

Corpus des Recettes culinaires du Moyen Age: Recensement, Analyse, Visualisation

Cooking Recipes of the Middle Ages: Corpus, Analysis, Visualisation

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Project summary

Cooking traditions, local and continental, are one of the most recognizable items of European culture, and a large part of European identities. But how did they get to be what they are? How did they evolve, what were their influences? During the last decades, research arrived at two important conclusions on these issues. First, there are no quantitative studies on the origin and formation of regional cuisines in Europe. Second, substantial evidence, namely manuscripts containing thousands of cookery recipes, first appears in the Middle Ages, which can be thus regarded as the birth of modern European cuisines. On the European continent Latin, Middle French and Early New High German recipes provide the majority of culinary transmission. Since the 1960s scholars attempt to provide overviews of the different regional cuisines based on historical evidence but since then no one tried to comprehensively include the transmission of culinary recipes into this research. Time, money and effort would have been very high. Today we have access to edited cooking recipe collections and manuscripts as digital images, and digital humanities research methods, which greatly helps to facilitate analysis of a comprehensive corpus of historical recipes.

This project aims at realising this long dreamed-of goal and even putting an interdisciplinary focus on the cross-cultural research of medieval cooking recipes and their interrelation. The project will prepare the cooking recipe transmission of France and the German speaking countries, which includes more than 80 manuscripts and ca. 8000 recipes, for the analysis of their origin, their relation, and their migration through Europe. The comparison of French and German food history is especially suited for this task as France ever had a culturally formative influence on German speaking peoples!

The partners from the Laboratoire CESR (Centre d'Etudes Supérieures de la Renaissance), at the University of Tours and the Zentrum für Informationsmodellierung – Austrian Centre for Digital Humanities (ZIM-ACDH) and the Department of Medieval German Studies at the University of Graz provide the expertise to collect manuscripts and recipes, to edit them according to scholarly and digital standards, and to analyse these multilingual texts following up-to-date quantitative and qualitative research methodology. For machine aided analysis the recipe corpus and its metadata are edited and modelled according to international standards using XML/TEI, semantic web technologies and a research infrastructure that is laid out for digital preservation of research assets. All recipes are enriched through ontologies for ingredients, cooking processes, and food historically relevant data (e.g. on religious, cultural, or medical aspects). Within and across languages the project's analysis will reveal concurring or deviating eating habits, which have built European identities and heritage, text migration as well as the influence of neighbouring countries on their respective cuisine. The research data will be the basis for spatial and temporal visualisation and statistical evaluation, which will foster new approaches towards interpretation of the historical and cultural assets.

The research of the CoReMA project will not only provide a generic model for the integration of further language collections into the research infrastructure but also add to the curricula of the respective disciplines medieval and early modern history, food history, and digital humanities. The project team also aims at dissemination of project findings to the general public to foster the awareness of food history and eating habits.

Summary table of persons involved in the project

Country	University or institution	Last Name	First name	Current position	Role in the project (Task NR.)	Involvement (person.months)*
FR	CESR	Laurieux	Bruno	Professor	Scientific Coordinator (WP 1-6)	24
FR	CESR	Boutroue	Marie Elisabeth	Research Scientist	Critical editing (T. 3.1 and 3.5), Digital text preparation (T. 4.3), Scholarly analysis, Interpretation of findings (T. 5.2-3)	6
FR	CESR	Brioist	Pascal	Professor	Digital text preparation (T. 4.3), Scholarly analysis, Interpretation of findings (T. 5.2-3), Scholarly conferences and publications (T.6.2-3)	6
FR	CESR	Busson	Sébastien	Project Engineer	Multimedia and digitization (WP 2 & 6)	3
FR	MSH	Fauconnier	Mélanie	Project Engineer	Dissemination (WP 6)	6
FR	CESR	Lastraioli	Chiara	Professor	Scholarly analysis, Interpretation of findings (T. 5.2-3), Scholarly conferences and publications (T.6.2-3)	2
FR	CESR	Masquillier	Marie Laure	Project Engineer	Technical support for updating blog, conferences management and institutional communication (WP 1 & 6)	3
FR	CESR	Mellet	Paul Alexis	Lecturer	Preparation of select cooking recipe collections for print edition (T. 3.5), Annotation of surrounding cultural context (T. 4.3), Scholarly analysis, Interpretation of findings (T. 5.2-3)	3
FR	CESR	Pennuto	Concetta	Lecturer	Preparation of select cooking recipe collections for print edition (T. 3.5), Annotation of surrounding cultural context (T. 4.3), Scholarly analysis, Interpretation of	6

					findings (T. 5.2-3)	
FR	CESR	Quellier	Florent	Lecturer	Scholarly analysis, Interpretation of findings (T. 5.2-3), Scholarly conferences and publications (T.6.2-3)	3
FR	CESR	Rolland	Yves	Technician	Database management (WP 2)	3
FR	CESR	X	X	Project Engineer (to be hired by ANR)	Acquisition of manuscript images and printed editions, diplomatic transcription and collation (T. 2.1-2), Basic manuscript description (T. 3.1)	12
FR	CESR	X	X	Research Engineer (to be hired by ANR)	Transversal functions (WP 1-6)	18
AT	ZIM-ACDH	Klug	Helmut W.	Post doc research assistant (partially funded in the project)	Coordinator Digital Humanities Critical editing (WP1, T2.2, WP 3-6)	18
AT	ZIM-ACDH	Hofmeister-Winter	Andrea	Professor	Critical editing (T2.2, WP3)	6
AT	ZIM-ACDH	Kranich	Karin	Senior post doc research assistant	Palaeography Critical editing (T3.1-3)	2
AT	ZIM-ACDH	Böhm	Astrid	Pre doc (to be hired for the project)	Critical editing Philology (Tasks: WP2, WP3-4, T5.2-3)	27
AT	ZIM-ACDH	Steiner	Christian	Pre doc (to be hired for the project)	Digital humanities Semantic Web (WP 4-5)	27

I. Proposal's context, positioning and objective(s)

(References, work and other titles, acronyms, and abbreviations are listed in Annex 1)

I.1. Context

In Romanic and Anglo-American countries food and food tradition awareness and thus food history studies have reached a very high level. German food and food-history studies are less focused. Nevertheless, cooking traditions, local and continental, are one of the most recognizable items of European culture, and a large part of European identities. But how did they get to be what they are? How did they evolve, what were their influences? During the last decades, research arrived at two important conclusions on these issues. First, there are no quantitative studies on the origin and formation of regional cuisines in Europe. Second, substantial evidence (manuscripts containing thousands of cookery recipes) first appears in the Middle Ages, which can be thus regarded as the birth of modern European cuisines. There are few attempts to provide a contrasting view of early

European cuisines that either have a very wide (e.g. Flandrin 1999), or to narrow focus like the focus on a single dish (e.g. 'Blanc manger': Hieatt 1995 with a linguistic focus, Flandrin 1984 and van Winter 1989 with a focus on ingredients). Until now, food history has dealt with medieval recipes mostly on a national, geographical or language separated level (e.g. Adamson 1995, Carlin 1989, Adamson 2002, Karg 2007, etc.). Based on the continuous influence France and the French culture had on German speaking peoples through the centuries a comparative analysis of the French and German medieval cuisine seems self-evident.

Cooking recipes are documents for handicraft knowledge which was generally handed down verbally. They are a relatively new type of written text, substantially different from old and formalised texts like poetic texts or medical recipes, even if culinary and medical recipes can be structurally alike. Medieval culinary collections are also quite different in their content and in their formulas from Ancient culinary collections, like Apicius' recipe collection.

Although the transmission process for cooking recipes is assumed to be the same as for any other kind of texts (copying of model/original, transmission from household to household), there are only few manuscripts to prove this. For instance, we have only 2 copies from the model of *buoch von guoter spise*, the most famous cookbook in German: the original München, Universitätsbibliothek, 2° Cod. ms. 731 (Cim 4) and the nearly identical copy Dessau, Anhaltische Landesbücherei, Hs. Georg. 278.2°. The lack of intermediate copies does not usually allow to reconstitute the textual tradition through a reliable *stemma codicum*.

Cooking recipes evolve over time (change in wording, order of ingredients, preparation), depending on various aspects: skill of the cook, scribe, its usage or adaptation to owner's taste. Hieatt (1985,26) states: "The fact of the matter is that medieval cooks, like their modern counterparts, constantly changed and adapted recipes." Cooking recipes are submitted to a constant lability and this is also the case of cookery books or recipe collections which evolve and get newly combined, structured, etc. As a consequence, transmission lines and collection families that indubitably exist in the culinary text production cannot be found out with classical philological means like parallel transmission analysis based on classical text collation.

1.2. Objectives and scientific hypotheses

The solution is an analysis based partly on text similarities (classical collation methods) but to a large extent also on ingredients, preparation instructions, tools and so on, named in the texts. CoReMA explores this solution and addresses the following objectives: to build a suitable ontology that fits medieval cooking recipes; to find out about recipe and collection relations; to find out about migration of recipes. To reach these goals we need: 1° recipe corpora to be analysed; 2° modelling and annotation of texts; 3° an ontology to formalise ingredients, processes, tools; 4° analyses of data. The project findings will be proof of concept on the methods applied and on the relations between European cooking recipes.

The CoReMA project sets out to address these issues by starting a quantitative and comparative study of cooking recipe texts. The project wants to take advantage of the opportunities this research will open for resolving old and new research questions. It is going to lift scientific barriers and to apply new approaches from the emerging field of Digital Humanities on classical historical research strategies.

The **first challenge** is to work on a European level or at least on a comparative scale. Among the nearly 160 cookery manuscripts written from 12th to 16th c., German, French, and Latin recipes provide the majority of culinary transmission, with ca. 80 volumes and about 8000 recipes only for 12th-15th c. These will be the sample for CoReMA and with this sample we can demonstrate how French and German cooking recipes are related, and cultural assets migrated in medieval Europe.

At the moment, this huge material is not easily accessible to researchers. The original manuscripts are scattered throughout 41 cities in 9 countries. Only two-thirds of these manuscripts have been reprinted into modern editions, albeit sometimes in a poor quality. The reasons are manifold and range

from a dated editorial concept (e.g. Wiswe 1958) to a poor transcription performance (e.g. Aichholzer 1999). About forty of the recipe collections, German cookbooks worked on by the University of Graz, have already been digitized and are available as digital text. The need for transcriptions and critical editions is most obvious for the cookery collections recorded in Latin, which have been excessively neglected although they were the first ones to be set down in writing. The **second challenge**, therefore, is to edit this culinary heritage of Medieval Latin, Middle French and Early New High German recipes and make it digitally accessible for scholarly use to meet modern and up-to-date research standards.

Unfortunately, understanding these recipes, their context and their transmission is not straightforward, which sets the **third challenge**. The recipes and the recipe collections need to be laboriously studied and transcribed by specialized history scholars with high skills in palaeography of medieval technical language, and fluency in the technical vocabulary that describes ingredients, utensils, procedures, and customs of the time. Thus, the texts need not only be transcribed and edited but also semantically enriched so that further analysis like machine aided comparison of ingredients or cooking processes can add to standardised philological research like the collation of text.

CoReMA aims at putting an interdisciplinary focus on the cross-cultural research of medieval cooking recipes and their interrelation. The partners provide the expertise to collect, edit, and analyse these multilingual texts following up-to-date methodology. For machine aided analysis a recipe corpus and its metadata are modelled according to international humanities and technical standards. The recipes are enriched through ontologies for ingredients, cooking processes, etc. (cf. chapter I.4. Risk management and methodology). Within and across languages analysis will reveal text migrations, concurring or deviating eating habits, which have built European identities and heritage. This data is the basis for spatial and temporal visualisation and statistical evaluation. It allows long-term comparative studies with Early Modern Cookery and also synchronic studies on particular food ingredients or habits. Last but not least, CoReMA will provide a generic model for the integration of additional language collections of cooking recipes and similar texts. To be internationally competitive as well as appealing we will provide the website, the documentation, and the data description in French, German and English.

I.3. Originality and relevance in relation to the state of the art

Medieval cooking recipes have been studied and edited since the 18th c. The scholars' interest was first about history of food habits and then about lexicography of words that were often rare. Even if research on cookbooks has undergone a strong development during the last decades, it has reached two clear impasses.

First, in the philological area, there is no consensus about the method of editing medieval and early modern cookbooks. Some scholars think that the truth is in manuscript families, others choose to edit a particular manuscript, in the line of the old and classical debate between Gaston Paris and Joseph Bédier about the edition of medieval literary texts. There is no clear cut approach for providing lists of parallel transmission, which cross culinary and philological aspects (cf. Ehlert's approach in her editions between 1996-2014 and Honold 2005, *contra* the critical remarks by Sorbello-Staub 2002,23f). There are also different theories on the transmission of cookery recipes collections that can be regarded as an exchange of knowledge between households of the nobility or a re-composition according to readers' or owners' need?

The second impasse is in Food History. Except some papers that offer studies on the European and multilingual dissemination of some dishes, as 'Blanc manger' (Flandrin 1984, van Winter 1989), the main effort has been about quantification as a method of knowledge on chronology of the changing tastes or shaping of regional patterns (Hyman 2005, Laurieux 2002). But this incomplete and disordered quantification doesn't allow even a comparison between two different historian's works. This lack of research and above all the lack of research possibilities has been lamented since the early 60ies (cf. Ehlert 1997,133f.).

