

Brand Toolkit



Contents

These design guidelines will help you produce communications that live and breathe The Wellcome Sanger Institute.

Please take time to read through them, and to see how all the components work together.

For more help and advice contact your communications team at the Institute.

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Introduction

A quiet and thoughtful modernisation

The Wellcome Sanger Institute has been at the forefront of pioneering scientific research in genomics for the last 25 years. Our commitment to delivering big, bold exploratory research that pushes the boundaries of what is known and what is possible in genomics remains central to who we are and what we do.

However, the Institute's visual identity and overall brand presentation had not kept pace with our science. Our primary logo and visual identity had fallen behind our science.

The double helix had become a much used and abused visual reference for DNA and no longer reflected the complexity of the science. In short, the Institute's brand was no longer fit for purpose.

It was time to refresh, update and modernise the way the Institute presented and communicated itself to the outside world.

The external presentation and identity must reflect the reality internally.

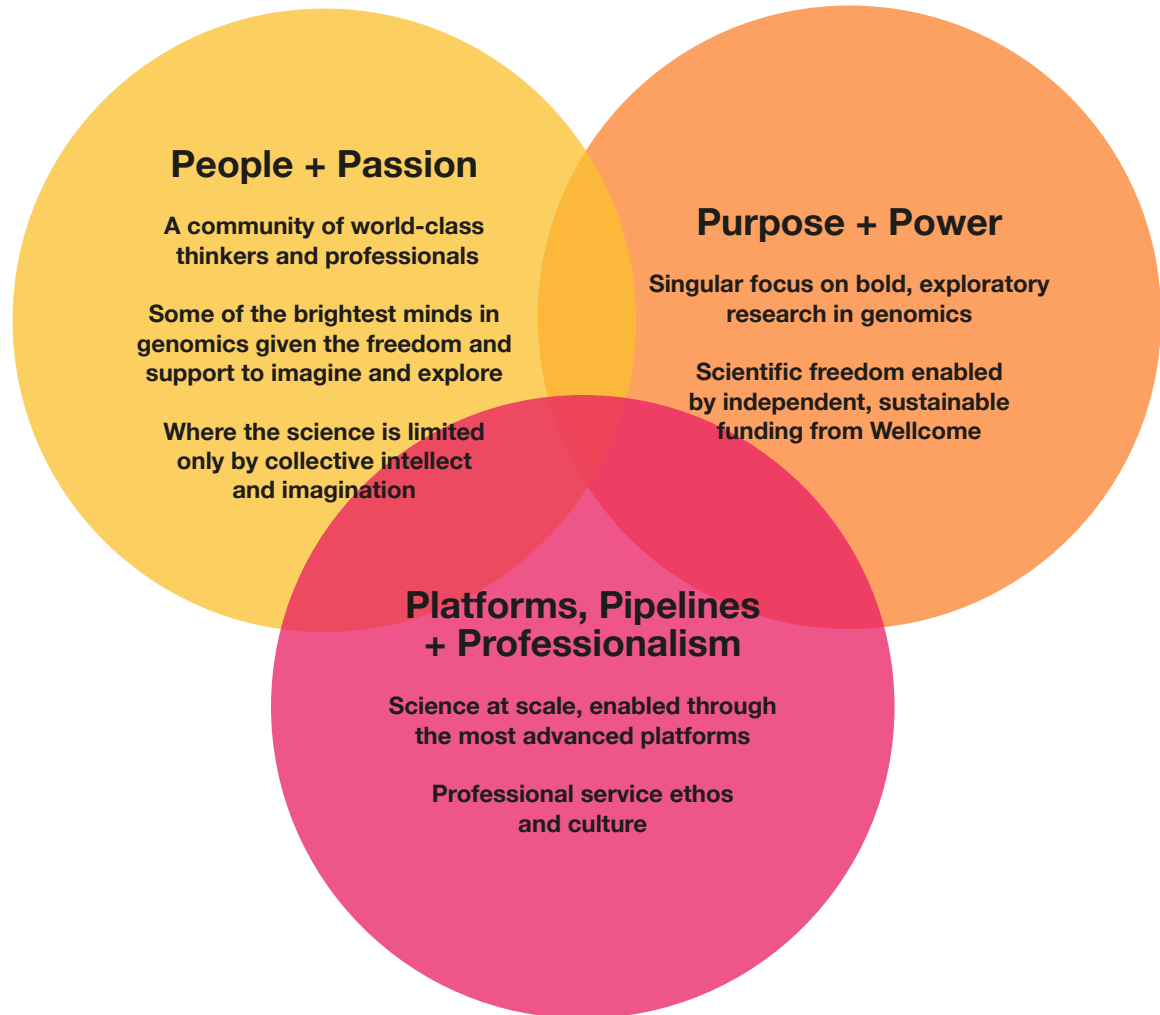
Our brand must reflect our science and attributes that make Sanger, Sanger.



What we stand for

**There are three
fundamental ingredients
that make Sanger, Sanger.**

**These are the foundation
of our brand.**

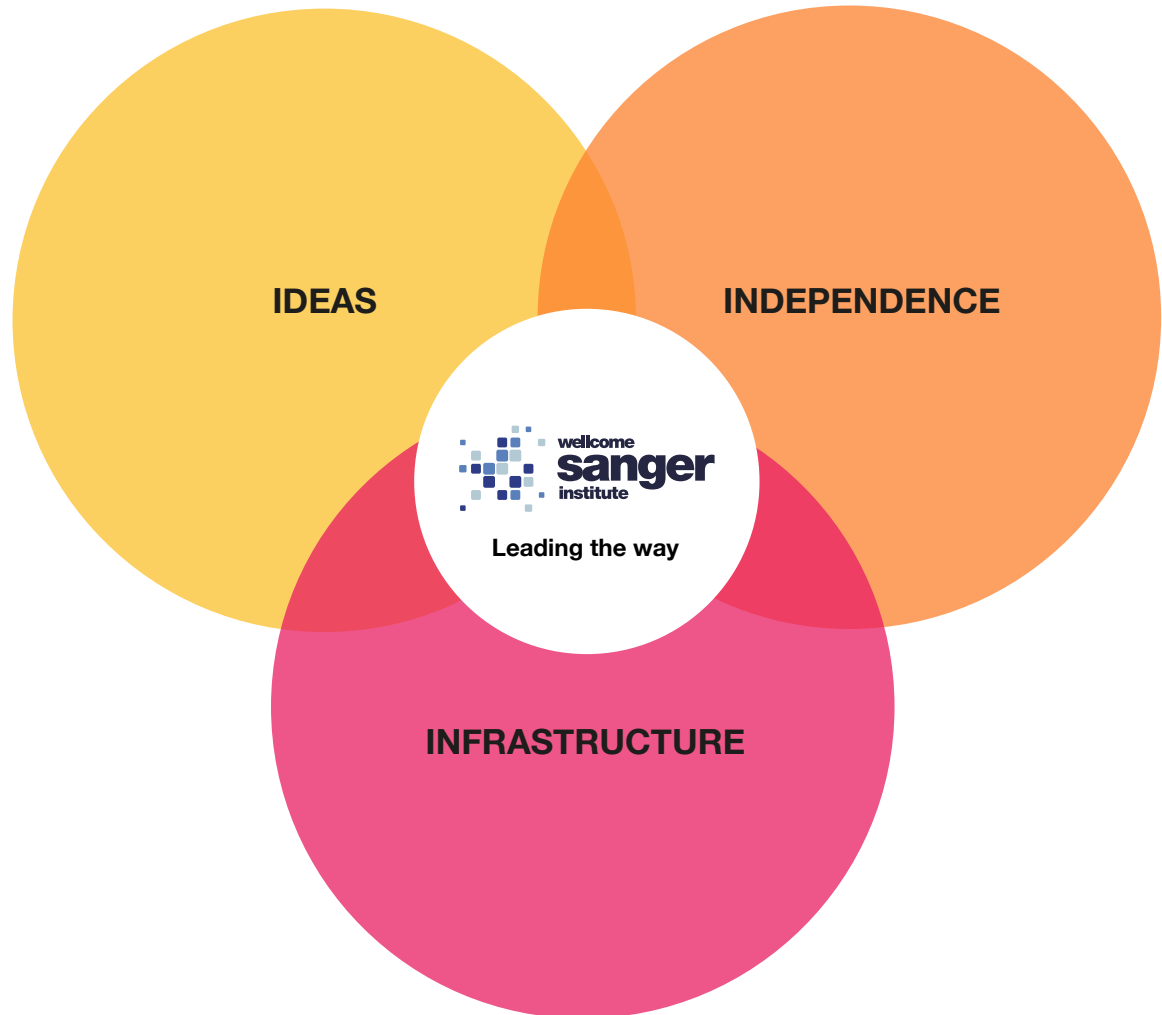


Our brand idea = leading the way.

We lead the way in genomics thanks to our big, bold ideas

+

Scientific independence + cutting-edge infrastructure that enables exploratory science at scale



Our brand idea = Leading the way; genomic science at scale

Why do we exist?

Wellcome Sanger Institute exists to tackle the biggest, toughest challenges in genomics today. Through big, bold exploratory research we continually seek new ways to unlock, understand and harness the wealth of information stored within genomes, to improve health and life on earth.

How do we work?

The unique way we are funded, combined with the infrastructure and technology that underpins our research, enables us to focus on the biggest, most ambitious projects; projects that quite simply wouldn't happen without us. As a result, we've been instrumental in some of the most significant initiatives and projects in genomics over the last 25 years.

At Sanger, the science is limited only by our collective intellect and imagination. Intellectual risk taking and the most robust, evidence-led science are both expected and required here. Our collective goal is to push the boundaries of what is known and what is possible.

We think the unthinkable, imagine scientific possibilities that would be impossible to explore elsewhere and set out to do what can't be done by others, daily. Building our reputation on achieving what many would not dream of attempting.

Design idea

Design idea

Our new logo is born of data points, gene blocks and classic sequencing gels, yet reimagined in a dynamic, fluid and progressive way, reflecting our pioneering work at the forefront of genomic research.

