

# Curriculum



Nome Name:	Stefano
Cognome Surname:	Bastianini

ORCID:	0000-0003-2468-1704
Scopus Author ID:	n.d.
WOS Author ID:	n.d.
Sito WEB WEB site:	n.d.

## **POSIZIONE PROFESSIONALE ATTUALE / CURRENT PROFESSIONAL POSITION:**

Posizione attuale Current position:	In servizio
Qualifica Qualification:	Professore Associato (L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company:	Alma Mater Studiorum - Università di BOLOGNA
Nazione Ateneo/Ente/Azienda University/Institution/Company Country:	ITA
Anno inizio Start Year:	2022
Anno fine End Year:	n.d.

## **PRECEDENTI ESPERIENZE LAVORATIVE (ULTIMI 10 ANNI) / PREVIOUS WORK EXPERIENCE ( LAST 10 YEARS):**

Qualifica Qualification:	Ricercatore a t.d. - t.defin. (art. 24 c.3-a L. 240/10)
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Ateneo/Ente/Azienda University/Institution/Company	Alma Mater Studiorum - Università di BOLOGNA
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	n.d.
Anno inizio Start Year:	2018
Anno fine End Year:	2019
Descrizione Description:	RTD-a

Qualifica Qualification:	Ricercatore a t.d. - t.defin. (art. 24 c.3-b L. 240/10)
Ateneo/Ente/Azienda University/Institution/Company	Alma Mater Studiorum - Università di BOLOGNA
Posizione Sede Lavorativi (indicare Nazione e Città) Workplace Location (specify Country and City):	n.d.
Anno inizio Start Year:	2019
Anno fine End Year:	2022
Descrizione Description:	

## LINGUE / LANGUAGES:

Lingua Language:	Inglese
Scrittura Writing:	B2
Comunicazione Communication:	B2

## AREA/SETTORE SCIENTIFICO-DISCIPLINARE / AREA/SECTOR SCIENTIFIC-DISCIPLINARY

Area scientifico-disciplinare Area scientific-disciplinary:	Scienze biologiche
Area scientifico-disciplinare codice Area scientific-disciplinary code:	05
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-Fisiologia
Settore scientifico-disciplinare codice Sector scientific-disciplinary code:	-BIOS-06/A

**DESCRIZIONE DEI PRINCIPALI RISULTATI SCIENTIFICI  
CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI  
MASSIMO 10 PUBBLICAZIONI) / DESCRIPTION OF THE MAIN  
SCIENTIFIC RESULTS ACHIEVED IN THE LAST 10 YEARS (WITH  
ATTACHED LIST OF MAXIMUM 10 PUBLICATIONS):**

<p>Descrizione Description:</p>	<p><i>Since 2004, I have published 57 articles (SCOPUS h-index: 20; 1133 citations on May the 5th, 2025), 16 as first author and 4 as last (corresponding) author. Main significant contributions to science of my works are the following: - for the first time we documented the non-dipping blood pressure profile in narcoleptic mice, a serious risk factor for cardiovascular disease. Our later works confirmed this finding also in narcoleptic patients, and pharmacological/mechanistic investigations highlighted a specific sympathetic derangement (PMID: 33517440; 24033681; 21286242; 23217021). These data have direct clinical relevance in better characterizing human NT1. - Similarly, in 2012 we discovered a peculiar EEG feature (High amplitude theta waves) in narcoleptic mice during REM sleep and cataplexy. Again, subsequent works confirmed this finding both in rodents and human patients (PMID: 21883592; 26742662; 27230703; 23616586). These data have direct clinical relevance in better characterizing human NT1. - In 2024 we patented a novel dual orexin receptor agonist (TAT-OXA, Italian n. 102022000013894 and international n. WO/2024/003128) as possible therapeutic molecule for narcolepsy. The patent is currently hold by the University of Bologna and the molecule will be further developed to with the aim of moving toward human trials. - In 2013, as postdoc for the Karolinska Institutet (Sweden) I started working on mouse sleep breathing and, from 2022, I have got 4 (2 local and 2 National) grants (3 as PI and 1 as Participant) in this research field for a total of 495.000 Euros. My contribution in this field was the discover of mouse models of obstructive sleep apneas and the development of new therapeutic (chemo and opto-genetic) strategies to prevent their occurrence (PMID: 39032099; 37459897; 34509609; 30920081; 28230307). This specific interest also allowed to start multidisciplinary collaboration with engineers to develop new implantable mouse devices to control sleep apneas according to blood oxygen saturation. - In collaboration with Prof. Ciani, I contributed to characterize a mouse model of CDKL5 deficiency (CDD, a rare genetic disease) discovering the occurrence of sleep apneas (PMID: 39049436; 28230307) and cardiovascular derangements (PMID: 36982627). These data are currently under investigation on human CDD patients and, up to now, have been partly replicated (PMID: 36372969). A second step of this collaboration (also thanks to specific Telethon grants) led to the development of gene and protein therapies (patented by prof. Ciani) we have extensively published (PMID: 29474534, 36109452).</i></p>
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## PUBBLICAZIONI / PUBLICATIONS:

