Performance Report for:

https://www.biosyntagma.com/

Report generated: Mon, Mar 11, 2024 7:52 AM -0700
Test Server Location: London, UK
Using: Chrome 117.0.0.0, Lighthouse 11.0.0

A	Performance	Structure	L. Contentful Paint	T. Blocking Time	C. Layout Shift
	89%	95%	1.3s	0ms	0.12

Top Issues

Med-Low	**Use a Content Delivery Network (CDN)**	33 resources found
Med-Low	**Eliminate render-blocking resources** FCP LCP	Potential savings of 279ms
Low	**Properly size images**	Potential savings of 109KB
Low	**Serve static assets with an efficient cache policy**	Potential savings of 47.4KB
Low	**Avoid large layout shifts** CLS	5 elements found

Page Details

2.4s
Fully Loaded Time

Total Page Size - 1.03MB

Total Page Requests - 48

HTML JS CSS IMG Video Font Other

How does this affect me?

Today's web user expects a fast and seamless website experience. Delivering that fast experience can result in increased visits, conversions and overall happiness.

As if you didn't need more incentive, **Google has announced that they are using page speed in their ranking algorithm.**

About GTmetrix

CARBON 60
THE MANAGED CLOUD COMPANY

GTmetrix is developed by the good folks at **Carbon60**, a Canadian hosting company with over 28 years experience in web technology.

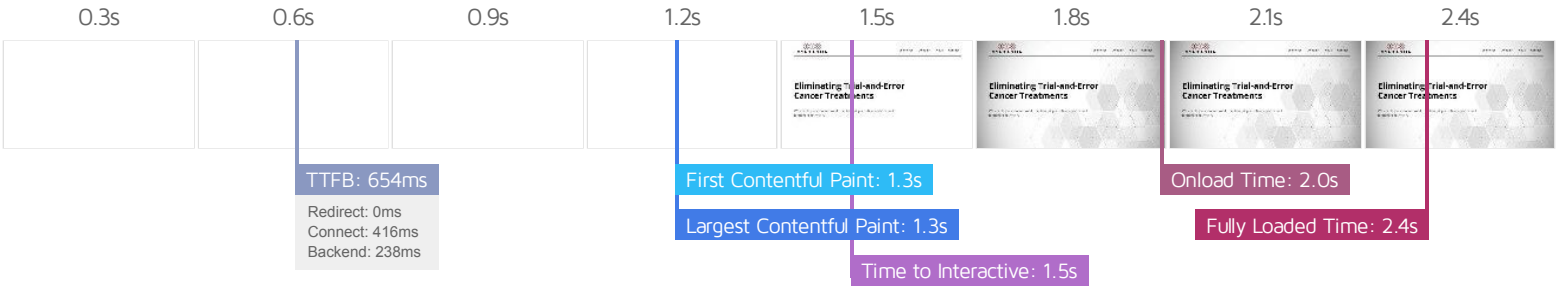
https://carbon60.com/

The waterfall chart displays the loading behaviour of your site in your selected browser. It can be used to discover simple issues such as 404's or more complex issues such as external resources blocking page rendering.

