



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DEPARTMENT
OF PHARMACY
AND BIOTECHNOLOGY

PhD program in Cellular and Molecular Biology

PhD coordinator: Anna Maria Porcelli

19° PhD Workshop

4, 5, 8, 9 September 2025

Aula Magna, Via della Beverara 123, Bologna

and

Online Via Teams (link to be provided)

Organizers: A.M. Porcelli, B. Zambelli, A. Danielli

Thursday, September 4, 2025

14:00 — *Greetings from the PhD coordinator*

Session 1 - Chairs: Longanesi, D'Silva

14:15 — **Mattia Niccolò Li Volsi** (39°, Vannini / Roncarati)

Functional and structural study of different sRNAs controlled by NikR and Fur in Helicobacter pylori

14:35 — **Monica Procacci** (38°, Capranico / Miglietta)

Dissecting the immunogenic potential of G-Loop-Associated Micronuclei in Genome Instability

14:55 — **Matteo Bergonzoni** (39°, Perini / Lieberman, The Wistar Institute)

EBV-specific Responses to Decitabine in Epstein-Barr Virus Associated Gastric Carcinomas

17:35 — **Alena Kaltenbrunner** (38°, Danielli / Costantini) online

Engineering Phages for Targeted Cancer Therapy: Insights into immune interactions and 3D model penetration

15:35 — **Iacopo Gherardi** (38°, Porcelli / Ghelli – Iommarini)

TMEM65 interactome reveals involvement in mitochondrial inner membrane proteins biogenesis



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DEPARTMENT
OF PHARMACY
AND BIOTECHNOLOGY

15:55 — Coffee break

Session 2 - Chairs: Peppi, Lopo

16:25 — Marco De Maria (40°, Brandimarti / Menotti – De Biase)

Cellular Model Construction for the Characterization of Uncertain Significance Variants

16:40 — Fabrizio Bertolazzi (38°, Perini / Schug, The Wistar Institute)

Identifying Acetate Transporters through a CRISPR Dropout Screen

17:00 — Noemi Carosella (39°, Zambelli / Ciurli)

Characterization of the C-terminal region of NDRG1, a protein involved in cancer development

17:20 — Elisa Dell'Anna (38° PNRR, Bernardoni / Perini)

Ribonucleoside diphosphate reductase small subunit (RnrS) downregulation in Drosophila post-mitotic neurons cells demonstrated the essential role of the enzyme for Central Nervous System activity

17:40 — Giulia Pantella (39°, Perini / Murphy, The Wistar Institute)

PADI4 Citrullinates p53 and Redirects Its Binding to Non-Canonical Target Genes

18:00 — Umberto Genchi (40°, Cappelletti / Roncarati)

Investigating the role of DNA methylation in Rhodococcus opacus PD630, a bacterial strain with biotechnological relevance

Friday, September 5, 2025

Session 3 - Chairs: Franciosi, Li Volsi

14:00 — Corrado Selva (40°, Francia/ Ghelli)

Analysis of the hydration shell in protein/disaccharide glassy matrices. An FTIR study.

14:15 — Mattia Longanesi (38° PNRR, Cavaliere/ Perini)

Study of natural insect antagonists and associated symbionts aimed at identifying bioinsecticides



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DEPARTMENT
OF PHARMACY
AND BIOTECHNOLOGY

14:35 — Emma Coschina (38° PNRR, Angelini / Ravegnini - Capranico)
Generation and Characterization of 3D bioprinted human endometrial cancer models

14:55 — Ettore Lopo (39° PNRR, Cappelletti / Sauro)
Biodiversity and biotechnological potential of microorganisms inhabiting pristine and contaminated subterranean environments

15:15 — Martina Tomirotti (39°, Perini / Weiner, The Wistar Institute)
Integrating in silico humanization and DNA delivery to engineer anti-influenza monoclonal antibodies for improved in vivo expression

15:35 — Federica Severi (38°, Perini, Claiborne The Wistar Institute)
Multivalent CAR T cell therapy demonstrates potent and durable control of HIV escape and replication in BLT humanized mice

15:55 — Coffee break

Session 4 - Chairs: Cimadom, Gherardi

16:25 — Loris Meoni (40°, Capranico / Marinello)
Transcription/Replication Conflicts and RNA Pol II backtracking in cancer genome instability