Reproduced in four colours, in its master form, to represent the four DNA bases, our logo is flexible and influences our broader visual language, ensuring the way we look inspires everyone who comes into contact with the Wellcome Sanger Institute.



Logo structure

Our logo is inspired by the four bases of DNA and the procedures of sequencing and analysis.

We have paired this with a strong type lockup formed from the Wellcome brand identity.

These are combined to create an easily identifiable logo that represents the Wellcome Sanger Institute.

Symbol



Logotype

wellcome
sanger
institute

Our master logo



Master logo

Our master logo is the linear Wellcome Sanger Institute logo shown opposite. This lock-up should be used wherever possible.

For restricted spacing use the stacked version of the logo shown opposite, or the small size lockup shown further in this document.

It is important to use the master artwork of this logo, do not change, edit or create a custom version of this logo.

Alternative logo

The stacked version of the logo should only be used when space is restricted.

As with our linear logo, it is important to use the master artwork, please do not change, edit or create a custom version of this logo.

Master logo



Alternative logo



Logo colour palette

Our logo palette is built from the lead colours of the Wellcome Sanger Institute. These colours allow the logo to stand out and be easily identifiable.

Monotone executions of the logo are available should you require them, details follow in the next section.



Sanger Light Blue

RGB R:178, G:201, B:212
CMYK C:35, M:13, Y:15, K:00
Pantone Pantone 5513 C
Hex B2C9D3



Sanger Medium Blue

RGB R:102, G:128, B:186
CMYK C:70, M:45, Y:05, K:00
Pantone Pantone 646 C
Hex 597FBA



Sanger Blue

RGB R:046, G:059, B:135
CMYK C:97, M:85, Y:09, K:01
Pantone Pantone 7687 C
Hex 2D3A87



Sanger Dark Blue

RGB R:036, G:038, B:066
CMYK C:93, M:85, Y:42, K:49
Pantone Pantone 533 C
Hex 232642

Master logo



Alternative logo



Monotone logo

When we use the master or alternative logo we may find that it clashes on a background. When this situation occurs, you can use a monotone version of the logo.

It is important to use the master artwork of this logo, do not change, edit or create custom versions of this logo.

Sanger Blue monotone logo



Black monotone logo



White monotone logo



















Monotone colour

Our monotone logos can be coloured using our secondary colour palette.

It is important to only use the secondary colour palette and not to use (or create) other colours.

Please refer to the colour table below, or secondary colour section on **page 25** for more information.

 Pantone 123C	 Pantone 305C
 Pantone 715C	 Pantone 3125C
 Pantone 213C	 Pantone 299C
 Pantone 704C	 Pantone 2945C
 Pantone 205C	 Pantone 584C
 Pantone 245C	 Pantone 7737C
 Pantone 2592C	 Pantone 563C
 Pantone Med.PC	 Pantone 357C

Master logo monotone



Alternative logo monotone



Clear space

Whenever our logo is used, it needs breathing space around the outer edge of the artwork to maximize its visibility.

It is recommended that the minimum safety area is the “S” in the Sanger within the logo, although we should allow as much space as possible.

Master logo clear space



Alternative logo clear space



Minimum size

The lock-ups opposite demonstrate our logo at minimum print size (mm).

Master logo minimum size



Alternative logo minimum size



Minimum size (digital)

These lock-ups reflect our logo at minimum size (px).

Master logo minimum size



Alternative logo minimum size



Digital logo formats

The logos opposite are specifically designed for online and web use, including favicons and banner formats.

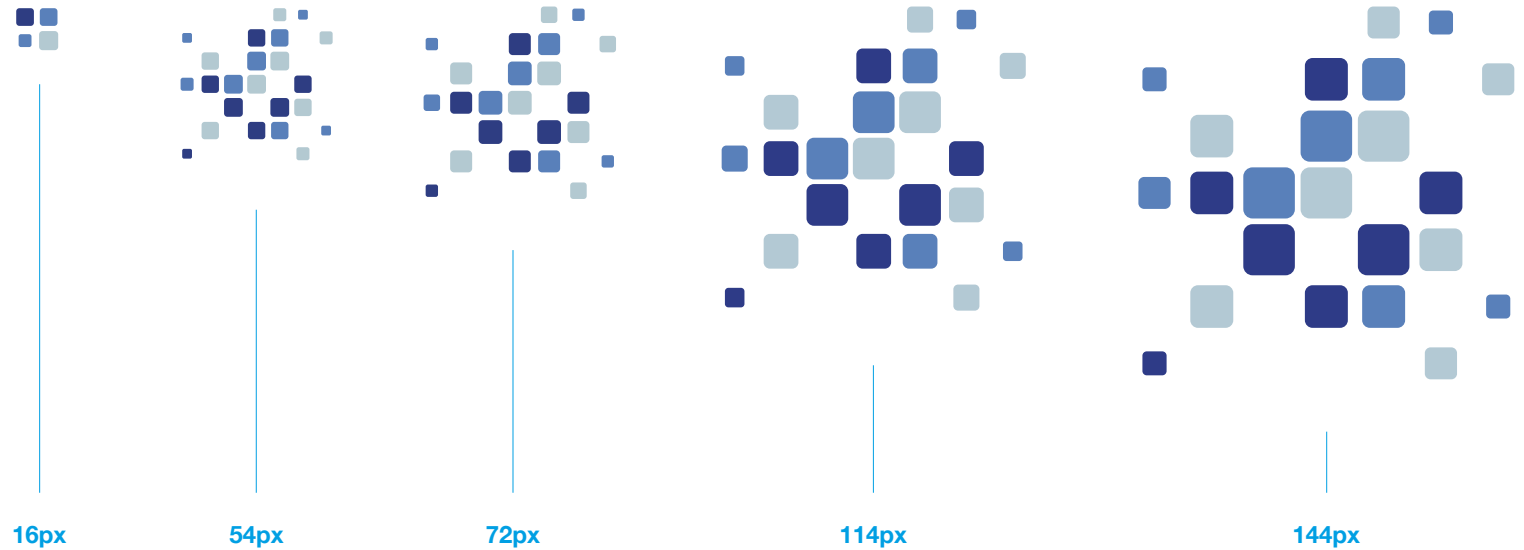
Large icons



Favicon

Our favicon is designed to scale with pixel size. It's important to use the correct size when executing designs.

Favicon



Small scale identity

In special circumstances when a smaller logo is needed below 20mm in size, a reduced sized logo has been created.

The examples opposite show the logo in detail (x4 scale) and actual size.

The small scale identity must only be used at 18mm width, do not enlarge or adjust its size.

Logo in detail (4x scale)



Actual size



Logo misuse (master)

The examples opposite show our master logo being misused in various ways.

It's important that we maintain a strict lockup style for the Wellcome Sanger Institute logo, using only the master, alternative and small scale formats.



An example of how the Wellcome Sanger Institute logo should look when used correctly.



Do not apply colours that are not within the official palette of the Institute.



Do not apply a colour fill to the outline of the box area of the Institute's logo artwork.



Do not re-arrange the layout of the symbol within the Institute's logo.



Do not adjust the position of the symbol within the Institutes's logo.



Do not remove or adjust the size of the symbol that forms the Institute's logo.



Do not apply any colour effects such as gradients to the Institute's logo.



Drop shadows should not to be applied to the Institute's logo.



Do not re-arrange the layout of the type within the Institute's logo.

Logo misuse (alternative)

The examples opposite show our master logo being misused in various ways.

It's important that we maintain a strict lockup style for the Wellcome Sanger Institute logo, using only the master, alternative and small scale formats.



An example of how the Wellcome Sanger Institute logo should look when used correctly.



Do not apply colours that are not within the official palette of the Institute.



Do not apply a colour fill to the outline of the box area of the Institute's logo artwork.



Do not re-arrange the layout of the symbol within the Institute's logo.



Do not adjust the position of the symbol within the Institutes's logo.



Do not remove or adjust the size of the symbol that forms the Institute's logo.



Do not apply any colour effects such as gradients to the Institute's logo.



Drop shadows should not to be applied to the Institute's logo.



Do not re-arrange the layout of the type within the Institute's logo.

