

# Assessing publication research integrity – understanding the key techniques

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Conflicts of interest – JB and AA none to declare

JC and EB – software donated from Profig, ImageTwin, Imacheck

# Morning session – understanding the basic techniques

## 9am – 12 noon

<b>9am</b>	<b>Alison Avenell</b>	<b>Introduction</b>
<b>9.10am</b>	<b>Jennifer Byrne</b>	<b>Principles of fact-checking and data triangulation, including broader considerations of research plausibility in the pre-clinical setting. Seek &amp; Blastn, checking cell lines.</b>
<b>9.25am</b>	<b>Alison Avenell</b>	<b>Introduce the ‘REAPPRAISED’ checklist for evaluation of publication integrity and basic statistical techniques, RIA and TRACT and other checklists.</b>
<b>10.25am</b>	<b>Coffee break</b>	
<b>10.40am</b>	<b>Jana Christopher Elisabeth Bik</b>	<b>Image screening as part of decision-making pre- and post-publication, common problems that would render a manuscript/paper questionable. Paper mills – typical image-related problems, including image re-use across papers and computer/ AI generated images.</b>
<b>11.40am - noon</b>	<b>All</b>	<b>Discussion</b>

# Afternoon timetable – further techniques and practical demonstrations 1pm – 4pm

<b>1.00pm</b>	<b>Alison Avenell</b>	<b>Introduction</b>
<b>1.05pm</b>	<b>Alison Avenell</b>	<b>Try out 'REAPPRAISED' checklist for evaluation of publication integrity of a published trial; basic statistical techniques for investigation.</b>
<b>2.15pm</b>	<b>Tea Break</b>	
<b>2.30pm</b>	<b>Jana Christopher</b>	<b>Image manipulation: generative AI, examining raw data, tadpole paper mills. Hashing of raw images at acquisition, coupled with bespoke checking software to verify genuine images.</b>
	<b>Elisabeth Bik</b>	<b>Screening techniques: naked eye, Photoshop, automated tools (ImageTwin, Forensically, Fig Check, Proofing demonstrations), advantages and drawbacks.</b>
<b>3.40 – 4.00pm</b>	<b>All</b>	<b>Discussion</b>

- What is your background?
  - Journals/publishers?
  - Universities?
  - National organisations?
  - Others?
- Have you been involved in integrity investigations?
- What do you wish to gain from today?

# Our aims

- Provide a basic understanding of key techniques used to assess publication integrity
- Present examples where specific expertise is required
  - Methodological, e.g. statistical expertise
  - Subject content, e.g. clinician, molecular biologist

- Please interrupt for clarification, but otherwise leave brief questions for discussion time after each presenter. We have also allowed for discussion at the end of the morning and afternoon sessions.
- We welcome feedback from today to allow us to improve training.