop the work supported by the IGF grant?**

Yes	
No	

If Yes, please provide details:

Funding agency	Value (£)	Duration (months)

## PERFORMANCE OF YOUR IGF GRANT

**4. How successful was your IGF project in meeting its original objectives?**  
(please mark one box)

<b>4</b> very successful	<b>3</b> successful	<b>2</b> partly successful	<b>1</b> not at all successful

**5. If your project was less successful in meeting its objectives than you anticipated, were the reasons for this related to:**

(Please mark all boxes that apply and provide brief comments if you wish)

Reason	✓
Staffing difficulties:	
I was unable to recruit someone with the necessary qualifications and experience	
Staff temporarily stopped work during the grant (e.g. illness, career break)	
Staff left during the grant, so I had to re-recruit	
Other – please specify	
Experimental, methodological or technical reasons	
Lack of resources (e.g. funding, equipment)	
Unrealistic objectives	
'High risk' hypothesis	
Forced to change research direction (e.g. by publication of new data by other investigators)	
Regulatory procedures or ethical issues	
Other - please specify	

Comments:
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## RESEARCH OUTPUTS AND OUTCOMES

It is increasingly important for BBSRC to demonstrate to government the wider impacts of research funding, and we recognise that it may take a considerable amount of time before the wider economic and social impacts of research are realised. We are therefore interested in finding out about the research outputs that have arisen since the final report for the IGF grant was submitted.

The research outputs that you submitted in the final report are shown below. Please check these and add all further outputs arising from the grant since the final report was submitted. Please ensure that you include only those outputs that resulted directly from the IGF grant.

### 6. Publications

Original research articles in refereed journals:

Other publications: e.g. review articles, book chapters and articles in popular magazines (but not conference talks or poster presentations):

### 7. How many of these publications had co-authors based overseas or in industry?

Publication type	Overseas	Industry
Original research articles		
General articles		

### 8. Database submissions: please tick as appropriate and provide further details for any submissions that are of particular interest or merit.

Database submission	✓	Details
Nucleic acid sequence		
Peptide sequence		
Molecular structure data		
Transcriptomics data		
Proteomics data		
Metabolomics data		
Other large data sets		

**9. Exploitation and commercialisation: any form of intellectual property rights that you have applied for** (please note: any information you provide will be treated as confidential and will not be released into the public domain without your approval).

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**10. Spin-out companies established: for each company please give the following details:**

Company name						
Company URL						
Date of incorporation						
Sector and area of activity						
Current status (please indicate)	Trading		Dormant		Ceased trading	
Number of full time staff employed currently						

**11. Tools and technologies: new products, processes, resources, tools or technologies. Please provide the following information for each output and give further details of any particularly noteworthy examples.**

Description	
Who are the users?	
For what purpose do they use it?	
How was it made accessible to others?	
Does it have the potential to be commercially exploitable?	
What impact has it had on researchers and on the community as a whole?	
Is it still accessible and relevant, or has it been superseded by new technologies?	

Further details:
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**12. Please give details of any resources that you used from any other IGF centre/grant, for example, materials, samples, staff expertise.**

Description	
IGF centre/grant	

**13. Trained staff.** One of the objectives of the IGF initiative was to create an enhanced output of trained postdocs and technicians underpinning functional genomics research. The following table gives details of staff reported in the final report (who were employed on the grant for longer than three months) - please check these entries and provide any missing information.

Name	Grade/ position	Period of appointment	Training received and/or qualifications gained on IGF grant	First destination after IGF grant*	
				UK	Overseas

\* Please enter category in appropriate column:

- |                                       |  |
|---------------------------------------|--|
| A – Remained in my lab                | F – Private sector, industry or commerce |
| B – Permanent academic elsewhere      | G – Government or other public sector    |
| C – Fixed-term academic elsewhere     | H – Other employment                     |
| D – Further training (excl. teaching) | I – Not employed/retired                 |
| E – Teaching or teacher training      |  |

**14. To what extent do you think the initiative was successful in achieving this objective?**

4 very successful	3 successful	2 partly successful	1 not at all successful

Comments:
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## YOUR NETWORK/CONSORTIUM

**15. As you were part of the consortium “[CONSORTIUM]”, please comment on any interactions that you have had with other consortium members, both during and after the grant.**

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**16. Were there any advantages to you in being part of a consortium? For example, did it allow you to achieve outcomes that would not have been possible through traditional initiative or responsive mode funding?**

