



# Raul da Costa

Dr.rer.nat.

## PROFILE

- Cellular biologist with focus on the use of flow cytometry for the assessment of cell-viability-markers.
- Experienced communicator with several peer-reviewed publications, congress participations and a patent application.
- Adaptable professional with experience working with multidisciplinary and cross-cultural teams.

## PERSONAL DATA & CONTACT

- Name: Raul Adrian da Costa Graterol
- Date of birth: 24.06.1989
- Nationality: Portuguese
- Residence: Luxembourg
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## EDUCATION

- **Doctor rerum naturalium, Magna cum laude**  
(02.2017–04.2020) University of Münster - Germany
- **Master in Biology of Human Reproduction**  
(03.2013–02.2016) Center for Advanced Studies - Venezuela
- **Licentiate in Biology**  
(04.2007–12.2012) University of Zulia - Venezuela

## Experience

- **Engineer Flow, Mass and Imaging Cytometry**  
(05.2023 – Today) National Cytometry Platform, Luxembourg Institute of Health – Luxembourg
  - Developing cell-based assays
  - Designing cytometric experiments
  - Maintaining equipment and performing quality controls
- **Postdoctoral researcher**  
(05.2020 – 04.2023) Centre for Reproductive Medicine and Andrology, University of Münster – Germany
  - Management of research projects
  - File a patent application in collaboration with patent attorneys and intellectual property representatives
  - Scout scientific literature to assess research trends
  - Supervise and tutoring of students
- **Research Guest**  
(06.2016 – 04.2020) Centre for Reproductive Medicine and Andrology, University Hospital of Münster – Germany
  - Develop cellular assays based on flow cytometry
  - Generate written communications and presentations
  - Establish of multidisciplinary collaborations
  - Work alongside different institutional departments

## COMPETENCIES

- Flow cytometry, cell sorting (FACS), use of data analysis software (FlowJo, FCS Express), Raman micro-spectrometry.
- Cell viability assays, mitochondrial activity, oxidative stress, DNA fragmentation assays, cell cycle analysis.
- Public presentations, to groups, via electronic media. Generation of reports, scientific articles, slides, posters.
- Organization and prioritization of tasks, meeting deadlines, local and international networking.

## AWARDS & GRANTS

- Novartis Regional BioCamp 2019. Member of the winner team. Ljubljana – Slovenia, 19-21.05.2019.
- DAAD Research Grants - Doctoral Programmes in Germany 2016 – 2019. German Academic Exchange Service (DAAD)

## COURSES & CERTIFICATIONS

- Good Manufacturing Practice Training. Pharma Lessons. Online 03.2022. Verification Code: vJ4z07PMvg
- IVDR 2017 746 regulatory affairs: Learn EU compliance. Udemy. Online 03.2022. Verification Code: UC-6d15bedb-2385-4fa2-8749-fd338cad66b5





## INVENTIONS

- “SPERM STRATIFICATION” International application according to the Patent Cooperation Treaty. European Patent Office, The Hague Ref. code PCT/EP2021/066927

## PERSONAL REFERENCES

- **Dr. Stefan Schlatt**  
Director of Centre for Reproductive Medicine and Andrology.  
+49 251 83 56099  
stefan.schlatt@ukmuenster.de
- **Dr. Victoria Sanchez**  
Regional Business Manager  
Cryos International  
+49 151 20517297  
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## LANGUAGE SKILLS

- **English**  
Full professional proficiency 
- **German**  
Limited working proficiency 
- **Spanish**  
Native 
- **Portuguese**  
Elementary proficiency 

## PUBLICATIONS

- Da Costa R, et al. **Simultaneous detection of sperm membrane integrity and DNA fragmentation by flow cytometry: a novel and rapid tool for sperm analysis.** Andrology 2021. DOI: 10.1111/andr.13017.
- Da Costa R, et al. **Spectral features of nuclear DNA in human sperm assessed by Raman Microspectroscopy: Effects of UV-irradiation and hydration.** PLOS ONE 2018. DOI: 10.1371/journal.pone.0207786
- Amaral S, Da Costa R, et al. **Raman micro-spectroscopy analysis of different sperm regions: a species comparison.** Mol Hum Reprod 2018; DOI: 10.1093/molehr/gax071
- Da Costa R, et al. **Cadmium inhibits motility, activities of plasma membrane Ca<sup>2+</sup>-ATPase and axonemal dynein-ATPase of human spermatozoa.** Andrologia 2016. DOI: 10.1111/and.12466

## PRESENTATIONS

- **Sperm DNA and membrane integrity test (DMI): a novel evaluation strategy of DNA fragmentation in viable spermatozoa (oral).** 12th European Congress of Andrology (ECA). Barcelona – Spain, 19-21.10.2022.
- **Assessment of DNA fragmentation in viable spermatozoa: a novel sperm evaluation strategy in andrology (oral).** 34th Annual Meeting of the German Society for Andrology. Giessen – Germany, 08-10.09.2022.
- **Flow Cytometry for Sperm Screening – a multiparametric approach (poster).** 21st European Testis Workshop (ETW) - Online, 30.05. – 03.06.2021.