

CURRICULUM VITAE

Stefan DIMITROV

• EDUCATION

- 1982 Ph.D, Molecular Biology, Institute of Molecular Biology Roumen Tsanev, Bulgaria and Institute of Molecular Biology, Moscow, Russia
- 1976 Masters, Solid-State Physics, Sofia University St. Kliment Ohridski, Bulgaria

• CURRENT POSITIONS

- 2023-present Professor, European Research Area (ERA) Chair Holder, Institute of Molecular Biology Roumen Tsanev, Bulgaria
- 2017-present Emeritus Director of Research at CNRS, France

• PREVIOUS POSITIONS

- 2018 –2023 Scientific Director of Izmir Biomedicine and Genome Center (IBG), Izmir, Turkey
Head of a lab “Epigenetics and Chromatin Biology” at IBG, Turkey
- 1996 - 2017 Director of Research (DR1, Full Professor equivalent position) at the National Centre for Scientific Research (CNRS)

Head of a lab at the Institute for Advanced Biosciences, Grenoble, France

Co-leading a lab at Ecole Normale Supérieure de Lyon, France
- 1992 - 1996 Visiting scientist at the National Institutes of Health (NIH), Bethesda, USA
1991 - 1992 Visiting Professor at The Cancer Research Center, Laval University, Canada
1990 - 1991 Visiting Scientist at Swiss Institute for Experimental Cancer Research, Switzerland
1989 - 1990 Director of Research at the Institute of Molecular Biology, Sofia, Bulgaria
1983 - 1988 Assistant Professor at the Institute of Molecular Biology, Sofia, Bulgaria

• FELLOWSHIPS AND AWARDS

- 2011 - 2013 Outstanding research group, The National Ligue against Cancer
2010 Team A+, the highest team ranking for excellence in science in France
2008 - 2009 Medical Research Council (INSERM) award for Excellence in Research
2007 - 2009 Leader of outstanding research group, the National Ligue against Cancer (France)
2006 Ranked among the first top 3% French biomedical scientists
1996 - 1999 ATIP (the highest award for young scientist in France), CNRS, France

MAIN FELOWSHIPS AND AWARDS:

- 2022-elected *Honorary Member of the Turkish Academy of Sciences, Turkey (TUBA)*
- 2016-elected *Foreign Fellow of the National Academy of Sciences, India (NASI)*
- 2008-elected *Foreign Member of the Bulgarian Academy of Sciences, Bulgaria (BAS)*

I have been elected Foreign/Honorary Member of the three above mentioned National Academy of Sciences (TUBA, NASI and BAS) for “seminal contributions in the field of epigenetics” and assistance in science development in Turkey and in both India and Bulgaria. This is the main scientific recognition that these countries can offer to a scientist.

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2023-present Institute of Molecular Biology Roumen Tsanev, Sofia, Bulgaria
2018-present Izmir Biomedicine and Genome Center, Izmir, Turkey
1996 -2017 CNRS & University Grenoble-Alpes, IAB, France and ENS de Lyon.

During my whole scientific career, I had supervised more than 90 students and post docs.

• TEACHING ACTIVITIES (1996-2017)

I have been occasionally teaching courses on "Chromatin Structure and Function" and "Chromatin Epigenetics" at ENS, Lyon, France and at Université Grenoble-Alpes, Grenoble, France.

• INSTITUTIONAL RESPONSIBILITIES

2020 –2023 Scientific Director at Izmir Biomedicine and Genome Center, Turkey
2020 –2022 Coordinator of COVID research at Izmir Biomedicine and Genome Center, Izmir, Turkey
2017 - 2019 Director at the Basic and Translational Research Program at Izmir Biomedicine and Genome Center, Turkey
1996 - 2017 Faculty Member (Director of Research at CNRS, France), Institute for Advanced Biosciences, Grenoble (IAB), France and Member of the Director Committee, IAB, France

• REVIEWING ACTIVITIES

2017 - 2018 President of the Scientific Advisory Board of IBG, Turkey
2015 - 2016 Member of the Scientific Advisory Board of IBG, Turkey
2010 - 2017 Scientific evaluator for the Agence Nationale de Recherche, France
1996 - 2017 Evaluator for the scientific activities of national Institutions at INSERM and CNRS, France

Since 2022, I am the Editor in Chief of the Indian Journal of Biochemistry and Biophysics, the flagship Indian journal in the field of modern biology.

During the years I have also been grant/thesis reviewer for EC (ERCEA) as well as for Institutions in several European and non-European countries including Italy (AIRC), Bulgaria (BAS), Qatar (QBRI), Canada (NSERC, FRSQ), UK (University of Cambridge/LMB Cambridge, BBSRC), Saudi Arabia (KAUST), South Africa (University of Cape Town, NRF), Netherlands (NOW), Australia (ANU, Canberra), India (JNCASR, Bangalore), etc.