Yes	
No	

If Yes, please provide details:

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**17. Please comment on the role of the steering committee for your consortium. For example, did you receive any feedback from it, was it helpful and did it affect the direction of your research in any way?**

Comments:
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## NETWORKING AND COLLABORATION

**18. Did you develop any new collaborations or networks as a result of this grant, apart from the consortium?**

	Name of collaborator	Subject area	Country	Sector
New or improved contacts				
New formal research collaboration (e.g. joint publication, joint funding application)				
Other (please specify)				

## WIDER BENEFITS TO THE PUBLIC GOOD

BBSRC recognises the benefits that research brings to society through the provision of knowledge and the training of staff.

**19. Please give details about the wider contribution that the research funded through the IGF grant has made to the public good, or is likely to make in the future.** Please distinguish between benefits that have been realised to date, and potential benefits that may arise in the future.

Wider benefit	Details
Human health	
Animal health and welfare	
Environment	
Sustainable agriculture	
Contribution to the formulation of government policy, or meeting government priorities	
Contribution to the reduction, refinement and replacement of animals in experiments	
Other – please specify:	

## OBJECTIVES AND SCOPE OF THE IGF INITIATIVE

The original objectives and scope of IGF were:

- a. to make available methods and resources whereby the connection between genes and important functions can be discovered using genomics, through providing access to e.g. microarrays, filter arrays and proteomics
- b. to support the creation of new mutant libraries and similar essential resources, specialised screening of new and existing libraries and distribution of mutant collections
- c. to increase focus and coordination in the community by supporting collaborative and systematic approaches to function search and gene identification within consortia based on model organisms or key organisms of commercial significance which are central to the BBSRC mission.

### 20. Do you think the initiative was successful in meeting these objectives?

(please mark one box for each and comment if you wish)

	4 very successful	3 successful	2 partly successful	1 not at all successful
a				
b				
c				

Comments:

### 21. Do you have any comments on the management of the IGF initiative by BBSRC?

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### 22. Please feel free to express your views on any other aspects of the IGF initiative.

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Thank you for completing the questionnaire.

# Evaluation of BBSRC 'genomics' research funded through responsive mode

## Grantholder survey

Thank you for participating in the BBSRC evaluation of genomics research funded through responsive mode. Please answer as many questions as possible and return to Dr Paul Reeves, preferably by e-mail, by **7<sup>th</sup> September**. An electronic version of this questionnaire will be sent to you in the next few days.

### YOUR DETAILS

**Name:**

**Institution:**

**Please note:**

- The information you provide on your project's outputs and outcomes will be used to update the grant final report. All other responses will be made **non-attributable**
- The objective of this evaluation is to assess BBSRC's portfolio of responsive mode genomics research **as a whole**. There is no intent to make judgments on the performance of individual grantholders
- To help reduce the time taken to complete the questionnaire we have used 'tick-box' questions where possible. However, we would still appreciate your written comments.
- We are particularly interested to learn about the wider impacts of your research (both directly from this grant and in the context of your wider research programme)

## **A: YOUR RESEARCH GRANT**

### **1. How successful was the project supported by this grant in meeting its objectives?**

*Please mark one box*

<b>4</b> very successful	<b>3</b> successful	<b>2</b> partly successful	<b>1</b> not at all successful

### **2. If your project was less successful in meeting its objectives than you anticipated, were the reasons for this related to:-**

*Please mark all boxes that apply and provide brief comments if you wish*

<b>Reason</b>	<b>✓</b>
<b>Staffing difficulties</b>	
I was unable to recruit someone with the necessary qualifications and experience	
Staff temporarily stopped work during the grant (e.g. illness, career break)	
Staff left during the grant, so I had to re-recruit	
Other – please specify	
<b>Experimental, methodological or technical reasons</b>	
<b>Lack of resources</b> (e.g. funding, equipment)	
<b>Unrealistic objectives</b>	
<b>‘High risk’ hypothesis</b>	
<b>Forced to change research direction</b> (e.g. by publication of new data by other investigators)	
<b>Regulatory procedures or ethical issues</b>	
<b>Other – please specify</b>	

Comments:

**3. Did the project have any in-kind support or co-funding?**

*Please mark all boxes that apply and give brief details*

in-kind support / co-funding	✓	Details
IPA <sup>1</sup>		
LINK <sup>2</sup>		
Industry		
Academic		
Other		

<sup>1</sup> Industrial Partnership Award: science-led, responsive mode grants where an industrial partner contributes in cash at least 10% of the full economic cost of the project.