bioSyntagma | Where Spatially Resolved, Multi-Omic Maps Join AI

/	200	biosyntagma.com	15.2KB	700ms
style.css?ver=1.1.4	200	biosyntagma.com	8.92KB	175ms
style.min.css?ver=6.4.3	200	biosyntagma.com	14.8KB	316ms
fontawesome-all.min.css…	200	biosyntagma.com	7.58KB	375ms
designer_css.css?ver=1.0	200	biosyntagma.com	12.1KB	459ms
styles.css?ver=5.8.2	200	biosyntagma.com	0.98KB	197ms
job-listings.css?ver=5983…	200	biosyntagma.com	1.30KB	458ms
email-before-download-p…	200	biosyntagma.com	116B	458ms
dashicons.min.css?ver=6…	200	biosyntagma.com	34.9KB	345ms
css?family=Ek+Mukta%3…	200	fonts.googleapis.com	890B	45ms
jquery.min.js?ver=3.7.1	200	biosyntagma.com	30.4KB	480ms
jquery-migrate.min.js?ver…	200	biosyntagma.com	4.79KB	199ms
imagesloaded.min.js?ver…	200	biosyntagma.com	1.77KB	480ms
masonry.min.js?ver=4.2.2	200	biosyntagma.com	7.26KB	482ms
ticker.min.js?ver=1.0	200	biosyntagma.com	1.67KB	203ms
designer.js?ver=1.0	200	biosyntagma.com	2.26KB	368ms
global.js?ver=1.0.0	200	biosyntagma.com	281B	481ms
mPrint-Figure-02.png	200	biosyntagma.com	203KB	587ms
index.js?ver=5.8.2	200	biosyntagma.com	3.14KB	613ms
index.js?ver=5.8.2	200	biosyntagma.com	4.10KB	644ms
dlm-xhr.min.js?ver=4.9.5	200	biosyntagma.com	2.65KB	642ms
email-before-download-p…	200	biosyntagma.com	501B	643ms
hoverIntent.min.js?ver=1.…	200	biosyntagma.com	706B	643ms
superfish.min.js?ver=1.7.10	200	biosyntagma.com	1.85KB	643ms
superfish.args.min.js?ver…	200	biosyntagma.com	132B	637ms
skip-links.min.js?ver=3.3.3	200	biosyntagma.com	251B	643ms
responsive-menus.min.js…	200	biosyntagma.com	1.39KB	637ms
home.js?ver=1.1.4	200	biosyntagma.com	566B	628ms
api.js?render=6LdJxbwU…	200	google.com	1.16KB	624ms
wp-polyfill-inert.min.js?ve…	200	biosyntagma.com	2.43KB	644ms
regenerator-runtime.min.j…	200	biosyntagma.com	2.45KB	778ms
wp-polyfill.min.js?ver=3.1…	200	biosyntagma.com	36.1KB	786ms
index.js?ver=5.8.2	200	biosyntagma.com	503B	765ms
cropped-output-onlinepn…	200	biosyntagma.com	27.2KB	799ms
Hexagons_sized.jpg	200	biosyntagma.com	77.8KB	803ms
memvYaGs126MiZpBA-U…	200	fonts.gstatic.com	47.1KB	651ms
recaptcha__en.js	200	gstatic.com	194KB	22ms
wp-emoji-release.min.js?…	200	biosyntagma.com	5.00KB	153ms
anchor?ar=1&k=6LdJxbw…	200	google.com	28.0KB	122ms
styles__ltr.css	200	gstatic.com	24.0KB	29ms
recaptcha__en.js	200	gstatic.com	194KB	33ms
722MlWu_TMZiQau3mAa…	200	google.com	6.80KB	13ms
logo_48.png	200	gstatic.com	2.18KB	5ms
KFOmCnqEu92Fr1Mu4mx…	200	fonts.gstatic.com	15.0KB	81ms
KFOlCnqEu92Fr1MmEU9f…	200	fonts.gstatic.com	15.2KB	81ms
webworker.js?hl=en&v=Q…	200	google.com	135B	19ms
cropped-web-logo-icon_c…	200	biosyntagma.com	1.73KB	153ms
POST reload?k=6LdJxbw…	200	google.com	9.49KB	61ms

48 Requests **1.03MB (2.88MB Uncompressed)** **Fully Loaded 2.4s (Onload 2s)**



Performance Metrics

First Contentful Paint

Longer than recommended

How quickly content like text or images are painted onto your page. A good user experience is 0.9s or less.

1.3s

Time to Interactive

Good - Nothing to do here

How long it takes for your page to become fully interactive. A good user experience is 2.5s or less.

1.5s

Speed Index

OK, but consider improvement

How quickly the contents of your page are visibly populated. A good user experience is 1.3s or less.

1.5s

Total Blocking Time

Good - Nothing to do here

How much time is blocked by scripts during your page loading process. A good user experience is 150ms or less.

0ms

Largest Contentful Paint

OK, but consider improvement

How long it takes for the largest element of content (e.g. a hero image) to be painted on your page. A good user experience is 1.2s or less.

1.3s

Cumulative Layout Shift

OK, but consider improvement

How much your page's layout shifts as it loads. A good user experience is a score of 0.1 or less.

0.12

Browser Timings

Redirect	0ms	Connect	416ms	Backend	238ms
TTFB	654ms	First Paint	1.3s	DOM Int.	1.5s
DOM Loaded	1.5s	Onload	2.0s	Fully Loaded	2.4s

IMPACT	AUDIT	
Low	**Reduce unused JavaScript** LCP	Potential savings of 99KB

Reduce unused JavaScript and defer loading scripts until they are required to decrease bytes consumed by network activity.