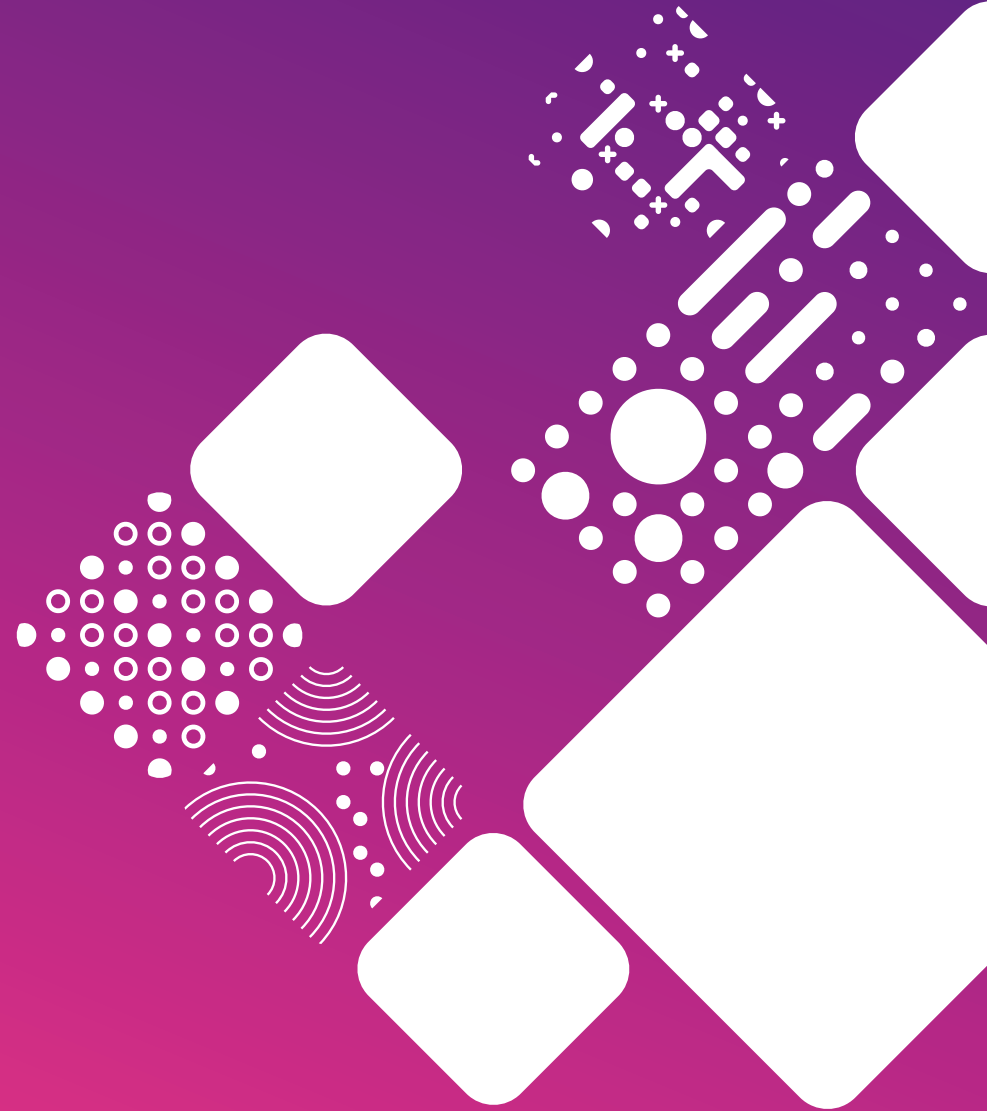
Campus lockup

It is important that when the Institute's logo is used in conjunction with other related branding that a well balanced relationship is achieved.

We have created a master artwork of this lock-up.



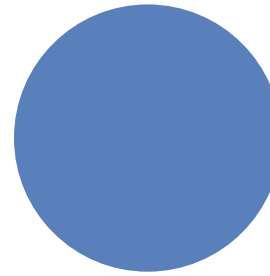
Elements



Our primary colours

The primary colour palette is built from four colours inspired by the tones used in the process of DNA sequencing, plus white and black.

For most projects you may use a combination of the primary and secondary palette, but for key branding assets, such as our stationery family, you must use Sanger Blue primary colours.



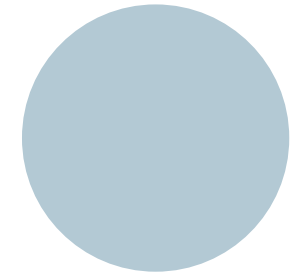
Sanger Medium Blue

R:102, G:128, B:186

C:70, M:45, Y:05, K:00

Pantone 646 C

Hex: 597FBA



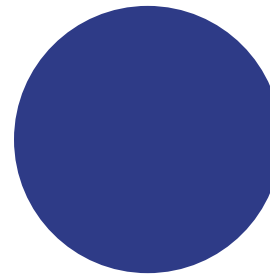
Sanger Light Blue

R:178, G:201, B:212

C:35, M:13, Y:15, K:00

Pantone 5513 C

Hex: B2C9D3



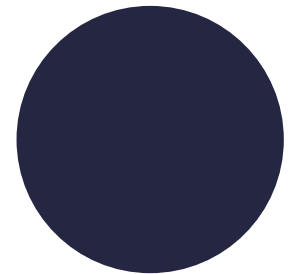
Sanger Blue

R:046, G:059, B:135

C:97, M:85, Y:09, K:01

Pantone 7687 C

Hex: 2D3A87



Sanger Dark Blue

R:036, G:038, B:066

C:93, M:85, Y:42, K:49

Pantone 533 C

Hex: 232642

Our secondary colours

Our secondary palette is designed to bring a further level of colour when creating content, keeping our brand fresh and alive.

These colours have been chosen to compliment each other while remaining bright and attractive to the viewer when used in print or digital.



RGB R:251, G:192, B:045
CMYK C:01, M:27, Y:87, K:00
Pantone Pantone 123 C
Hex FBC02D



RGB R:253, G:130, B:048
CMYK C:00, M:59, Y:83, K:00
Pantone Pantone 715 C
Hex FD8230



RGB R:233, G:030, B:099
CMYK C:00, M:95, Y:36, K:00
Pantone Pantone 213 C
Hex E91E63



RGB R:156, G:034, B:034
CMYK C:20, M:98, Y:95, K:11
Pantone Pantone 704 C
Hex 9C2222



RGB R:236, G:64, B:122
CMYK C:00, M:86, Y:23, K:00
Pantone Pantone 205 C
Hex EC407A



RGB R:234, G:128, B:252
CMYK C:30, M:55, Y:00, K:00
Pantone Pantone 245 C
Hex EA80FC



RGB R:156, G:039, B:176
CMYK C:60, M:86, Y:00, K:00
Pantone Pantone 2592 C
Hex 9C27B0



RGB R:074, G:020, B:140
CMYK C:90, M:100, Y:01, K:01
Pantone Pantone Med. Purple C
Hex 4A148C



RGB R:037, G:215, B:253
CMYK C:61, M:00, Y:04, K:00
Pantone Pantone 305 C
Hex 25D7FD



RGB R:000, G:172, B:193
CMYK C:75, M:06, Y:24, K:00
Pantone Pantone 3125 C
Hex 00ACC1



RGB R:003, G:155, B:229
CMYK C:75, M:26, Y:00, K:00
Pantone Pantone 299 C
Hex 039BE5



RGB R:001, G:087, B:155
CMYK C:95, M:65, Y:09, K:00
Pantone Pantone 2945 C
Hex 01579B



RGB R:212, G:225, B:087
CMYK C:25, M:00, Y:75, K:00
Pantone Pantone 584 C
Hex D4E157



RGB R:139, G:195, B:074
CMYK C:53, M:00, Y:84, K:00
Pantone Pantone 7737 C
Hex 8BC34A



RGB R:077, G:182, B:172
CMYK C:67, M:03, Y:39, K:00
Pantone Pantone 563 C
Hex 4DB6AC



RGB R:027, G:094, B:032
CMYK C:87, M:36, Y:100, K:33
Pantone Pantone 357 C
Hex 1B5E20

Notes on colour usage

It's important to use the colour palette carefully, and avoid a rainbow effect.

Use complementary rather than clashing colours and pay careful attention to accessibility.

Make sure there is good contrast so that text is legible.

We encourage people to use different colours to mark different sections in a publication, but discourage colour coding.

Always use colours as solids, never as tints. Use the light colours as backgrounds for pages.

Colour combinations

- 1: White on darks
- 2: Darks on lights
- 3/4: Complementary darks and lights
- 5. Avoid clashing colours and combinations which give poor legibility to text and are therefore not accessible.**

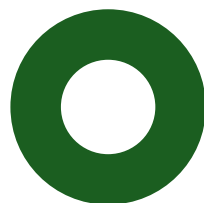
Dark colours



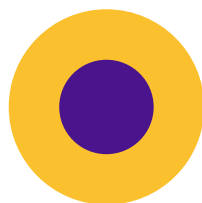
Light colours



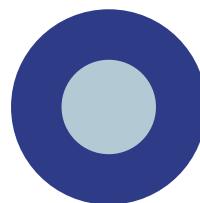
Colour combinations



1.



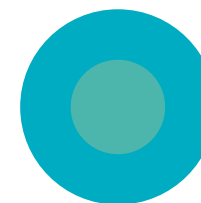
2.



3.



4.



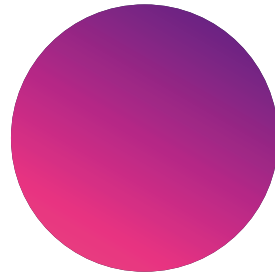
5.

Gradient combinations

We can create a series of gradients using our secondary colour palette.

It's important to consider which colours you use when creating gradients, as some may blend with little difference in colours.

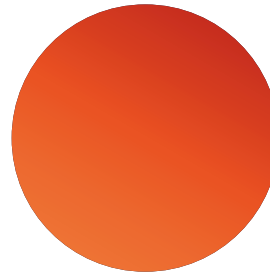
It's recommended that you use analogous colours when creating your gradients.



R:236, G:64, B:122
C:00, M:86, Y:23, K:00
Pantone 205 C
EC407A



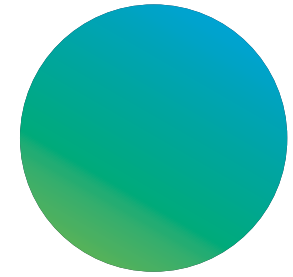
R:074, G:020, B:140
C:90, M:100, Y:01, K:01
Pantone Med. Purple C
4A148C



R:253, G:130, B:048
C:00, M:59, Y:83, K:00
Pantone 715 C
FD8230



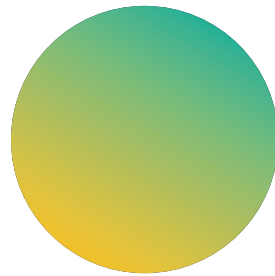
R:156, G:034, B:034
C:20, M:98, Y:95, K:11
Pantone 704 C
9C2222



R:003, G:155, B:229
C:75, M:26, Y:00, K:00
Pantone 299 C
039BE5



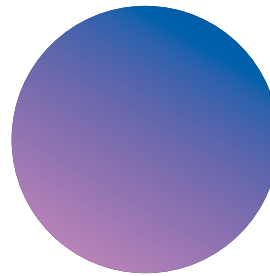
R:139, G:195, B:074
C:53, M:00, Y:84, K:00
Pantone 7737 C
8BC34A



R:251, G:192, B:045
C:01, M:27, Y:87, K:00
Pantone 123 C
FBC02D



R:077, G:182, B:172
C:67, M:03, Y:39, K:00
Pantone 563 C
4DB6AC



R:234, G:128, B:252
C:30, M:55, Y:00, K:00
Pantone 245 C
EA80FC



R:001, G:087, B:155
C:95, M:65, Y:09, K:00
Pantone 2945 C
01579B



R:253, G:130, B:048
C:00, M:59, Y:83, K:00
Pantone 715 C
FD8230



R:233, G:030, B:099
C:00, M:95, Y:36, K:00
Pantone 213 C
E91E63

Name hierarchy

The name of the Institute has changed to mirror changes at Wellcome.