Anno della pubblicazione Year of publication:	2024
Citazione Citation:	Lo Martire V., Berteotti C., Zoccoli G., Bastianini S. (2024). Improving Sleep to Improve Stress Resilience. CURRENT SLEEP MEDICINE REPORTS, vol. 10, p. 23-33, ISSN: 2198-6401, doi: 10.1007/s40675-024-00274-z

Anno della pubblicazione Year of publication:	2017
Citazione Citation:	BASTIANINI, STEFANO, ALVENTE, SARA, BERTEOTTI, CHIARA, LO MARTIRE, VIVIANA CARMEN, SILVANI, ALESSANDRO, Swoap, Steven J, VALLI, ALICE, ZOCCOLI, GIOVANNA, Cohen, Gary (2017). Accurate discrimination of the wake-sleep states of mice using non-invasive whole-body plethysmography. SCIENTIFIC REPORTS, vol. 7, p. 1-10, ISSN: 2045-2322, doi: 10.1038/srep41698

Anno della pubblicazione Year of publication:	2024
Citazione Citation:	Bastianini S., Alvente S., Berteotti C., Lo Martire V., Matteoli G., Miglioranza E., Silvani A., Zoccoli G. (2024). Ageing-related modification of sleep and breathing in orexin-knockout narcoleptic mice. JOURNAL OF SLEEP RESEARCH, vol. 1, p. 1-12, ISSN: 0962-1105, doi: 10.1111/jsr.14287

Anno della pubblicazione Year of publication:	2017
Citazione Citation:	Lo Martire, Viviana, Alvente, Sara, Bastianini, Stefano, Berteotti, Chiara, Silvani, Alessandro, Valli, Alice, Viggiano, Rocchina, Ciani, Elisabetta, Zoccoli, Giovanna (2017). CDKL5 deficiency entails sleep apneas in mice. JOURNAL OF SLEEP RESEARCH, vol. 26, p. 295-297, ISSN: 0962-1105, doi: 10.1111/jsr.12512

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Alvente, Sara, Matteoli, Gabriele, Miglioranza, Elena, Zoccoli, Giovanna, Bastianini, Stefano (2023). How to study sleep apneas in mouse models of human pathology. JOURNAL OF NEUROSCIENCE METHODS, vol. 395, p. 1-11, ISSN: 1872-678X, doi: 10.1016/j.jneumeth.2023.109923

Anno della pubblicazione Year of publication:	2021
Citazione Citation:	Bartolucci M. L., Berteotti C., Alvente S., Bastianini S., Guidi S., Lo Martire V., Matteoli G., Silvani A., Stagni F., Bosi M., Alessandri-Bonetti G., Bartesaghi R., Zoccoli G. (2021). Obstructive

	sleep apneas naturally occur in mice during REM sleep and are highly prevalent in a mouse model of Down syndrome. NEUROBIOLOGY OF DISEASE, vol. 159, p. 1-9, ISSN: 0969-9961, doi: 10.1016/j.nbd.2021.105508
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Anno della pubblicazione Year of publication:	2025
Citazione Citation:	Matteoli, Gabriele, Alvente, Sara, Berteotti, Chiara, Coraci, Dario, Lo Martire, Viviana, Lops, Martina, Miglioranza, Elena, Silvani, Alessandro, Volino, Emilia, Zoccoli, Giovanna, Bastianini, Stefano (2025). Detection of central and obstructive sleep apneas in mice: A new surgical and recording protocol. PLOS ONE, vol. 20, p. 1-9, ISSN: 1932-6203, doi: 10.1371/journal.pone.0320650

