

## **CURRICULUM VITAE**

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Title	PhD
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Teaching Career	Since 2004 collaborations and teaching position at the University of Milan Bicocca. Teaching collaboration and contribution with University of Ferrara (AA 2012/13, 2013/14), University of Bologna (AA 2019/20)
Teaching Activities	<p>Courses taught:</p> <p>Marine Vertebrate Zoology  Study and Management of Wild Populations,  Molecular Ecology,  Analyses and Management of Aquatic Biocenoses (one module),  Conservation Genetics (one module at University of Ferrara),  Marine Mammal Biology and Conservation (as part of the ISN master course)</p>
Other Activities	<p>Laboratory and analytical experience:</p> <ul style="list-style-type: none"> <li>- preparation of NGS libraries for High Throughput Sequences from environmental samples</li> <li>- isolation of metabarcoding universal primers</li> <li>- development of barcode qPCR assays for single target species</li> <li>- preparation of cell cultures from whale tissue (cornea)</li> <li>- DNA extraction from degraded and/or small tissue samples</li> <li>- isolation of microsatellite loci (genetic markers)</li> <li>- optimisations for large-scale microsatellite screening (e.g. boiling DNA-extraction, and silver staining visualisation of PCR products) - analysis of sequencing data</li> <li>- analysis for phylogenetic reconstructions</li> <li>- parentage and paternity testing</li> </ul> <p>Field experience:</p> <ul style="list-style-type: none"> <li>- coordinating environmental DNA sampling campaigns from ferries</li> <li>- 5 whale-census surveys in the Mediterranean</li> <li>- study of an estuary population of bottlenose dolphin (Portugal)</li> <li>- cetacean vocalisation recording using hydrophones</li> <li>- cetacean photo-identification</li> <li>- remote biopsy tissue sampling</li> <li>- sloughed skin collection from free-ranging humpback whales</li> </ul>

	<p>Experience in Dolphinarium:</p> <ul style="list-style-type: none"> <li>- ultrasound recording</li> <li>- computer analysis of dolphin body trajectory and movements</li> <li>- assessment of dolphin capability to echolocate nets</li> <li>- intense behavioural observations of mother-calf pair following birth</li> </ul>
<p>Research Activities</p>	<p>Currently involved in a series of projects on molecular monitoring of marine biodiversity and endangered species, such as:</p> <p>MeD for Med (Marine eDNA for the Mediterranean): environmental DNA surveys relying on water samples collected from ferries operation in the Mediterranean.</p> <p>“SPOT the MONK” molecular approach for a non-invasive detection of the monk seal presence by means of environmental DNA analysis</p> <p>“CARAPAX SCAPE” mapping sea turtle movements and health state from the study of the biological communities living on their carapaces</p>
<p>List of 10 main Publications of the last 5 years</p>	<p><b>Valsecchi E</b>, Arcangeli A, Lombardi R, Boyse E, Galli P, Goodman S (submitted) “Ferries and environmental DNA: underway sampling from commercial vessels provides new opportunities for systematics genetic surveys of marine biodiversity “</p> <p><b>Valsecchi E</b>, Coppola E, Pires R, Parmegiani A, Casiraghi M, Galli P, Bruno A (submitted) "Newly developed <i>ad hoc</i> molecular assays show how eDNA can witness and anticipate the monk seal recolonization of central Mediterranean", submitted to Biodiversity and Conservation</p> <p><b>Valsecchi E</b>, Bylemans J, Goodman SJ, Lombardi R, Carr I, Castellano L, Galimberti A, Galli P 2020 “Novel universal primers for metabarcoding eDNA surveys of marine mammals and other marine vertebrates”. <i>Environmental DNA</i> 2(4):460-476</p> <p><b>Valsecchi E</b>, Corkeron P, Galli P., Sherwin W., Bertorelle G. 2010 “Genetic evidence for sex-specific migratory behaviour in the western south pacific humpback whales” <i>Marine Ecology Progress Series</i> 398:275-286</p>
<p>Scientific Expertise</p>	<p>molecular ecology, metabarcoding analysis, marine mammal biology, conservation genetics, non-invasive molecular surveys, development of single species barcoding assays, analysis of kinship relationship, population genetics</p>