It is no longer the Wellcome Trust Sanger Institute or WTSI. In all written content it should be referred to as **The Wellcome Sanger Institute** or **Wellcome Sanger Institute**.

In written content, after the first full name reference, it's fine to subsequently reference it as **“The Sanger”**, **“Sanger”**, **“the Institute”** or **“Institute”**.

First full name
reference

“The Wellcome Sanger Institute”

“Wellcome Sanger Institute”

Subsequent
reference

“The Sanger”, “Sanger”

“The Institute”, “Institute”

Our typography

When creating company messaging, such as posters for events or internally, we must use the Wellcome and Helvetica family of fonts.

Lead titles should be set in the Wellcome font family using the bold weight.

Subtitles should use Helvetica Neue using the bold weight.

Body copy should be set in Helvetica Neue using the regular weight.

There may be times that we cannot use the Helvetica Neue family, in these cases we can default to the Arial font family.

Wellcome Bold

Wellcome Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£\$%^&*()_+

Helvetica Neue Regular

Helvetica Neue Bold

Helvetica Neue Regular
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£\$%^&*()_+

Helvetica Neue Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£\$%^&*()_+

Arial Regular

Arial Bold

Arial Regular
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£\$%^&*()_+

Arial Bold
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@£\$%^&*()_+

Examples of usage

We have a display face for headlines and a secondary typeface for all other text.

Headlines should be set in the Wellcome font family using the bold weight.

For subtitles we should use Helvetica Neue using the bold weight.

Body copy should be set in Helvetica Neue using the regular weight.

There may be times that we cannot use the Helvetica Neue family, in these cases we can default to the Arial font family.

Headlines in Wellcome bold

For subtitles we use Helvetica Neue bold, this is Helvetica Neue bold at 24pt with 26pt leading.

This is Helvetica Neue regular, a thinner variation of the Helvetica Neue. We would use this on introduction copy, inset and conclusion copy within an article or other long form. This is Helvetica Neue Light at 12pt with 14pt leading.

This is Arial bold, an alternate option for Helvetica Neue bold. We would use this when the Helvetica Neue family isn't available. This is Arial bold at 12pt with 14pt leading.

This is Arial regular, an alternate option for Helvetica Neue regular. We would use this when the Helvetica Neue family isn't available. This is Arial regular at 12pt with 14pt leading.

Best practice for typography

This example shows our typography rules in action.

These rules allow us to create content that stays consistent with our brand messaging, while remaining clear and legible to the viewer.

Headline title using the Wellcome Bold typeface, with clear space around it

Body copy using the Helvetica Neue family, with clear spacing for legibility

Clear area for the CTA, using Helvetica Neue



Typography misuse

These are examples of our fonts being used in a way that conflicts with our house style.

It's important that typography is kept clear and consistent.

To reinforce our brand identity, and retain legibility for the viewer.

This title has tracking that is clear and legible

This subtitle has leading that is clear and legible

This is an example of body copy that has leading and tracking that is clear and legible to the reader

This title has tracking that is too narrow

This subtitle has leading that is too tight

This is an example of body copy that has leading that is too narrow, and tracking that is too tight.

This title has tracking that is too wide

This subtitle has leading that is too loose

This is an example of body copy that has leading that is too loose, and tracking that is too wide.

Square graphic pattern

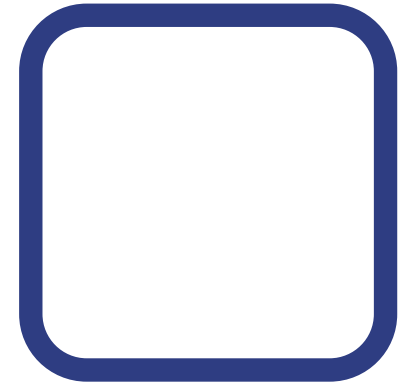
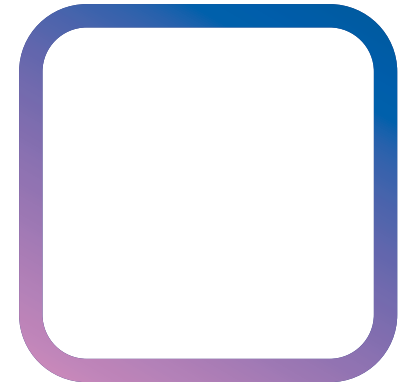
Using the squares of the logo and the research illustrative elements creating dynamic, contemporary executions. This forms our basis of the Institute's visual language. **The square pattern can be used as an overlay, a mask, or a transparency.**



Frames, squares and chevrons

The core of the pattern graphic is built on three elements: a square, a chevron square and a frame square.

These are used in multiple sizes and form design details that can frame photography and add dynamic shapes to a composition.



Solid square

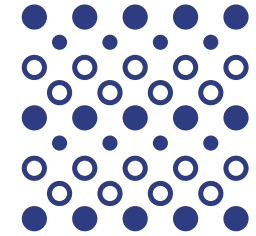
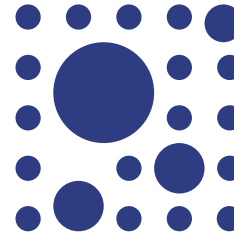
Chevron square

Frame square

Research branding

We have produced a series of patterns that represent the research within the Wellcome Sanger Institute.

This allows us to create a further level of detail with a pattern. By adding them alongside the squares and frames we can provide a flexible and dynamic graphic representation of the Institute.



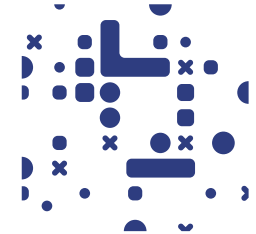
Facilities & expertise



Cellular genetics



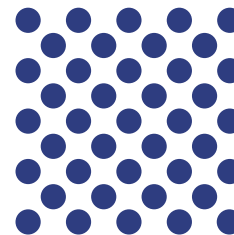
Cancer, ageing & somatic mutation



Human genetics

Infection genomics

Malaria



Science Operations

Pattern layouts (best)

The example below shows the pattern being applied as a mask overlay to a piece of comms. Care has been taken to layer elements of the composition



This form of layout is best used for eye catching-statement content.

Pattern layouts (good)

The example below shows the pattern being applied as a simple overlay.

This form of layout is best used when time and resource are limited.



Patterns as overlays

The examples show the pattern being used as an overlay to add colour to the composition.

This method allows us to create eye-catching content whenever it's applied to print, digital and the Institute's graphics.

You will find a series of overlay patterns pre-prepared for use when designing content and communications.

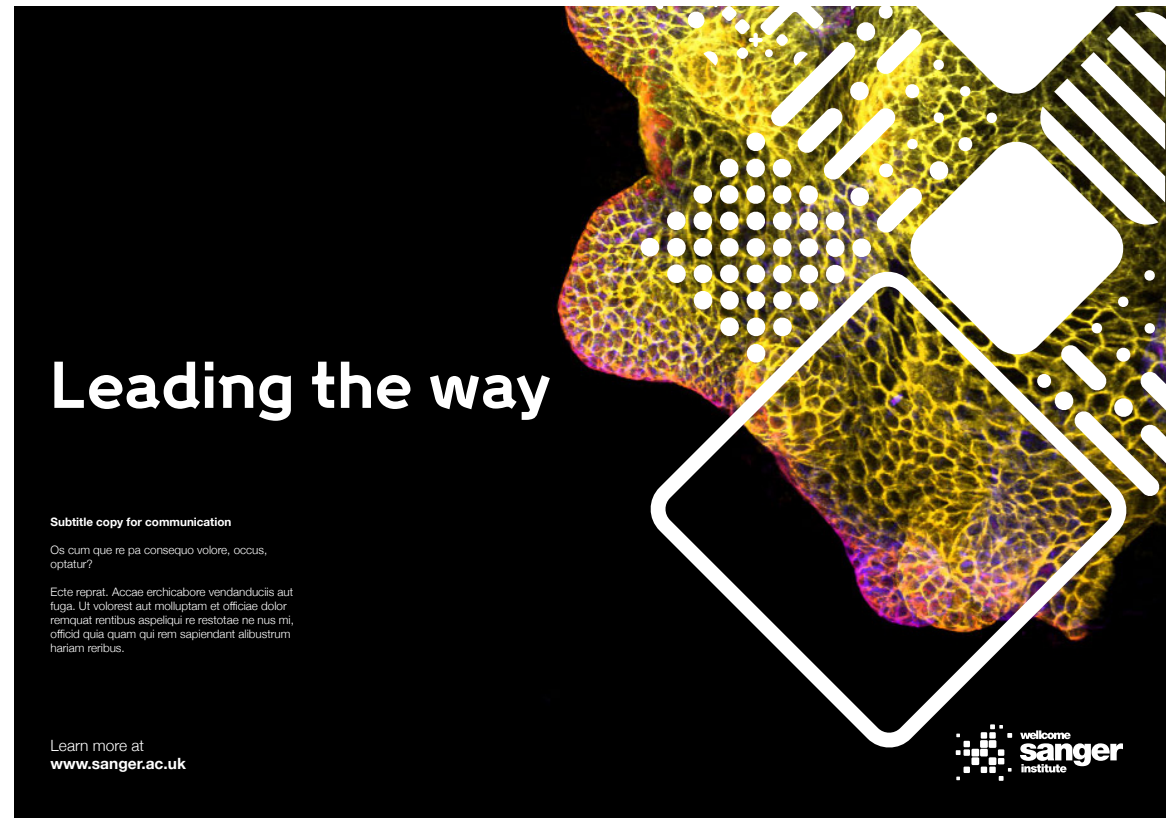


Patterns as frames

The examples opposite shows the pattern being used in conjunction with a frame to highlight a key point in the photography.