Gathering thousands of recipes, the novel instrument created by CoReMA, can overcome these obstacles. It allows also to approach in a new way major research questions which have not yet gotten a proper answer: For example, analysing the relations between food and health or, more precisely, cookery and medicine. This will be possible through a deep comparison between the CoReMA corpus and medical texts, or first medical recipes, their ingredients and their medical qualities. When, how and why did occur the discrepancy, or even the divorce of cuisine and medicine formerly alleged by J.-L. Flandrin? (Flandrin 1996) Which concrete links did exist between culinary practices and medical theories in Middle Ages and Early Modern Time? Or, another example, revive the long debated question about the birth of regional patterns: The *doxa* states that regional cuisine was born only in the 19th c. (Csergo 1996). But historical sources, some narratives, medical and “geographical” texts, speak about regional habits or preferences as early as the 15th c. (Flandrin & Hyman 1988, Laurioux 2005). We know that CoReMA will contribute to resolve this apparent contradiction thanks to its thousands recipes enclosed in manuscripts whose composition will be precisely located.

1.4. Risk management and methodology

1.3.1 Critical editing

The methods of critical editing have been refined since its beginning in the 18th century. Currently there are several schools and edition models that co-exist side by side (diplomatic editing, genetic editing, historico-critical editing, etc.) the differentiation mainly comes from the varying research interests of the different disciplines: history scholars mostly rely on diplomatic transcription with moderate normalization (Kranich-Hofbauer 2000), philologists may use a genetic oriented approach, focus on documentary editing, or in the case of the Department for German Medieval Philology in Graz a hyper diplomatic transcription approach (Hofmeister-Winter 2003).

The current approach applied in two running edition projects of household manuscripts in Graz relies on digital research environments for text transcription. It explicitly focuses on the edition of sachprosa texts and heterogeneous collected manuscripts. It produces a moderate diplomatic transcription that has no normalisation and attempts to record writer specific characteristics (concerning individual letters and parts of letters like abbreviation markers or superscripts), text-genetic information, and dialectal markers that are represented on character level (e.g. sound changes, dialect markers).

This method has been tested in closed and running projects at the ZIM-ACDH and was proven useful, risk calculation is very low. The success rate depends on the accuracy of the transcriber.

1.3.2 Digital Humanities Methods

1.3.2.1 Digital editing

Digital Editions are a product of the Digital Humanities, which uses computer-based methods to create, research and disseminate scientifically based sources (cf. for example Pierazzo 2011, Sahle 2013). If the 'classic' edition is distinguished by its historically grown diversity, this 'new' form adds another dimension of complexity. It also strengthens the connection between the source and the edition and makes it possible to add extra value to this essential scholarly work. Sahle and Vogeler (2014) describe an edition as

an information resource which offers a critical representation of (normally) historical documents or texts. Scholarly digital editions are not merely publications in digital form; rather, they are information systems which follow a methodology determined by a digital paradigm, just as traditional print editions follow a methodology determined by the paradigms of print culture.

Digital editions currently are one of the prominent research fields in the Digital Humanities and will remain in the centre of interest in the years to come. Digital Editions endeavour to separate the edition of the constraints individual fields of science impose and they tend to open up research towards

questions that go beyond the scope of individual disciplines.

One of the reasons for the paradigm shift from 'classical' to the Digital Edition is the change in the scientific workplace, which is characterized by a trans-medialisation: nearly all editorial procedures are now carried out in a digital work environment on digital documents (Pierazzo, Driscoll 2016,32). Consequently, the result of editorial work should also be digital. This means not only that the computer is a natural tool for preparing scholarly editions, but also that digital editions which allow for both digital and printed output meet all the standards of scholarly editing. Digital editions are advantageous in that they provide a more flexible means of cataloguing historical texts and offer better accessibility than the print medium ever could. Digital editing breaks free of the constraints of the printed page – and many recent digital editions demonstrate this effect (cf. Sahle 2017). This creates the basis for a large number of derivatives, which, in addition to the (printed) reading text are text-image relation, variations in text representation, text-genetic documentation, presentation and analysis, or the evaluations and visualizations of the text data and of data texts have been enriched with. A prerequisite for this is that the digital edition retains its attempt at experimental research methods but also follows established standards (e.g. XML/TEI) and follows the guidelines of long-term preservation.

This method has been excessively tested and was proven useful by the digital humanities community, risk calculation is very low.

I.3.2.2 Digital enrichment

An important focus of CoReMA is the semantic enrichment of the historic texts (van Hooland et al. 2015, 263ff.). It generally is the basis for machine aided analysis and digital text production in the Digital Humanities. The formalization of this enrichment process (annotation), the computer aided analysis of historical documents and their interpretations are an important step in humanities research. To conform to scholarly requirements, digital research objects are not only created in a transparent and regulated way (digitization) but are also annotated with critically tested and normed research data to prepare the sources as well as the annotations for domain specific research and analysis methods. The digitalization of cultural artefacts is not simply settled with their pictorial or textual representation stored in some computer but by the formal explication and contextualization of the semantic structures of these artefacts. It involves both the formal visualization of the semantics inherent in the artifact as well as the enrichment with meanings arising from interpretations and contextualization acts in the research process.

Of course, this is not a new dimension of scholarly research. What is new are the possibilities offered by information technology for the processes of formalization, presentation and analysis of these structures of meaning. For example, palaeographic features of a manuscript can be formally differentiated and statistically (cf. Hofmeister & Stigler 2010) analyzed, dialect and information on production of manuscripts can provide temporal and spatial data for visualisation on time charts and maps, text enriched with normative data can be tested comparatively. These are research strategies which are soundly tested in digital humanities projects. The main advantages are that there still is room for experimental research and, of course, the possibility to process huge amounts of data.

This method has been excessively tested and was proven useful by the digital humanities community, risk calculation is very low.

I.3.2.3 Semantic web technologies

Searching for information in a computer environment currently is still based on finding and matching words. The problem of word sense disambiguation (just a simple example) for instance cannot be addressed in a non-semantic search environment. A semantic search should be able to address this problem by looking at the context of the searching operation. To make this possible on a technical basis there are core requirements for knowledge representation: entity identity, representing relationships between identities, extensibility, shared vocabularies (ontologies).

These requirements can be reproduced with a cluster of basic web technologies that are commonly

called the ‘Semantic Web Stack’ (W3C 2007): URIs are necessary to uniquely identify resources in the Semantic Web. Unicode is an international standard with the long-term goal of assigning a digital code to all meaningful characters of all semiotic systems known allowing consistent encoding for different countries and cultures. Extensible Markup Language (XML) is a markup language that helps to structure data. RDF (Resource Description Framework) enables us to structure information (triples) in a way that data can be exchanged between systems while the original meaning stays the same. A triple always resembles the form resource - property - value and can be visualised as graph, showing the relations between the stored data. Every resource is uniquely identified by an URI. Subjects, predicates and objects are names for concrete or abstract entities in the real world (cf. Fig. 1: Exemplary model for visualising cooking recipes in RDF). Vocabularies and ontologies define the relations among terms or concepts that together define the conceptualisation of a domain. Ontologies are already being successfully used to represent (Sam et al. 2014) and analyse (Jovanovic et al. 2015, Vadivu & Waheeta Hopper 2010) cooking recipes, albeit with a different focus and granularity of data. Data that is available in a semantic web format and that, analogue to its format, is stored in a triple store can be queried with the help of SPARQL Protocol And RDF Query Language.

Preparing humanities research data this way opens it to a wide possibility of research strategies: queries on semantic relations and underlying meaning provide a deeper level of text analysis, the data and its relation can be visualised using different means (statistical relations, ways of migration, stages of text development, etc.), and it makes accessible a whole new universe of linked open data, that allow for deeper enrichment and more data value. It makes it possible to find links between resources that were not known before, thus expanding the potential of knowledge generation.

Risk calculation for this method is low, its success depends on the quality of the data produced in tasks 2.2 and 4.1-3.

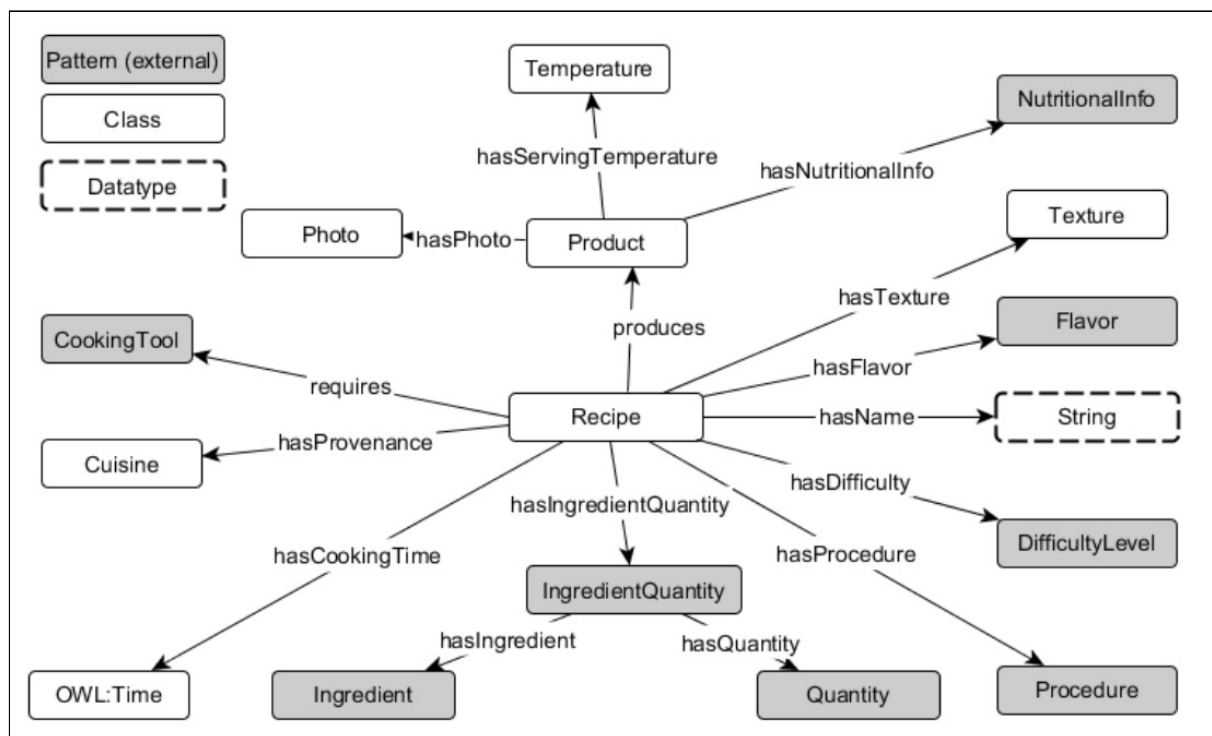


Fig. 1: Example for a semantic model of a modern cooking recipe (Sam et al. 2014, 55).

I.3.2.4 Data Visualisation

Visualising data is the procedure of expressing any kind of data or even processes with some kind of graphical means. The goal is to make the understanding of data or processes easier (Card 1999, 6), visualisation of data is a step beyond simple data analysis as its results have the potential to generate

new research questions (Reiche et al. 2012,18). The most common means of visualisation in a scholarly context are graphs to visualise data connection, and hierarchical structures (tree, radial, and 3d structures, etc.) to show dependencies. In the humanities visualisation is often used for information retrieval from unstructured data collections (Manning 2008), data mining (Hand et. al 2001,17), data analysis, and temporal and spatial data presentation. Typical use cases are the visualisation of text variants and stemmata in Digital Editions, and the presentation of historical metadata as time tables and geographical maps as well as combinations thereof.

Once historical data is digitized and enriched, and even in a semantic web format the possibilities of visualisation are manifold. For the presented project a combination of temporal and spatial data interface will suit to analyse and visualise the question of recipe migration and development (cf. the visualisation environment *nodegoat*). The development of cooking recipe and recipe collections in regard to form and content may be visualised with graphs (cf. the tools *Collate X* and *Stamma Web*).

Risk calculation for this method is low, its success depends mainly on the quality of the data produced in tasks 4.1-3 and 5.1-2.

I.3.2.5 Digital Infrastructure and Long Term Preservation

GAMS is an OAIS-compliant Asset Management System based on the Open Source software FEDORA and further developed by ZIM-ACDH. The purpose of GAMS is to establish and continuously develop a data repository for scholarly content, and to ensure the long-term preservation, access to and reusability of the content in different usage scenarios. The repository builds upon a webservice-based (SOAP, REST), platform-independent and distributed system architecture, a largely XML based content strategy, the support of XML based import and export standards (METS, etc.) and the use of standardized data and metadata formats. The Cirilo client, a java application developed for content preservation and data curation in FEDORA-based repository systems, includes object creation and management, versioning, normalization and standards, and the choice of data formats. User-defined mappings allow for a simple transformation of the most important content into RDF triples and consequently into Linked Open Data. GAMS uses an object-oriented concept of so called content models on the base of WSDL (Web Service Description Language).

A main concern for the creation of valuable digital objects is to ensure the long-term availability and reliable citability of the generated resources. Therefore the assignment of a persistent identification and the enrichment with at least a minimal set of metadata is crucial when working with scientific and cultural heritage material. To ensure this, ZIM-ACDH, as a member of the handle network runs its own handle server. All data objects in the system receive a persistent identifier based on *handle.net* and can thus be explicitly cited, analogous to a print publication.