Since 1996, I am reviewing for the top-level scientific journals, including *Cell*, *Nature*, *Science*, *Mol. Cell*, *Nature Struct. Mol. Biol.*, *Nucl. Acids Res.*, *Nature Com*, *EMBO J*, *J. Cell Biol.*, etc.

Major scientific contributions (2010-present):

I have worked during all my scientific career in the field of epigenetics and our lab is among the leader labs in this field of modern biology. Below are summarized my major scientific contributions during the last years.

- Revealing the function of MeCP2 and deciphering the aetiology of Rett syndrome (a very severe neurodevelopmental disease), *a ground breaking discovery, abolishing a “text-book dogma”*,

published in Science (paper #2 from “Selected Publications”), and highlighted by an Editorial in *Science*;

- Determination of the structures of both H1-bound nucleosome and H1-bound hexa-nucleosome summarized in 3 *Mol. Cell* papers (papers # 4-6). *This is among the highest achievements in structural epigenetics in the last 30 years*;
- Identification of the first mammalian chaperones for the histone variant H2A.Z and clarifying the function of H2A.Z, a *breakthrough published in Nature* (paper #9), *Nature Struct. Mol. Biol.* (paper # 7) and *Nucl. Acids. Res.* (paper #3).

Selected Publications (2010-present):

I have spent all my scientific career working in the field of epigenetics. I have published **155 papers** and my lab is among the few leader labs in epigenetics field. **My papers are cited more than 11,880 times** (543 citations for the period 1982-1992, and 11343 after 1992)*. **Six of my papers were ranked by Faculty 1000. My h-index is 58*. My I-index is 101***. *, according Google Scholar

1. "Dual role of histone variant H3.3B in spermatogenesis: positive regulation of piRNA transcription and implication in X-chromosome inactivation." Fontaine E, Papin C, Martinez G, Le Gras S, Nahed RA, Héry P, Buchou T, Ouararhni K, Favier B, Gautier T, Sabir JSM, Gerard M, Bednar J, Arnoult* C, **Dimitrov* S**, Hamiche* A. *Nucleic Acids Res.* 2022;50(13):7350-7366; doi: 10.1093/nar/gkac541. (* , corresponding authors) **IF=16.6**

2. “MeCP2 is a microsatellite binding protein that protects CA repeats from nucleosome invasion” Ibrahim A, Papin C, Mohideen-Abdul K, Le Gras S, Stoll I, Bronner C, **Dimitrov,* S**, Klaholz* BP, Hamiche* A. *Science.* 2021 Jun 25;372(6549):eabd5581. doi: 10.1126/science.abd5581 (*highlighted by an Editorial from Science*) (* , corresponding authors) **IF=56.9**

3. “H2A.Z is dispensable for both basal and activated transcription in post-mitotic mouse muscles”. Belotti E, Lacoste N, Simonet T, Papin C, Padmanabhan K, Scionti I, Gangloff YG, Ramos L, Dalkara D, **Dimitrov *S**, Hamiche* A, Schaeffer* L. *Nucleic Acids Res.* 2020 May 21;48(9):4601-4613. doi: 10.1093/nar/gkaa157. (*highlighted as NAR breakthrough article*) (* , corresponding authors) **IF=16.6**

4. “Structure of an H1-Bound 6-Nucleosome Array Reveals an Untwisted Two-Start Chromatin Fiber Conformation”. Garcia-Saez I, Menoni H, Boopathi R, Shukla MS, Soueidan L, Noirclerc-Savoye M, Le Roy A, Skoufias DA, Bednar J, Hamiche A, Angelov D, Petosa C, **Dimitrov S.** *Mol Cell.* 2018, 72(5):902-915.e7. (*ranked by Faculty 1000, “F1000 Prime”*) **IF=16.6**

5. “Structure and Dynamics of a 197 bp Nucleosome in Complex with Linker Histone H1 ». Bednar J, Garcia-Saez I, Boopathi R, Cutter AR, Papai G, Reymer A, Syed SH, Lone IN, Tonchev O, Crucifix C, Menoni H, Papin C, Skoufias DA, Kurumizaka H, Lavery R, Hamiche A, Hayes JJ, Schultz P, Angelov D, Petosa C, **Dimitrov S.** *Mol Cell.* 2017, May 4;66(3):384-397.e8. **IF=19.3**

6. “The Flexible Ends of CENP-A Nucleosome Are Required for Mitotic Fidelity”. Roulland Y, Ouararhni K, Naidenov M, Ramos L, Shuaib M, Syed SH, Lone IN, Boopathi R, Fontaine E, Papai G, Tachiwana H, Gautier T, Skoufias D, Padmanabhan K, Bednar J, Kurumizaka H, Schultz P, Angelov D, Hamiche A, **Dimitrov S.** *Mol Cell.* 2016 Aug 18;63(4):674-685. **IF=19.3**