Anno della pubblicazione Year of publication:	2015
Citazione Citation:	BASTIANINI, STEFANO, SILVANI, ALESSANDRO, BERTEOTTI, CHIARA, LO MARTIRE, VIVIANA CARMEN, Cohen, Gary, Ohtsu, Hiroshi, Lin, Jian Sheng, ZOCCOLI, GIOVANNA (2015). Histamine Transmission Modulates the Phenotype of Murine Narcolepsy Caused by Orexin Neuron Deficiency. PLOS ONE, vol. 10, p. 1-16, ISSN: 1932-6203, doi: 10.1371/journal.pone.0140520

Anno della pubblicazione Year of publication:	2023
Citazione Citation:	Loi, Manuela, Bastianini, Stefano, Candini, Giulia, Rizzardi, Nicola, Medici, Giorgio, Papa, Valentina, Gennaccaro, Laura, Mottolese, Nicola, Tassinari, Marianna, Uguagliati, Beatrice, Berteotti, Chiara, Martire, Viviana Lo, Zoccoli, Giovanna, Cenacchi, Giovanna, Trazzi, Stefania, Bergamini, Christian, Ciani, Elisabetta (2023). Cardiac Functional and Structural Abnormalities in a Mouse Model of CDKL5 Deficiency Disorder. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES, vol. 24, p. 5552-5577, ISSN: 1422-0067, doi: 10.3390/ijms24065552

Anno della pubblicazione Year of publication:	2022
Citazione Citation:	Alessandro Silvani, Giuseppe Plazzi, Giorgio Medici, Stefania Trazzi, Elisabetta Ciani, Gabriele Matteoli, Sara Alvente, Viviana Lo Martire, Stefano Bastianini, Chiara Berteotti, Giovanna Zoccoli (2022). Artificial protein and its applications. ITPF7490WO

**DESCRIZIONE DEI PRINCIPALI PROGETTI DI RICERCA E PREMI CONSEGUITI NEGLI ULTIMI 10 ANNI (CON ANNESSO ELENCO DI MASSIMO 10 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PRINCIPAL INVESTIGATOR O COORDINATORE LOCALE DI PROGETTI DI RICERCA COMPETITIVI NAZIONALI O INTERNAZIONALI, SIGNIFICATIVI PREMI CONSEGUITI PER LA**

**PROPRIA ATTIVITÀ DI RICERCA)/ DESCRIPTION OF THE MAIN RESEARCH PROJECTS AND AWARDS AWARDED IN THE LAST 10 YEARS (WITH ATTACHED LIST OF MAXIMUM 10 ACHIEVEMENTS, INCLUDING, FOR EXAMPLE, PRINCIPAL INVESTIGATOR OR LOCAL COORDINATOR OF NATIONAL OR INTERNATIONAL COMPETITIVE RESEARCH PROJECTS, SIGNIFICANT AWARDS AWARDED FOR YOUR RESEARCH ACTIVITY):**

