

Destigmatising how we identify and address research mistakes

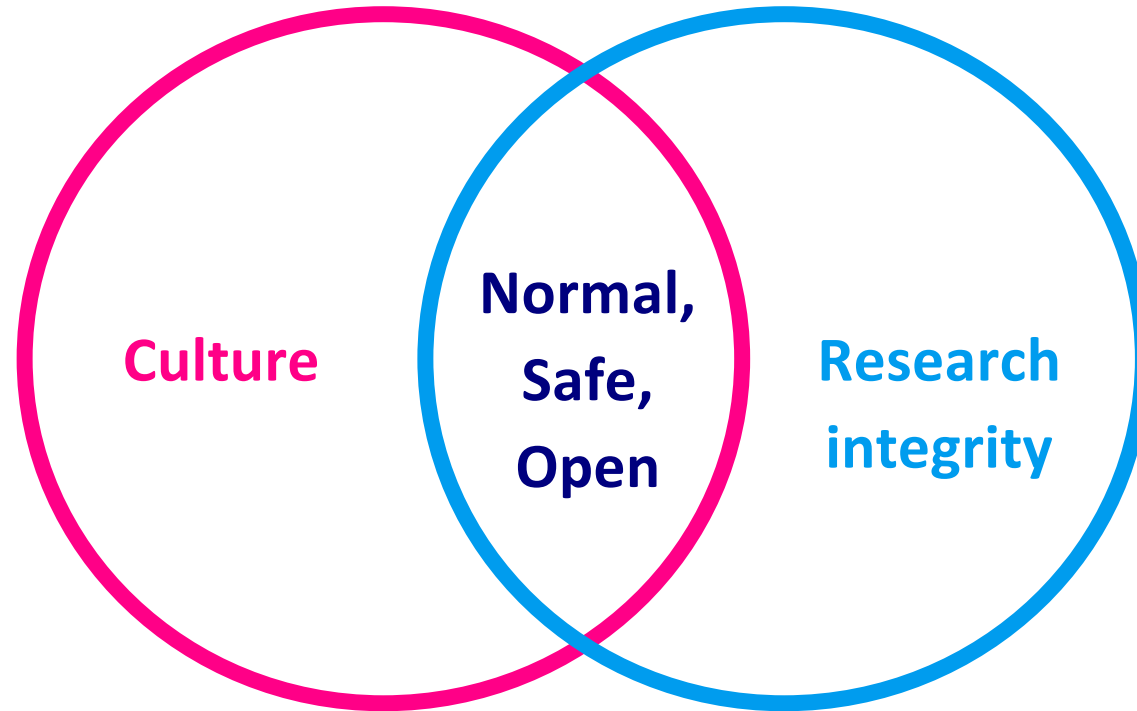
Dr Catherine Winchester

Head of Research Integrity

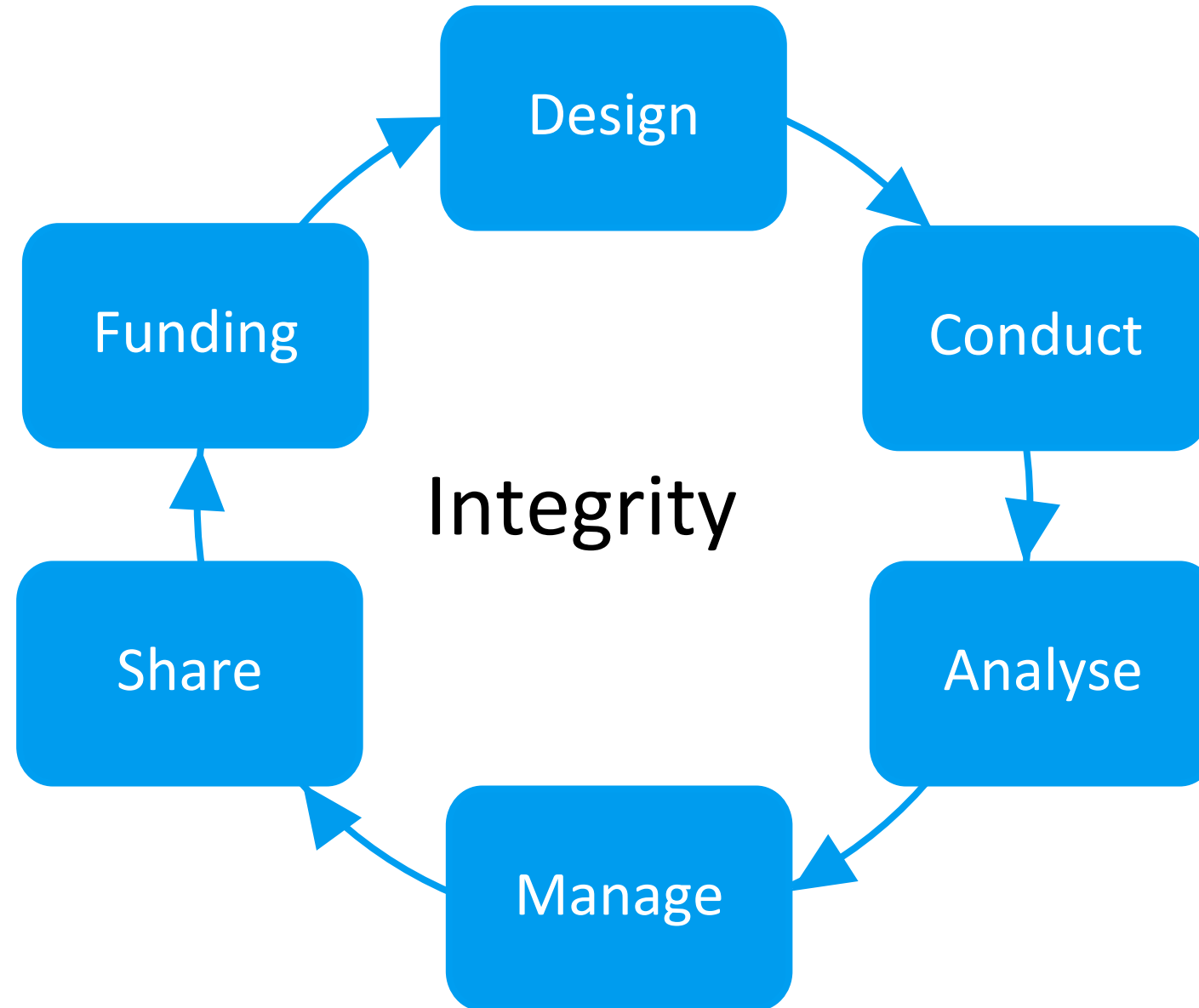
Culture and Integrity at the CRUK Scotland Institute

IRCC – 17/09/2025

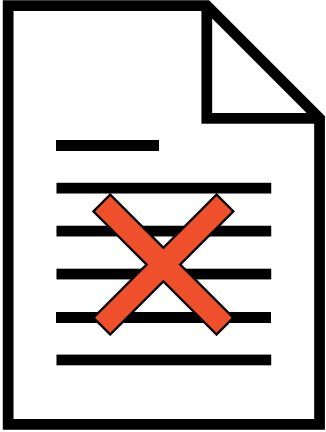
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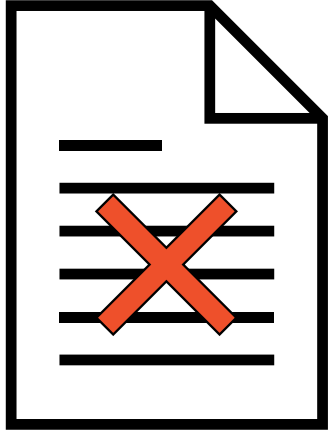


Mistakes happen in research (1)



- Human error
- Lack of knowledge
- Lack of training
- Misunderstanding

Mistakes happen in research (2)



- Human error
- Lack of knowledge
- Lack of training
- Misunderstanding



“nearly 40% of retraction notices did not mention fraud or other kinds of misconduct. Instead, the papers were retracted because of errors, problems with reproducibility, and other issues.”