Using frames allows us to develop a storyline within the composition, or underline a key point expressed in the communication.

You will find a series of overlay patterns pre-prepared for use when designing content and communications.



Imagery



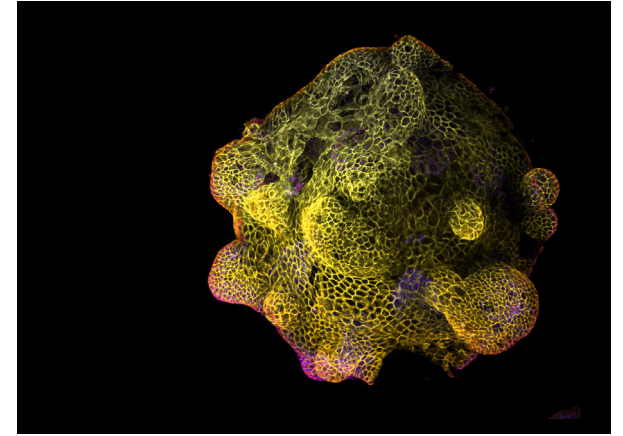
Photography

Inviting and engaging imagery is a key part of the Wellcome Sanger Institute.

When choosing photography we aim to frame a community of world-class thinkers and professionals, a singular focus on bold, exploratory research in genomics and science at scale.



High contrast, detail shots of creatures and parasites



Microscopic photography of organoids



Imagery that represents our work for humanity



Our scientists, technicians and researchers at work

Photography use: storytelling

Photography is an important part of storytelling and plays a key role in our communication. We can incorporate our branding elements to help focus a story.

Photographing the subject in a personal environment can help the viewer engage with the subject's story, but also shows, and stays faithful to, the subject and topic without looking overly staged.

A subject can be looking to camera but the scene they are in must tell the subject's story too.

Photography must provoke an emotive or curious response and inspire and engage the audience.

The Malaria challenge

Subtitle copy for communication

Os cum que re pa conseqno volore, occus, optatur?

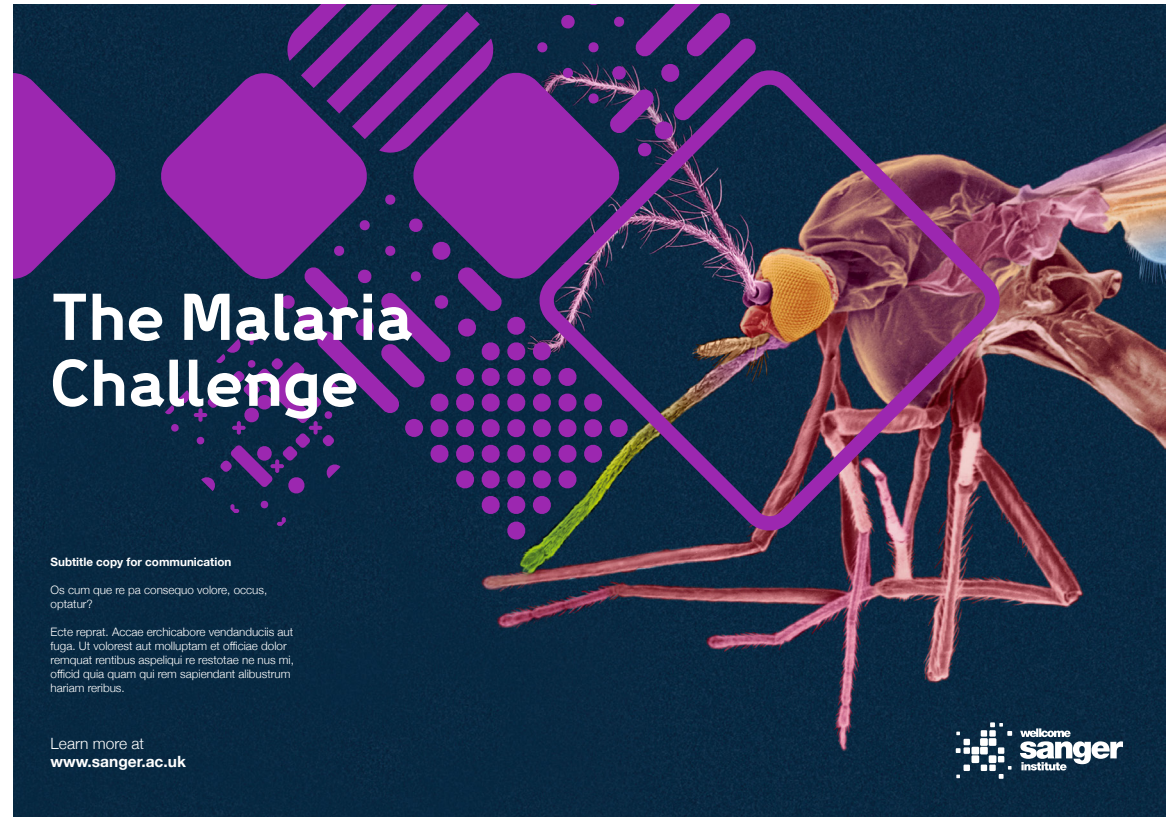
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Learn more at www.sanger.ac.uk

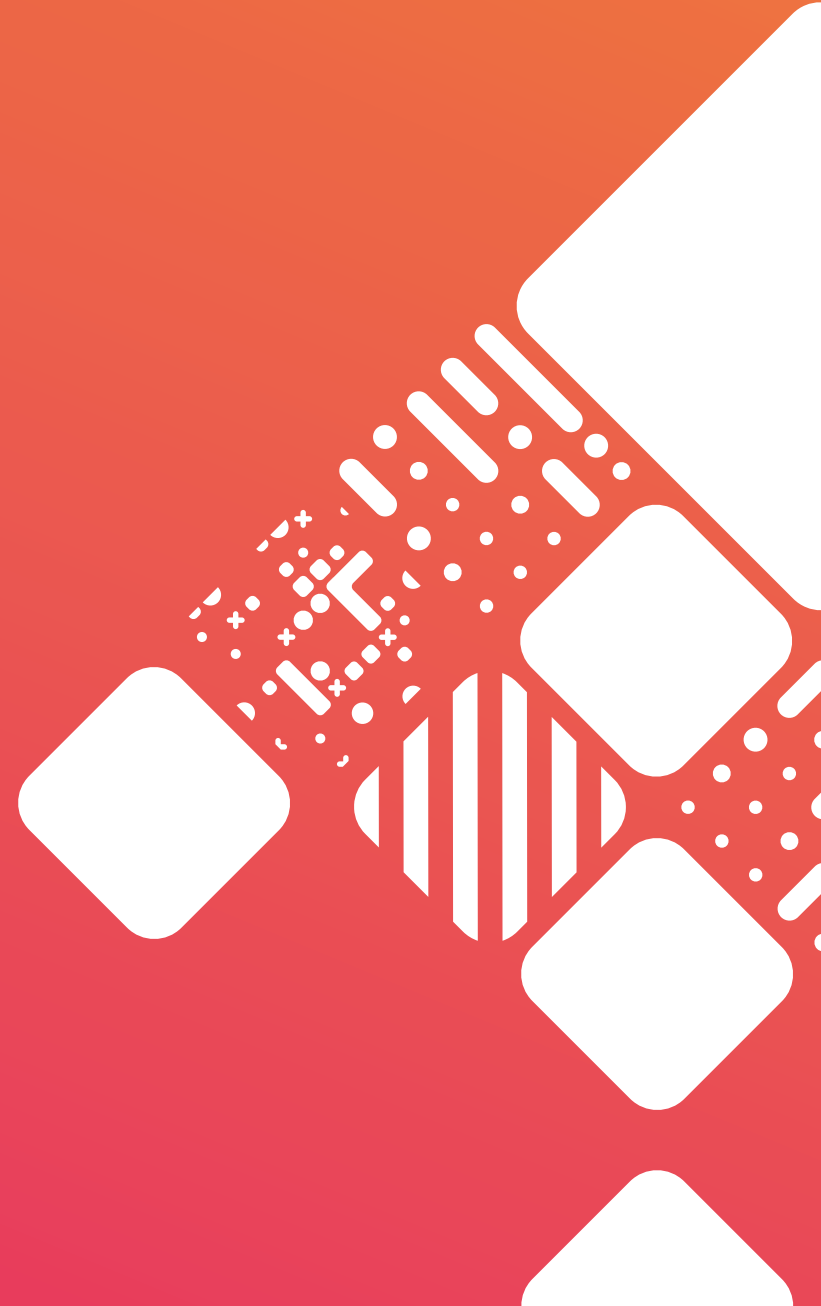
wellcome
sanger
institute

Photography use: highlights

Highlighting is an important part of communication engagement. We can use the framing elements of our branding to help push narration.



Design at work



Letterhead

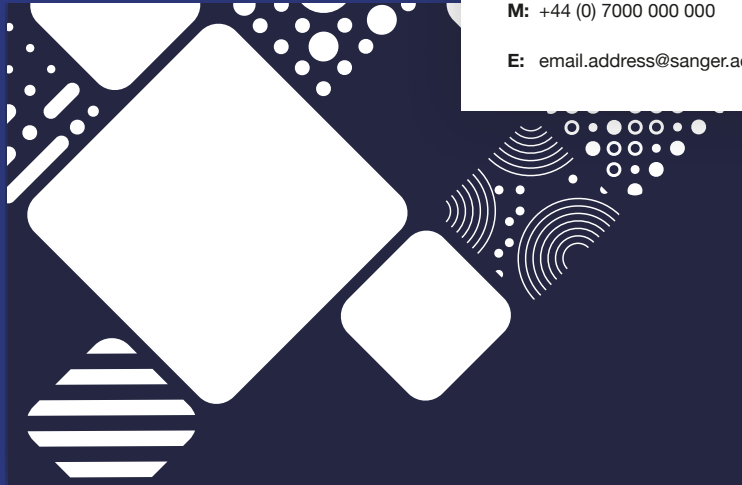
You can find a word template in the branding section of the server.