16:40 — Mario Marino (39°, Perini / Liberman, The Wistar Institute)
Characterization of Viral-Host Hybrid Transcripts in EBV-Positive Cells Using Long-Read Sequencing

17:00 — Francesco Flandi (38°, Oggioni / Parolin)
*Testing host specificity of *Klebsiella pneumoniae* infection in humans and swine*

17:20 — Ginevra Marie Eloise Peppi (39° PNRR, Zaffagnini / Trost)
Study of a new class of plant enzymes involved in redox homeostasis with still unknown functional plasticity using biological integrated approaches

17:40 — Manon Elise C Libotte (38° PNRR, Zuccheri / Monti - Massenzio)
Self-assembled DNA nanostructure applied on immunomodulation of microglia in neuroinflammation

18:00 — Ekaterina Shipilova (40°, Perini / Montaner, The Wistar Institute)
MOUD Alters the Distinctive Patterns Associated with HIV Infection and Suppressive ART



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DEPARTMENT
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AND BIOTECHNOLOGY

Monday, September 8, 2025

Session 5 - Chairs: Carosella, Pappagallo

14:00 — Chiara D'Silva (39°, Massenzio / Monti)

Characterization of Extracellular Vesicles in Alzheimer's Disease: Focus on EVs-derived miRNAs as Inflammatory Modulators

14:20 — Kelvin Maduabuchi Okpokpo (38°, Perini / Sarma, The Wistar Institute)

Role of ATRX and CTCF in Chromatin Architecture and Histone Variant Dynamics

14:40 — Anna Clara Capuzzi (40°, Sparla / Gurrieri)

Preliminary Studies on the Interaction Between Thioredoxin and Phosphoribulokinase

14:55 — Leonardo Cimadom (39°, Perini / Chemello)

MYCN levels reprogram the interactome of E2F3 in Neuroblastoma

15:15 — Tânia Raquel Cunha Alves (39°, Monti / Musilek)

The Impact of Circadian Rhythms on Neural Stem Cells in Alzheimer's Pathogenesis

15:35 — Sofia Ranieri (40°, Zambelli / Mazzei)

Biochemical and Structural Characterization of Viral Proteases and Metalloproteases

15:50 — Coffee break

Session 6 - Chairs: Dell'Anna, Guerra

16:20 — Filippo Sgolacchia (40°, Perini / Villanueva, The Wistar Institute)

Identification of novel therapeutic targets to prevent growth and metastasis in acral melanoma

16:35 — Asia Pizzi (38° PNRR, Vitali / Patrignani)

*In vitro gut model to evaluate the impact of the GABA-producing *Levilactobacillus brevis* CRAI on human microbiota in eubiosis and dysbiosis*



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DEPARTMENT
OF PHARMACY
AND BIOTECHNOLOGY

16:55 — Lorenzo Serra (39°, Perini / Price, The Wistar Institute)
Effect of splicing inhibitors on Adenovirus RNA processing and infection

17:15 — Cecilia Franciosi (39° PNRR, Monti / Alberini)
Angelman Syndrome: A Study Of Neuronal Cultures Derived From Patient iPSCs

17:35 — Stefania Di Silvestro (38 ° PNRR, Cappelletti (PNRR), Franchi)
Bacterial functionalization of biochar as a sustainable approach for metal(loid) bioremediation

Tuesday, September 9, 2025

Session 7 - Chairs: Flandi, Procacci

14:00 — Clelia Manna (38° PNRR, Roncarati / Vannini)
Characterization of engineered bacterial outer-membrane vesicles (OMVs) and their effect as specific carriers for RNA-based therapy against osteosarcoma

14:20 — Emanuel Forciniti (38°, Perini / Sarma, The Wistar Institute)
Interrogating the role of ADNP-HP1 and ADNP-CHD4 interactions in neural development

14:40 — Martina Casciaro (40°, Bacchelli / Maestrini)
Genomics of Autism Spectrum Disorder

14:55 — Claudio Pino (38° PNRR, Musiani / Ghelli) online
Precision medicine in cancer: drug repurposing strategies targeting DNA polymerase ϵ for cancer therapy

15:15 — Martina Santulli (38° PNRR, Perini / Monti) online
Role of the PRR12 Factor in Neurodevelopmental Visual Disorders (NVDs)

15:35 — Pietro Demurtas (40 ° PNRR, Fioresi / Perini)
Deep-Learning for analysis of sequential biological data