Since 2014 GAMS has been a certified trusted digital repository in accordance with the guidelines of the *Data Seal of Approval* with a particular focus on the persistent storage and reusability of resources considered to be worthy of long-term preservation. This seal is awarded to trusted digital repositories adhering to 16 basic principles. GAMS is also registered with the Registry of research data repositories *re3data.org*. Reusability and interoperability of the produced research data is guaranteed by the use of adequate data standards (XML/TEI P5, TCF, NIF, CMDI, CWB), standardized data models (RDF) and processing languages (XSLT).

To ensure the physical persistence of data in case of hardware errors or other causes for the loss of data, it is necessary to have a data security policy in place. Data storage for GAMS is provided via SAN by the University's IT department. Data is stored redundantly in two data centers in different campus buildings. Data backup in GAMS is part of the central backup processes of the University of Graz. Daily backups are stored on a disk array and later moved to tape. There is an additional daily offsite backup managed by the Centre itself. For more information on GAMS see the complete documentation (cf. Steiner & Stigler 2015).

II. Project organisation and means implemented

II.1. Scientific coordinators (CV in annex)

Bruno LAURIOUX is professor in Medieval and Food History at the University of Tours. He has worked on medieval cookery, gastronomy and food for more than thirty years. He has published 7 books and edited 4 others on the different aspects of medieval food and more recently on long term food history. He has published more than 100 papers and supervised 10 PhD. B. Laurioux has created and managed an international network on food studies: the “Institut Européen d’Histoire et des Cultures de l’Alimentation” (IEHCA), as a secretary, deputy chairman and chairman of Scientific Council (2001-2016) and since 2016 as chairman of the Board. He was member of the Editorial Board of *Food & Foodways* and *Médiévales*. From 2006 to 2010 he was scientific deputy director for Ancient and Medieval History and scientific director of the Institute of Social Sciences and Humanities at the CNRS (Centre National de la Recherche Scientifique).

Bruno Laurioux will coordinate the French team of CoReMA at the Centre d’Etudes Supérieures de la Renaissance.

Helmut W. KLUG is post-doc research assistant at the Zentrum für Informationsmodellierung - Austrian Centre for Digital Humanities of Graz University (ZIM-ACDH). His focus of interest is subdivided into the research of medieval and early modern alimentation and researching into digital humanities methods of computer-aided knowledge generation, this includes the application of Digital Humanities methods and especially Digital Scholarly Editions. He has, for example, gathered experience in independent project management with the *Dictionary of Old English Plant Names* (fwf project) and the *Medieval Plant Survey* (proof of concept dissertation project), both web based scholarly research tools. He is the editor of the *Korpus mittelalterlicher Kochrezepttexte* (Corpus of Medieval Cooking Recipes). H. Klug has published pertinent articles on German medieval food history and digital editing and has recently started to co-organise and to work on a nation wide research infrastructure project on Digital Editions.

Helmut W. Klug is Austrian research group leader for the CoReMA project.

II.2. Consortium

The joint project CoReMA can access the main research capacities of both the French and Austrian partner. The main expertise of the **French** team at the CESR includes food history of the Middle Ages and Early Modern Europe, an intimate knowledge of the French and Latin transmission of cooking recipes, and expertise in the critical and technical analysis (codicology, palaeography) of medieval and early modern manuscripts, script in Middle French and medieval Latin languages. The laboratory CESR’s expertise on Digital Humanities appears through the *BVH* program (Bibliothèques Virtuelles Humanistes: Humanist Virtual Libraries) and through the building of a heterogeneous data platform in the regional program *Intelligence des Patrimoines*. The **Austrian** team contributes expertise on the German cooking recipe transmission, theoretical and practical knowledge of scholarly editing, Early New High German, theoretical and practical knowledge of digital editing and digital text analysis, as well as the means to host and analyse the project data. The assignment of tasks and work-packages as detailed below builds on this distribution of competency.

The partners share a fundamental understanding of the history of food of the Middle Ages and Early Modern Age. The project strongly builds on the partners’ diverging knowledge of medieval and early modern cooking recipes and their historic language variants. The partners also complement one another in regard to codicological and palaeographic expertise and digital humanities research experience.

II.3. Means of achieving the objectives

II.3.1 Description and scientific context of work packages

WP 1: Management

This work package will be completely shared by the two partners, under the responsibility of the two scientific coordinators, B. Laurieux & H. W. Klug.

It will be subdivided in two tasks:

Task 1.1: Management, coordination. Two workshop meetings (project development, scholarly and technical topics) per year and two intermediate video conferences per year. Deliverables: 12 inner reports. Meetings will be held alternately in Tours and Graz, meetings will last between for 4 and 2 days.

Task 1.2: Management of legal administrative and financial issue. This task includes one intermediate report to funding agencies and one final report on scientific results and financial statement. It will accumulate costs for personal, assumed by the partners.

This task will accumulate costs for travelling: CESR: €12.000.- / Graz: €13.590.-

This task will accumulate costs for functioning : CESR: €5.704.-

This task will accumulate costs for personal, asked to ANR/FWF. CESR: 5 PM and for ZIM-ACDH: 3 PM.

WP 2: Digitization

Our research questions require the complete transmission of medieval cooking recipes of both the French and German language from 12th to 16th c. In order to apply digital methods of analysis the texts need to be available in digital form. This Corpus of Culinary Medieval Recipes will include all recipes handed down in Middle French, medieval Latin, and Early New High German recipe collections in their original language, order, form and content, i.e. 85 manuscripts for only 12th-15th c. The French manuscript corpus holds 13 manuscripts, one of which still has to be transcribed. The French medieval cooking recipes amount to an estimated total of more than 1000 recipes. The Latin corpus holds 14 collections, 11 still need digitization. One edited collection (Mulon 1971) needs revision and collation with the source manuscripts due to the poor quality of the edition. Latin recipes account for an estimated total of 1600 recipes. The German manuscript corpus holds 58 manuscripts containing cooking recipe collections, 15 of which are not yet properly transcribed. Five of the edited and published collections call for revision and collation (e.g. Aichholzer 1999). The German corpus of medieval cooking recipes sums up to ca. 4500 recipes.

Many of these recipes (approximately one third, i.e. all recipes in the German *Korpus mittelalterlicher Kochrezepttexte*) already have been digitized and are available electronically, albeit not in XML/TEI format. Another third has been properly edited and can be fairly easily retro-digitized from critical and modern editions. The last third, mostly French and Latin, needs a direct reading of cookery manuscripts, because they have not yet been edited properly or edited at all. It is imperative that the research corpus holds a text base of homogeneous quality.

The corpus will successively be made available as an open access resource to the scientific community as the text type cooking recipe and the historic documents hold more research potential this project can exploit (e.g. linguistics, dialectology etc.). This range of different initial situations calls for a subdivision of these tasks:

Task 2.1: Acquisition of manuscript images and printed editions: The basis for transcription of unedited or partially / poorly edited manuscripts will be microfilm or digital images, which have to be acquired from the libraries holding the manuscripts. This kind of substitute will be useful for most of the transcription process, in case of partially illegible manuscripts or manuscripts difficult to read, a direct examination of the manuscripts in the respective libraries is inevitable.

Acquisition of previously edited and published recipe collections for retro-digitization: The texts of

previously edited recipes have to be scanned from the books they are published in. The scanned images need OCR treatment.

Task 2.2: Diplomatic transcription and collation of unedited or partially / poorly edited manuscripts, written in medieval German (ZIM-ACDH), middle French and medieval Latin (CESR). It requires good specialists in palaeography and philology, both of which are available at the partner institutions. Of course, both partners have experience with scholarly editing, especially concerning cooking recipe texts and sachprosa.

Transcription will be done in a digital environment so that the output is XML and ready for machine processing later on (cf. WP 4 and 5). There are several ways to deal with this task, ranging from using specialised software (*Transkribus*, *Ediarum*, *T-Pen*, etc.) to using text editors (*Oxygen*) and proprietary mark-up. ZIM-ACDH has already been applying these methods in other projects. The suggested workflow includes an initial introductory workshop (5 days) to digital editing (theory, tools and mark-up, processing and presentation), and training with the software of choice. Decentralised projects like CoReMA call for using a collaborative software solution like *Transkribus* (free), so that help and guidance is available any time. This task will produce digital texts in XML/TEI format, which are best handled with the *Oxygen*-Editor (with costs). If applicable, the texts can be marked-up with a basic annotation (ingredients) during this step. This will prepare the texts for machine aided annotation and processing (cf. Task 4 and Annex 6 for annotation examples)

Task 2.3: OCR-Text collation. The text derived from the OCR process (Task 2.1) will need detailed collation and proof reading. Modern OCR software generally scores a very high recognition rate but working with historical varieties of text (middle French and medieval Latin) or highly annotated and formalised text types (critical editions) tend to produce a higher error rate. This task will produce digital texts in TEI-XML format. If applicable, the texts can be marked-up with a basic annotation (ingredients) during this step. This will prepare the texts for machine aided annotation and processing (cf. Task 4).

For this work package we assume costs of approximately CESR (€55.500.-), ZIM-ACDH (ca. €20.000.-) covering manuscript digitisation (CESR: €21.346.-, including purchase of one digital camera and copyrights for images; ZIM-ACDH: €14.500.-) and travel costs to visit libraries (CESR: €33.000.-, because of numerous Latin manuscripts still unedited and spread all over Europe; ZIM-ACDH: €5.500.-) [workshop travel costs are calculated in WP 1]; scanning and OCR of printed editions (CESR: €800.-; ZIM-ACDH: ---), purchase of specialised software (*Oxygen XML Editor*: CESR: €354.-; ZIM-ACDH: €531.-).

This work package will amount to 39 person months: CESR: 19 PM (including 8 asked to ANR) / ZIM-ACDH: 20 PM.

WP 3: Critical Study

The proper dating of manuscripts is an important subtask as the preserved culinary manuscripts range from the 12th to the 15th century. But simple manuscript dating is not enough to correctly situate a single recipe, less a recipe collection. On the surface, many medieval culinary recipes seem to be repetitive, using the same title and / or the same ingredients. But they seldom give exactly the same text, which raises questions on text usage, the users themselves, and, of course, text tradition (cf. Sorbello-Staub 2002,23f.). For this reason, critical editorial work is necessary to understand how manuscripts are linked to each other, inside a textual tradition: one manuscript can be a copy (imperfect, partial, increased) of another one, a compilation of many texts, etc. Normally, editors would apply text-critical analysis to answer these questions. But in the case of cooking recipes, we need a different approach. These texts are by no means simple ‘quasi standardized’ records like religious or legal texts, that have only been duplicated. Cooking recipes are ‘living’ texts that possibly see some kind of transformation with every single user. The reasons are manifold and can result from cook’s different approaches towards a recipe or even from a scribe’s lack of interest in the topic of the text (eg. in the MS Erlangen, Universitätsbibl., B 37). Analysing text traditions of cooking recipes with text-critical means within one language has proven difficult (cf. Ehlert 1996-2014 and Honold

2005, *contra* the critical remarks by Sorbello-Staub 2002,23f). Nevertheless, CoReMA plans a cross-language analysis of cooking recipes and their transmission across political and language borders.

Still, critical editorial methods are one means to provide a basis for this analysis, they lay the foundation for positioning the manuscripts and the recipes in time (dating of handwriting and/or watermarks) and space (manuscript provenance, dialect analysis). Traditional research techniques will be complemented with modern digital humanities approaches whenever possible.

The critical study of the manuscripts and the cooking recipe texts will produce basic metadata which is taken as granted in this context. The data will successively be published and available open access on the project website as a *Descriptive List of Medieval Cookery Manuscripts*.

Task 3.1: Basic manuscript description. This covers an optical and haptic description of the manuscript and it includes measurements, description of the writing material, order of quires, description of a manuscript's content (especially important with compound manuscripts). Most of this information will be available through the preserving library's manuscript catalogue. This task requires specialists in codicology, which are available at CESR.

Task 3.2: Dating of manuscripts. Dating of manuscripts and the texts they contain is performed through thorough palaeographic analysis of the handwriting and the analysis of watermarks that can be found as imprint in the paper used as writing material. Accessing the manuscripts at the respective libraries that preserve them is necessary for a detailed analysis. This task requires specialists in palaeography and codicology, which are both available at CESR and ZIM-ACDH.

Task 3.3: Geographic location. Based on dialectological analysis historical texts can be appointed to specific regions that share certain dialect characteristics. For situating the recipe collections the origin or production of a cookery manuscript should be localised in a narrower geographic area (region, province, dialectal area). This subtask requires specialists in dialectology, which are available at CESR (Middle French and Latin) and ZIM-ACDH (Early New High German).

Task 3.4: Textual analysis can help situating the recipe collections in distinct textual tradition. This subtask requires specialists in philology, which are available at CESR (Middle French and Latin) and ZIM-ACDH (Early New High German).

Task 3.5: Preparation of select cooking recipe collections for print edition based on international standards. Based on the general coverage of German cooking recipe editions, we suggest that editions of historical recipes should include the following pieces of information and analysis (cf. Klug & Kranich 2015,125-127): detailed manuscript description, identification and description of dialectal features, diplomatic transcription of cooking recipes, diplomatic edition (if preferred), translation, critical apparatus, glossary, commentary on single recipes, collective commentary and situation of recipe collection within cooking recipe tradition.

For this task 3.1 and 3.2 we assume travel costs, these are already calculated in task 2.1. Person months for this work package will be: CESR: 18 PM (including 8 asked to ANR) ; ZIM-ACDH: 14 PM.