URL	TRANSFER SIZE	POTENTIAL SAVINGS
https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/recaptcha__en.js	195KB	99KB

Low	**Serve images in next-gen formats**	Potential savings of 183KB

Image formats like WebP and AVIF often provide better compression than PNG or JPEG, which means faster downloads and less data consumption.

URL	RESOURCE SIZE	POTENTIAL SAVINGS
https://www.biosyntagma.com/wp-content/uploads/2019/03/mPrint-Figure-02.png	203KB	118KB
https://www.biosyntagma.com/wp-content/uploads/2019/03/Hexagons_sized.jpg	77.8KB	46.7KB
https://www.biosyntagma.com/wp-content/uploads/2019/02/cropped-output-onlinepngtools.png	27.2KB	18.6KB

Low	**Avoid chaining critical requests** FCP LCP	32 chains found

The Critical Request Chains below show you what resources are loaded with a high priority. Consider reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources to improve page load.

Maximum critical path latency: **1.5s**

INITIAL NAVIGATION

- https://www.biosyntagma.com/ 15.2KB, 698ms
  - https://www.biosyntagma.com/wp-content/plugins/contact-form-7/includes/css/styles.css?ver=5.8.2 1.06KB, 190ms
  - https://www.biosyntagma.com/wp-includes/js/hoverIntent.min.js?ver=1.10.2 785B, 177ms
  - https://www.biosyntagma.com/wp-content/plugins/blog-designer/public/css/designer_css.css?ver=1.0 12.2KB, 452ms
  - https://www.biosyntagma.com/wp-content/themes/altitude-pro/js/global.js?ver=1.0.0 336B, 474ms
  - https://www.biosyntagma.com/wp-includes/js/dist/vendor/wp-polyfill.min.js?ver=3.15.0 36.1KB, 320ms
  - https://www.biosyntagma.com/wp-includes/js/dist/vendor/regenerator-runtime.min.js?ver=0.14.0 2.51KB, 312ms
  - https://www.biosyntagma.com/wp-content/themes/genesis/lib/js/skip-links.min.js?ver=3.3.3 306B, 177ms
  - https://fonts.googleapis.com/css?family=Ek+Mukta%3A200%2C800&ver=1.1.4 890B, 38ms
  - https://www.biosyntagma.com/wp-includes/js/imagesloaded.min.js?ver=5.0.0 1.86KB, 473ms
  - https://www.biosyntagma.com/wp-content/themes/altitude-pro/js/home.js?ver=1.1.4 622B, 162ms
  - https://www.biosyntagma.com/wp-includes/js/dist/vendor/wp-polyfill-inert.min.js?ver=3.1.2 2.51KB, 178ms
  - https://www.biosyntagma.com/wp-content/themes/genesis/lib/js/menu/superfish.min.js?ver=1.7.10 1.91KB, 177ms
  - https://www.biosyntagma.com/wp-includes/js/masonry.min.js?ver=4.2.2 7.38KB, 475ms
  - https://www.biosyntagma.com/wp-includes/js/jquery/jquery.min.js?ver=3.7.1 30.4KB, 473ms
  - https://www.biosyntagma.com/wp-content/plugins/email-before-download/public/css/email-before-download-public.css?ver=6.9.6 193B, 451ms
  - https://www.biosyntagma.com/wp-content/plugins/wp-job-manager/assets/dist/css/job-listings.css?ver=598383a28ac5f9f156e4 1.39KB, 451ms
  - https://www.biosyntagma.com/wp-includes/js/jquery/jquery-migrate.min.js?ver=3.4.1 4.91KB, 192ms