Descrizione Description:	<i>In the last 10 years I have got 3 PRIN2022 and PRIN-PNRR grants (1 as PI and 2 as participant) for the study of obstructive sleep in a mouse model of Down syndrome and for the study of the long-term effects on sleep of adult mice whose mothers have undergone different forms of stress during pregnancy. The research project on sleep apneas (with myself as PI) was further granted by a local bank institution (CARISBO) in 2024. Again, in 2024 I have got a donation by the Wake-Up narcolepsy network to study a new possible gene therapy approach to be used on narcoleptic mice.</i>
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Descrizione Description:	2024: WakeUp Narcolepsy Project. Title: "Fixing Orexin Signalling by Histaminergic neuron gene Therapy (the FORSIGHT project)". Project grant amount \$ 22000. Role: Principal Investigator.
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Descrizione Description:	2024: Bando Ricerca scientifica e alta tecnologia 2024, Fondazione CARISBO. Title "Sviluppo di un nuovo approccio chemogenetico per la cura delle apnee ostruttive del sonno". Project grant amount € 8000. Role: Principal Investigator.
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Descrizione Description:	2023: PRIN2022-PNRR, code P2022RTCCA , title "ESTROSA: Energy-autonomous System for Treatment of Obstructive Sleep Apnea". Project grant amount € 244.004. Role: Participant
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Descrizione Description:	2023: PRIN2022, code J53D23010940001, title "Chemogenetic and Optgenetic Rescue of Sleep Apnea (CORSA) in mice". Project grant amount € 219.437. Role: Principal Investigator.
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Descrizione Description:	2023: PRIN2022, code C53D23004250008, title "Poor sleep during pregnancy as risk factor for post-partum stress and mental health: A translational, longitudinal and clinical study. Maternal Outcome after THERapy for Sleep (MOTHERS)". Project grant amount € 211.364. Role: Participant.
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Descrizione Description:	2022: Almaidea project funded by University of Bologna, title "SONICA: Stimolazione Optogenetica dei Nuclei dell'Ipoglossa per la Cura delle Apnee". Project grant amount € 24000. Role: Principal Investigator.
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Descrizione Description:	2021: has been collaborating to the project funded by Cassa di Risparmio di Bologna, Bando di Ricerca Medica e Alta Tecnologia. Title: "Ricerca medica traslazionale per la validazione di un modello murino della sindrome di Morvan associata ad anticorpi anti-CASPR2". Funding amount: € 8.000. Role: Participant.
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Descrizione Description:	2009: has been collaborating to the PRIN project, code 2008FY7K9S, title "Ruolo del sistema ipocretinergico nel controllo cardiovascolare termoregolatorio durante la veglia e il sonno". Funding amount € 55.770. Role: Participant.
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Descrizione Description:	2013-2014 Scholarship for the project "Cotinine: a powerful but unrecognized developmental cardiovascular toxin?" by the "Märta och Gunnar V. Philipsons Stiftelse" Stockholm, Sweden.
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Descrizione Description:	2014 Prize "Stiftelsen Frimurare Foundation" (5000 Euros) granted by the Free Mason Foundation Stockholm, Sweden.
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SVILUPPO DI RETI E RELAZIONI SCIENTIFICHE NAZIONALI E INTERNAZIONALI (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, PARTECIPAZIONE O ORGANIZZAZIONE DI CONVEGNI NAZIONALI E INTERNAZIONALI; CONTRIBUTI A CONSORZI DI RICERCA) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF DEVELOPMENT OF NATIONAL AND INTERNATIONAL SCIENTIFIC NETWORKS AND RELATIONS (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, PARTICIPATION OR ORGANIZATION OF NATIONAL AND INTERNATIONAL CONFERENCES; CONTRIBUTIONS TO RESEARCH CONSORTIA):**

Descrizione Description:	<i>From 2009, when we started to study mouse models of Narcolepsy, we developed an international network which includes all the most expert researchers in this field as evidenced by numerous joint publications. In 2017, I proposed a symposium on the relationship between sleep and stress that had been held in Prague during the World Sleep Congress. This symposium paved the way for national and international networks on sleep and stress producing several publications (both reviews and experimental papers) and a project funded by the Italian Ministry (PRIN2022). In 2019, I have been involved in an international symposium on sleep apnea at the Italian Congress of Physiology. This symposium paved the way for a national network involving physiologists of the University of Firenze and Bologna together with</i>
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	<i>engineers of Pavia and Bologna. This network produced several publications (both reviews and experimental papers) and 2 projects funded by the Italian Ministry (PRIN2022 and PRIN-PNRR). Moreover, this collaboration has been extended to Canadian Physiologists and paved the way for an international ongoing experiment and a Post-Doc position for a researcher of our team. Finally, this collaboration led to a symposium proposal (including researchers from Canada, USA and Italy) that has been accepted for the next world sleep congress which will be held in Singapore next September.</i>
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Descrizione Description:	2020: Symposium "11 Minutes of Sleep" at the 14° virtual congress "Pisa Sleep Award". Title: "Stress & Sleep: A Relationship Lasting A Lifetime".
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Descrizione Description:	2020: Symposium "il sonno nel periodo perinatale" at the 30° virtual congress of the "Associazione Italiana di Medicina del Sonno" (AIMS). Title "Sonno e stress nel periodo perinatale e conseguenze a lungo termine nell'adulto: novità dalla ricerca di base".
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Descrizione Description:	2019: Symposium "Breathing through the ages - Rhythm generation and modulatory mechanisms" at the joint congress SIF-FEPS in Bologna, Italia. Title "New data on hypnic and breathing phenotype of a mouse model of Down Syndrome".
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Descrizione Description:	2017 Symposium "Sleep and stress: a relationship that lasts a lifetime" at the 17° World Sleep Congress in Praga, Czech Republic. Title "Perinatal stress and hypnic derangements in adults: news from animal models".
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Descrizione Description:	2025 Symposium "New insights on the control of breathing during sleep and innovative genetic approaches for obstructive sleep apneas" at the 18° World Sleep Congress which will be held in Singapore on September 2025.
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI DI SUPPORTO ALLA COMUNITÀ SCIENTIFICA (CON ANNESSO ELENCO DI MASSIMO 5 RISULTATI, INCLUDENDO, A TITOLO DI ESEMPIO, RESPONSABILITÀ DI DIREZIONE DI COMITATI EDITORIALI; INCARICHI DI VALUTAZIONE DELLA RICERCA PRESSO ISTITUZIONI NAZIONALI O INTERNAZIONALI; RESPONSABILITÀ ISTITUZIONALI ALL'INTERNO DELL'ISTITUZIONE DI APPARTENENZA O DI ALTRE ISTITUZIONI) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS**