<sup>2</sup> LINK scheme: promotes academic/industrial collaboration in pre-competitive research; projects are typically funded 50:50 by industry and government support.

**RESEARCH ASSISTANT TRAINING**

**4. How would you rate the skills of your grant’s Research Assistant with respect to the ‘genomics’ technologies used in the research project?**

*Please mark one box for each category and provide brief comments if you wish*

	<b>4</b> very good	<b>3</b> good	<b>2</b> fair	<b>1</b> poor
RA’s skills at the start of the grant				
RA’s skills at the end of the grant				

Comments:

**PRIOR AND FURTHER FUNDING**

- In order for us to place this grant in the wider context of the development of your research programme, please answer the following questions about prior and further funding.

**5. At the time of your application, had you previously received funding to incorporate ‘genomics’ approaches into your research programme?**

Yes	
No	

If yes, please indicate how long you had been using ‘genomics’ approaches in your research at the time of your application and provide details of the funding agency(s) who supported the research

< 5 years	5 -10 years	> 10 years	Funding Agency(s)

**6. Have you received a further grant from BBSRC to continue or develop the work supported by this grant?**

Yes	
No	

If yes, please provide details:

BBSRC Committee	Grant reference

**7. Have you received further funding from another funding agency to continue or develop the work supported by this grant?**

Yes	
No	

If yes, please provide details:

Funding Agency	Value (£)	Duration (months)

## **B: RESEARCH OUTPUTS**

- The questions in this section are intended to update your final report
- There is no need to provide us with information that is already contained within the report

### **PUBLICATIONS**

**8. Please list all further publications arising from the grant since the final report was produced, including those that are 'in press' or accepted for publication, in the spaces below or on a separate sheet.**

Please list publications in the following two categories, and ensure that the full reference is included:

Original research articles in refereed journals:

Others – e.g. review articles, book chapters, articles in popular magazines:

*Please note: We do not need information on conference proceedings or poster presentations*

**9. How many of these publications, including those listed in your final report, had co-authors based overseas or in industry?**

<b>Publication type</b>	<b>Overseas</b>	<b>Industry</b>
Original research articles		
General articles		

## DATABASE SUBMISSIONS

**10. Please indicate if you made submissions to online databases as a result of this grant, and provide details of any submissions you feel are of particular interest or merit.**

*Please include transcriptomics, proteomics, metabolomics, imaging and other long-term studies*

Database submission	✓	Details
Nucleic acid sequence(s)		
Peptide sequence(s)		
Molecular structure data		
Transcriptomics data		
Proteomics data		
Metabolomics data		
Other large data sets		

## **C. RESEARCH OUTCOMES AND IMPACTS**

- It is increasingly important for BBSRC to demonstrate the wider impacts of research funding to government
- BBSRC recognises that it may take considerable time for the wider economic and social impacts of research to be realised
- When answering the following questions please refer to the **direct outputs** of your grant, or to **indirect outputs** from your wider research programme which have been **significantly underpinned** by the research grant in question
- For indirect outputs, please provide brief details of how they relate to the grant in question.

### **KNOWLEDGE AND ITS EXPLOITATION**

**11. Did any new products, processes, resources, tools or technologies result from this grant?** *e.g. collections, reagents, software, databases, methodology*

Yes	
No	

If yes, please provide details where relevant:

Description of product, process, resource etc.	
Who are the (potential) users? For what purpose do (or will) they use it?	
How was/will it be made accessible to others?	
Does it have the potential to be commercially exploitable?	
What impact has it had on researchers and on the community as a whole?	
Is the resource still accessible and relevant, or has it been superseded by new technologies?	