Mistakes should be addressed (1)

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THE CONCORDAT TO SUPPORT RESEARCH INTEGRITY

- “errors committed in good faith and honest mistakes are seen as productive elements of research”
- Researchers should be “open and transparent about their research methodologies and findings, and honest when errors are made”
- Employers should “create the conditions necessary for honest errors to be openly admitted without undue detriment”

Mistakes should be addressed (2)

THE CONCORDAT TO SUPPORT RESEARCH INTEGRITY



- “errors committed in good faith and honest mistakes are seen as productive elements of research”
- Researchers should be “open and transparent about their research methodologies and findings, and honest when errors are made”
- Employers should “create the conditions necessary for honest errors to be openly admitted without undue detriment”
- “acknowledging that mistakes can and do happen in research is therefore a vital part of improving the quality and integrity of that research”

CRUK SI process to assess mistakes

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Error

Analyse the error to determine the problem

Review the raw data

Determine the cause of the error

Document the assessment

Notify the journal editor

Co-ordinate the correction of mistakes

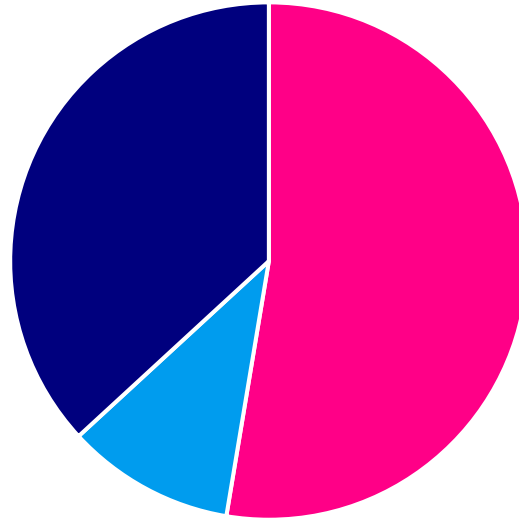


Review the assessment
and learn lessons

Introduce preventative
measures



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% papers

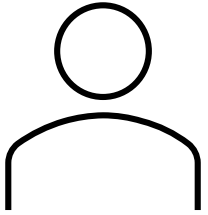
- data not generated at CRUK SI or by CRUK SI researchers
- Data not generated at CRUK SI
- Data generated at CRUK SI

- Years papers published: 1997, 1998, 2003, 2009, 2010, 2012, 2013, 2015, 2017, 2019, 2020, 2023
- No issues: 16%
- Data not available: 16%
- Corrections published: 32%
- Corrections prepared: 16%

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Identifying mistakes



- Self-report
- Raise concerns about other researchers



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- Anonymous concerns & queries



- Integrity sleuths
- Journal integrity specialists

- Owning up to mistakes:
 - embarrassment
 - fear of reputational damage
 - fear of mistake being viewed as research misconduct

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- Minor errors: approx. 40% immediately report to journal, 35% do nothing unless someone reports you, 25% do nothing
- Serious error in run of mill journal: approx. 85% immediate report, 10% do nothing unless someone reports you, 5% do nothing
- Serious error in high impact journal: approx. 87% immediate report, 8% do nothing unless someone reports you, 5% do nothing

- Owning up to mistakes:
 - embarrassment
 - fear of reputational damage
 - fear of mistake being viewed as research misconduct
- Reporting about other researchers
 - fear of negative reputation and impact on career
 - fear of retribution

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 - fear of retribution
- Ability to assess mistakes

Actions to drive positive change



- Treat mistakes differently from research misconduct
- Be non-accusatory and non-judgemental about mistakes
- Make mistake assessment normal
- Be open and share experiences of mistakes
- Learn from situations where things have gone wrong