7. Molecular basis and specificity of H2A.Z-H2B recognition and deposition by the histone chaperone YL1. Latrick CM, Marek M, Ouararhni K, Papin C, Stoll I, Ignatyeva M, Obri A, Ennifar E, **Dimitrov S**, Romier C, Hamiche A. *Nat Struct Mol Biol.* 2016 Apr;23(4):309-16. **IF=16.8**

8. “ANP32E is a histone chaperone that removes H2A.Z from chromatin”. Obri A, Ouararhni K, Papin C, Diebold ML, Padmanabhan K, Marek M, Stoll I, Roy L, Reilly PT, Mak TW, **Dimitrov* S**, Romier*

C, Hamiche*A. *Nature*. 2014 Jan 30;505(7485):648-53. doi: 10.1038/nature12922. (*, *corresponding authors*) **IF=64.8**

9. “Phosphorylation of the CENP-A amino-terminus in mitotic centromeric chromatin is required for kinetochore function” Goutte-Gattat D, Shuaib M, Ouararhni K, Gautier T, Skoufias DA, Hamiche A, **Dimitrov S. *Proc Natl Acad Sci U S A***. 2013 May 21;110(21):8579-84. **IF=11.1**

10. “The docking domain of histone H2A is required for H1 binding and RSC-mediated nucleosome remodeling” Shukla MS, Syed SH, Goutte-Gattat D, Richard JL, Montel F, Hamiche A, Travers A, Faivre-Moskalenko C, Bednar J, Hayes JJ, Angelov D, **Dimitrov S. *Nucleic Acids Res***. 2011 Apr;39(7):2559-70. **IF=16.6**

11. "Single-base resolution mapping of H1-nucleosome interactions and 3D organization of the nucleosome. Syed SH, Goutte-Gattat D, Becker N, Meyer S, Shukla MS, Hayes JJ, Everaers R, Angelov D, Bednar J, **Dimitrov S. *Proc Natl Acad Sci U S A***. 2010 May 25;107(21):9620-5. **IF=11.1**

12. Remosomes: RSC generated non-mobilized particles with approximately 180 bp DNA loosely associated with the histone octamer. Shukla MS, Syed SH, Montel F, Faivre-Moskalenko C, Bednar J, Travers A, Angelov D, **Dimitrov S. *Proc Natl Acad Sci U S A***. 2010 Feb 2;107(5):1936-41. **IF=11.1**

13. HJURP binds CENP-A via a highly conserved N-terminal domain and mediates its deposition at centromeres. Shuaib M, Ouararhni K, **Dimitrov S**, Hamiche A. *Proc Natl Acad Sci U S A*. 2010 Jan 26;107(4):1349-54. **IF=11.1**

Management experience

I was among the few *founders* of the interdisciplinary Institute « Laboratoire Joliot Curie » at Ecole Normale Supérieure de Lyon (ENS), which is one of the most prestigious Universities in France.

We, Prof. Mehmet Ozturk (the famous Turkish molecular biologist) and myself, have established Izmir Biomedicine and Genome Center (iBG-izmir), the biggest cell and molecular biology Center in Turkey. The Center was inaugurated on the fall of 2015. I was, together with Prof. Aziz Sancar (Nobel Prize winner, 2015), Prof. Christian Bréchet (President, Institut Pasteur), Prof. Maria Leptin (Director, EMBO), Prof. Iain Mattaj (General Director, EMBL) and other colleagues, Member of the Science Advisory Board (SAB) of iBG-Izmir during the period 2015-2018. I was President of the SAB for the period 2017-2018. Since November 2018, I have a Senior Scientist position at IBG and I was Scientific Director of IBG for the period January 2020-May, 2023

Since 2003, I was working in close collaboration with scientists from India. I have been involved in depth in the development of Indian Epigenetics. Of note, in 2003 there were only two labs working in the field, while now hundreds of labs in India are focused on epigenetic problems.

Major contributions to early careers of excellent researchers: As a whole, **13** of either my students or post-doctoral fellows have competitively won *tenure* positions in various scientific Institutions in different countries, including France, Italy and India. Among others, Sebastien Almagro and Fabienne Hans have Assistant Professor positions in France. Matthieu Boulard is group leader at EMBL, Rome. Fabien Montel and Andre Verdel are CR1 (First class Research position) at CNRS (France), while Kiran Padmanabhan is CR1 at INSERM (France) and they have their own labs. Two of my “people” (Kiran and André) had ATIP/AVENIR grants (the highest scientific award for young scientists in France) and one of them (André) had also ERC and HSFP grants. In addition, several of my ex-students/post-docs have higher positions in industry.