- https://www.biosyntagma.com/wp-content/plugins/email-before-download/public/js/email-before-download-public.js?ver=6.9.6 556B, 177ms
- https://www.biosyntagma.com/wp-content/plugins/blog-designer/public/js/ticker.min.js?ver=1.0 1.76KB, 196ms
- https://www.biosyntagma.com/wp-includes/css/dashicons.min.css?ver=6.4.3 35.3KB, 338ms
- https://fonts.gstatic.com/s/opensans/v40/memvYaGs126MiZpBA-UvWbX2vVnXBbObj2OVTS-muw.woff2 47.6KB, 27ms
- https://www.biosyntagma.com/wp-content/themes/altitude-pro/style.css?ver=1.1.4 9.12KB, 167ms
- https://www.biosyntagma.com/wp-content/plugins/contact-form-7/includes/js/index.js?ver=5.8.2 4.18KB, 179ms
- https://www.biosyntagma.com/wp-content/themes/genesis/lib/js/menu/superfish.args.min.js?ver=3.3.3 209B, 171ms
- https://www.biosyntagma.com/wp-content/plugins/contact-form-7/includes/swv/js/index.js?ver=5.8.2 3.26KB, 151ms
- https://www.biosyntagma.com/wp-content/themes/altitude-pro/js/responsive-menus.min.js?ver=1.1.4 1.45KB, 171ms
- https://www.biosyntagma.com/wp-content/plugins/download-monitor/assets/js/dlm-xhr.min.js?ver=4.9.5 2.74KB, 177ms
- https://www.biosyntagma.com/wp-content/plugins/blog-designer//admin/css/fontawesome-all.min.css?ver=1.0 7.71KB, 368ms
- https://www.google.com/recaptcha/api.js?render=6LdJxbwUAAAAACZMGtGZMctkkS8YCbvHv0GrJieF&ver=3.0 1.16KB, 58ms
- https://www.biosyntagma.com/wp-content/plugins/contact-form-7/modules/recaptcha/index.js?ver=5.8.2 559B, 299ms
- https://www.biosyntagma.com/wp-content/plugins/blog-designer/public/js/designer.js?ver=1.0 2.32KB, 360ms
- https://www.biosyntagma.com/wp-includes/css/dist/block-library/style.min.css?ver=6.4.3 14.8KB, 308ms

Low **Avoid enormous network payloads** LCP — Total size was 1.04MB

Large network payloads cost users real money and are highly correlated with long load times.

URL	TRANSFER SIZE
https://www.biosyntagma.com/wp-content/uploads/2019/03/mPrint-Figure-02.png	205KB
https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/recaptcha__en.js	195KB
https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/recaptcha__en.js	195KB
https://www.biosyntagma.com/wp-content/uploads/2019/03/Hexagons_sized.jpg	78.4KB
https://fonts.gstatic.com/s/opensans/v40/memvYaGs126MiZpBA-UvWbX2vVnXBbObj2OVTS-muw.woff2	47.6KB
https://www.biosyntagma.com/wp-includes/js/dist/vendor/wp-polyfill.min.js?ver=3.15.0	36.1KB
https://www.biosyntagma.com/wp-includes/css/dashicons.min.css?ver=6.4.3	35.3KB
https://www.biosyntagma.com/wp-includes/js/jquery/jquery.min.js?ver=3.7.1	30.4KB
https://www.google.com/recaptcha/api2/anchor?ar=1&k=6LdJxbwUAAAAACZMGtGZMctkkS8YCbvHv0GrJieF&co=aHR0cHM6Ly93d3cuYmlvc3ludGFnbWEuY29tOjQ0Mw..&hl=en&v=QquE1_MNjnFHgZF4HPsEcf_2&size=invisible&cb=sdqdbdvyfyzb	28.0KB
https://www.biosyntagma.com/wp-content/uploads/2019/02/cropped-output-onlinepngtools.png	27.5KB

Low **Efficiently encode images** — Potential savings of 7.63KB

Optimized images load faster and consume less cellular data.

URL	RESOURCE SIZE	POTENTIAL SAVINGS
https://www.biosyntagma.com/wp-content/uploads/2019/03/Hexagons_sized.jpg	77.8KB	7.63KB

Low **Reduce JavaScript execution time** TBT — 255ms spent executing JavaScript

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this.

URL	TOTAL CPU TIME	SCRIPT EVALUATION	SCRIPT PARSE
https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/recaptcha__en.js	257ms	231ms	6ms
https://www.biosyntagma.com/	88ms	11ms	1ms
Unattributable	67ms	4ms	0ms

Low **Reduce unused CSS** FCP LCP — Potential savings of 62.3KB

Reduce unused rules from stylesheets and defer CSS not used for above-the-fold content to decrease bytes consumed by network activity.

URL	TRANSFER SIZE	POTENTIAL SAVINGS
https://www.biosyntagma.com/wp-includes/css/dashicons.min.css?ver=6.4.3	35.3KB	35.3KB
https://www.biosyntagma.com/wp-includes/css/dist/block-library/style.min.css?ver=6.4.3	14.8KB	14.8KB
https://www.biosyntagma.com/wp-content/plugins/blog-designer/public/css/designer_css.css?ver=1.0	12.2KB	12.2KB

Low **Reduce initial server response time** FCP LCP — Root document took 238ms

Keep the server response time for the main document short because all other requests depend on it.