Compliment Slips



Business Cards



Full Name
Job Title

T: +44 (0)1223 834244

M: +44 (0) 7000 000 000

E: email.address@sanger.ac.uk

Wellcome Sanger Institute
Wellcome Genome Campus
Hinxton Cambridge
CB10 1SA

Email footer

You will find a word document template which you can paste into your email signatures.

Please do not change, edit or create a custom version of the email signature. Our email signature must be consistent across the Institute. If you are having problems with your email signature please contact IT Support.



Full Name
Job Title

T: +44 (0)8455 202080
W: www.sanger.ac.uk
E: email.address@sanger.ac.uk

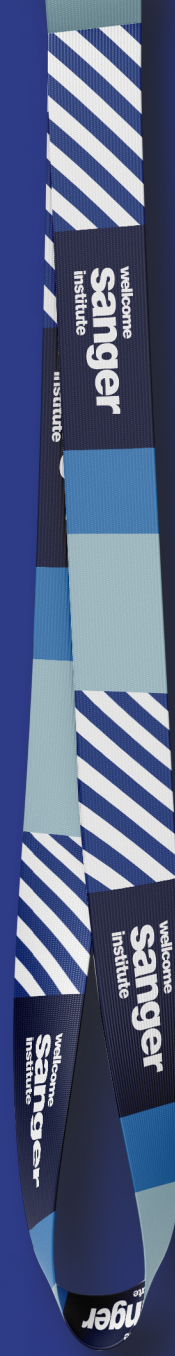
The Wellcome Sanger Institute

Wellcome Genome Campus
Hinxton, Cambridge CB10 1SA
United Kingdom

The Wellcome Sanger Institute is operated by Genome Research Limited, a charity registered in England with number 1021457 and a company registered in England with number 2742969, whose registered office is 215 Euston Road, London, NW1 2BE.

ID cards and lanyards

Our ID cards and lanyards include the chevrons and pattern graphic seen throughout our branding.



PowerPoint templates

The squares allow for a bespoke series of PowerPoint/presentation templates that keep the branding consistent over multiple forms of usage.

The mutations that are driving cancer.

A presentation by DR John Smith

What are the project goals we need to deliver?

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The genome project.

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Our research paths.

Cellular Genetics

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Cancer, ageing and mutation

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Infection genomics

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Human genetics

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Infection genomics

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- anxiety
- mira
- energy
- psychomotor
- stress
- neurotransmitter
- P-value 0.01

“We confirmed that, on average, one to ten driver mutations are needed for cancer to emerge.”


PowerPoint Secondary colours

Our secondary colours allow us to create an engaging on screen experience.




The genomic surveillance of MRSA.

A presentation by DR John Smith

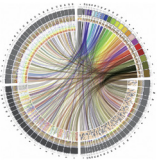


What are the project goals we need to deliver?

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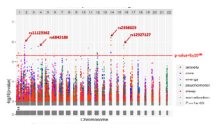

“Researchers saw the transmission within and between hospitals, and in GPs surgeries and communities.”



The genome project.


Hi et harumt quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.

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Infection genomics

Hi et harumt quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.



Our research paths.

- Cellular Genomics**
Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.
- Cancer, ageing and mutation**
Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.
- Infection genomics**
Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.
- Human genetics**
Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.




DNA pipeline operations update.

A presentation by DR John Smith




What are the project goals we need to deliver?

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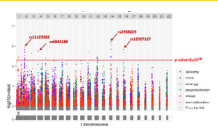
“The Pipelines process DNA, RNA and tissue samples received from internal and external sources.”



The genome project.


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Infection genomics

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Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.
- Human genetics**
Lectoris eodapod quareit, od inlitoro tem fuga, Qu, itam, quam sum quare. Meritat eodapod nonnetur.



Communication executions (portrait)

The combination of well chosen imagery, use of pattern and clear typography will in time, build our brand and strengthen our reputation.



Communication structure (portrait)

We recommend a grid layout of 8x12 with 15mm margins (at A4 size), which should allow a clean look throughout the design.

Headline title positioned clearly for the viewer

Area for body copy, positioned to the left of the layout

Area for a CTA, or associated information and the Institute's logo



Communication executions (landscape)

The combination of well chosen imagery, use of pattern and clear typography will in time, build our brand and strengthen our reputation.



Communication structure (landscape)

We recommend a grid layout of 12x8 with 15mm margins (at A4 size), which should allow a clean look throughout the design.

Headline title positioned clearly for the viewer

Area for body copy, positioned to the left of the layout

Area for a CTA, or associated information and the Institute's logo




Scientific poster (one-column)

The one column science poster is designed to house information and graphics for research projects.

The examples opposite show the one-column execution in action.

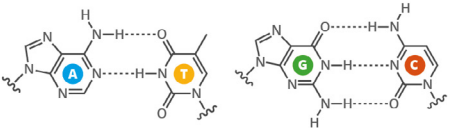
It's important to choose the correct template for your poster content.

The chemical structure of DNA



WHAT HOLDS DNA STRANDS TOGETHER?

DNA strands are held together by hydrogen bonds between bases on adjacent strands. Adenine (A) always pairs with thymine (T), whilst guanine (G) always pairs with cytosine (C).



FROM DNA TO PROTEINS

DNA
TRANSCRIPTION
RNA
TRANSLATION
PROTEIN

The bases along a single strand of DNA act as a code. The letters form three letter 'words', or codons, which code for different amino acids - the building blocks of proteins.


An enzyme, RNA polymerase, transcribes DNA into mRNA (messenger ribonucleic acid). It does this by splitting apart the two strands that form the double helix, then reading a strand and copying the sequence of nucleotides. The only difference between the RNA and the original DNA is that in the place of thymine (T), another base with a similar structure is used: uracil (U).

DNA SEQUENCE	T	T	C	C	T	G	A	A	C	C	G	T	T	A
mRNA SEQUENCE	U	U	C	C	U	G	A	A	C	C	G	U	U	A
AMINO ACID	Phenylalanine		Leucine		Asparagine		Proline		Leucine					


In multicellular organisms, the mRNA carries genetic code out of the nucleus, to the cell's cytoplasm. Here, protein synthesis takes place. 'Translation' is the process of converting turning the mRNA's 'code' into proteins. Molecules called ribosomes carry out this process, building up proteins from the amino acids coded for.

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The chemical structure of DNA



How is DNA constructed?



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page 55

Scientific poster (two-column)

The two column science poster is designed to house information and graphics for research projects.

The examples opposite show the two-column execution in action.

It's important to choose the correct template for your poster content.

Identification of genetic loci for treatment response of serotonin inhibitors

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Score Change									
GENE	CHR	SNP	BP	MAF	AL	BSL	P	Factor	
LOC102026109	2	r11125262	53,764,389	0.361	C	0.0692	1.14E-06	SPR	
ANKK3	14	r23982029	70,481,337	0.061	C	0.1234	6.0E-07	anxiety	
	16	r12362727	13,952,896	0.945	T	0.0002	1.49E-06	anxiety	
ICMVA	4	r66843188	23,456,829	0.455	A	-0.0915	1.7E-06	energy	

Manhattan plot for score change

Binary Response									
GENE	CHR	SNP	BP	MAF	AL	OR	P	Factor	
LOC102026109	2	r11125262	53,764,389	0.361	C	0.2014	1.8E-06	anxiety	
	15	r4356429	3,552,455	0.395	G	2.249	1.9E-06	one	

Manhattan plot for binary response

The degree of improvement in syndromal severity

Polygenic Risk Score for Binary Response

We compared full model (polygenic risk score + age + sex) with reduced model (age + sex) to obtain Nagelkerke's R². The PRS of 'core' was used to predict response of other syndromal factors. The R² ranged from 0.01 (psychomotor) to 0.24 (energy).

he degree of syndromal improvement over time varies with different factors. At week 8, 'psychomotor' had the largest improvement (81%), while 'anxiety' and 'energy' had the least (44-46%). In total score, there was 55% severity reduction at week 8.

Sparse factor model for gene co-expression networks

Gene co-expression network

Network construction (for undirected graphical models)

1. Choose a measure, L of the link between 2 genes
2. Decision rule (e.g. > 3 different from 0)
3. Visualization through a graph

Measure of the link

Linear measure

- Pearson correlation: $\text{corr}(x, y) = \frac{\text{cov}(x, y)}{\sigma_x \sigma_y}$
- Co-expression networks
- Sparse correlation: $\text{corr}(x, y) = \frac{\text{cov}(x, y)}{\sqrt{\text{var}(x) \text{var}(y)}}$
- Gaussian Graphical Model (GGM)

Non-linear measure

- Mutual information MI
- Information-theory-based methods

Challenges

High dimension: $n \gg p$

Sparsity assumption: within a set of genes, only a few are interacting (Pearson 2011)

Factor model

Key idea: to structure the dependence for correlation estimation (less parameters to estimate).

Y dataset with n rows (individuals) and m columns (genes).
 $Y = X \cdot \beta + \epsilon$
 Complete between genes are described by a small number q of factors containing a common dependence:

$$C_{ij} = \sum_{k=1}^q \beta_{ik} \beta_{jk}$$

where β is a q × m matrix and ϵ represents the n × m matrix of noise.

Estimation of β and β EM algorithm (Rubin & Tzipori 1992)

Objective: $\text{E}[C_{ij}] = \text{cov}(C_{ij}) = \text{tr}(\beta \beta^T + \text{diag}(\sigma_i^2))$

- Calculate and minimize the expectation of $\text{E}[C_{ij}]$

Sparse adapted model

The topology of the network can be deduced from the loading matrix B.

