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Personal Information

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Employment

1991 – Present **Permanent Lecturer Staff**
Faculty Of Science And Technology, UNAIR

1996 **Lecturer**
Faculty Of Science And Technology, UNAIR

2007 **Assistant Professor**
Faculty Of Science And Technology, UNAIR

2007 **Associate Professor**
Faculty Of Science And Technology, UNAIR

2007 **Head of biology study program**
Faculty Of Mathematics And Science, UNAIR

2007 – 2010 **Head of academic FMIPA/FST**
Faculty Of Mathematics And Science/ Faculty Of Science And Technology , UNAIR

2010 – 2016 **Vice dean III**
Faculty Of Science And Technology, UNAIR

2015 **Professor**
Faculty Of Science And Technology, UNAIR

2015 - Present **Head of institute for research and innovation**
UNAIR

Education

1986 – 1990 **Bachelor of Science (S.Si)**
Universitas Airlangga – Surabaya
Major in Biology

- 1983 – 1995** **Master of Science (M.Si)**
Institut Teknologi Bandung - Bandung
Major in Biology
- 2001 – 2005** **Doctoral (Dr.)**
Tohoku University - Japan
Major in Biology

Public Service Experience

- 2015** Team of public service implementation through social service in district Ngantang, Malang in 61st Anniversary (Dies Natalis) UNAIR
- 2015** Training of isolation and protein electrophoresis to improve the competence of Biology teacher
- 2015** Training of liquid organic fertilizer on farmer's group in district Krian, Sidoarjo
- 2013** Recharging and competency test laboratory management and practical skills for senior high school teacher in Surabaya
- 2013** Making of phagocytosis preparation for senior high school teacher in Surabaya
- 2013** Recharging and competency test laboratory management and science practical skills for senior high school teacher in Bangkalan
- 2013** Making of phagocytosis preparation for senior high school teacher in Surabaya
- 2012** Training of orchid cultivation for RW IV sub-district Kejawen Tambak Putih
- 2012** Improving elementary school teacher in Surabaya
- 2012** Observation of river ecosystem and environment
- 2012** Training of making mitosis preparation and spermatozoa observation
- 2012** Orchid cultivation in sub-district Bulak, Surabaya
- 2012** Recharging and competence test computer-based science for SMA RSBI teacher, Surabaya
- 2010** Improving elementary school teacher's competence on biology lesson in Surabaya
- 2010** Improving senior high school (SMA) teacher's competence on biology
- 2010** Olympiad preparation SMAN 1 Krian, Sidoarjo
- 2009** The committee in tissue culture training for community of Indonesian Orchid Association (PAI) branch Malang
- 2009** Biology Olympiad preparation for SMA Katolik Santa Agnes Surabaya
- 2008** Certification of cognitive competence, psychomotor, and affective biology fields for special smart students on senior high school level, East Java
- 2008** Training for educator to complete the standard of competence senior high school (SMA) teachers and vocational high school (SMK) teachers in Surabaya
- 2008** Optimization of florist potential in Surabaya, through training of orchid culture cultivation
- 2008** Mentoring of competency test for acceleration senior high school students in Surabaya
- 2008** Training evaluation of learning outcomes for competency test acceleration students

2008	Biology Olympiad preparation on national level for SMAN 15 students Surabaya
2007	Training of tissue culture
2007	Training of structure and animal development; and training of plant eco-physiology
2007	In house training of improving teacher
2007	Biology Olympiad preparation on national level for SMAN 15 students Surabaya
2007	Training of orchid culture cultivation
2007	Training of orchid tissue culture for florist in Surabaya
2007	Training of fundamental genetic engineering for senior high school students Surabaya
2007	Training for the farmers GERHAN
2007	Biology Olympiad preparation on national level for SMAK 5 Petra students Surabaya
2006	Training techniques and observation chicken embryo preparation for senior high school teacher in Gresik, East Java
2006	Biology Olympiad preparation on national level for SMAN 2 Pare students
2006	Biology Olympiad preparation on national level for SMAN 5 students Surabaya
2006	Biology Olympiad preparation on national level for SMAN 3 Madiun students and SMK Petra 2, Surabaya
2005	The committee of training and enriching Molecular Biology in development of Biology Olympiad and learning of Competency-Based Curriculum (KBK)
2005	Training and biology test for Olympiad participant Senior high School level (SMA)
2001	Training of tissue culture techniques and the implementation in plant culture for society
2001	Improving scientific insight for biology teacher through laboratory implementation
2000	Potential and chance of resource in Udanawu district, Blitar, East Java