15:50 — Coffee break



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DEPARTMENT
OF PHARMACY
AND BIOTECHNOLOGY

Session 8 - Chairs: Cunha, Di Silvestro

16:20 — Filippo Badii (40°, Perini / Veglia, The Wistar Institute)

Brain tumor-derived factors inhibit neutrophil antigen-presenting potency

16:35 — Federico Guerra (38°, Capranico / Marinello)

Role of RNA Polymerase II Backtracking in Genome Instability

16:55 — Zainul Abe Din (39°, Perini / Escolano, The Wistar Institute)

Tailored RNA Suits for Immunogens

17:15 — Lucia Pappagallo (38°, Danielli / Castagnola)

Neurophage: molecular engineering of phage nanoparticles for non-invasive neuronal photostimulation

17:35 – 17:55 — Concluding remarks and prize awards

Elena Chiti (38°, Roncarati / Scarlato) - data della presentazione da definire con la Giunta di Dottorato

Novel Insights into Nucleoid Structure and Master Regulators in Helicobacter pylori and Campylobacter jejuni

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Time	4-Sep				5-Sep				Time	6-Sep				Time	7-Sep			
	Speaker	Tutor	Co-tutor	Title	Speaker	Tutor	Co-tutor	Title		Speaker	Tutor	Co-tutor	Title		Speaker	Tutor	Co-tutor	Title
	Greetings from the PhD coordinator				Selva Corrado	Francia	Ghelli	Presentation of the structure/function of dehydrated proteins. Analysis of the protective mechanisms exerted by the external matrix										
14.00-14.15	Li Voli Mattia Niccolò	Vannini	Roncarati	Functional and structural study of different siRNAs controlled by NAR1 and Fur in Helicobacter pylori	Longanesi Mattia	Cavaliere (PNRR)	Perini	Study of natural insect antagonists and associated symbionts aimed at identifying biopesticides	14.00-14.20	D'Silva Chiara	Masensio	Monti	Characterization of Extracellular Vesicles in Alzheimer's Disease: Focus on EVs-derived miRNAs as Inflammatory Modulators		Manna Ciella	Roncarati (PNRR)	Vannini	Characterization of engineered bacterial outer-membrane vesicles (OMVs) and their effect as specific carriers for RNA-based therapy against osteosarcoma
14.15-14.35									14.20-14.40	Olkopko Kelvin Madubuchi	Perini (Wistar)	Sarna	Role of ATRX and CTCF in Chromatin Architecture and Histone Variant Dynamics		Forciniti Emanuel	Perini (Wistar)	Sarna	Interrogating the role of ADNP-HP1 and ADNP-CHD4 interactions in neural development
14.35-14.55	Proccacci Monica	Capranico	Miglietta	Dissecting the immunogenic potential of G-Loop-Associated Microvesicles in Genome Instability	Coschina Emma	Angelini	Ravegnini/ Capranico (PNRR)	Generation and Characterization of 3D bioprinted human endometrial cancer models	14.40-14.55	Capuzzi Anna Clara	Sparla	Gurrieri	Preliminary Studies on the Interaction Between Thrombospondin and Phosphoribosyltransferase		Casciaro Martina	Bacchelli	Maestri	Genomics of Autism Spectrum Disorder
	Bergonzoni Matteo	Perini (Wistar)	Liebman	EBV-specific Responses to Deictone in Epstein-Barr Virus Associated Gastric Carcinomas	Logo Ettore	Cappelletti (PNRR)	Sauro	Biodiversity and biotechnological potential of microorganisms inhabiting pristine and contaminated subterranean environments	14.55-15.15	Cimadrom Leonardo	Perini	Chemello	MYCN levels reprogram the interactome of E2F3 in Neuroblastoma		Pino Claudio	Musiani (PNRR)	Ghelli	Precision medicine in cancer: drug repurposing strategies targeting DNA polymerase ϵ for cancer therapy
14.55-15.15																		
	Kaltenbrunner Alena	Danielli	Costantini	Engineering Phages for Targeted Cancer Therapy: Insights into immune interactions and 3D model penetration	Tomietti Martina	Perini (Wistar)	Weiner	Integrating in silico humanization and DNA delivery to engineer anti-influenza monoclonal antibodies for improved in vivo expression	15.15-15.35	Cunha Alves Tania Raquel	Monti	Musilek	The Impact of Circadian Rhythms on Neural Stem Cells in Alzheimer's Pathogenesis		Santulli Martina	Perini (PNRR)	Monti	Role of the PRRI2 Factor in Neurodevelopmental Visual Disorders (NVDs)