WP 4: Digital text preparation

Working with historical texts requires the sound understanding of its cultural background. This assumption is constitutive for the work with specialist literature. Information on culture and customs of historical peoples further the decoding of explicit information and facilitates the understanding of implicit knowledge that the historical author simply assumes of his recipients. This is especially true of cooking recipe texts that explicitly only specify ingredients, preparation methods, or serving instructions but implicitly assume the historic recipient to draw conclusions on religious, social, economic, and above all dietetic dependencies. For the contemporary medieval recipient, this would not have been any problem at all but a modern reader of these texts will have to acquire an appropriate cultural background in order to being able to comprehend the text's information in its whole complexity. Understanding and interpreting always relays on a sound knowledge of the associated cultural background.

We stated above (cf. Task 2) that traditional critical philology will not suffice for the analysis of text traditions and text migration of cooking recipes due to genre specific aspects. However, we believe that this kind of analysis can be done by falling back on cultural data associated with historic cooking recipes. This will include categorization of dishes, analysis of ingredients, steps in preparation, and serving instructions, as well as metadata on explicit and implicit seasonal, religious, social, and dietetic reference.

Task 4.1: Annotation of recipes: ingredients. The XML/TEI output of task 2.2 is the basis for this task. If applicable, the transcribed and collated texts have already been basically annotated in task 2.2 (ingredients, cooking equipment: one-piece annotation, generally nouns). The results of his initial step can be used to produce a machine generated list of ingredients that in a further step will be normalised and then itself enriched with links into a simple food ontology (BBC Food Ontology), that covers basic recipe description. The enriched data will be fed back into the cooking recipe transcription to prepare it for further analysis. This step requires close collaboration between food historians and digital humanists.

Task 4.2: Annotation of recipes: genre specific instructions. This mark-up process will concentrate on multi-part information available in the recipes, like preparation and serving instructions. Due to the linguistic characteristics of this information (mostly verb clauses) the annotation process will have to be done manually. It again will include normalisation and enrichment through ontology linking as well as linking to ingredients and kitchen equipment whenever possible. This step needs a culinary interpretation and requires close collaboration between food historians and digital humanists.

Task 4.3: Annotation of surrounding cultural context. This annotation process will focus on cultural information conveyed in the cooking recipes that is strongly linked to medieval cuisine but has no direct influence on the cooking and preparation process: direct or indirect religious, social, and dietetic references. Again, the annotation process will have to be done manually based on normalised keywords. This information has to be linked with the project's food ontology, too. During this step, the ontology will have to be extended in regard to these historic concepts. This step needs a culinary and cultural interpretation and requires close collaboration between food historians and digital humanists.

All data annotated in these tasks will then be linked back to normalized vocabularies that are machine generated and scholarly approved. The vocabularies will for example hold all historic variants of a term as well as the modern French, German and English expressions. This data is the basis for the semantic web data.

This work package will not accumulate extra costs than for personnel, estimated work-load: CESR: 14 PM (including 3 PM asked to ANR) ; ZIM-ACDH: 17 PM.

WP 5: Analytic processing and interpretation of findings

Task 5.1: Machine-based analyses. Properly and fully annotated TEI-XML transcriptions can be automatically transferred into a semantic web environment, a so called triple store which is able to handle complex RDF data and supports data querying, with the help of SPARQL queries that allow for deep analysis of the data. The focus will lie on a) ingredient and b) cooking instructions annotation. These searches, that can overcome the language barrier, will produce recipe groups that use the same ingredients (or similar) and the same (or similar) cooking processes, therefore indicating that they describe the same dish. Based on their metadata they can be sorted according to different research interests (diachronic, according to their place of production, etc.).

A second step towards verifying parallel transmission or recipe variants is the use of collation software, that uses different kinds of algorithms to determine different levels of similarity ranging from verbal parallelism to several steps of variation, on select text groups. This software can also produce tree diagrams visualising the text development in similar texts.

Task 5.2: Scholarly analysis. The result data-sets produced by machine analysis need verification through scholarly supervision. In the training/experimental phase of this subtask, both food historian and digital humanist have to collaborate closely on producing/choosing the most productive

combination of search runs. Tasks 5.1 and 5.2 are tightly intertwined.

Task 5.3: Interpretation of findings. The search results need, of course, constant verification through scholarly analysis. This is also the basis for the interpretation by food historians concerning the question why and to what extent the migration process happened to certain recipes.

This work package will not accumulate extra costs than for personnel, estimated work load: CESR: 17 PM (including 3 asked to ANR) ; ZIM-ACDH: 19 PM.

WP 6: Dissemination

Concerning the project output CoReMA wants to pursue several strategies: the primary output channel will be the project web site, where not only a manuscript catalogue with a focus on cooking recipe transmission but also all research data will be made available open access. From our point of view research data includes the TEI-XML transcriptions of previously unedited or poorly edited manuscripts, the normalised vocabulary, the food ontology and all software scripts for data manipulation. The website will also be able to host digital scholarly editions of the individual recipe collections. These can be the basis for a print output of select recipe collections. Furthermore, the usage of RDF as a data format in combination with the elaborated food ontology will provide a way into the Linked Open Data Cloud. This means that research can be done even outside of the project environment on the website as SPARQL allows to query and combine the data from anywhere in the world and with any information available as Linked Open Data. In this way any future projects dealing with a similar topic could combine their data with this project's output and merge to an ever growing database on food related information.

Task 6.1: Publishing in line of the database on a web platform. Scholarly findings and research data will be continuously published under *Creative Commons* licenses. The website, data description, and analysis will be available in French, German, and English.

Task 6.2: Scholarly conferences. The project will be presented at thematically fitting conferences (e.g. the Leeds International Medieval Congresses of Leeds, Lerida and Kalamazoo; the Oxford Symposium on Food and Cookery; the IEHCA International Conference on Food Studies at Tours, the Diata Conference of Coimbra). Moreover, three major International Conferences will be organized by CoReMA exposing the methodology and the results of the program for a large scientific audience, including not only Food Historians but also Philologists, Science Historians, Specialists of Digital Humanities, Professional Cooks and Journalists. The first CoReMA conference will be dedicated to “Recipe as a genre” and will be held probably in the middle of the 2nd year in Tours. The second at the beginning of the third year, hosted in Graz, will focus on digital humanities aspects and has the working title “Historical and historico-linguistic research and the Semantic Web”. The third one will be the concluding conference hosted in Tours and can be temporarily entitled “Recipes as sources”.

Task 6.3: Scholarly publications. The research will inspire scholarly articles discussing both medieval food history and digital humanities (digital editing). Conference proceedings and research articles will be means to promote the project’s methodology and findings.

Task 6.4: Supplying data to Linked Open Data Cloud: Advertising the data resource within the Linked Open Data Community.

Task 6.5: Pedagogical Dissemination. The project will generate a collection of recipes with French roots that have migrated to German speaking countries. This pool of texts and dishes will be a great source for science to public dissemination in schools (as it happens in Graz in the nationally founded Sparkling Science Project *Nutritious Ages – Medieval Cuisine and Hygienics between Orient and Occident*), and public lectures or workshops. It can be the basis for a long overdue cookbook of medieval recipes that follows modern standards. An exhibition can also show the concrete results to a large audience in the framework of the Cité de la Gastronomie at Tours.

This WP accumulate extra costs: CESR €51.009.- including €40.000.- for organization of sessions in international general conferences, of two major international conferences on and around the program, and of one exhibition ; €10.000.- for publications of the two international conferences; €1.109.- for 2 trainees to help the organization of the conferences and the exhibition

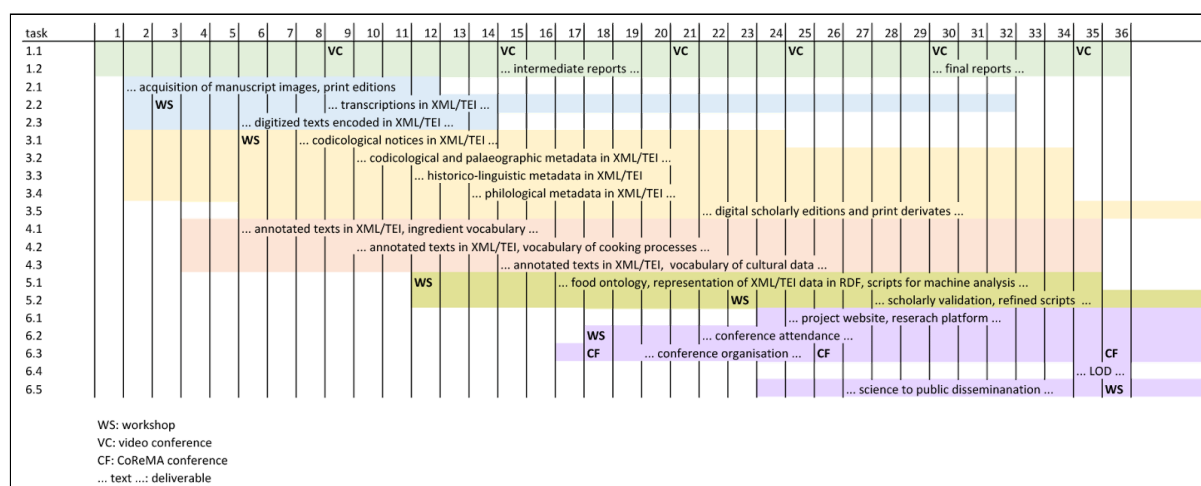
For personnel, the estimated work load is CESR: 19 PM (including 3 asked to ANR) ; ZIM-ACDH 8 PM.

II.3.2 Project time-table and deliverables

WP/ Task	Description of Tasks	Ressources	Chronology	Deliverable (cf. Gantt chart)
1	Management			
1.1	Management, coordination	CESR - ZIM-ACDH	M1-M36	Two workshop meetings and two intermediate video conferences per year with 6 inner reports
1.2	Management of legal administrative and financial issue	CESR - ZIM-ACDH	M1-M36	1 intermediate report, 1 scientific and financial statement
2	Digitization			
2.1	Acquisition of manuscript images and printed editions	CESR - ZIM-ACDH	M2-M12	60 manuscripts or documents acquired
2.2	Diplomatic transcription and collation of unedited or partially/poorly edited, written in medieval German [ZIM-ACDH], middle French and medieval Latin [CESR]	CESR - ZIM-ACDH	M2-M32	Workshop on digital editing Transcriptions in TEI-XML
2.3	OCR-Text collation	CESR	M2-M14	Digitized texts encoded in TEI-XML
3	Critical Study			
3.1	Basic manuscript description	CESR - ZIM-ACDH	M2-M24	Codicological notices in TEI-XML
3.2	Dating of manuscripts, through handwriting or watermarks.	CESR - ZIM-ACDH	M2-M34	Codicological and palaeographic metadata in TEI-XML
3.3	Locating the place of production of a cookery manuscript in a more narrow area than a "country" (eg. dialectal region, province).	CESR - ZIM-ACDH	M2-M34	Historico-linguistic and spatial metadata in TEI-XML
3.4	Situating the cookbooks in textual tradition.	CESR - ZIM-ACDH	M2-M34	Philological metadata in TEI-XML
3.5	Editing select texts in regard to international scientific standards	CESR - ZIM-ACDH	M6-M36-	Digital Editions and print derivatives
4	Digital text preparation			
4.1	Annotation of recipes: ingredients	CESR - ZIM-ACDH	M4-M35	Encoded texts in TEI-XML, ingredient vocabulary
4.2	Annotation of recipes: genre specific instructions	CESR - ZIM-ACDH	M4-M35	Encoded texts in TEI-XML. Vocabulary of cooking processes
4.3	Annotation of surrounding cultural context	CESR - ZIM-ACDH	M4-M35	Encoded texts in TEI-XML, vocabulary of cultural data
5	Analytic processing and interpretation of findings			
5.1	Machine-based analysis and use of semantic search strategies and collation software	CESR - ZIM-ACDH	M12-M35	Food ontology Semantic representation of annotated texts in RDF-XML Automated analysis of encoded texts. Production of recipes groups
5.2	Scholarly analysis, interpretation of findings	CESR - ZIM-ACDH	M12-M36-	Validate machine generated results
6	Dissemination			

6.1	Publishing in line of the database on a web platform	CESR - ZIM-ACDH	M24-M36	Research platform for historic cooking recipes - Heterogeneous Data Platform of ZIPAT program
6.2	Organisation of and participation in scientific events (International Medieval Congress, Oxford symposium on food and cookery, IEHCA Conference on Food Studies). CoReMA Conferences on the Recipe as a genre and as a source, and on digital humanities methods	CESR - ZIM-ACDH	M18-M36-	Panels, International Conferences and Congress 3 CoReMA International Conferences
6.3	Scientific production and publications	CESR - ZIM-ACDH	M17-M36-	Edition of Scientific Conferences, Scientific papers (on food habits, on medical theories, on regional identities), Research books, Printed Critical Editions
6.4	Task 6.4: Supplying data to Linked Open Data Cloud:	ZIM-ACDH	M35-M36	Linked Open Data
6.5	Pedagogical Dissemination	CESR - ZIM-ACDH	M24-M36-	Exhibition, adapted recipes book

II.3.3 Project Gantt Chart



II.3.4 Overview of Costs and Personal Months

	CESR add. costs	CESR PM	ZIM-ACDH add. costs	ZIM-ACDH PM
WP 1	€12.000.- travel €3600.- computers €554.- trainee €550.- screen €1.000.- consumables	11 (6 UnivTours + 5 ANR)	€13.590.- travel	3
WP 2	€21.346.-manusc. img. €33.000.- travel € 800.- scanning and OCR € 354.- software	19 (11 UnivTours + 8 ANR)	€14 500.- manusc. img. €5.500.- travel	20
WP 3		18 (10 UnivTours + 8 ANR)		14
WP 4		14 (11 UnivTours + 3 ANR)		17
WP 5		17 (14 UnivTours + 3 ANR)		18
WP 6	€40.000.- Intern. Conferences	19 (16 UnivTours + 3 ANR)		8

	€10.000.- Publications €1109.- Trainees			
Sum	€ 124.313.-	95 (65 UnivTours + 30 ANR)	€33.590.-	80

III. Impact and benefits of the project

The results of CoReMA clearly address Challenge 8 of the ANR Work Program 2017, “Innovative, inclusive and adaptive societies”, especially the theme 5 “Cultures, creation and heritage”. In Challenge 8, social sciences and the humanities are encouraged to pursue cross-disciplinary approaches encompassing, among others, history and linguistics. Challenge 8 may fund the conducting of surveys or the constitution of corpuses (as texts and images) on the conditions, all gathered in CoReMA, that they coincide with a research project, that open data is provided, and that a mechanism exists for perpetuating said data.

