**St Andrews Bioinformatics Unit**

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| **Grant Submission Form** *[April 2021]* |  |
| This form is required to cost any grants that include Bioinformatics involving StABU and/or access to the High Performance Computing Cluster via StABU. Approval by a member of the Bioinformatics Unit is required at least 2 weeks before the grant submission deadline.  |
| Please email one of the following: Peter Thorpe (pjt6@st-andrews.ac.uk),  Silvia Paracchini (sp58@st-andrews.ac.uk),Nathan Bailey (nwb3@st-andrews.ac.uk ), Carolin Kosiol (ck202@st-andrews.ac.uk) , David Ferrier (dekf@st-andrews.ac.uk)   | ***For official use only:****Received:* *Reference No.: StABU****-******-***  |

Please send the completed form to FAS with your costing request

1. **Principal Investigator Details:**

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| Name:       |
| Email:       | School:       | Date:       |
| Name of researchers: (if known, e.g. postgraduate or DRA. If names not known, number and type of posts for the project)       |

1. **Project Description:**

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| **Project Title:**  |
| **Organism:**  |
| **Sample Size:**  |
| **Type of experiment:**  |
| GWAS  | [ ] [ ]  | Exome  | [ ] [ ]  | Genome | [ ] [ ]  |
| Transcriptome | [ ] [ ]  | Epigenome  | [ ] [ ]  | ChIP-seq | [ ] [ ]  |
| Specify if other here:       |
| **Type of Data:**  |
| Illumia | [ ] [ ]  | PacBio | [ ] [ ]  | Nanopore | [ ] [ ]  |
| Specify if other here:       |
| **Brief description of analysis required:**  |

1. **Data Storage and Bioinformatics Server User Costs:**

Please note: Charges are based on a 3-tier system in which data quantity is assumed proportional to CPU usage. If you anticipate using more the 5TB of space, please cost extra storage into your grant. We are charged by central IT, £400 per terabyte, which is backed up nightly and backups are kept for 1 week (this is subject to change without notice as implemented by central IT). The cluster is not designed for long-term storage and archiving, so it is the PI’s responsibility to remove data and archive it after projects are finished. Lapses in subscription payments may result in your account being closed and your data being deleted.

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| **Estimated Size of your data** (if unsure please contact StABU to discuss prior to submitting the form) |
| Low: < 1TB storage: £263.14  | [ ] [ ]  | Medium: 1 to 5TB storage: £742.62 | [ ] [ ]  | High: > 5TB storage: £1854.05 | [ ] [ ]  |

**Purchase of extra storage:**

Storage is charged at £400 per Terabyte. If you need to purchase more. Please state here how many terabytes: \_\_\_\_\_\_\_\_\_\_\_TB x £400 = £\_\_\_\_\_\_\_\_\_\_\_total cost

**Purchase of extra node for the cluster (if required): (please note these prices vary and these are rough estimates).**

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| 64 AMD core 1TB RAM node: £15,000  | [ ] [ ]  | GPU AMD node with 1 X RTX8000: £20,000 (plus extra £5,000 per extra GPU) | [ ] [ ]  | Specific requirements with quote: £\_\_\_\_\_\_\_\_\_\_\_\_\_  | [ ] [ ]  |

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| PowerEdge C6400 Enclosure and PowerEdge C6420 32 core 198 GB RAM Node£7,000  | [ ] [ ]  | AMD 32 cores 256 GB RAM£12,000 | [ ] [ ]  |  |  |

1. **Bioinformatician time and agreed deliverables** (all projects using Bioinformatics and HPC should cost on FTE):

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| 5% Minimal Support  | [ ] [ ]  | 10% training/support/minimal data analysis | [ ] [ ]  | 20% (data analysis, please discuss this with us) | [ ] [ ]  |
| Other (please specify and discuss with us) \* |

\* “5% minimal support” is email-only support for non-labour-intensive questions. “10% Support” is help with installing software, data interpretation, bug fixing (within reason). “Other” can include a smaller or larger portion of time, or a specific value/cost for specific data analysis, for example, RNAseq analysis (discuss this with us).

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| **Agreed Deliverables** (if analysis is to be performed, this must be agreed before grant submission with the relevant Bioinformatician. Analysis beyond what is stated in the agreed deliverables may incur an additional cost.):  |

1. **Declarations, Authorisations & Signatures**

By signing below, we:

1. note It is the Principal Investigator’s responsibility to ensure their staff use the cluster in a fair way and do not generate excessive amounts of data.
2. agree the usage costs are charged annually and reflect maximum usage in that period.
3. note that regular clean-up of temporary files is mandatory as excessive amounts of data impacts other users and cannot be tolerated.
4. note it is the responsibility of the PI to ensure their staff are trained to use the cluster. The training material can be found here: github.com/peterthorpe5/Sys\_admin/tree/master/cluster\_course
5. agree that all research outputs involving the Bioinformatics Unit should acknowledge the support of Wellcome Trust ISSF [grant 105621/Z/14/Z and 204821/Z/16/Z]. Please use the wording as follows: “Bioinformatics and Computational Biology analyses were supported by the University of St Andrews Bioinformatics Unit which is funded by a Wellcome Trust ISSF award [grant 105621/Z/14/Z] and 204821/Z/16/Z”
6. Please acknowledge the contribution of the University of St Andrews Bioinformatics Unit also in other research outputs (e.g. poster /conference talk/seminar).
7. The Wellcome Trust (and an increasing number of funding bodies) requires publications to be Open Access; please check with the Library for cost recovery: (http://www.st-andrews.ac.uk/library/services/researchsupport/openaccess/).
8. note that acknowledgement of significant Data Analysis or substantial contribution towards publication such as co-authorship would be attributed to the relevant person/people that made the contribution. This would be discussed prior to agreeing project deliverables.

**Approvals (signatures)**

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| Principal Investigator  |   | Date:  |
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| Bioinformatics Unit representative  |   | Date:  |