**OF SUPPORT TO THE SCIENTIFIC COMMUNITY (WITH ATTACHED LIST OF MAXIMUM 5 RESULTS, INCLUDING, FOR EXAMPLE, MANAGEMENT RESPONSIBILITIES OF EDITORIAL COMMITTEES; RESEARCH EVALUATION ROLES AT NATIONAL OR INTERNATIONAL INSTITUTIONS; INSTITUTIONAL RESPONSIBILITIES WITHIN THE INSTITUTION OF AFFILIATION OR OTHER INSTITUTIONS):**

Descrizione Description:	<i>I serve as external reviewer for many impacted journal on physiology, sleep and neuroscience. I have also served as Reviewer for 2 research projects funded by foreign institutions and, currently, I serve as Review Editor for 2 journals. I am part of the expert committee of the University of Bologna for the evaluation of the PRIN2022 projects.</i>
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Descrizione Description:	Review Editor for Frontiers in Integrative Physiology,
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Descrizione Description:	Review Editor for Frontiers in Sleep and Circadian Rhythm.
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Descrizione Description:	2022 Reviewer for the Project: "Prenatal stress and infants' temperamental and stress reactivity - the role of the quality of mother-infant interaction and child's microbiota composition." , Jagiellonian University in Cracow
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Descrizione Description:	2019: Reviewer for the Project: "Understanding the connection between stress-susceptibility and changes in sleep architecture" American University of Sharjah (Emirates).
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Descrizione Description:	2022-2025: Coordinator of the First cycle degree programme (L) in Nursing, Rimini Campus.
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**DESCRIZIONE DEI PRINCIPALI RISULTATI CONSEGUITI NEGLI ULTIMI 10 ANNI IN TERMINI VALORIZZAZIONE DELLE CONOSCENZE (CON ANNESSO ELENCO DI MASSIMO 3 RISULTATI, RELATIVI ALLA PARTECIPAZIONE DEL CANDIDATO ALLE ATTIVITÀ DI VALORIZZAZIONE DELLE CONOSCENZE) / DESCRIPTION OF THE MAIN RESULTS ACHIEVED IN THE LAST 10 YEARS IN TERMS OF KNOWLEDGE VALORIZATION (WITH ATTACHED LIST OF MAXIMUM 3 RESULTS, RELATING TO THE CANDIDATE'S PARTICIPATION IN KNOWLEDGE VALORIZATION ACTIVITIES):**

Descrizione Description:	<i>Since 2021, I have been giving lessons at the Elementary Schools in my city of residence to raise awareness among children about the importance of sleep in their lives. since 2023, this activity has also been extended to Middle Schools. on March 17, 2024, a children's book that I wrote on the topic of sleep have been published.</i>
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Descrizione Description:	since 2021: lessons at the Elementary Schools on the importance of sleep
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Descrizione Description:	2024: publication of a children's book (Museo del Sonno) on the importance of sleep in their life.
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Descrizione Description:	2025: Laboratory activity at MUSE museum of Trento to promote knowledge on sleep
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**Informazioni aggiornate alla data di candidatura 08-05-2025**

**Stefano Bastianini**

*Il presente curriculum costituisce allegato e parte integrante dell'incarico sottoscritto*