The CoReMA project is a scholarly research project focused on the historical and cultural development of national cuisines. Its research methods draw from classical scholarly methods like critical editing to modern experimental methods of analysis of the digital humanities. These are all reasons, why the benefits and the impact of the project are manifold: the project will have impact on the very research domains it is situated in, and it will also have impact on a wider public through the planned pedagogic dissemination strategies.

Due to the huge amount of historical documents that will be edited in the project both through traditional and modern research methods the project will influence both fields. There will be constant alternation between traditional and modern research methods during text transcription, codicological, palaeographical, and philological descriptive work and the design of a suitable presentation interface. This will generate knowledge on how and which methods work together productively. Dissemination through scholarly means (conference presentations, papers, and articles) will help to further both disciplines.

The project can also be seen as a proving ground for our research method for the study of text transmission and migration, that combines philological as well as cultural historical methods to reach its goals. This is a new approach for historical cooking recipes but when the technical infrastructure is in place and when the ground rules of the working process are published, it can be transferred to any kind of technical historical texts that do not follow the ideal transmission process of model => copy. The project will set up a research platform that not only can be used to analyse historical texts but, due to semantic web techniques, the application of a basic food ontology and the dissemination of the project data as Linked Open Data, also for the migration of recipes, food items, or eating habits throughout history up to the modern age. Provided a uniform source data the project's digital working environment can be seen as the foundation for diachronic, cross cultural research environment on food and food studies as well as other culturally charged transient texts.

The integration of historic German recipes into a wider European context and an international discourse of food history paired with an adequate documentation and promotion of the research progress and findings can be a further step to establish food studies and food history in German speaking Europe. One vital part of this process is scholarly dissemination (see above), the other is public dissemination. The general topic ‘food’ and the more specialised research on food history has a great potential of interest to a general public and will reach and engage a great number of people, varying food trends, food blogs, and of course, cooking shows all are examples for this interest. In Austria we will have access to a blog run by a renowned daily paper through a private society specialised on medieval food history (*KuliMa - Universitätsverein Kulinarisches Mittelalter*). This society also engages in the dissemination of scholarly research and knowledge in the direction science to public and has tight connections to the *siebente fakultät*, Graz University’s centre for science to public research dissemination. Dissemination strategies are public lectures, discussions, school events, workshops for children, media appearance (newspaper, TV) and cooking workshops.

The activities of CoReMA will be integrated in the cursus of the new CESR master “Food and

Heritage”, in the framework of the High Institute for the Heritage Intelligence that will be developed at the university of Tours.

The project includes core scholarly methods like critical editing or digital humanities research, which are an integral part of the curricula of the disciplines involved: history, German philology, digital humanities. The project will be part of ongoing classes through texts, research questions, and methodological discussion. The findings of the intertwined cooperation of history research and digital humanities will inspire new research methods that will influence both curricula of historical studies and digital humanities.

Annex 1: Referenced and Project Relevant Literature

- Adamson, M. W. (Ed.). (1995). *Food in the Middle Ages. A Book of Essays*. New York, London: Garland.
- Adamson, M. W. (Ed.). (2002). *Regional Cuisines of Medieval Europe: A Book of Essays*. New York, London: Routledge.
- Aichholzer, D. (1999). “*Wildu machen ayn guet essen.*” *Drei mittelhochdeutsche Kochbücher: Ersteditionen, Übersetzung, Kommentar*. Wien [u.a.]: Lang.
- Card, S., Mackinlay, J., Shneiderman, B. (1999): *Readings in Information Visualization: Using Vision to Think*. Morgan Kaufmann Verlag.
- Carlin, M., & Rosenthal, J. T. (Eds.). (1998). *Food and Eating in Medieval Europe*. London: Hambledon Press.
- CMDI: The Component Metadata Initiative.
- Collate X: <https://collatex.net/> [30.03.2017].
- Csergo, J. (1996). “L’émergence des cuisines régionales”. In *Histoire de l’alimentation*. Dir. J.-L. Flandrin & M. Montanari. (p. 823-841). Paris: Fayard.
- CWB: Corpus Work Bench.
- Data Seal of Approval. <https://www.datasealofapproval.org/> [30.03.2017].
- Dictionary of Old English Plant Names*. Eds. Bierbaumer, Peter, Klug, Helmut W., Sauer, Hans, Krischke, Ulrike. 2007-2017. <http://oldenglish-plantnames.org/> [30.03.2017].
- Driscoll, M. J., & Pierazzo, E. (Eds.). (2016). *Digital Scholarly Editing. Theories and Practices*. Cambridge: Open Book Publishers.
- Ediarum*: <http://www.bbaw.de/telota/software/ediarum/> [30.03.2017].
- Ehlert, T. (1997). “Regionalität und nachbarlicher Einfluß in der deutschen Rezeptliteratur des ausgehenden Mittelalters.” In H.-J. Teuteberg, G. Neumann, & A. Wierlacher (Eds.). *Essen und kulturelle Identität. Europäische Perspektiven*. (pp. 131-147). Berlin: Akademie-Verlag.
- Ehlert, T. (1996). “Das Reichenauer Kochbuch aus der Badischen Landesbibliothek. Edition und Kommentar.” *Mediaevistik*, 9, 135-188.
- Ehlert, T. (Ed.). (1999). *Münchener Kochbuchhandschriften aus dem 15. Jahrhundert. Cgm 349, 384, 467, 725, 811 und clm 15632*. Donauwörth: Auer.
- Ehlert, T. (Ed.). (2010). *Küchenmeisterei. Edition, Übersetzung und Kommentar zweier Kochbuch-Handschriften des 15. Jahrhunderts. Solothurn S 490 und Köln, Historisches Archiv GB 4° 27. Mit einem reprographischen Nachdruck der Kölner Handschrift*. Frankfurt am Main [u.a.]: Lang.
- Ehlert, T. (2014). “Kochrezepte und Notizen aus dem Günterstaler Notizenbuch. Edition von fol. 11r--14v der Handschrift GLA 65 Nr. 247 aus dem Generallandesarchiv Karlsruhe.” In A. Hofmeister, H. W. Klug, & K. Kranich (Eds.). *Der Koch ist der bessere Arzt. Zum Verhältnis von historischer Diätetik und Kulinarik im Mittelalter und in der Frühen Neuzeit. Beiträge der Grazer Tagung 20.- 22.6.2013*. (p. 287-314). Frankfurt am Main [u.a.]: Lang.
- FEDORA: Fedora Repository.
- Flandrin, J.-L. (1984). «Internationalisme, nationalisme et régionalisme dans la cuisine des XIVe et XVe siècles: le témoignage des livres de cuisine». In *Manger et boire au Moyen âge. Actes du Colloque de Nice (15-17 octobre 1982)*. (pt. 2, p. 75-91). Paris.
- Flandrin, J.-L. & Hyman, P. (1988) “Regional tastes and cuisines: Problems, documents, and discourses on food in Southern France in the 16th and 17th centuries”. *Food and Foodways* 1-3, p. 221-251.
- Flandrin, J.-L. (1996). “De la diététique à la gastronomie, ou la libération de la gourmandise”. In *Histoire de l’alimentation*. Dir. J.-L. Flandrin & M. Montanari. (p. 683-703). Paris: Fayard.
- Flandrin, J.-L. & Montanari, M. (Ed.). (1999). *Food. A culinary history from antiquity to the present*. New York: Columbia Univ. Press.
- GAMS: Gesiteswissenschaftliches Asset Management System.
- Hand, D. J., Mannila, Heikki & SmythPadhraic. (2001). *Principles of Data Mining*. Cambridge, Massachusetts: MIT Press.
- handle.net: Handle.Net Registry. <http://handle.net/> [30.03.2017].

- Hieatt, C. (1995). Sorting through the Titles of Medieval Dishes: What Is, or Is Not, a “Blanc manger”. In M. W. Adamson (Ed.), *Food in the Middle Ages. A Book of Essays*. (pp. 25-43). New York, London: Garland.
- Hofmeister, W., & Stigler, H. (2010). “Die Edition als Interface. Möglichkeiten der Semantisierung und Kontextualisierung von domänenspezifischem Fachwissen in einem Digitalen Archiv am Beispiel der XML-basierten ‚Augenfassung‘ zur Hugo von Montfort-Edition.” *editio*, 24, 79-95.
- Hofmeister-Winter, A. (2003). *Das Konzept einer „Dynamischen Edition“ dargestellt an der Erstaussgabe des „Brixner Dommessnerbuches“ von Veit Feichter (Mitte 16. Jh.)*. Göppingen: Kümmerle.
- Hyman, P. & M. (2005). «Les associations de saveurs dans les livres de cuisine français du XVIe siècle». In *Le Désir et le Goût. Une autre histoire (XIIIe-XVIIIe siècles). Actes du colloque international à la mémoire de Jean-Louis Flandrin (Saint-Denis, septembre 2003)*. Dir. Odile Redon, Line Sallman et Sylvie Steinberg. (p. 135-150). Saint-Denis: Presses Universitaires de Vincennes.
- Jovanovik, M., Bogojeska, A., Trajanov, D., & Kocarev, L. (2015). “Inferring Cuisine - Drug Interactions Using the Linked Data Approach.” doi:10.1038/srep09346 [30.03.2017].
- Karg, S. (Ed.). (2007). *Medieval Food Traditions in Northern Europe*. Copenhagen: National Museum of Denmark.
- Klug, H. W., & Kranich, K. (2015). “Das Edieren von handschriftlichen Kochrezepttexten am Weg ins digitale Zeitalter. Zur Neuedition des Tegernseer Wirtschaftsbuches.” In T. Bein (Ed.), *Vom Nutzen der Editionen. Zur Bedeutung moderner Editorik für die Erforschung von Literatur- und Kulturgeschichte*. (pp. 121-137). Berlin, Boston: De Gruyter.
- Korpus mittelalterlicher Kochrezepttexte*. In *Portal der Pflanzen des Mittelalters / Medieval Plant Survey*. Redaktion: Helmut W. Klug. Technische Leitung: Roman Weinberger. <http://medieval-plants.org> [30.03.2017].
- Kranich-Hofbauer, K. (2000). “Editionswissenschaft als interdisziplinäre Grundwissenschaft. Über Berührungspunkte und deren Überwindung.” *Jahrbuch der Oswald von Wolkenstein Gesellschaft*, 12, 49-64.
- Laurioux, B. (2002). «Identità nazionali, peculiarità regionali e koinè europea nella cucina del Medioevo». In *Il mondo in cucina. Storia, identità, scambi*. Dir. Massimo Montanari. (p. 45-70). Rome-Bari, Laterza.
- Laurioux, B. (2005). «Les voyageurs et la gastronomie en Europe à la fin du Moyen âge ». In *Le Désir et le Goût. Une autre histoire (XIIIe-XVIIIe siècles), Actes du colloque international à la mémoire de Jean-Louis Flandrin (Saint-Denis, septembre 2003)*. Dir. Odile Redon, Line Sallman et Sylvie Steinberg. (p. 99-117). Saint-Denis, Presses Universitaires de Vincennes.
- LOD: Linked Open Data
- Manning, Christopher D., Raghavan, Prabhakar & Schütze, Hinrich. (2008). *Introduction to Information Retrieval*. Cambridge [u.a]: Cambridge University Press.
- METS: Metadata Encoding and Transmission Standard.
- Mulon, M. (1971): «Deux traités inédits d’art culinaire médiéval». In *Bulletin Philologique et Historique (jusqu’en 1610). Année 1968*. (p. 369-435). Paris: Bibliothèque Nationale.
- NIF: NLP Interchange Format.
- Nodegoat: <https://nodegoat.net/> [30.03.2017].
- OAIS: Open Archival Information System.
- Oxygen: <https://www.oxygenxml.com/> [30.03.2017].
- Pierazzo, E. (2011). A rationale of digital documentary editions. *Literary and Linguistic Computing*, 26, 463-477.
- Portal der Pflanzen des Mittelalters / Medieval Plant Survey*. Redaktion: Helmut W. Klug. Technische Leitung: Roman Weinberger. <http://medieval-plants.org/> [30.03.2017].
- RDF: Resource Description Framework.
- re3data.org. <http://www.re3data.org/> [30.03.2017].
- Reiche, R., Becker, R., Bender, M., Munson, M., Schmunk, S., & Schöch, C. (2012). *Erster Bericht über die Verwendung von Verfahren der Digital Humanities in den Geistes- und Kulturwissenschaften (R 2.2.3)*. Urn:nbn:de:gbv:7-dariah-2014-2-6 [30.03.2017].
- REST: Representational State Transfer.