Adapted EM algorithm (M-step): minimizing the expected deviance under sparsity constraint

$$\text{E}[C_{ij}] = \sum_{k=1}^q \beta_{ik} \beta_{jk} + \text{diag}(\sigma_i^2)$$

Laplace multiplier approach

Sparsity using LASSO penalization

Inference on the sparsity

L₁ regularization

$$\text{E}[C_{ij}] = \sum_{k=1}^q \beta_{ik} \beta_{jk} + \lambda \sum_{k=1}^q |\beta_{ik}| |\beta_{jk}|$$

Chosen by minimization of BIC

Comparison study

- SPC: Sparse Principal Components
- RFM: Bayesian Factor Regression Model

Simulations

100 datasets simulated from the true generator structure

Identification of the true edges: Mean ROC curves over 1000 simulations

Better estimation of the network

Sparsity using biological knowledge

Inference on the sparsity

Biological information:

- Gene Ontology
- Transcription factors
- pQTL regulation

Example of application

Gene expression dataset

Gene modules detection using WGCNA

Module-stability relationship

New biological insight in gene module detection

FANET R package

4876x (2018): this function performs a LASSO-regularized EM algorithm on a matrix containing observed expression data to estimate sparsity of the factor model

4876x (2018): this function uses the biological information to regularize sparsity of the factor model

4876x (2018): this function uses the biological information to regularize sparsity of the factor model

4876x (2018): this function uses the biological information to regularize sparsity of the factor model

References

More about Factor Analysis for expression data:
 • Blum Y et al. A Factor Model to Analyze Heterogeneity in Gene Expression. BMC Bioinformatics, 2010, 11:360.
 • C. Fagard, et al. A factor model approach to multiple testing under dependence. Journal of the American Statistical Association, 104(481):1406-1415, 2009.
 • WGCNA R package
 • P. Langfelder and S. Horvath. WGCNA: an R package for weighted correlation network analysis. BMC bioinformatics, 9(1):359, 2008.

R package FANet and tutorial

yama-blum.com/links/FANet


Scientific poster (three-column)

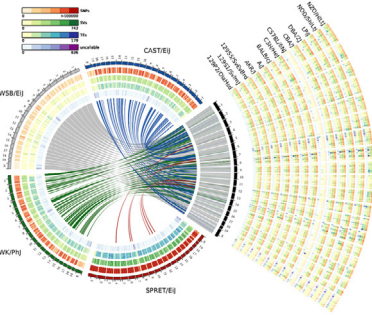
The three column science poster is designed to house information and suitable graphics for research projects.

The examples opposite show the three-column execution in action.

It's important to choose the correct template for your poster content.

Genomic Data Visualisation





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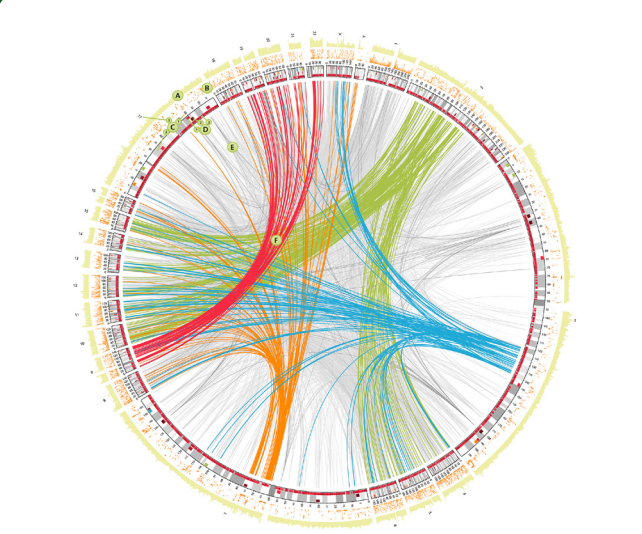
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Genomic data visualisation





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Scientific poster (landscape)

The scientific posters also have a landscape execution, featuring one, two and three column versions.

The chemical structure of DNA



THE SUGAR PHOSPHATE 'BACKBONE'

DNA is a polymer made up of units called nucleotides. The nucleotides are made of three different components: a sugar group, a phosphate group, and a base. There are four different bases: adenine, thymine, guanine & cytosine.

A ADENINE	T THYMINE
<chem>Nc1ncnc2n(cnc12)</chem>	<chem>CC1=CNC(=O)NC1=O</chem>


WHAT HOLDS DNA STRANDS TOGETHER?

DNA strands are held together by hydrogen bonds between bases on adjacent strands. Adenine (A) always pairs with thymine (T), whilst guanine (G) always pairs with cytosine (C).

FROM DNA TO PROTEINS

Nam quunt quia sant vidio bla que voluptur? Ucipsum res que ni a que quidebis dolorum etur, oditatem velesecae cus exerum imus eate serciist velia quoditi busdae pa nam, ut venis aut repudignihil.

Genomic data visualisation



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Scientific poster research branding

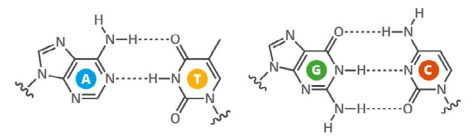
The examples opposite show the research branding being applied, allowing the viewer to see clearly what division of research the poster belongs to.

The chemical structure of DNA



WHAT HOLDS DNA STRANDS TOGETHER?

DNA strands are held together by hydrogen bonds between bases on adjacent strands. Adenine (A) always pairs with thymine (T), whilst guanine (G) always pairs with cytosine (C).



FROM DNA TO PROTEINS

DNA

TRANSCRIPTION

RNA

TRANSLATION

PROTEIN

The bases along a single strand of DNA act as a code. The letters form three letter 'words', or codons, which code for different amino acids - the building blocks of proteins.

An enzyme, RNA polymerase, transcribes DNA into mRNA (messenger ribonucleic acid). It does this by splitting apart the two strands that form the double helix, then reading a strand and copying the sequence of nucleotides. The only difference between the RNA and the original DNA is that in the place of thymine (T), another base with a similar structure is used: uracil (U).

DNA SEQUENCE

T T C C T G A A C C C G T T A


mRNA SEQUENCE

U U C C U G A A C C C G U U A

AMINO ACID

Phenylalanine Leucine Asparagine Proline Leucine

In multicellular organisms, the mRNA carries genetic code out of the nucleus, to the cell's cytoplasm. Here, protein synthesis takes place. 'Translation' is the process of converting turning the mRNA's 'code' into proteins. Molecules called ribosomes carry out this process, building up proteins from the amino acids coded for.



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Identification of genetic loci for treatment response of serotonin inhibitors



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GENE	CHR	SNP	BP	MAF	AI	BSA	P	Factor
LOC102021689	2	rs11125242	53,348,339	0.301	C	0.0492	1.14E-06	0.09
ANKK1	14	rs23882029	79,481,217	0.063	C	0.1234	6.40E-07	0.05
ANKK1	14	rs12672127	11,952,436	0.345	T	0.0602	1.49E-06	0.05
KCNMA1	4	rs6842406	21,456,527	0.125	A	0.0975	1.75E-06	0.09

Manhattan plot for score change



The degree of improvement in symptom severity



Omninus, omninusda porenunda nusandsique volest por sedian- dis nupa nonserc lasinci es raspudio que nullupatur? Qui officio lilt ut volonic tor maioe sed quis rehenti ilupta seque reratur assus. Dunt most hi molorvero quates voluplati dolupta cone numquia sapis deciam cum captur atur sum, sectore numqui rissunt quame pre odoliccus es etur a que aliquam necaborent, od mi, sitatis sae- que pedtia siminci magnisi id qui solor alignat aut lis volor autectet vent maxima quae nobilitantit laut aut aut peliquat.

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GENE	CHR	SNP	BP	MAF	AI	CHR	P	Factor
LOC102021689	2	rs11125242	53,348,339	0.301	T	0.0314	1.49E-06	0.09
ANKK1	14	rs23882029	79,481,217	0.063	C	0.2249	1.76E-06	0.05

Manhattan plot for binary response



Polygenic Risk Score for Binary Response



We compared full model (polygenic risk score + age + sex) with reduced model (age + sex) to obtain Nagelkerke's R². The PRS of 'core' was used to predict response of other syndromal factors. The R² ranged from 0.01 (psychomotor) to 0.24 (energy).



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An example using **cellular genetics** branding.

An example using the **human genetics** branding.

