

Anton I. Petrov, PhD

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- **Expert in RNA Bioinformatics** | 15+ years of experience in ncRNA research, RNA structure analysis, and large-scale database development
- Built the **world's largest RNA databases**, [RNAcentral](#) and [Rfam](#) | Creator of [R2DT](#)
- **£2M+** in research funding | **30+** publications, **5K+** citations

Professional Experience

Director, Riboscope Ltd, Cambridge, UK 2022 - present

- Lead RNA bioinformatics consultancy specialising in computational analysis and database development for biotechnology clients
- Design and implement custom bioinformatics solutions for RNA drug discovery
- Develop and maintain proprietary analysis pipelines and visualisation tools

Head of RNA Bioinformatics 2022

Ladder Therapeutics - now Serna Bio (remote)

- Developed tools for identifying and prioritising RNA targets for drug development

RNA Resources Project Leader 2015 - 2022

European Bioinformatics Institute (EMBL-EBI), Cambridge, UK

- **Led a team of 4** to develop [RNAcentral](#) & [Rfam](#), serving **80K+ users** annually
- Coordinated the RNAcentral Consortium, connecting **50+ research groups** worldwide
- **Secured £2M+ in funding** (Wellcome, BBSRC) through successful grant applications
- **Creator and lead developer** of [R2DT](#), an open-source platform for automated RNA structure visualisation, now adopted by 10+ major databases
- **Managed projects end-to-end**, including research strategy, recruitment, team leadership, public outreach, and external collaborations
- Oversaw **Scientific Advisory Boards**, handling member selection and reporting
- Designed an **award-winning public engagement** activity, reaching **3K+** people

Bioinformatician 2013 - 2015

European Bioinformatics Institute (EMBL-EBI), Cambridge, UK

- Implemented the RNAcentral website and data pipeline from scratch in less than a year

Postdoctoral Research Associate (1 year), **Graduate Student** (5 years) 2007 - 2013
Leontis-Zirbel lab, Bowling Green State University, Ohio, USA

- Developed [RNA 3D Motif Atlas](#), an automatic classification of RNA 3D motifs, and [RNA 3D Hub](#), a database for RNA 3D structure analysis.

Education

PhD, Biology	2007 - 2012	BSc, Biology	2003 - 2007
<i>Bowling Green State University, OH, USA</i>		<i>St. Petersburg State University, Russia</i>	
<i>Advisers: Neocles Leontis and Craig Zirbel</i>		<i>Specialised in Biochemistry and</i>	
<i>Dissertation: RNA 3D Motifs: Identification, Clustering, and Analysis. GPA 4.0</i>		<i>Bioinformatics.</i>	
		<i>Summa cum laude</i>	

Technical Skills

18+ years of programming experience developing web interfaces and data pipelines.

- *Programming languages:* **Python & JavaScript**, Perl, PHP, Matlab
- *Frameworks:* Django, Svelte, React, D3, Bootstrap, Snakemake
- *Cloud and DevOps:* Docker, Kubernetes, AWS, GCP, Solr
- *Databases:* Postgres, MySQL, SQLite, Oracle PL/SQL
- *Other Tools:* Git, GitHub, Jenkins, LSF, Bash
- *RNA-specific Tools:* Infernal, Vienna RNA package, R-scape

Selected Publications 32 total

Full list at [ORCID](#) | [5K+ citations](#) | **6** papers as last author & **6** as first author

- **R2DT**: a comprehensive platform for visualizing RNA secondary structure
Nucleic Acids Research (NAR), 2025.
Original paper: R2DT is a framework for predicting and visualising RNA secondary structure using templates *Nature Communications, 2021*
- **LitSumm**: large language models for literature summarization of noncoding RNAs
Database, 2025
- **Rfam 15**: RNA families database in 2025 *NAR, 2025.*
Previous versions: **Rfam 14** (*NAR, 2021*) and **Rfam 13** (*NAR, 2018*)
1,800+ combined citations

- **RNAcentral 2021**: secondary structure integration, improved sequence search and new member databases *NAR, 2021*. Previous versions: *NAR, 2014, 2017, 2019*
850+ combined citations
- Automated classification of RNA 3D motifs and the **RNA 3D Motif Atlas**
RNA Journal, 2013

Peer Review and Editorial Duties

- **100+ reviews** for **20+ journals**, including *NAR, Bioinformatics, Database, RNA, PLoS, RNA Biology, Genome Biology, and Nature Communications* ([view all](#))
- Served as an **Editorial Board member** for *Genes* (2020-2022)
- Reviewed grants for NSERC (Canada) and National Science Centre (Poland)

Talks

Presented at multiple international conferences, including RNA Society, ISMB, VIZBI, RiboClub, Cambridge RNA Club, and Benasque RNA Structure and Function meetings.

Other

- *Foreign languages*: Fluent in **English** and **Russian**, working proficiency in **French**, limited proficiency in **Italian** and **Spanish**, basic German and Latin
- *Activities*: **Guitar** (electric and acoustic), **rowing** (8+, 4+, 1x)
- Successfully completed a six-month **entrepreneurship course** at the Wellcome Genome Campus Startup School (2021-2022 cohort)
- Dual **British-Russian citizen**