- Sahle, P. (2013). *Digitale Editionsformen. Zum Umgang mit der Überlieferung unter den Bedingungen des Medienwandels*. 3 vols. Norderstedt: Books on demand.
- Sahle, P. (2008-2017). *A catalog of Digital Scholarly Editions*. <http://digitale-edition.de/> [30.03.2017].
- Sahle, P., & Vogeler, G. (2014). *Criteria for Reviewing Scholarly Digital Editions, Version 1.1*. <http://www.i-d-e.de/publikationen/weitereschriften/criteria-version-1-1/> [30.03.2017].
- Sam, M., Krisnadhi, A. A., Wang, C., Gallahager, J., & Hitzler, P. (2014). "An Ontology Design Pattern for Cooking Recipes - Classroom Created." In *Proceedings of the 5th International Conference on Ontology and Semantic Web Patterns*, 1302, 49-60.
- SAN: Storage-Area-Network.
- siebente fakultät. <https://sieben.uni-graz.at/> [30.03.2017].
- SOAP: Simple Object Access Protocol.
- Sorbello Staub, A. (2002). *Die Basler Rezeptsammlung. Studien zu spätmittelalterlichen deutschen Kochbüchern. Erstausgabe mit Kommentar und Fachglossar der Handschriften Basel, ÖUB D II 30, Bl. 300ra-310va, und Heidelberg, UB cpg 551, Bl. 186r-196v und 197r-204r*. Würzburg: Königshausen & Neumann.
- Steiner, E. & Stigler, J. (2015): *GAMS and Cirilo Client. Policies, documentation and tutorial*. <http://gams.uni-graz.at/doku/> [30.03.2017].
- Stamma Web: <https://stemmaweb.net/> [30.03.2017].
- T-Pen: <http://t-pen.org/TPEN/> [30.03.2017].
- TCF: Text Corpus Format.
- Transkribus: <https://transkribus.eu/Transkribus/> [30.03.2017].
- Vadivu, G., & Waheeta Hopper, S. (2010). "Semantic Linking and Querying of Natural Food, Chemicals and Diseases." In *International Journal of Computer Applications*, 11.4, 35-38.
- van Hooland, S. V., Wilde, M. D., Verborgh, R., Steiner, T., & Walle, R. V. D. (2015). "Exploring entity recognition and disambiguation for cultural heritage collections." *Digital Scholarship in the Humanities*, 30, 262-279.
- van Winter, J. M. (1989). "Kochen und Essen im Mittelalter." In B. Herrmann (Ed.). *Mensch und Umwelt im Mittelalter*. (pp. 88-100). Frankfurt am Main: Fischer-Taschenbuch-Verl.
- W3C. (2007). W3C's Semantic Web Activity: Semantic Web overview slides. [https://www.w3.org/2007/Talks/0130-sb-W3CTechSemWeb/#\(24\)](https://www.w3.org/2007/Talks/0130-sb-W3CTechSemWeb/#(24)) [30.03.2017].
- Wiswe, H. (1956). "Ein mittelniederdeutsches Kochbuch des 15. Jahrhunderts." *Braunschweigisches Jahrbuch*, 37, 19-55.
- WSDL: Web Service Description Language.
- XML/TEI: XML Markup conventions proposed by the Text Encoding Initiative. <http://www.tei-c.org/> [30.03.2017].
- XML: Extensible Markup Language.
- XSLT: Extensible Style Sheet Language.

Annex 2: CV Bruno Laurioux

LAURIOUX, Bruno

Born the 6th of July, 1959. Professor in Medieval and Food History, “Classe exceptionnelle, 1er echelon”. University François Rabelais, Tours. Research Unit: CESR (Centre d’Etudes Supérieures de la Renaissance), UMR 7323

Degrees

1979-1984: Student at the école normale supérieure - Saint-Cloud.

1982: Agrégé, history.

1992: PhD, history, University of Paris I, Panthéon-Sorbonne. Title of the thesis: « Les livres de cuisine en Occident à la fin du Moyen Âge » (*Cookbooks in Western Europe at the end of the Middle Ages*). Grade: Summa cum laude.

2004: Authorized to supervise research in history, University of Paris I, Panthéon-Sorbonne. Title: « Discours et pratiques alimentaires au Moyen Âge » (Food discourses and practices in the Middle Ages).

Academic Career

1990-1993: Lecturer in history – University Paris VIII, Vincennes – Saint-Denis.

1993-1998: Assistant Professor in medieval history – University Paris VIII, Vincennes – Saint-Denis.

1998-2005: Assistant Professor in medieval history – University Paris I, Panthéon-Sorbonne.

2002-2003: Sabbatical Year, Scientific Guest of the école française de Rome.

2003-2005: Researcher at CNRS (LAMOP: Laboratoire de Médiévisitque Occidentale de Paris)

2005-2016 (-31/01): Professor of medieval history – University Versailles Saint-Quentin-en-Yvelines (1^{ère} classe, 2011, classe exceptionnelle, 2015).

2010-2011: Researcher at CNRS (LAMOP: Laboratoire de Médiévisitque Occidentale de Paris)

2016 (01/02-): Professor of medieval and food history – University François-Rabelais, Tours. 2017: member of research unit CESR, UMR 7323.

National & International Influence

1989-2010: Member of the Editorial Board of the Journal *Médiévales* (A in ERIH ranking), Editor-in-chief and Series Editor. 1994-2002: Member of the Editorial Board of the Journal *Food and Foodways*, Harwood Academic Publisher, Senior Associate Editor (1998-2002). Secretary (2001-2005), Deputy Chairman (2006) and Chairman (2011-2017) of the Scientific Committee, Chairman of the Board: Institut Européen d’Histoire et des Cultures de l’Alimentation (IEHCA).

2006-2008: Member of the Scientific Committee of the Universities of Paris IV and Paris X.

2006-2008: Member of the ERIH-ERAnet. 2008-2010: Member of the Scientific Committee of the EHESS-Paris and of The Casa de Velasquez (as representative of CNRS).

2008-2011: Member of the Scientific Committee of the Institut National du Patrimoine.

2010-2013: Member of the thematic group « Food & Foodways » in the National Alliance ALLEnvi.

2014-: Editor of the Series « Histoire de Sciences », CNRS-Editions.

2015-: Fellow of the Comité des Travaux Historiques et Scientifiques, Histoire et philologie des civilisations médiévales, chairman (2017-).

Scientific animation

2002-2005: In charge of the Network "Patrimoines européens de l'alimentation", Minister of Research, ACI "Techniques, Terrains, Théories".

2005-2012: Deputy Director of the Research Unit ESR, EA 2849 (UVSQ).

2006-2009: In charge of the Research Program « Normes et pratiques des cultures de cour », PPF « Les cours: pratiques culturelles et constructions d’imaginaires (du Moyen Âge à nos jours) » (UVSQ, Centre de Recherche du château de Versailles,)

2007-2009: In charge of the Research Program « Cultures de cour, cultures du corps: pratiques, normes et représentations corporelles dans les cours européennes avant la Révolution française » (EA ESR-Centre de

recherche du château de Versailles).

2008-2011: Member of GDRE CNRS C3B (Culture of the Court, Culture of the Body): Univ. of Lausanne, Queen Mary University, Univ. of Lyon 2, EHESS, UVSQ.

Organization of International Conferences and Congress

2001: *Histoire et identités alimentaires en Europe*, IEHCA (Strasbourg). Published by Hachette Littératures, 2002.

2006: *Cultures de cour, cultures du corps. Hygiène, santé et beauté dans les cours européennes à l'époque médiévale et moderne*, ESR/UVSQ-CRCV (Versailles). Published by PUPS, 2011.

2007: *Être historien du Moyen Âge au XXI^e siècle*, Société des Historiens Médiévistes de l'Enseignement Supérieur Public (Saint-Quentin-en-Yvelines-Créteil-Villetaneuse). Published by Publications de la Sorbonne, 2007.

2007: *Pratiques et discours alimentaires en Méditerranée de l'Antiquité à la Renaissance*, Institut de France-IEHCA (Beaulieu-sur-mer). Published in *Cahiers de la villa « Kérylos »*, 2008.

2008: *La cour du prince: cour de France, cours d'Europe, XII^e-XV^e siècle*, universités Paris XII-Paris XIII-UVSQ (Villetaneuse, Créteil & Guyancourt). Published in *Études d'Histoire Médiévale* series, Honoré Champion, 2011.

2010: *Expertise et valeur des choses au Moyen Âge, 1, Le besoin d'expertise*, FRAMESPA/University of Toulouse le Mirail- LAMOP/University Paris I-CSIC-Casa de Velázquez (Toulouse), panel *Nécessités de l'expertise alimentaire*. Published in *Collection de la Casa de Velázquez*, 2013.

2012: *La Viande: Fabrique et représentations*, IEHCA (Tours). To be published in "Tables des Hommes" series (PUR-PUFRT).

2013: *Se nourrir. Pratiques et stratégies alimentaire*, 138^e Congress of CTHS (Rennes), panel *L'acquisition des aliments: de la nature à la table au Moyen Âge*, to be published by CTHS editions.

2014: *Rituels et cérémonies de cour: de l'Empire romain à l'âge baroque*, DYPAC/UVSQ-CRCV (Versailles). To be published by Presses Universitaires du Septentrion.

2014: *Le modèle culinaire français: diffusion, adaptations, transformations, oppositions à travers le monde (17^e-21^e siècles)*, IEHCA (Tours). To be published in "Tables des Hommes" series (PUR-PUFRT).

2015: *The Banquet: Eating, Drinking and Talking together (XIIth to XVIIth c.)*, Univ. of Lausanne-UVSQ (Lausanne). To be published in *Micrologus*.

2016: *2nd International Conference on Food History and Food Studies*, IEHCA (Tours).

Main International Congress (Papers or Keynote Lectures)

1986: *L'Animal dans l'alimentation humaine: les critères de choix*, Liège, H.A.S.R.I.

1988: *Eating, History and the Social Sciences*, Wassenaar, Symposium of the Netherlands Institute for Advanced Study in the Humanities and the Social Sciences.

1990: *Du manuscrit à la table*, Université de Montréal.

1991: *Le Monde végétal (XII^e-XVII^e siècles). Savoirs et usages sociaux*, Florence, Villa I Tatti.

1995: *La Mediterrània, àrea de convergència de sistemes alimentaris (segles V-XVIII)*, Palma de Majorque, Institut d'Estudis Baleàrics.

1996: *Alimentazione e nutrizione, secc. XIII-XVIII*, Prato, XXVIII^a Settimana di Studi dell'Istituto internazionale di storia economica "F. Datini".

1998: *Mahl und Repräsentation. Der Kult ums Essen*, Univ. of Salzburg.

2000: *Il mondo in cucina. Storia, identità, scambi*, Univ. of Bologna.

2004: *La Scuola Medica Salernitana. Gli autori e i testi*, Salerne, Università degli Studi di Salerno.

2004: *Les Savoirs à la cour*, Univ. of Lausanne.

2008: *Alimentar la ciudad en la edad media*, Nájera. Encuentros internacionales del Medievo.

2011: *Circolazione di uomini e scambi culturali tra città (secoli XII-XIV)*, XXIII^e convegno internazionale di studi du Centro italiano di studi di storia e d'arte, Pistoia.

2011: *El mercat: un món de contactes i intercanvis*, Univ. of Lleida, Balaguer.

2011: *Forme e segni della distinzione sociale. Marquer la prééminence sociale*, Univ. of Palermo-EFR-LAMOP, Palermo.

2012: *Parfums et odeurs au Moyen Âge. Sciences, usages, symboles*, univ. of Louvain-la Neuve & Katholieke Universiteit Leuven, Louvain.

2014: *Imaginaires de la gastronomie. Productions, diffusions, valeurs, enjeux*, UQAM-Entretiens Jacques Cartier.

2014: *La civiltà del pane: storia, tecniche e simboli dal Mediterraneo all'Atlantico*, Univ. cattolica del Sacro Cuore, Brescia.

2015: *L'alimentazione nell'alto medioevo. Pratiche, simboli, ideologie. Sessantatreesima Settimana di studio*, Centro italiano di studi sull'alto medioevo, Spoleto.

2015: *Dos Prazeres da Mesa aos Cuidados do Corpo*, 3^o Colóquio Luso-brasileiro de História e Culturas da Alimentação, univ. of Coimbra.

2015: *1st International Conference on Food History and Food Studies*, IEHCA, Tours.

2015: *Le Banquet: Manger, boire et parler ensemble (XII^e-XVII^e siècle)*, Univ. of Lausanne-UVSQ, Lausanne.

2016: *Cooking Knowledge: An Intellectual History of Food and Cuisine*, Central European Univ. of Budapest.

2016: *Listes d'objets*, ANR Program POLIMA, WS 3, Rome.

2016: *Table et diplomatie à l'échelle du monde*, IEHCA-Univ. of Paris I & IV.

Lectures in seminars (out of France)

1994: « Les livres de cuisine italiens à la fin du Moyen Âge: un nouveau bilan » (Florence, Villa I Tatti).