Organization

2000 – 2010 Indonesian Biology Association

Research Interest

- Development of Plant.

Research Experience

No.	Years	Title
1	2016	Kemampuan batok kelapa (<i>Cocos nucifera</i>) penyisih kadar ammonia (inhibitor produksi biogas) pada pengolahan air limbah anaerobik
2	2015	Inovasi teknologi instalasi lahan portable solusi lingkungan, dalam peningkatan keanekaragaman produksi komoditas pangan
3	2013-2014	Produksi bahan kontrasepsi pria <i>Justicia gendarussa</i> Burm.f. secara kultur jaringan

4	2013-2014	Teknik Bioassay Proses Degradasi Sampah Organik Kota Surabaya Dengan Bioindikator Cacing Tanah <i>Lumbricus rubellus</i>
5	2013-2014	Ecosystem services by paddy fields as a local climate mitigation and biodiversity in Indonesia and Thailand country
6	2013-2014	Kemampuan batok kelapa (<i>Cocos nucifera</i>) penyisih kadar ammonia (inhibitor produksi biogas) pada pengolahan air limbah anaerobik
7	2013-2014	Produksi bahan kontrasepsi pria <i>Justicia gendarussa</i> Burm.f. Secara Kultur Jaringan
8	2012-2013	Pemanfaatan Tanaman Gulma Sebagai Biofilter Pada Pengolahan Limbah Cair Secara Anaerob
9	2008-2010	Induksi embryogenesis mikrospora anggrek bulan (<i>Phalaenopsis amabilis</i> (L.) Bl: upaya untuk mendapatkan galur murni dalam satu generasi
10	2004	Functional anatomy of air conducting network in root system of mangrove plants <i>Mombusho</i>
11	2000	Pengaruh Gibberelin (GA3) terhadap bunga dan buah Cabai (<i>Capsicum sp.</i>)
12	1999	Studi pengaruh umur dan tinggi batang terhadap struktur serat, sifat fisik, morfologi dan kimia batang bamboo apus (<i>Gigantochloa apus</i> Kurz)
13	1998	Studi silvikultur hutan amboo di Sukapura, Kabupaten Probolinggo, JawaTimur
14	1997	Studi struktur serat <i>Bambusa vulgaris</i> Schrad. Sebagai dasar pengembangan untuk bahan pembuatan kertas
15	1996	Studi viabilitas dan perkembangan biji <i>Nephelium lappaceum</i> L. pada berbagai jenis media tanam
16	1995	Perkembangan batang bambu ampel (<i>Bambusa vulgaris</i> Schrad.)
17	1993	Uji pendahuluan pengaruh radiasi sinar gamma Co60 terhadap viabilitas biji kacang hijau
18	1993	Peranan limbah deterjen terhadap viabilitas biji salak (<i>Salaca edulis</i> Reinw)
19	1992	Pengaruh infuse rhizome kembang sungsang (<i>Gloriosa superba</i> L.) terhadap spermatogenesis tikus putih
20	1992	Pengaruh infuse cermai (<i>Phyllanthus acidus</i> Skeels) terhadap berat badan dan uji toksisitas pada hepar mencit
21	1990	Peranan musang (<i>Paradoxurus hermaphroditus</i> F. Cuvier) dalam proses regenerasi aren (<i>Aren gapinnata</i> (Wurmb) Merr) ditinjau dari aspek viabilitas biji