15.15-15.35																		
	Gherardi Giacomo	Porcelli	Ghelli/ Iommarini	TMEM65 interaction reveals involvement in mitochondrial inner membrane proteins biogenesis	Severi Federica	Perini (Wistar)	Ciabrone	Multivalent CAR T cell therapy demonstrates potent and durable control of HIV escape and replication in BLT humanized mice	15.35-15.50	Ranieri Sofia	Zambelli	Mazzei	Biochemical and Structural Characterization of Viral Proteases and Metalloproteases		Demurtas Pietro	Fionesi (PNRR)	Perini	Deep-Learning for analysis of sequential biological data
15.55-15.55																		
15.55-16.25	Coffee break				Coffee break					Coffee break					Coffee break			
	Session 2 - Chairs: Pappi, Login				Session 4 - Chairs: Cimadrom, Pappagallo					Session 6 - Chairs: Dall'Anna, Guerra					Session 8 - Chairs: Cunha, Di Silvestro			
16.25-16.40	De Maria Marco	Brandimarti	Menotti/ De Biasi	Cellular Model Construction for the Characterization of Uncertain Significance Variants	Masini Loris	Capranico	Marinello	Transcription/Replication Conflicts and RNA Pol II backtracking in cancer genome instability	16.20-16.35	Sgolaichia Filippo	Perini (Wistar)	Villanueva	Identification of novel therapeutic targets to prevent growth and metastasis in acral melanoma		Badi Filippo	Perini (Wistar)	Veglia	Brain tumor-derived factors inhibit neuronal antigen-presenting potency
	Bertolazzi Fabrizio	Perini (Wistar)	Schug	Identifying Acetate Transporters through a CRISPR Dropout Screen	Marino Mario	Perini (Wistar)	Liberman	Characterization of Viral-Host Hybrid Interactions in EBV-Positive Cells Using Long-Read Sequencing	16.35-16.55	Pizzi Alaia	Vitali (PNRR)	Patraglini	In vitro gut model to evaluate the impact of the GABA-producing Levilactobacillus brevis CRI on human microbiota in eczema and dysbiosis		Guerra Federico	Capranico	Marinello	Role of RNA Polymerase II Backtracking in Genome Instability
16.40-17.00																		
	Carosella Noemi	Zambelli	Curli	Characterization of the C-terminal region of NOD1, a protein involved in cancer development	Flandi Francesco	Oggioni	Parolin	Testing host specificity of Kaposi's sarcoma-associated herpesvirus infection in humans and swine	16.55-17.15	Serra Lorenzo	Perini (Wistar)	Price	Effect of splicing inhibitors on Kaposi's sarcoma RNA processing and infection		Di Zainul Abul	Perini (Wistar)	Escolano	Tailored RNA Suits for Immunogens
17.00-17.20																		
	Dell'Anna Elisa	Bernardini (PNRR)	Perini	Ribonucleotide diphosphate reductase small subunit (RRS) downregulation in Drosophila pro-mitotic neurons cells demonstrated the essential role of the enzyme for Central Nervous System activity	Pappi Ginevra Maria Eloise	Zaffagnini (PNRR)	Trost	Study of a new class of plant enzymes involved in redox homeostasis with still unknown functional plasticity using biological integrated approaches	17.15-17.35	Franciosi Cecilia	Monti (PNRR)	Altavanti	Angelman Syndrome: A Study Of Exon-Skipping Therapies in Cultured Neurons Derived From Patient Ipsos		Pappagallo Lucia	Danielli	Castagnola	Neurophage: molecular engineering of phage nanoparticles for non-invasive neuronal photostimulation
17.20-17.40																		
	Pantella Giulia	Perini (Wistar)	Murphy	PAD4 Cytosolic p53 and Reddits Its Binding to Non-Canonical Target Genes	Libotte Manon Elise C	Zuccheri	Monti/ Masensio (PNRR)	Self-assembled DNA nanostructure applied on immunomodulation of microglia in neuroinflammation	17.35-17.55	Di Silvestro Stefania	Cappelletti (PNRR)	Franchi	Bacterial functionalization of biochar as a sustainable approach for metal(loid) bioremediation		Prize awards			