1998: « Interdits et obligations alimentaires au Moyen Âge » (univ. of Lausanne, Pr Agostino Paravicini Bagliani).

2008: « The Medieval Gastronomy » (Yale University, Pr Paul Freedman) ; « Between the Middle Ages and the Renaissance: Gastronomy in the Fifteenth Century » (Columbia University, Pr Susan Boynton) ; « The Arts of the Table in the Middle Ages » (Bard Graduate Center, New York, Pr Peter N. Miller).

2011: « Le Moyen Âge et la gastronomie française » (Sommeruniv. of Frankreich-Zentrum, Albert-Ludwigs-Univ., Freiburg i-B)

2013: « L'historien et l'alimentation: évolution d'un regard », *Weimarer Rendez-vous mit der Geschichte*.

2016: « L'art culinaire médiéval » (Univ. of Lausanne).

Supervision of Research Works

4 PhD completed and 7 supervised whose 4 are on Food History.

2015: Yann Morel, *L'alimentation à la cour de Bourgogne au XV^e siècle*. Grade: *Summa cum laude*.

2016: Olivia Parizot, *Les écuycers tranchants et la découpe des aliments dans les péninsules ibérique et italienne à la fin du Moyen Âge et à la Renaissance*.

Since 2016: Hélène Jawhara-Piñer, *Interculturalités et patrimoines culinaires de la Péninsule ibérique: l'exemple des livres de cuisine arabes d'al-Andalus*.

Since 2016: Yu Gyeong Yoon, *L'alimentation en Corée sous les dynasties de Goryeo et de Joseon du Xe au XVII^e siècle*.

I took part in 12 boards of examiners for PhD and Habilitation thesis, whose 7 were on Food History.

1998: Florence Dufournier (Univ. of Paris IV).

2001: Fernando Serrano Larráyo (Pampelona, Universidad Pública de Navarra).

2007: Ramón Agustín Banegas López (Universitat de Barcelona).

2008: Robin Nadeau (Univ. of Paris I, Panthéon-Sorbonne): chairman.

2008: Cécile Le Cornec Rochelois (Univ. of Paris IV).

2009: Benoît Descamps (Univ. of Paris I, Panthéon-Sorbonne).

2016: Hsu Chia-Ling (Univ. of Paris-Diderot)

2016: Octave Julien (Univ. of Paris I, Panthéon-Sorbonne): chairman

Select Personal bibliography

The sign ← after a publication indicates that it is available on the Web, mainly in the site Academia.edu.

Monographs, edited monographs and edition of special issues of scientific journals

- Le Moyen Âge à Table*, Adam Biro, 1989, 154 p. Portuguese (1992) and German translation (1992, 1999).
- Le Règne de Taillevent. Livres et pratiques culinaires à la fin du Moyen Âge*, Paris, Publications de la Sorbonne, 1997, 424 p. ←
- Les Livres de cuisine médiévaux*, Turnhout, Brepols, 1997, 89 p. (series *Typologie des sources du Moyen Âge occidental*, fasc. 77).
- Ed. with Laurence Moulinier-Brogi: *Scrivere il Medioevo. Lo spazio, la santità, il cibo. Un libro dedicato ad Odile Redon*, Roma, Viella, 2001 (I libri di Viella, 28), 458 p.
- Manger au Moyen Âge. Pratiques et discours alimentaires en Europe aux XIV^e et XV^e siècles*, Hachette, 2002, 301 p. (series *Vie Quotidienne*) ; repr. 2006 & 2013 (new. ed.), 301 p. (series *Pluriel*). Japanese translation (2003).
- Edition with Martin Bruegel: *Histoire et identités alimentaires en Europe*, Paris, Hachette Littératures, 2002.
- Une histoire culinaire du Moyen Âge*, Paris, Honoré Champion, 2005, 476 p. (series *Sciences, techniques et civilisations du Moyen Âge à l'aube des Lumières*, 8).
- Edition, *Cuisine et médecine au Moyen Âge*, in *Cahiers de Recherches Médiévales*, vol. XIII, numéro spécial (2006), p. 221-266.
- Gastronomie, humanisme et société à Rome au milieu du XV^e siècle: autour du De honesta voluptate de Platina*, Florence, Galluzzo-SISMEL, 2006, 652 p. (series *Micrologus' Library*, 14).
- Edition, *Alimentation de cour – Food at court*, in *Food & History*, vol. 4 n° 1 (2006), p. 9-104
- Écrits et images de la gastronomie médiévale*, Paris, Bibliothèque nationale de France (conférences Léopold Delisle), 2011, 96 p. Best in the World, Gourmand World Cookbook Award 2012.
- En co-direction avec Catherine Esnouf et Jean Fioramonti, *L'Alimentation à découvert*, Paris, CNRS Editions, 2015, 324 p. Best in the World, Gourmand World Cookbook Award 2015.

Papers in peer-review journals and conferences (since 2005)

- With Odile Redon: « Histoire de l'alimentation entre Moyen Âge et Temps modernes. Regards sur trente ans de recherches », in *Le Désir et le Goût. Une autre histoire (XIII^e-XVIII^e siècles)*, ed. O.Redon, L.Sallman & S. Steinberg, Saint-Denis, 2005, p. 53-96.
- « Les voyageurs et la gastronomie en Europe à la fin du Moyen Âge », *Ibid.*, 2005, p. 99-117.
- « Le prince des cuisiniers et le cuisinier des princes: nouveaux documents sur Maestro Martino, *cocus secretus* du pape », *Médiévales* 49 (automne 2005), p. 141-154. ←
- « Cuisine et médecine au Moyen Âge: alliées ou ennemies ? », *Cahiers de Recherches Médiévales* 13, n° spécial (2006), p. 223-238. ←
- « Le maigre: cuisine de substitution ? », in *Substitution de nourritures, nourritures de substitution en Méditerranée*, ed. S. Bouffier-Collin & M.-H. Sauner, Aix; 2006, p. 89-106.
- « Alimentation de cour, alimentation à la cour au Moyen Âge: nouvelles orientations de recherches », *Food & History* 4-1 (2006), p. 9-27. ←
- (en collaboration avec Pauline Moirez), « Pour une approche qualitative des comptes alimentaires: cour de France et cour de Rome à la fin du Moyen Âge », *Food & History* 4-1 (2006), p. 45-66. ←
- « Petrus Musandinus et son traité sur l'alimentation des malades », in *La Scuola Medica Salernitana. Gli autori e i testi*. Florence, 2007, ed. Agostino Paravicini Bagliani (Edizione nazionale « La scuola medica salernitana », I), p. 235-260. ←
- « Les savoirs gastronomiques à la cour des papes au XV^e siècle », *Micrologus. Natura, Scienze e Società Medievali* 16 (2008), p. 217-232. ←
- « Athénée, Apicius et Platina. Gourmands et gourmets de l'Antiquité sous le regard des humanistes romains du XV^e siècle », in *Pratiques et discours alimentaires en Méditerranée de l'Antiquité à la Renaissance*, ed. J.Leclant, A. Vauchez & M. Sartre, Paris, 2008 (series *Cahiers de la villa « Kérylos »*, 19), p. 389-407. ←
- « Rome, Babel gastronomique au XV^e siècle », in *Alimentar la ciudad en la Edad Media. Nájera, Encuentros internacionales del Medievo 2008. Actas*, ed. B. Arízaga Bolumburu, J. Á. Solórzano Telechea, Logroño, 2009, p. 491-510 ←

- « De ville en ville, de cour en cour: le rôle des cuisiniers dans la diffusion des normes et des pratiques culinaires », in *Circolazione di uomini e scambi culturali tra città (secoli XII-XIV)*, Rome, 2013, p. 493-522.
- « Distinction et alimentation à la fin du Moyen Age », in *Marquer la prééminence sociale*, ed. J.-P. Genet & E.I. Mineo, Paris-Rome, Publications de la Sorbonne-Ecole Française de Rome, 2014 (series « Le pouvoir symbolique en Occident, 1300-1640 »), p. 323-345.
- « Parfums d'Orient. La science des épices au Moyen Âge », in *Parfums et odeurs au Moyen Âge. Science, usage, symboles*, ed. A. Paravicini Bagliani, Florence, 2015, p. 61-87.
- « Il pane sulla tavola: ricettari e usi culinari », in *La civiltà del pane: storia, tecniche e simboli dal Mediterraneo all'Atlantico*. ed. G. Archetti, Spoleto, 2015, p. 1105-1113
- « Cuisine, médecine et diététique: traditions, rencontres, distorsions entre le V^e et le XII^e siècle », in *L'alimentazione nell'alto medioevo. Pratiche, simboli, ideologie*, Spoleto, 2016 (*LXIII^e Settimana di studio*), p. 467-492.

Chapters of edited monographs relevant for CoReMA

- « Les sources culinaires », in *Comprendre le XIII^e siècle. Études offertes à Marie-Thérèse Lorcin*, ed. P. Guichard & D. Alexandre-Bidon, Lyon, 1995, p. 215-226. ←
- « Cuisines médiévales (XIV^e et XV^e siècles) », in *Histoire de l'alimentation*, ed. J.-L. Flandrin & M. Montanari, Paris, 1996, p. 459-477.
- « Identità nazionali, peculiarità regionali e koinè europea nella cucina del Medioevo » in *Il mondo in cucina. Storia, identità, scambi*, ed. M. Montanari, Rome-Bari, 2002, p. 45-70. ←
- « Olla Patella: Préliminaires à une étude de la lexicographie alimentaire au Moyen Âge », in *Par les mots et les textes. Mélanges de langue, de littérature et d'histoire des sciences offerts à Claude Thomasset*, ed. Danièle James-Raoul, Olivier Soutet & Danielle Jacquart, Paris, Presses de l'Université Paris-Sorbonne, 2005, p. 459-474.
- « De Jean de Bockenheim à Bartolomeo Scappi: Cuisiner pour le pape entre le XV^e et le XVI^e siècle », in *Offices et papauté (XIV^e-XVII^e siècle). Charges, hommes, destins*, ed. A. Jamme & O. Poncet, Rome, 2005, p. 303-332.
- « Un désir d'or: remarques sur la production et les usages alimentaires du safran au Moyen Âge », in *Plantes exploitées, plantes cultivées: cultures, techniques et discours*, ed. A. Durand, Aix-en-Provence, 2007, p. 77-94. ←
- « Chapter 36. Medieval Food », in *A Companion to Food in the Ancient World*, ed. John Wilkins & Robin Nadeau, Wiley, 2015, p. 377-382.

Annex 3: CV Helmut W. Klug

Personal details, address, website:

Date of birth: 12.07.1974

Mag. Dr. Helmut Werner Klug

Zentrum für Informationsmodellierung

Universität Graz

Elisabethstr. 59/III

8010 Graz

<https://goo.gl/x3cDJb>

Main Area of Research: German medieval studies, German medieval and early modern food history, scholarly editing, Digital Scholarly Editions

Academic career and employment:

- 2005 Master's degree (Mag. phil.) in English and American Studies and German Studies
- 2006-2009 Lead project participation at the Department for English Studies at the University of Graz within the fwf-project *Electronic and Printed Dictionary of Old English Plant-Names*
- 2007-2008 Project participation at the Department for German Studies at the University of Graz within the project *Feasibility Study on a Database for the Authentication of Medieval Scribes*
- 2007- Assistant lecturer at the University of Graz
- 2009-2011 Lead project participation at the Department for English Studies at the Karl-Franzens-University of Graz within the fwf-project *Dictionary of Old English Plant-Names*
- 2015: PhD degree (Dr. phil.) in German Mediaeval Studies
- 2015- Postdoc research assistant at the Zentrum für Informationsmodellierung - Austrian Centre for Digital Humanities
- 2017- Project head of federally funded research and dissemination projekt "Etablierung eines Mittelalter-Labors an der Universität Graz: Digitale, fachwissenschaftliche und wissenschaftskommunikatorische Aufbereitung der Handschrift Graz, UB, Ms. 1609"

Publication list (project relevant selection):

- Klug, Helmut W.: 'gewürz wol vnd versalz nicht'. Auf der Suche nach skalaren Erklärungsmodellen zur Verwendung von Gewürzen in mittelalterlichen Kochrezepten. In: *Medium Aevum Quotidianum* 61 (2011), S. 56-83.
- Klug, Helmut W.; Roman Weinberger: *Modding Medievalists: Designing a Web-based Portal for the Medieval Plant Survey / Portal der Pflanzen des Mittelalters (MPS/PPM)*. In: *Herbs and Healers from the Ancient Mediterranean through Medieval West. Essays in Honor of John M. Riddle*. Hrsg. v. Anne Van Arsdall; Timothy Graham. Burlington: Ashgate 2012. (=Medicine in the Medieval Mediterranean.) S. 329-58.
- Klug, Helmut W.: Editionen als fächerübergreifende Grundlage für datenbankbasierte Forschung. Ein Praxisbericht. In: *Internationalität und Interdisziplinarität der Editionswissenschaft*. Hrsg. v. Michael Stolz, Yen-Chun Chen. Berlin, New York: De Gruyter 2014, (= Beihefte zu *Editio*. 38.) S. 29-41.
- Der Koch ist der bessere Arzt. Zum Verhältnis von historischer Diätetik und Kulinarik im Mittelalter und in der Frühen Neuzeit. Fachtagung im Rahmen des Tages der Geisteswissenschaften 2013 an der Karl-Franzens-Universität Graz, 20.6.-22.6.2013. Hrsg. v. Andrea Hofmeister-Winter, Helmut W. Klug, Karin Kranich. Frankfurt am Main [u.a.]: Lang 2014. (= *Mediävistik zwischen Forschung, Lehre und Öffentlichkeit*. 8.)
- Klug, Helmut W.: „... und färbs ain wenig ob du wilt.“ Eine analytische Bestandsaufnahme der diätetischen Aspekte des Färbens von Speisen in der spätmittelalterlichen Küche. In: *Der Koch ist der bessere Arzt. Zum Verhältnis von historischer Diätetik und Kulinarik im Mittelalter und in der Frühen Neuzeit*. Fachtagung im Rahmen des Tages der Geisteswissenschaften 2013 an der Karl-Franzens-Universität Graz, 20.6.-22.6.2013. Hrsg. v. Andrea Hofmeister-Winter, Helmut W. Klug, Karin Kranich. Frankfurt am