Poster structure

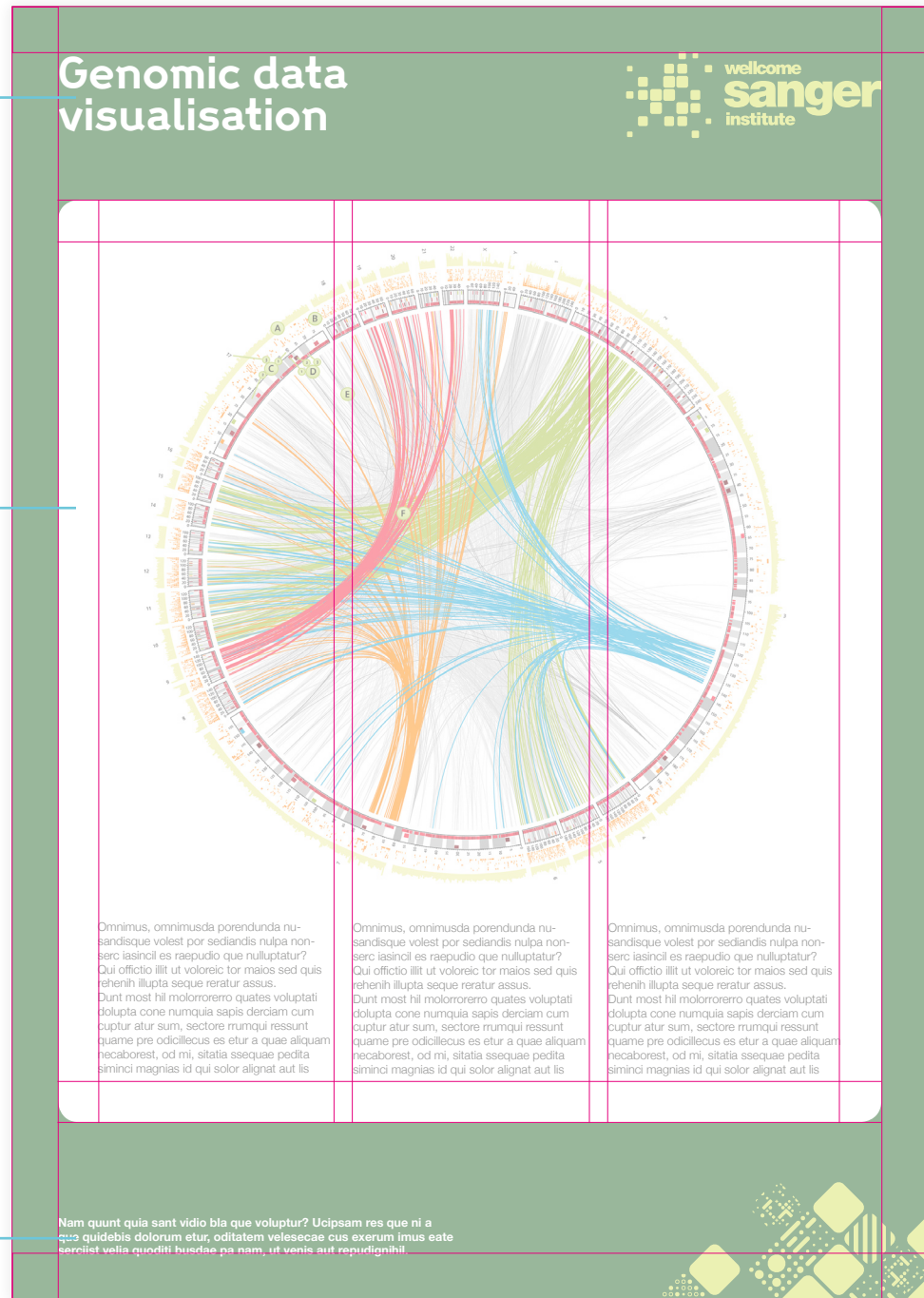
The layout opposite shows the structure of the three-column science poster.

The layout is designed to accommodate imagery and copy, as well as titles and a CTA within the footer of the poster.

Headline and logo spacing area

Area for body copy, spaced for artwork

Area for a CTA, or associated information and the Institute's logo



Digital communication

The monotone execution of the logo sits comfortably on the current website.

A breakdown of logos for web usage is available in the digital logo section.

The screenshot shows the Wellcome Sanger Institute website. At the top left is the logo, which consists of a grid of white squares of varying sizes forming a stylized 'S' shape, followed by the text 'wellcome sanger institute'. To the right of the logo is a search icon and the tagline: 'We use genome sequences to advance understanding of the biology of humans and pathogens to improve human health'. Below the logo is a navigation bar with five items: 'SCIENCE' (Explore our teams, research, data & software), 'PEOPLE' (Meet our scientists, staff, developers & engineers), 'NEWS' (Discover our latest findings & the people behind them), 'ABOUT' (Understand our mission to improve health & join us), and 'INNOVATIONS' (Help translate our work into tools, therapies & diagnostics). The main content area features a large image of a robin's head on the right. On the left, a blue box contains the text: '25 new genomes to celebrate 25 years of the Sanger Institute' and 'Blackberry to robin, bush cricket to brown trout - the 25 species all reside in the UK'. Below this is a 'Read more' button. At the bottom right of the image is a small credit: '27 лютага 2014 г, Wikimedia Commons'. Below the main image is a section titled 'Apply to the Sanger Institute's PhD programmes' with a sub-headline: 'One of our core aims is to train the next generation of world-class genome scientists and clinicians'. It includes closing dates for applications: 'Sunday 3rd December 2017 for the 4-year PhD programme' and 'Monday 13th November 2017 for the Clinical PhD programme'. Below this is a 'Recent News' section with three articles: 'Professor Sharon Peacock to be awarded the 2018 Microbiology Society Unilever Colworth Prize', 'Study shows routine genomic surveillance of MRSA can detect unsuspected outbreaks', and 'Five new malaria targets that could lead to an effective vaccine'. The footer contains navigation links: 'Reach Us', 'Follow Us', 'Join Us', and 'Who We Are', along with the 'Athena SWAN Bronze Award' logo.

Social media

The examples opposite show our logo being used on social media.

Social media logos are available in the logo branding package.

Home Moments Notifications Messages Search Twitter Tweet

 wellcome
sanger
institute



Tweets 1,854 Following 1,455 Followers 33.6K Likes 392 Lists 4 Follow

Sanger Institute
@sangerinstitute

The Wellcome Trust Sanger Institute uses genome sequences to advance understanding of the biology of humans and pathogens to improve human health

Wellcome Genome Campus, Cambs
sanger.ac.uk
Joined April 2009

Tweet to Sanger Institute

189 Photos and videos



Tweets Tweets & replies Media

Sanger Institute @sangerinstitute · 2h
#Genomics could solve the story of Squirrel Nutkin, and tell us why #founding #redsquirrels are vulnerable to squirrel pox when #greysquirrels seem to be unaffected. #25Genomes #advent

Our partners: @WildlifeTrusts @Lancswildlife @TrentUni buff.ly/2ITqcA1 @WGCengage



Sanger Institute Retweeted

Ewan Birney @ewanbirney · 6h
Great @FT article on @gsk's investment in @uk_biobank genome sequencing + @emblebi + @sangerinstitute Open Targets

Who to follow · Refresh · View all

-  **Genome Research** @gen...
Follow
-  **UCSC Genome Browser** ...
Follow
-  **Nick Loman** @pathogeno...
Follow

Find people you know
Import your contacts from Gmail

Connect other address books

Trends for you · Change

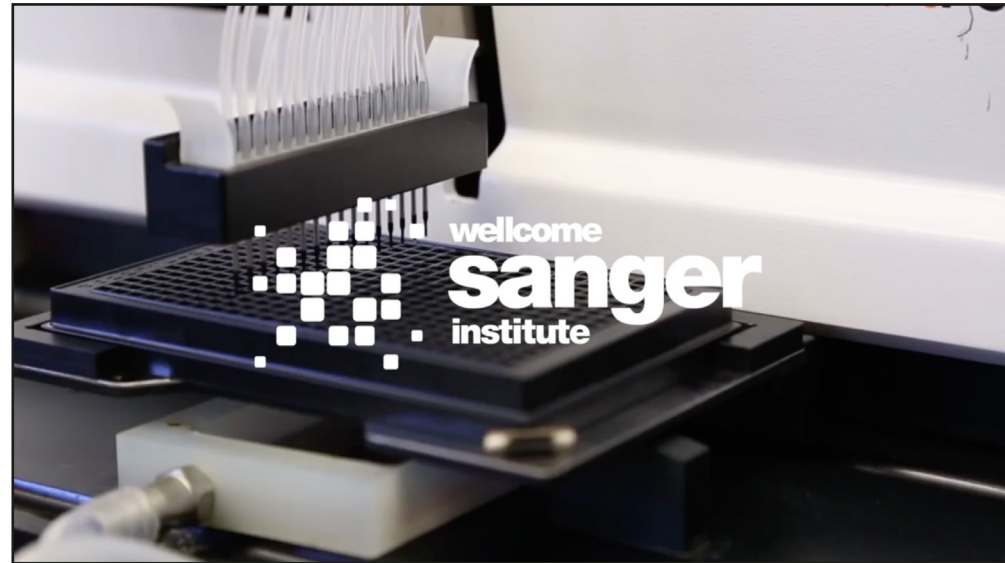
- #PMQs**
14.8K Tweets
- David Davis**
David Davis says there are no impact assessments of Brexit
- #sot2021**
6,470 Tweets
- Cambridge News**
Looks like Cambridge News had an eventful morning
- #DogTubeStation**
- Oxford Circus**
- #mostcontagious**

Film stings

A series of animated logo sting have been created to apply to video content within the Wellcome Sanger Institute.

A monotone and coloured version of the master logo are available to use.

Do not change, edit or modify the animation in any way.



Environmental graphics (windows)

This example shows a window application of the logo and the squared pattern.



Institute collateral

The examples opposite show logo execution across collateral.

There is a specific embroidery logo lockup designed for use on apparel, only use this for clothing application.



25th Anniversary branding

The Sanger Institute was founded in 1993 by Professor Sir John Sulston as part of the Human Genome Project. The Institute made the largest single contribution to the gold-standard sequence of the first human genome, which was published in 2003.

To mark this celebration, we have created an overarching logo that accompanies our communication throughout the year.

25th anniversary logo



Master logo and full 25th anniversary logo



master logo and edited anniversary logo



Accessibility

Accessibility

The Wellcome Sanger Institute branding is designed to inspire everyone, from visitors to the staff. To do that we must make sure all content is clear and consistent.

The points opposite are a series of good rules to follow when producing content for the Institute.

- 1.** Use the Wellcome and Helvetica Neue typeface to keep content easy to read and consistent in style.
- 2.** Set text in sentence case, left aligned. Avoid underlining. Use of italics should be limited, only used for emphasis, reference titles, and so on.
- 3.** Make sure that layouts are uncluttered and allowed to breathe, with a clear hierarchy of headings, captions and text.
- 4.** Take care and consideration when choosing imagery to accompany the content you produce.
- 5.** Avoid setting text whenever possible.
- 6.** Be careful when placing copy over imagery, choose an area where there is consistent colour and suitable contrast to the colour of your typography.
- 7.** When using coloured text, or putting text on a coloured background, make sure there's plenty of contrast between your text and the background.
- 8.** Choose white paper with a matt, silk or uncoated finish.
- 9.** Choose good quality photographs with strong colours and clear definition.
- 10.** At the end of all printed materials remember to use a CTA, such as a callback to the Institute website.

Contact details



Contact details

If you have any questions or concerns in regards to the brand toolkit, please contact the communications team.

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Director of Communications

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