**12. Have you or your colleagues applied, or are you likely to apply, for any patents, licences or other form of intellectual property rights as a result of the research supported by this grant?** *Please note: Any information provided by you will be treated as confidential and will not be released into the public domain without your prior approval.*

Yes	
No	
Likely to apply	

If yes, please give details:

Type of intellectual property	Has it been licensed to companies?	If so, has the licence yielded any income? (please give details with dates)

**13. Have you or your colleagues established any spin-out companies from the research supported by this grant?**

Yes	
No	

If yes, please provide details:

Company name						
Current status	Trading		Dormant		Ceased trading	
Date of incorporation						
Antecedents						
Sector and area of activity						
Number of full time equivalent (FTE) staff currently employed						
URL of company website						
Other relevant information <sup>1</sup>						

## PARTNERSHIPS

### 14. Did any new academic collaborations or networks develop from this grant?

Partnership links	Details (collaborator, subject area)	Country (e.g. UK, USA)	Multi-disciplinary? (e.g. chemistry, physics)
New or improved contacts			
New formal research collaboration (e.g. joint publication, joint funding application)			

### 15. Did any new or improved collaborations with industry, commerce or other non-academic end-users develop from this grant?

Partnership links	Details (collaborator, subject area)	Country (e.g. UK, USA)	Sector (e.g. pharmaceuticals, agriculture)
New or improved contacts			
New formal research collaboration (e.g. joint publication, joint funding application)			

## KNOWLEDGE EXCHANGE

### 16. Are you aware of any academic or non-academic end-users who have used the findings, outputs or expertise developed during this grant? *We are interested in specific examples of actual users, rather than general groups of potential end-users*

End-users	✓	Details
Academic		
Non-academic		

## WIDER BENEFITS TO THE PUBLIC GOOD

- BBSRC recognises the contribution your research makes to society through the provision of knowledge and training
- We are also interested in learning about the wider benefits of your research to the public good

### 17. Has your research contributed to outcomes of benefit to the public good, or is it likely to in the future?

*Please distinguish between benefits that have been realised to date, and potential benefits that may arise in the future. Feel free to include benefits from your wider research programme, but please indicate how they relate to the grant in question.*

Wider benefit	✓	Details
Human health		
Animal health and welfare		
Environment		
Food security / sustainable agriculture		
Contribution to the formulation of government policy, or meeting government priorities		
Contribution to the reduction, refinement and replacement of animals in experiments		
Other – please specify:		

## **D. BBSRC's SUPPORT FOR GENOMICS RESEARCH**

- In parallel with the evaluation of 'genomics' research funded through responsive mode, BBSRC is conducting an evaluation of the Investigating Gene Function (IGF) initiative
- We are interested in learning about how the IGF Centres benefited the wider research community, and whether they are good models for disseminating other new technologies and approaches
- Details of the IGF consortia / projects are at Annex 1

### **18. Have you used resources or services offered by any of the genomics Centres developed as part of BBSRC's Investigating Gene Function Initiative?**

*(either during this grant or as part of your wider research programme)*

<b>IGF Centre/Project</b>	<b>✓</b>	<b>Details</b>
Arabidopsis (GARNet)		
Brassica		
Cereals		
Drosophila		
Farm Animals (ARK-Genomics)		
Microbial Eukaryotes (COGEME)		
Streptomyces		

### **19. Please comment on the extent to which your research programme has benefited, directly or indirectly, from the IGF initiative**

*e.g. through the provision of tools, resources, expertise, training etc.*

**20. To what extent did BBSRC's support of the IGF initiative encourage you to incorporate genomics technologies into your research programme?**

4 very much	3	2	1 not at all

Comments:

**21. To what extent did the IGF initiative stimulate a more favorable view of research using genomics technologies by BBSRC Research Committees?**

*Please mark one box and provide brief comments if you wish*

4 very much	3	2	1 not at all

Comments:

**22. To what extent did BBSRC's support of the IGF initiative stimulate the development of genomics technologies and resources in your own organism(s) of interest?**

*Please indicate the organism and mark the appropriate box*

Organism(s)	4 very much	3	2	1 not at all

Comments:

**23. Were you forced to change the focus of your research as a result of BBSRC's support of the IGF initiative?** *i.e. did you change the organism into which you conduct research to benefit from the available resources*

Yes	
No	

If yes, please provide brief details:

Comments:

**24. How effective were the IGF Centres in disseminating genomics technologies and approaches to the wider research community?**

*Please mark one box and provide brief comments if you wish*

4 very effective	3 effective	2 somewhat effective	1 not at all effective

Comments:

**25. Please give any other comments you have on BBSRC's support for genomics research** *e.g. are there areas where BBSRC should be providing more or less support, is the balance between funding through initiatives and responsive mode appropriate etc.*

**26. Do you have any other comments relevant to this evaluation?**

*Thank you, your contribution is much appreciated.*