- Main [u.a.]: Lang 2014, (= Mediävistik zwischen Forschung, Lehre und Öffentlichkeit. 8.) S. 205-22.
- Klug, Helmut W., Kranich, Karin: Das Edieren von handschriftlichen Kochrezepttexten am Weg ins digitale Zeitalter. Zur Neuedition des Tegernseer Wirtschaftsbuches. In: Vom Nutzen der Editionen. Zur Bedeutung moderner Editorik für die Erforschung von Literatur- und Kulturgeschichte. Hrsg. v. Thomas Bein. Berlin, Boston: De Gruyter 2015. (= Beihefte zu editio. 39.) S. 121-37.
- Dictionary of Old English Plant Names. Eds. Peter Bierbaumer and Hans Sauer with Helmut W. Klug and Ulrike Krischke. 2007-2015. Url: <http://oldenglish-plantnames.org/>.
- Portal der Pflanzen des Mittelalters / Medieval Plant Survey. Redaktion: Helmut W. Klug. Technische Leitung: Roman Weinberger. 2009-2015. Url: <http://medieval-plants.org/>.
- Klug, Helmut W.: Mittelalterliche Kulinarik: ein schlaglichtartiger Aufriss einer fremden Kultur. In: Steiermärkische Landesbibliothek (Hg.): "Man nehme ..." - Kochbücher und ihre Rezeption im Laufe der Jahrhunderte. Beiträge zum Symposium "Man nehme ..." . Graz: Steirischer Verlag 2016, 33-103.
- Welscher Gast digital. [Review] In: RIDE: A Review Journal for Digital Editions and Resources . 4. 2016. <doi: 10.18716/ride.a.4.5>
- Hofmeister, Wernfried; Böhm, Astrid; Klug, W. Helmut: Die deutschsprachigen Marginaltexte der Grazer Handschrift UB, Ms. 781 als interdisziplinärer Prüfstein explorativer Revisionsforschung und Editionstechnik. In: Editio 30 (2016), S. 14-33.

Projects:

- 2006-2011 Dictionary of Old English Plant Names (fwf funded) - <http://oldenglish-plantnames.org/>
- 2011- Medieval Plant Survey (dissertation project) - <http://medieval-plants.org/>
- 2017- Etablierung eines Mittelalter-Labors an der Universität Graz (federal funding) - <https://mitmachlabore.uni-graz.at/de/>

Annex 4: Short CV of other scientific members of CoReMA

CESR

Permanent Position Researchers

Marie-Elisabeth BOUTROUE is CNRS research scientist at CESR. She is a leading expert on Science History in the Renaissance, specially on botanical and pharmacological knowledge. Among her numerous publications on the subject, see “Des plantes pour dormir: un aperçu de la pharmacopée ancienne de l’insomnie”, *Camena* 5 (2008). She is also an expert on Latin philology and on codicology. She will work on WP 3 (Preparation of select cooking recipe collections for print edition and Basic manuscript description), WP 4 (Annotation of surrounding cultural context) and WP 5 (Scholarly analysis, interpretation of findings). 6 PM.

Pascal BRIOIST is Professor of Early Modern History at the university of Tours. He is a leading expert on Cultural History of the Renaissance in France, England and Italy. His main research interests are about Intellectual History, Science History and scientific and technical networks and practices in Europe. Invited Professor at Cornell University and UCLA and member of the Editorial board of the *Science History* journal, he published many books and papers and organized outstanding exhibitions on Renaissance Life and Civilisation. Recently he studied the diplomatic dinners of the famous “Camp du drap d’or” and found important accounts on these events. He will work on WP 4 (Annotation of surrounding cultural context), WP 5 (Scholarly analysis, interpretation of findings) and WP 6 (scholarly conferences and Scholarly publications). 6 PM.

Sébastien BUSSON is CNRS Project Engineer, in charge of the CESR Multimedia department. As an expert in digital technologies and management system of online databases, he organized the digitization campaign of the CESR photographic archives and took part in the European *Musico* Program. He designed and manages the CESR website and the specialized websites for *Architectura* and *Ricercar* programs (<http://www.cesr.univ-tours.fr>, <http://www.architectura.univ-tours.fr> and <http://www.ricercar.univ-tours.fr>). Technical manager of the *BVH* project (Bibliothèques virtuelles des humanistes), he takes part in the digitization program of the Libraries Old Collections in Center Region (<http://www.bvh.univ-tours.fr>). He published with Jean-Yves Ramel and Marie-Luce Demonet a paper on User-driven Page Layout Analysis of historical printed Books in *International Journal on Document Analysis and Recognition*, Springer Verlag, 2007, 9 (2-4), pp.243-261. In CoReMA. He will be in charge, for CESR, of multimedia and an expert for digitization (WP 2 et 6). 3 PM.

Mélanie FAUCONNIER is University Project Engineer at the MSH Centre Val de Loire. She is the project manager of the Food Platform (Pôle Alimentation), an interdisciplinary program of the University of Tours. Holding a MA in Food Technology, she organized many research program, specially in their valorisation aspects. She will concentrate her work on WP 6, Dissemination. 6 PM.

Rémi JIMENES is a Research and Teaching Assistant at the CESR. He is an expert in codicology, especially of printed books in 15th and 16th c. He knows also very well the question of images digitization. He will work for WP 2 : Acquisition of manuscript images by photography of unedited and unscanned manuscript ; diplomatic transcription and collation of unedited Latin manuscript. And WP 3 :Basic manuscript description. 3 PM.

Chiara LASTRAIOLI is Professor of Renaissance Italian Literature. Her research interests are about anonymous propaganda, parodic and satiric literature, literary genres and italian book in France. She has coordinated many important research programs, as ECRISA (*L’écriture, ses supports, ses archives: une plateforme pour l’analyse et la gestion de l’écriture et des archives*), EDITEF (*L’édition italienne dans l’espace francophone à la première modernité*) and the working group *European Networks of Knowledge*

Exchange in the COST network *New Communities of Interpretation: Contexts, Strategies of Religious Transformation in Late Medieval and Early Modern Europe*. She is CESR representative in the Board of Biblissima, a huge web digital library on ancient manuscripts and books. She will work in the last two years of CoReMA on WP 5 (Scholarly analysis, interpretation of findings) and WP 6 (scholarly conferences and scholarly publications). 2 PM.

Marie-Laure MASQUILIER is CNRS Project Engineer at the CESR, in charge of Research Projects. She worked previously as Documentation Engineer in Information Science at the National Institute for Scientific and Technologic Information (INIST). Holding a MA in Natural Sciences, she was in charge of the integration of the documentary resources on ecology and environment in the PASCAL database. In 2011, she published a paper on Bibliometric analysis of diadromous fish research from 1970s to 2010: a case study of seven species in *Scientometrics*, Springer Verlag, 2011, 88 (3), pp.929-947. In CoReMA, she will be in charge of technical support for updating blog, conferences management and institutional communication (WP 1). 3 PM.

Paul-Alexis MELLET is a Lecturer at the University of Tours. He is an expert of the confessional and political controversies during the Renaissance, of Book History, that he studies through the Bible's readings, and of techniques of disinformation. He published many books and papers, notably Critical Editions. His expertise is required in WP 3 (Preparation of select cooking recipe collections for print edition), WP 4 (Annotation of surrounding cultural context) and WP 5 (Scholarly analysis, interpretation of findings). 3 PM.

Concetta PENNUTO is a Lecturer of Medical History and Latin Language at the University of Tours. She is a leading expert on History of Renaissance medicine. Her research interests are about astrological medicine, medical gymnastics and women's health. She published many critical editions and research papers in the most important journals for History of medicine. She is now interested in the recipe literature. Her expertise can benefit to WP 3 (Preparation of select cooking recipe collections for print edition), WP 4 (Annotation of surrounding cultural context) and WP 5 (Scholarly analysis, interpretation of findings). 6 PM.

Florent QUELLIER is a Lecturer of Early Modern History at the University of Tours. He was elected Chair for Modern Food History and is a leading expert in Early Modern Food Culture, Gastronomy and Cuisine. He wrote acclaimed books as *Gourmandise: Histoire d'un péché capital*, 2010, which won the prestigious Prize Jean Trémolières for Nutrition. He organized an important congress about the Influence of Italy on French Food Culture of the Renaissance. His expertise can benefit to both WP 5 (Scholarly analysis, Interpretation of Findings) and 6 (Scholarly Conferences, Scholarly Publications) . 3 PM.

Yves ROLLAND is a computer technician at CESR. He will manage the CESR side of the WP 2 for the database management. 3 PM.

Project team members to be financed through the project

One Project Engineer (Ingénieur d'études) to be hired by a call for applications as soon as the ANR fund is available. 12 PM (24 first months at 50%). Eligibility : Holding a research master in Medieval History and/or Latin Philology, preferably doctoral researcher. Capacities : deep knowledge in Latin philology and paleography, good knowledge in codicology, recommended knowledge in Food and Culinary History. She/he will work mainly in WP 2 : Acquisition of manuscript images by photography of unedited and unscanned manuscript ; diplomatic transcription and collation of unedited Latin manuscript. She/he will work also in WP3: Basic manuscript description, Dating of manuscripts, Textual analysis. Because of a great number of unedited Latin cookbooks, this person will be central in the success of CoReMA.

One Research Engineer (Ingénieur de recherches) to be hired by a call for applications as soon as the ANR fund is available. Eligibility : post-doctorate, holding a PhD in Medieval History and/or Latin Philology, with an experience in Research team management. Capacities: deep knowledge in Digital Humanities, good knowledge in Food and Culinary History, fluent English. She/he will have a transversal function as the main contact person with the two scientific coordinators and will be able to work in any WP.

She/he will check the implementation of the program, in interaction with Mss Fauconnier and Masquillier, suggesting necessary improvements or changing to coordinators, lead the working meetings, organizing the congresses and conferences and coordinate the CESR team. 18 PM (36 months at 50%).

Three Trainees (3x3 months) will help the scientific coordinator and the Engineer of Research / Project Manager to organize some events of CoReMA : first year one Conference; second year one Exhibition; third year : one collective Publication. They will be student in Food History and Culture at a Master level. In Functioning costs asked to ANR

ZIM-ACDH

Permanent Personnel

Andrea HOFMEISTER-WINTER (professor) studied German and Classical Philology at the University of Graz. She received her doctorate through Prof. Anton Schwob with the dissertation *The Concept of the 'Dynamic Edition' exemplified with the First Edition of Veit Feichter's 'Brixner Dommessnerbuch' (Mid 16th Cent.) Part I: Theory and Practical Implementation. Part II: Text*. She received her postdoctoral lecture qualification in German medieval studies with the main emphasis on editorial sciences through a cumulative habilitation treatise: *Text as Gateway. Philological and Transdisciplinary Perspectives of the Graz 'Dynamic Edition'*. Her fields of study include editorial sciences (conceptual aspects of the Graz 'Dynamic Edition'), palaeography and graphemic writing analysis, literature of late medieval and early modern times, artes literature.

<https://goo.gl/QWWtL7>

Karin KRANICH (senior post doc researcher) researches and teaches at the Institute for German Studies at the University of Graz. From 2007-2016 director of the historical society "KuliMa - Culinary Middle Ages at the University of Graz". She is organizing and conducting lectures and training events on medieval food history. In her research she focuses on the *Sachprosa* of the Late Middle Ages and Early Modern Period, her main interests are knowledge preservation, knowledge transfer, and knowledge transformation in the transition from the Middle Ages to Early Modern Times, and historical cuisine in theory and practice, as well as critical editing with a focus on Early New High German *Sachprosa* texts.

<https://goo.gl/UsusJQ>

Project team members to be financed through the project

Astrid BÖHM (doctorate) finalised her master studies 2014 at the Department of German Studies with a thesis on *The iatromathematical household book of Codex ÖNB, 3085 (fol.1r–39v) - stoffgeschichte, classification, dynamic edition and glossary*. She is assistant lecturer at the University of Graz and doctoral researcher in the project *Establishment of an interactive module for science communication of medieval studies*. Her research interests are traditional and digital transcription techniques, editorial sciences, and artes literature.

<https://goo.gl/ag9EU3>

Christian STEINER (doctorate) is doctoral researcher at the ZIM-ACDH with a general focus on digital humanities. Currently he is working on a joint project with the Austrian Academy of Sciences "Cantus Network" where he is responsible for the implementation of a digital as well as a print edition of the liturgical-musical sources from the Salzburg church province. His expertise lies in the implementation of digital scholarly editions and semantic web technologies. He is also interested in web design and web programming.

<https://goo.gl/YmN17B>