Patent and Protected Right

- Metode pengembangan kalus daun pucuk mawar (*Rosa hybrid* L. Varietas hybride tea purple) dengan elisitasi cahaya untuk peningkatan kandungan Minyak Atsiri

Publication

- The use of *Lumbricus rubellus* as bioremediation agent of vermicomposting of city organic waste polluted by lead metal (Pb).
- Effect of digestion time on anaerobic digestion of high ammonia concentration.
- The effects of lead [Pb(NO₃)₂] on the growth and chlorophyll content of sea grass [*Thalassia hemprichii* (ehrenb.) Aschers.] Ex situ.
- Asymbiotic seed germination and in vitro seedling development of *Paphiopedilum liemianum* Fowlie, an endangered terrestrial orchid in Northern Sumatra, Indonesia.
- Quantity essential oil from rose callus leaf (*Rosa hybrid* L. variety Hybride tea purple): Results of light elicitation.
- Fluctuation concentration of organic compound in anaerobic batch reactor with *Imperata cylindrica* and *Eichhornia crassipes* as packed media.
- *Agrobacterium rhizogenes* mediated hairy root induction in *Justicia gendarussa* Burm. f
- Induksi akar rambut Gandarusa (*Justicia gendarussa* Burm. f.) dengan perlakuan perbedaan lama waktu infeksi *Agrobacterium rhizogenes* strain YM 072001 dan A4T
- Performa reaktor anaerobic dalam penyisihan bahan organik di air limbah sintetik dengan variasi jenis sludge.
- Pengaruh dosis dan frekuensi pemberian pupuk hayati terhadap pertumbuhan dan produktivitas tanaman seledri (*Apium graveolens* L.).
- Keanekaragaman morfologi serbuk sari pada 5 spesies *Bougainvillea*
- Variasi morfologi bunga pada beberapa varietas *Chrysanthemum morifolium* Ramat
- Ammonia and organic compound removal from dairy milk simulation wastewater by coconut shell (*Cocos nucifera*).
- The alternative use of water hyacinth and reed as attached growth of microbial in waste water treatment.
- Effect of double inoculation biofertilizer and vesicular arbuscular mycorrhiza on growth and yield of eggplant (*Solanum melongena* L.).
- Primary structure and intercellular space formation of feeding root *Sonneratia alba*
- Characteristics of root caps in four root types of *Avicennia marina* (Forsk.) Vierh.
- Effect of nitrogen supply and genotypic variation for nitrogen use efficiency in Maize.
- Kurangi dampak tsunami dengan konservasi mangrove.
- Perlunya mangrove center dan perda pesisir.
- Pola pertumbuhan *Halophila ovalis* (R. Brown) Hooker F. dalam 6 kultur in vitro
- Struktur internal transport oksigen pada pneumatophore akar mangrove *Sonneratia alba*
- Profil minyak atsiri mahkota bunga mawar (*Rosa hybrida* L.) kultivar lokal
- Etnobotany tumbuhan obat di kabupaten Sumenep, Jawa Timur.
- Struktur komunitas mangrove di sekitar jembatan Suramadu sisi Surabaya
- Perkembangan kultur daun *Aglonema sp.* var. Lady Valentin dan *Aglonema sp.* var. Lipstik dengan perlakuan zat pengatur tumbuh IAA dan BAP
- Pemanfaatan hutan mangrove sebagai penyimpan karbon
- Ornamental shrubs as plant palletes elements and bioindicators based on air pollution tolerance index in

Surabaya city, Indonesia.