URL	TIME SPENT
https://www.biosyntagma.com/	238ms

Low **Minify CSS** FCP LCP — Potential savings of 5.33KB

Minifying CSS files can reduce network payload sizes.

URL	TRANSFER SIZE	POTENTIAL SAVINGS
https://www.biosyntagma.com/wp-content/themes/altitude-pro/style.css?ver=1.1.4	9.12KB	2.75KB
https://www.biosyntagma.com/wp-content/plugins/blog-designer/public/css/designer_css.css?ver=1.0	12.2KB	2.59KB

N/A **Avoid an excessive DOM size** TBT — 135 elements

A large DOM will increase memory usage, cause longer style calculations, and produce costly layout reflows.

STATISTIC	ELEMENT	VALUE
Total DOM Elements		135
Maximum DOM Depth	div.widget-wrap > div.textwidget > h2 > p <p>	14
Maximum Child Elements	body.home <body data-rsssl="1" class="home page-template-default page page-id-177 custom-header header-image hea…">	23

N/A **Largest Contentful Paint element** LCP — 1,250 ms

This is the largest contentful element painted within the viewport.

ELEMENT
Eliminating Trial-and-Error Cancer Treatments `<h4>`

PHASE	% OF LCP	TIMING
TTFB	52%	654ms
Load Delay	0%	0ms
Load Time	0%	0ms
Render Delay	48%	598ms

N/A **Avoid serving legacy JavaScript to modern browsers** TBT — Potential savings of 53B

Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary for modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers.

URL	POTENTIAL SAVINGS
https://www.biosyntagma.com/wp-includes/js/dist/vendor/wp-polyfill-inert.min.js?ver=3.1.2	53B
Line:0 Column:452	`@babel/plugin-transform-classes`

N/A **Minimize main-thread work** TBT — Main-thread busy for 498ms

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this.

CATEGORY	TIME SPENT
Script Evaluation	296ms
Other	118ms
Style & Layout	41ms
Parse HTML & CSS	16ms
Script Parsing & Compilation	14ms
Garbage Collection	7ms
Rendering	4ms

N/A **Reduce the impact of third-party code** TBT — Total size was 542KB

Third-party code can significantly impact load performance. Limit the number of redundant third-party providers and try to load third-party code after your page has primarily finished loading.

THIRD-PARTY	TRANSFER SIZE	MAIN-THREAD BLOCKING TIME
GOOGLE CDN	416KB	0ms
• https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/recaptcha__en.js	389KB	0ms
• https://www.gstatic.com/recaptcha/releases/QquE1_MNjnFHgZF4HPsEcf_2/styles__ltr.css	24.6KB	0ms
GOOGLE FONTS	79.3KB	0ms
• https://fonts.gstatic.com/s/opensans/v40/memvYaGs126MiZpBA-UvWbX2vVnXBbObj2OVTS-muw.woff2	47.6KB	0ms
• https://fonts.gstatic.com/s/roboto/v18/KFOmCnqEu92Fr1Mu4mxK.woff2	15.5KB	0ms
• https://fonts.gstatic.com/s/roboto/v18/KFOlCnqEu92Fr1MmEU9fBBc4.woff2	15.3KB	0ms
OTHER GOOGLE APIS/SDKS	46.0KB	0ms
• https://www.google.com/recaptcha/api2/anchor?ar=1&k=6LdJxbwUAAAAACZMGtGZMctkkS8YCbvHv0GrJieF&co=aHR0cHM6Ly93d3cuYmlvc3ludGFnbWEuY29tOjQ0Mw..&hl=en&v=QquE1_MNjnFHgZF4HPsEcf_2&size=invisible&cb=sdqdbdvyfyzb	28.0KB	0ms
• https://www.google.com/recaptcha/api2/reload?k=6LdJxbwUAAAAACZMGtGZMctkkS8YCbvHv0GrJieF	9.49KB	0ms
• https://www.google.com/js/bg/722MIWu_TMZiQau3mAaarHtCk2pd6rTYw5oNsH4wR_g.js	7.20KB	0ms

N/A **User Timing marks and measures**

No user timings and/or marks found.