- Structure of lenticels on the pneumatophores of *Avicennia marina*: as aerating device deliver oxygen in mangrove's root.
- Pengaruh umur tegakan tanaman terhadap adaptasi pneumatophor *Avicennia alba* di kawasan Wonorejo-Surabaya.
- Peranan mangrove dalam mitigasi perubahan iklim
- Ancaman terhadap hutan mangrove di Indonesia dan langkah strategis pencegahannya
- Hubungan factor lingkungan habitat porang (*Amorphophallus muelleri* Blume) pada lima agroforestry di JawaTimur dengan kandungan oksalat umbi
- Listrik nabati, mengapa tidak?
- Potensi lumpur Lapindo sebagai substrat mangrove
- Pemanfaatan nuklir dalam monitoring pencemaran logam berat di perairan
- Perilaku binatang tanda awal bencana tsunami
- Structure of oxygen transport in mangrove roots, *Sonneratia alba* J. Smith. Prosiding Seminar Nasional Biodiversitas
- Hati-hati dengan asbes
- Tinjauan perspektif hutan mangrove.
- Aerenchyma tissue development and gas pathway structure in root of *Avicennia marina* (Forsk.) Vierh.
- Functional anatomy of air conducting network on the pneumatophore of a mangrove plant, *Avicennia marina* (Forsk.) Vierh.
- Functional anatomy of air conducting network in root system of mangrove plants.
- Aerenchyma formation and porosity in root of a mangrove plant, *Sonneratia alba* (Lythraceae).
- Root system architecture and gravity perception of a mangrove plant, *Sonneratia alba*
- Specialized water conducting system in roots of a mangrove plant, *Sonneratia alba*.
- Root apex structure in various roots of mangrove plant, *Sonneratia alba*.
- Pengaruh Gibberellin (GA3) terhadap bunga dan buah cabai (*Capsicum sp.*).
- Studi silvi kultur hutan bambu di Sukapura, Kabupaten Probolinggo, JawaTimur.
- Studi pengaruh umur dan tinggi batang terhadap struktur, sifat fisik, morfologi dan kimia batang bamboo apus (*Gigantochloa aapus* Kurz.).
- Viabilitas dan perkecambahan biji jeruk manis (*Citrus sinensis* (L.) Osbeck) pada beberapa perlakuan mekanis.
- Botanical information on *Bambusa vulgaris* Schard.
- Timber Trees: Lesser known timbers
- Perbandingan pengaruh pemberian infuse daun katu (*Sauropus androgynus* Merr.) dan daun lampes (*Ocinum sanctum* Linn.) terhadap peningkatan berat badan anak ayam dan jumlah alveolus kelenjar pada ambing mencit.
- Mengatasi pencemaran air melalui pendekatan biologis
- Studi struktur serat *Bambusa vulgaris* sebagai dasar pengembangan untuk bahan pembuatan kertas.
- Studi viabilitas biji *Nephelium lappaceum* L. pada berbagai jenis media
- Pengaruh perendaman dalam larutan deterjen terhadap masa dormansi biji Salak (*Salaca edulis*).

- Studi jaringan pembuluh batang bamboo ampel (*Bambusa vulgaris*Schrad.)
- Peranan limbah deterjen dalam proses regenerasi salak (*Salacaedulis*Reinw.) ditinjau dari aspek viabilitas biji

Books

- Tanaman Obat Indonesia. 2015 : Airlangga University Press
- Kepemimpinan Berwawasan Kewirausahaan. 2010 : Airlangga University Press
- Kota Berketahanan Iklim, Pedoman Dasar Pengurangan Kerentanan Terhadap Bencana. 2010 : Self Publishing
- Penuntun Praktikum Anatomi Tumbuhan. 2007 : Self Publishing
- Penuntun Praktikum Embryologi Tumbuhan. 2007 : Self Publishing
- Penuntun Praktikum Fisiologi Tumbuhan. 2006 : Self Publishing
- Tinjauan Perspektif Hutan Mangrove. 2005 : Self Publishing
- Pengantar Mikroteknik Tumbuhan. 2000 : Self Publishing
- Penuntun Praktikum Reproduksi Tumbuhan. 1999 : Self Publishing
- Penuntun Praktikum Anatomi Tumbuhan. 1999 : Self Publishing